A Study of Economic Interchange Between Central and Provincial Governments in Indonesia

Viddy ARKAS

Doctor of Philosophy

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A STUDY OF ECONOMIC INTERCHANGE BETWEEN CENTRAL AND PROVINCIAL GOVERNMENTS IN INDONESIA: THE CASE OF EAST KALIMANTAN (KALIMANTAN TIMUR)

Viddy ARKAS

Bachelor of Economics in Economic Development Studies
Mulawarman University, East Kalimantan, Indonesia

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ABSTRACT

The policy of decentralisation has been implemented in Indonesia since the 1st of January 2001, in order to change the formulations of funds allocation from the Central government to provincial governments in Indonesia. This thesis examines the formulations of funds allocation in terms of a provincial budget from the Central Government to East Kalimantan province during centralisation and decentralisation periods, and analyses the impact of East Kalimantan province's provincial budget and decentralisation on the province's economic growth and human development.

This thesis finds that the existing formulation of Profit Sharing in the case of Oil/Mining and Gas income does not confer benefits for East Kalimantan province and the present percentages of profit sharing are based on political considerations and they are profitable for the Central government. There is a need to increase the percentage of Oil/Mining, Gas and Tax Income flowing to the provincial government of East Kalimantan so that the province's infrastructure could be developed which in turn will lead to economic growth and human development of the province. .

The trend analysis suggests that, during 1984-2007 there has been a significantly increasing tends in Eat Kalimantan province's real GDP, budget real expenditure, real exports and real imports. There is a significant positive impact of decentralisation on real GDP and real budget expenditure whereas there is a significant negative effect of decentralisation on the workforce. The Chow test shows that there are significant structural breaks in time series data for real GDP, real budget expenditure, workforce,

real exports and real imports. The trend analysis for the period 1990-2007 suggests that here has been a significantly increasing tends in Eat Kalimantan province's human development index (HDI) whereas the doctors per thousand of population show a significantly decreasing trend. There is a significant positive impact of decentralisation on teacher/student ratio whereas there are no significant effects of decentralisation on HDI and doctors per thousand of population. The Chow test shows that there is a significant structural break in time series data for teacher/student ratio.

The GDP (gross domestic product) regression estimated using data for the period 1984-2007 finds that, in the short-run as well in the long run, the budget real expenditures during both the centralisation period and during the decentralisation period have had a significant and positive impact on East Kalimantan province's real GDP. However, the budget real expenditure during the decentralisation period has had a slightly smaller positive impact on East Kalimantan's real GDP than during the centralisation period. The HDI (human development index) regression estimated using data for the period 1990-2007 finds that the budget real expenditures during both the centralisation period and during the decentralisation period have had a significant and positive impact on East Kalimantan province's human development index (HDI). However, the magnitude of the impact of budget real expenditure on East Kalimantan's HDI during both the decentralisation period and the centralisation period are similar.

DECLARATION

I, Viddy Arkas, declare that this PhD thesis entitled 'A Study of Economic Interchange Between Central And Provincial Governments In Indonesia: The Case Of East Kalimantan (Kalimantan Timur)' is no more than 100,000 words in length, exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Viddy Arkas

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LIST OF ABBREVIATIONS

APBD	*Anggaran Pendapatan Belanja Daerah* (Provincial Budget)
APE	Average Total Provincial Budget Expenditure
BF	Balancing Fund
BI	*Bank Indonesia* (Central Bank of Indonesia)
BPS	*Biro Pusat Statistik* (Statistics Bureau of Indonesia)
BPUPKI	Committee for Preparatory Work for Indonesian Independence
CnPI	Construction Price Index
CPI	Consumer Price Index
DAK	*Dana Alokasi Khusus* (Specific Allocation Fund)
DAU	*Dana Alokasi Umum* (General Allocation Fund)
DLBT	Duties on Land and Building Transfer
DPD	Provincial Representative
DPOD	*Dewan Pertimbangan Otonomi Daerah* (Regional Autonomy Advisory Council)
DPR	*Dewanc Perwakilan Rakyat Daerah* (Provincial Consultative Assembly)
E	Excises

FC	Fiscal Capacity
FI	Fishery Income
FN	Fiscal Need
FNR	The National Royalty Fund
FRR	Forestry Resource Rent
GAF	General Allocation Fund
GDP	Gross Domestic Product
GI	Gas Income
HDI	Human Development Index
IAr	Surface Area Index
IGPDP	Inverse of Gross Provincial Domestic Product
IHDI	Inverse of Human Development Index
IMF	International Monetary Fund
INPRES	*Intruksi Presiden* (Presidential Instruction)
JSX	Jakarta Stock Exchange
LBT	Land and Building Tax
LOR	Local Own Revenue

MLR Mining and Land Rent

MOF Ministry of Finance

MPR *Majelis Permusyawaratan Rakyat* (Consultative Assembly)

MR Mining Royalty

NBI Narrow Based Index

NOI Net Operating Income

OI Oil Income

OT Other Taxes

PAD *Pendapatan Asli Daerah* (Local Own Revenue)

PB Provincial Budget

PBR Provincial Budget Revenue

PETA *Pembela Tanah Air* (Indonesian Defence Army)

PS Profit Sharing

PI Population Index

PM *Participaciones Municipales* (PM)

PPP Purchasing Power Parity

PSI Profit Sharing Income

PTT Personal Income Tax.

RAPBN *Rancangan Anggaran Pendapatan dan Belanja Negara* (National Income and Budget Draft)

Rp Indonesian Rupiah

RsNat Revenue Sharing from Natural Resources

RsT Revenue Sharing from Taxes

SAF Specific Allocation Fund

SDO *Subsidi Daerah Otonom* (Autonomous Region Subsidy)

SGP General Share System

SNG System National Guaranty

TI Tax Income

UNDP United Nations Development Program

VAT Value Added Taxes

VOC *Vereenigde Oostindische Compagnie* (Dutch East India Company)

EXCHANGE RATES

1 December 2008:

Indonesian Rupiah per Australian Dollar: 7,586.00

Indonesian Rupiah per USA Dollar: 11,724.00

2 December 2008:

Indonesian Rupiah per Australian Dollar: 7,524.86

Indonesian Rupiah per USA Dollar: 11,800.00

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Viddy Arkas

December, 2008

CHAPTER 1

INTRODUCTION

1.1 The Context of the Study

Indonesia, an archipelago nation consisting about 17,508 islands strung over 5,200 kilometres, is situated astride the equator between Australia and mainland Asia. With the Pacific Ocean to the east and the Indian Ocean to the west, Indonesia's location could hardly be more strategically significant, an importance underlined by being the largest country in the Southeast Asia in terms of both landmass and population. With a population of 220 million (as of 2005), Indonesia is the world's fourth most populous country after China, India, and the United States (Drakeley, 2005).

The landscape that determined the type, manner, conduct and operation of the resource and revenue interchange between the Central and provincial governments of Indonesia underwent a seismic change in 2001 after the passage of appropriate legislation in 1999. A far greater devolution of economic and political authority from the Central to provincial governments has been implemented since January 2001 and has stimulated dynamic changes at the national and regional levels. As noted by Suwandi (2000), the new policy was a radical shift from the domination of the Central government over provincial governments toward the provision of a high discretion for provincial government in managing local affairs. Siddik (2004) state that by giving more autonomy to provincial governments, people have more flexibility in managing their own affairs, and thus could increase the effectiveness of provincial governments (and regional authorities or *regencies* and municipal governments within the provinces), increase community participation in economic, social, and political

decisions, and enhance government responsiveness, transparency and accountability. In other words, decentralisation would introduce the key elements of good governance into public management at the provincial level.

Two specific pieces of legislation are of importance in the context of the promotion of greater provincial autonomy. Law No 22/1999 passed in 1999 dealt with the devolution of political authority. The focus of the law ensured the increased authority of provincial government in a range of political, social and economic considerations of importance to this thesis. Law No 25/1999 established a new system of fiscal arrangements under which provinces would gain a far larger share of revenue generated from within their areas. That is, the law promoted a new financial balance between the Central and provincial governments whereby the latter assumed greater control and responsibility of financial resources (Aspinall and Fealy 2003). These new fiscal arrangements are also of importance in the context of this thesis.

It is clear that the provision of the new laws promoting decentralisation and greater autonomy in financial matters has produced mixed outcomes in the thirty-two provinces that constitute the Indonesian republic. Some provinces benefited greatly in that although they lacked a strong natural resource base and provided limited income to the Central government, they have, under the new regime, attracted substantial additional revenue flows. For example, as reported by the Provincial Budget (*APBD*) for the year 2001, South Sulawesi province received Rp 365.3 billion under the 1997 Provincial Budget allocations. This had increased to Rp 1,892.6 billion in 2000. The Indonesian Central Statistical Bureau (or BPS for *Biro Pusat Statistik*) notes that the Province of East Kalimantan, with a population of 2,443,300 (2000 Census) was

allocated Rp 263.03 billion under the 1997 centralised budget (BPS, 2000). Under decentralisation, this grant had risen to Rp 1,746.75 billion in 2003, an increase of Rp 1,483.72 billion or 564% (BPS, 2003).

In statistical terms the province of East Kalimantan is an extreme case. It is one of the largest, less densely populated and one of the wealthiest provinces of Indonesia in terms natural resources and per capita income. With a land area of about 210,000 km^2, the province is almost twice as large in area as Java, although it has a population of less than 3 million compared to the total population of Java which is about 137 million (BPS, 2003). Much of East Kalimantan province's income is derived from the extraction of mineral and natural resources, of which oil, natural gas and logging are the most important (Oosternan, 1999). It is of interest that the nominal per capita income in East Kalimantan is over twice the national average.

As noted by Chauvel (2001), a number of outer island provinces - Irian Jaya, Aceh and East Kalimantan – were and are resource-rich and significant earners of export revenue and that the provinces of East Kalimantan, Riau, Aceh, Jakarta and West Papua contribute a large proportion of the total provincial government sourced revenue received by the Central government. These provinces are among the richest in Southeast Asia, yet the consumption per capita of residents is very low by the region's standards. This suggests that the residents of these provinces are not enjoying the rewards from the exploitation of their resources, nor are they gaining from their development.

Under the centralised regime some small increases in revenue flows to the provinces were experienced over the period 1985-1996. However, most of each province's GDP continued to flow to the Centre (Jakarta) such that private consumption by provincial residents remained at low levels. For example, in East Kalimantan, while 8.8% of GDP was devoted to private consumption expenditure in 1985 and the figure had risen to only 13% by 1996. The provinces of Riau and Aceh fared little better. Riau achieved an increase in private consumption expenditure from 11% of GDP in 1985 to 20% in 1996, while Aceh barely changed from 21% in 1985 to 22% in 1996 (Mubyarto, 2003a).

However, all of these provinces remained locked into a poverty trap whereby a lack of infrastructure and facilities condemned most of the population to a life of paucity and hardship. In 2003 East Kalimantan experienced a 2.8% growth rate of population over the previous year, an infant mortality rate of 40 per 1,000 births and a life expectancy of 65 years. The health of the community is supported by 24 hospitals and 159 health clinics with 31 doctors per 100,000 people while the Central of Java has experienced a 0.67% growth rate of population with an infant mortality rate 36.67 per 1,000 births and life expectancy of 68 years. It has 140 hospitals and 1,426 health clinics with 2,453 doctors in 2003 (BPS, 2005).

Another important factor in determining welfare is infrastructure and facilities. East Kalimantan still badly lacks in both areas. It is of interest to compare the situation in East Kalimantan to that of the Central of Java. The East Kalimantan province has 2,004.83 km of sealed roads with 340.65 km in need of urgent repair, while Central of Java has 3.779,80 km of sealed roads with only 34.42 in need of

repair. Only 13.14% of the population of East Kalimantan has access to electricity compared to 18 % of the population of the Central of Java. East Kalimantan has 3,005 elementary and secondary schools and 38 universities and colleges with 28,813 teachers across all sectors, compared to the Central of Java, which has 25,266 schools, 202 universities and colleges and 279,810 teachers. BPS also notes that East Kalimantan has a higher GDP per capita (Rp 36,946,100) than the Central of Java (Rp 5,460,700). On the other hand the Central of Java has a lower unemployment rate at 7.72% compared to East Kalimantan, which is at 10.39% (BPS, 2003). In addition, East Kalimantan has 60% of its population below the poverty line compared to the Central of Java, which has 21.11% (Fitriyadi, 2005).

Summary data on demography and facilities of East Kalimantan and Central of Java provinces are presented in tables 1.1 and 1.2. On all of the critical demographic factors East Kalimantan ranks below that of the Centre of Java despite the enormous wealth and revenue generation of the East Kalimantan province.

Table 1.1: A Demographic Comparison of East Kalimantan and the Central of Java, (2003)

	East Kalimantan	Central of Java
Population	Less than 3 million	More than 32 million
Infant Mortality	40 per 1000 births	37 per 1000 births
Life Expectancy	65 years	68 years
Unemployment rate	10.39%	7.72%
Population below the poverty line.	60%	21.11%

Source: BPS, 2003

Table 1.2: Facilities and Infrastructure Comparison of East Kalimantan and the Central of Java (2003)

	East Kalimantan	Ratio to Population	Central of Java	Ratio to Population
Hospitals	38	1:78,947	140	1:228,571
Health Clinics	159	1:18,868	1426	1:22,440
Doctors	837	1:3,584	2453	1:13,045
Schools	3005	1:998	25,226	1:1,269
Universities/Colleges	38	1:78,947	202	1:158,416
Teachers	28,813	1:104	279,810	1:114
Roads	2,004.83 km		3,779.80 km	
Roads that need to be fixed	340.65 km		34.42 km	
Electricity	13.14% of population		18% of population	

Source: BPS, 2003

However, Table 1.2 needs to be interpreted with some caution. While East Kalimantan has a superior statistical ratio of hospitals and schools than the Central of Java the data makes no allowance for qualitative comparisons. Anecdotal evidence is very strong that much of the facilities and infrastructure of East Kalimantan exist in name only. In many instances a structure may be officially denoted as a hospital or a school but lack even the most basic of resources necessary to fulfil the function of the facility. The superior statistical ratios of East Kalimantan also beg the question as to why infant mortality and life expectancy rates in East Kalimantan are worse than

those of Central of Java (see Table 1.1). Again, qualitative analysis may provide the answer.

Unless addressed, particularly by an improved pattern of economic interchange, such realities as posed by the poor or non-existent facilities and infrastructure of East Kalimantan and other resource-rich provinces may well have placed significant pressure on the territorial integrity of the nation as calls for independence and control over local resources and wealth have begun to intensify. In response the Indonesian national government has moved to a policy of economic decentralisation. It is of little surprise that the decentralisation policy did not achieve spectacular overnight success, as the new regime promoting increased regional autonomy will need time to influence an entrenched economic environment.

1.2 The Research Problem

This thesis will provide qualitative and quantitative assessments of the new decentralised relationship developed to improve the economic interchange outcome between Indonesian Central and provincial governments. These new developments have arisen in the light of the fact that the previous centralised approach that characterised such economic interchange failed to achieve both an equitable distribution of wealth and improvement in the economic welfare of much of the population. In fact, economic interaction between Central and provincial governments is not well understood. It may also be of interest to examine like patterns of resource and revenue interchange in developed economies such as Australia and developing countries like Colombia to see if the decentralised policy now in place in Indonesia has any parallels with existing and proven interchange policies of these two economies.

1.3 Research Questions

Based on the information in the previous sections, the specific questions addressed in this thesis are as follows:

i. What is the historical basis of the economic interchange between central and provincial governments in Indonesia?

ii. What economic changes have taken place under the centralisation and decentralisation?

iii. What is the theoretical foundation for a study of economic interchange in Indonesia?

iv. What is the model used to determine the pattern of economic interchange?

v. What are weaknesses of the existing model of economic interchange?

vi. How may the existing economic interchange model be improved?

vii. Has the decentralisation enhanced East Kalimantan's economic growth and human development?

1. 4 Objectives of the Study

This main objective of this study is to examine the basis, pattern and impact of economic interchange between the Indonesian Central government and the government of the province of East Kalimantan. Economic interchange is the pattern of resource and revenue interchange between East Kalimantan provincial governments and the Central government of Indonesia located in Java. The study aims

to review and examine the existing quantitative models of economic interchange in order to serve as a guide for policy formation with respect to resource and revenue interchange between the Central and East Kalimantan's provincial governments. The study will focus on the theory and practice of economic interchange in order to accomplish the following specific objectives of study.

i. To explain the historical basis of the economic interchange between central and provincial government in Indonesia.

ii. To examine economic changes taken place in the centralisation era and the decentralisation era.

iii. To establish the theoretical foundation for a study of economic interchange in Indonesia.

iv. To analyse the existing model used to determine the pattern of economic interchange.

v. To discuss the weaknesses of the existing model of economic interchange.

vi. To present ways to improve the existing economic interchange model.

vii. To analyse the impact of decentralisation on East Kalimantan's economic growth and human development.

1.5 Significance of Study

As this thesis focuses on reviewing and analysing the existing models of economic interchange between the Central and provincial governments of Indonesia using the case study of East Kalimantan province, it will make an important contribution towards the formulation of a more effective basis for economic interchange between the Central and provincial governments in Indonesia under decentralisation policy regime. The thesis will also test the hypothesis that economic interchange during decentralisation era has achieved a greater level of economic progress and human development in East Kalimantan province, compared to the level of economic progress and human development recorded during the centralisation era. The findings of this analysis will make an important contribution towards the design and implementation of more effective economic policies under decentralisation regime that will improve the economic and human development conditions of the East Kalimantan province.

1.6 Outline of the Thesis

Chapter 2 of the thesis presents an overview of Indonesia and relationships between its provinces. The chapter focuses on geographical characteristics, historical and political relationships, the nationalist and political movements, social and religious relationships, and on economic conditions and relationships during the centralisation era and the decentralisation era.

Chapter 3 provides a review of the concepts, theories and empirical studies related to federalism and decentralisation in order to provide the conceptual and

theoretical foundations required for the empirical analysis undertaken in chapters 5 and 6 of the thesis.

Chapter 4 presents an overview of East Kalimantan province to set the scene for the detailed analyses in Chapters 5 and 6, and presents a discussion of geographic, demographic, economic and human development aspects of East Kalimantan.

Chapter 5 presents and examines the conceptual framework and models employed for the purpose of economic interchange process between the Central government and East Kalimantan provincial government of Indonesia. Definitions of the key thematic terms are provided first. Then, the conceptual framework is presented and discussed. Next, the models used for fund allocation between the Central and provincial governments and the variables in the models are specified, weaknesses of the models are discussed and the ways in which the models can be modified are described.

Chapter 6 develops and estimates the regression models, and discusses the results of estimation of such models, (i) to examine the trends and the effects of decentralisation policy on the trends of East Kalimantan province's gross domestic product (GDP), Human Development Index (HDI) and other related variables, and (ii) to analyse the impact of provincial budget expenditure and decentralisation policy on East Kalimantan province's GDP and HDI.

Chapter 7 concludes the thesis by presenting an overview of the thesis, summarising the findings and policy implications of the findings of the thesis, outlining the limitations of the thesis, and suggesting some areas for further research.

CHAPTER 2

AN OVERVIEW OF INDONESIA AND RELATIONSHIPS BETWEEN ITS PROVINCES

2. 1 Introduction

Indonesia was formed on the basis of the integration of some ethnic and religion groups, which have occupied the islands of Java, Sumatera, Kalimantan, Bali, Sulawesi, Maluku and Irian (Papua). Indonesia is divided into 33 provinces. Twenty six (26) provinces were formed before the year 2000, while seven more provinces were created after 2000. Since Indonesia gained independence on 17 August 1945, Java Island became the centre of government due to several reasons. Each of the islands has the same historical background of experience in building their regions. All of the islands were colonized by the Portuguese, the Dutch, the British, and the Japanese, and the colonisation created relationships among all of the islands. The same background or experience caused the basis of relationships between Java and other islands of Indonesia. These relationships created nationalism among the people in Indonesia and then nationalism led to national movements.

This chapter presents an overview of Indonesia and relationships between its provinces. The chapter focuses on geographical characteristics, historical and political relationships, the nationalist and political movements, social and religious relationships, and on economic conditions and relationships during the centralisation era and the decentralisation era. Section 2.2 describes geographical and population characteristics. Section 2.3 provides a detailed account of historical and political conditions and relationships. Section 2.4 discusses social and religious relationships.

Section 2.5 presents an overview of economic conditions and relationships during the centralisation era and the decentralisation era. Section 2.5 concludes the chapter.

2.2 Geography and Population Characteristics

Indonesia is the world's largest archipelago which consists of more than 17,500 islands, 6,000 of which are inhabited. It is divided into 33 provinces and extends about 3,200 miles east to west and 1,250 miles north to south. Indonesia lies between South East Asia and Australia, geographically. There are several large islands namely Sumatra, Java, Kalimantan (Indonesian Borneo), Sulawesi (Celebes) and Papua (the Indonesian half of New Guinea, which is sometimes known as Irian Jaya). Indonesian capital city is Jakarta which is located on Java (West Java). Based on 2003 Satellite Imaging Data, nearly 60 per cent of Indonesia's land is forest and a significant portion is mountainous and volcanic. Some mountains on Sumatra and Irian Jaya exceed 3,000 metres in height. Mt Merapi, on Java, is regarded as the most volatile of Indonesia's 500 volcanoes – 12% of which are still active. Indonesian archipelagos are illustrated in Figure 2.1.

Based on the 2000 Population Census, population of Indonesia was 205.1 million persons in 2000. Between the inter-census periods of 1999-2000, the average growth of population was 1.35 per annum (Suharno, 2007, p.2).

Figure 2.1 Indonesia Archipelagos

Indonesia's inhabitants consist of about 300 ethnic groups, but the major ethnic groups are: Javanese at 45 per cent, Sundanese at 14 per cent, Maduranese at 7.5 per cent, and coastal Malays at 7.5 per cent, and Chinese, Indians, Bataknese, Torajanese, Bugisenese, Dayaknese, Banjarnese, Kutainese, Tidungnese, Bulungannese, Beraunese, etc. at about 26%. Many Indonesians see themselves firstly by their ethnic group and cultural group, and secondly as Indonesians.

Indonesia has several legitimate religions. Muslims dominates among the religions at about 87 per cent, and 6 per cent are Protestants, 3 per cent are Catholics, 2 per cent are Hindus and 1 per cent is Buddhists. Whilst all of these religions are formally recognised in Indonesia, the Government is secular and therefore not based on a single religion. It was possible to build the Indonesian nation as a republic because Muslim communities dominate the population, and religious approach can be used for integrating the country.

Indonesia's diverse population are bound together by the usage of the *Bahasa Indonesia*, the national language and *Pancasila* as the national philosophy which has five principles of philosophy such as: belief in one God, just and civilised humanity, the unity of Indonesia, democracy led by the wisdom of deliberations among representatives, and social justice for all Indonesian citizens.

2.3 Historical and Political Relationships

Historical records show that Indonesian territories were occupied by colonial powers from 1596 until 1945, and the colonialism created relationships among people in Indonesia. At the same time people experienced poor living conditions because they were exploited by the colonial powers.

The Portuguese attempted to control all of Indonesian spice trade and had created a monopolistic market. In this case, the Portuguese was the only people that could buy the spices from the farmers and they themselves decided the prices of spices. Kumar (1985) states that the Portuguese still could not monopolise the trade in spices in the second half of the sixteenth century because they had a shortage of manpower – soldiers and sailors – and of shipping; the extent of a private trade among officers of the crown, and the desire to exclude Portuguese Jews or new Christians from commerce. Political and economic movements in Europe were equality important.

McKay (1976) states that the initial aim of the Portuguese was the complete control of spice trade, and that they made agreements with the producers in the

Bandas and the Mollucas first. This meant that they were encroaching on the businesses which had previously been almost exclusively in the hands of the Javanese.

The indigenous people fought against the Portuguese because they felt disappointed with the Portuguese action especially monopoly market control of Indonesian spice trade including the control of distribution and prices of spices. The Sultan of Aceh from Sumatra, the Sultan of Ternate from Maluku and the Sultan of Demak from Java fought against the Portuguese, but all of them were defeated.

The Dutch invaded Kupang in Western Timor in 1651, and they divided Indonesian territories into two colonies where the Dutch controlled the Western part while Portuguese occupied the Eastern part of Indonesia, especially the East Timor, until 1975. Indonesian natural resources led the Dutch to arrive in Indonesia, and they established the Dutch East India Company (VOC) in 1602 with the special purpose of protecting the spice merchants, so that they could earn huge profits from spice trading monopoly.

Legge (1964) points out that in 1602 the Netherlands United East India Company, *Vereenigde Oostindische Compagnie (V.O.C),* was formed and the company became the instrument by which the Netherlands, in succeeding years was able to exclude all the European rivals from the trade in Archipelago. Robertson and Spruyt (1967) note that with the formation of the East India Companies (English, 1600 and the Dutch 1602) the trade was regulated, and this ended the tremendous opportunities that had enabled rulers in Indonesia to raise prices by bargaining with the individual merchants. According to Dick (1990), the Dutch East India Company

attempted to monopolise re-trade, so the Dutch could control prices and distribution channels of spices.

The Dutch government had a firm control especially on the territories such as Java after VOC nationalisation in 1799. The Dutch not only exploited Indonesia's natural resources but also discriminated against the indigenous people, whereas only the Dutch families and the rich families could get an education.

Some of the Moslem Kingdoms in Java, which had political power, became the enemy of the Dutch. Foe example, Sultan Agung Hanyokrokusumo from Mataram attacked the Dutch in Batavia, but Jan Pieterzoon Coen's Dutch soldiers defeated the Sultan's troops. Coen, as the governor-general from 1618 to 1623, attempted to use various strategies in achieving spice trading monopoly for the Netherlands. Sultan Hasanuddin from Goa and Prince Trunojoyo from Madura also fought the Dutch in 1666, but they were repulsed and killed by the Dutch. After that the Dutch could implement all their regulations and rules for their benefit, which led to their monopoly of all commerce.

"After the seizure of Ambon in the Moluccas in 1605 and Banda Island in 1623, the Dutch secured the trade monopoly of the spice islands. A policy of ruthless exploitation by "divide and rule" tactics was carried out. In this way indigenous inter-island trade, like the between Makassar, Aceh, Mataram and Banten, as well as overseas trade, was gradually paralyzed. Indonesia was reduced to an agricultural country to supply European markets. At the same time, the Dutch adopted a so-called

open-door toward the Chinese in order that they serve as middlemen in their trade with Indonesia" (AsianInfo.org, 2005, Viewed: 11/11/06).

Because of the Dutch mismanagement and corruption the VOC went bankrupt and all of its territories were taken over by the Dutch Administration on December 31, 1799, and then the Netherlands sent a governor general representative leader in Batavia.

For developing Java, Daendles, who was the highest leader in Indonesian territories in 1808-1812, had implemented two policies, one for VOC officers and the other for the indigenous people. For VOC officers he avoided corruption, on the other hand he pushed the indigenous to work hard. He used stick method and succeeded in bringing the Javanese to work hard, so in one year they could build a 1,000 km road from Anyer (Merak) to Panarukan (Banyuwangi). Van den Bosch thought that the Javanese were lazy, so they were pushed to work hard with a certain returns target. Even though it was a success, only the Dutch benefited. (Soetomo, 2004).

The other European colonial power was the British, which first came to conquer Indonesia as a new European colonialist. Ricklefs (1990) notes that on 4 August 1811, sixty British ships departed to Batavia, which fell to the British on 26 August 1811. As the British Lieutenant Governor General of Java, Thomas Stanford Raffles implemented partial self-government and the land-tenure system. Crops planted on the land were surrendered to the British government. Moreover, he abolished all types of slavery in Indonesia.

The British, as Indonesian imperialist, did not last long because the British and the Dutch had signed a convention related to Indonesian territories, so Indonesia went back to the Dutch colonialism since 1815 and until 1942. During this period, Indonesians lived with full of sadness, poverty, and suffering which resulted in some wars, namely Diponegoro War (Java War), Moluccas War, Paderi War, and Goa War, but all of them were defeated.

Japanese took over Indonesia from the Dutch in March 1942 and announced that they were "Great East Asia Co-prosperity" and not the colonialists like the Portuguese, the Dutch or the British. They came to Indonesia with the main aims of granting Indonesia freedom, but Indonesia realised that Japanese are the new imperialists of Asia. Robertson and Spruyt (1967) state that the Japanese occupation was at first accepted by the people because they thought Japanese would help them but it was not the case. One of the most important outcomes of the Japanese colonial era was that the Japanese established the Investigating Committee for Preparatory Work for Indonesian Independence (BPUPKI), which had delegates from other Indonesian areas such as Sumatera and East of Indonesia. All of the colonial powers came to Indonesia with the main aim of exploiting Indonesia's natural resources, because those offered potential prospects for entering the European market.

Although the Japanese occupied Indonesia for only about 3 years, they caused suffering and poverty among people, and treated indigenous people cruelly and brutally. They not only raped many women but also killed many people since they conquered Indonesia. On the other hand they formed Indonesian groups to help Japanese defeat their enemies namely the Dutch, Americans and the British. PETA is

the name of Indonesian troops, which are formed by the Japanese. They were allowed to use Indonesian red and white national flag, *Indonesia Raya* as the national anthem, and *Bahasa Indonesia* as the national language.

2.3.1 The Nationalist and Political Movements

All of the wars fought by Indonesians separately against the different colonialist (the Portuguese, the Dutch, the British and the Japanese) failed. Thus far it was reasonable because at that time Indonesia lacked educated people. Moreover the colonialists always placed a restriction on activities including organised behaviour in Indonesia. However, Indonesians realised that a war could not be fought regionally and without any proper planning and organisation, but should be integrated and fought from many directions with proper planning, organisation, strategies and tactics.

Robertson and Spruyt (1967) state that from 1902 until 1912, new leaders asking each region in Indonesia to begin the task of rebuilding Indonesian self-respect, and started systematic educational programmes and mutual-assistance societies. Related to systematic educational programmes, it should educate people that they consists of several traditional cultures but they have to rebuild their regions for achieving economic welfare which had been suppressed by strict rules of the Dutch.

Indonesia has had three nationalist movements before independence, namely Kartini movement in 1879, *Boedi Oetomo* movement in 1908 and Youth Pledge in 1928, which led to form the Indonesian Republic and had integrated most of the islands and ethnic groups with different religions and many languages.

Raden Ajeng Kartini was the first woman who campaigned for equality of women continuously and consistently. She was born on 21 April 1879 in Jepara as one of Javanese nobility. Because of her social status, she could go to a Dutch elementary school and that school was established for Javanese nobility and the Dutch children. On the other hand, The Javanese girls should stay at home after finishing their primary school, so their fathers did not allow them to continue schooling but to stay at home for four years. Kartini wrote letters to her friend in Holland (the Netherlands) and told how disappointed she was. In her letter she explained what she had expected in the future, and then her letter was published with the title "from the dark to the light".

Kartini thought it was not fair and no justice for females because not only males became educated but also females should have the same right. Based on her experience, Kartini began to fight for females to have the same rights especially in getting education. She was successful in establishing a school for indigenous girls.

> "Kartini's school was a breakthrough in Indonesian education. It was the first school opened for Indonesians regardless of their status. The school put moral education above the mind education. In her mid twenties, Kartini died giving birth to her only son. Her admirers established a string of Kartini Schools. She had inspired other Indonesian heroines, Kartini struggled for society to come out of its ignorance and prejudice to education and equality. She fought against gender and status discrimination." (Expatforum.digitaldevelopment.com, 2004, viewed: 15/11/06).

The second nationalist movement was when Dr. Sutomo established *Boedi Oetomoe* and the students of STOVIA, influenced by Dr. Wahidin Soedirohoesodo and assisted by Gunawan and Suradji on 20 May 1908 (Syukri, 2003). This organisation focused on the education field, which was also set up for the main purpose of upgrading education in Indonesia, but it was involved in political activities.

"The move began with the founding of *Boedi Oetomo*, literally meaning "noble conduct," on May 20, 1908. This organization of Indonesian intellectuals was initially set up for educational purposes but later turned into politics. It was inspired by Japan's victory over Russia in 1901, which also gave impetus to nationalist movements in many parts of Indonesia. The founder of *Boedi Oetomo* was Dr. Soetomo who was greatly influenced by Dr. Wahidin Soedirohoesodo and supported by Gunawan and Suradji." (AsianInfo.org, 2005, viewed: 07/09/2006).

E.F.E Douwes Dekker proclaimed Indonesian nationalism, and assisted by Suwardi Surjaningrat (*Kihadjar Dewantara*) and Tjipto Mangunkusumo, established the *Indiche* Party in 1911. After that, an organisation was established, namely *Sarikat Dagang Islam* in 1912, formed by Haji Samanhudi. This organization had its main aim as stimulating the business in Indonesia, but it became a political party later under H.O.S Tjokroaminoto and Haji Agoes Salim. In the same year, in Yogyakarta, KH Ahmad Dahlan formed a modern organisation, which was named *Muhammadyah*. This organisation's main purpose was to reform Islam in Indonesia and to reduce the influence of Christianity.

Ricklefs (1981) states that the most significant modern organization of Indonesia was *Muhammadyah,* which was established in Yogyakarta in 1912 by Kyai Haji Ahmad Dahlan (1868-1923), and supported by Yogyakarta Sultanate. *Muhammadyah* was involved in educational and welfare efforts. In 1924, *Perserikatan Komunis Indonesia* (PKI) was changed to *Partai Komunis Indonesia* (the Indonesia Communist Party). PKI was established on July 4, 1927. Soekarno and his *Bandung Study Club* formed a new political party namely the *Perserikatan Nasional Indonesia* (Indonesia Nationalist Association), with Soekarno as chairman.

One of the most important movements was born on October 20, 1928, when delegates from Indonesian archipelago called Yong Java, Yong Ambon, Yong Sumatera, Yong Celebes, and Yong Kalimantan proclaimed Youth Pledge. The *Sumpah Pemuda*, or Youth Pledge, was a promise given by the Indonesian Youth Nationalist as follows:

> *Satu Tanah — Tanah Air Indonesia (*One nation — the Indonesian nation*)*
> *Satu Bangsa — Orang Indonesia (*One people — the Indonesian people*)*
> *Satu Bahasa — Bahasa Indonesia* (One language — the Indonesian language*)* (Answer.com, Viewed: 9/8/07).

After this moment, all of the organisations in Indonesia had a very strong ambition to build a nation, which was named Indonesia, with Indonesian language as a national language. Indonesian ambition became a reality on August 17, 1945, after the Japanese surrendered to the United State of America. Soekarno and Hatta proclaimed Indonesian Independence to represent the whole of the Indonesian people.

Soekarno and Hatta became the first president and vice president, respectively, of the Republic of Indonesia.

2.4 Social and Religious Relationships

The other type of relationships between Java and other provinces in Indonesia are social and religious relationships, which include Indonesian communitites, with specific characteristics and social behaviour. Indonesian social classes are based on their races, but that changed since 1940.

McKay (1976) argues that the most obvious social change by 1940 was the appearance of a society dominated by race. In the 1800s there were different communities with their own social systems and they were isolated from one another. McKay mentions that a clear racial status had asserted itself as more important than all others. In Java the social classes were Javanese rulers, nobility village headmen, villagers, and slaves. The classification of social status in other Indonesian regions was similar to the Javanese social status. Social status is one of social relationships, in which most of the Indonesian communities have the same status classification, namely village headmen and villagers or slaves. All the regions felt they were similar to each other, so it was as a prime motivation in establishing one nation Indonesia.

The most important social relationship is the religion, which had integrated many ethnics in different islands in one direction. The majority of Indonesian communities are Moslems (Islam), and the others are Catholics, Protestants, Hindus, and Buddhists. According to Indonesia Statistic Bureau (BPS, 2000) 88.2 per cent of

population are Moslems, 5.9 per cent Protestants, 3.1 per cent Catholics, 1.8 per cent Hindus, 0.8 per cent Buddhists, and 0.2 per cent other religions.

2.5 Economic Conditions and Relationships

Economic factors were significant for considering why Java become the centre of government until now, which has been settled for over 55 years. Jakarta was the capital city of Indonesia for most of the period, but Soekarno as the first president of Indonesia moved the capital city to Yogyakarta for about one year.

Since the colonial era, Java was identified as the island, which was the most important geographically and economically with its natural resources. It is located between Sumatera Island on the west side and Madura, Bali, Sulawesi, Irian Jaya Island on the east side, so it was natural that Java became the centre of trading and distribution. Java's land is suitable for growing many kinds of spices. Java's land is the most fertile among Indonesian land, and it returns very high quality agricultural products that fetch high prices. The products sold in European markets easily, and that was the main reason why the colonial powers implemented the crop intensive agriculture in Java and they focused to exploit Java land rather than other islands like Sumatera, Sulawesi or Kalimantan. McKay (1976) states that the communities were using the "*ladang* system", in that slashing and burning an area of the jungle cleared land. This temporally enriched the soil. Then a variety of crops were planted.

Because of Java's potential economic value, the colonial powers, especially the Dutch built infrastructure including bridges, roads, rail ways, etc, so in

infrastructure Java Island was the more ready than other islands in Indonesia. Good infrastructure gave a new multiplier economy effect that stimulated economic growth.

In Java, Raffles implemented the land rent programme of the British in 1830, even though it was not very successful. Another plantation programme was the culture system, which was implemented by Van den Bosch since 1820 where the Javanese villages should plant the crops for the government on a part of their land. It succeeded, because it involved very little disruption to the traditional economy or society (McKay, 1976).

2.5.1 Centralisation Era

2.5.1.1. *1945-1965 Period*

On 17 August 1945, Soekarno declared the Indonesian Republic and he was the president of Indonesia during 1945-1965. During that period, Indonesia had implemented centralisation system which had priorities of development as (1) Stabilisation of political conditions and (2) Economic growth.

Soekarno had attempted to implement liberalism during 1945 to 1960 and then it was replaced by socialism and communism during 1960 to 1965, with *Nasakom* (Nationalism, Religion and Communism) as the motto but still using *Pancasila* as the way of life. Almost all of the Indonesian development planning in centralisation era did not work as well as planned. Even though Soekarno was a very charismatic leader, who was very powerful, he could not implement what he planned. In fact, Indonesian political conditions were not stable. There were economic depression and hyperinflation in 1965. According to the Central Bank of Indonesia, inflation rate in

1959 was 22.2 per cent, and then gradually increased. In 1965, it reached the highest rate of 594 per cent (see Table 2.1).

Table 2.1: Inflation Rate in Indonesia during 1958-1965

Year	Inflation (%)
1958	46
1959	22
1960	38
1961	27
1962	174
1963	119
1964	135
1965	594

Source: Central Bank of Indonesia (BI), 2005

Touwen (2005) noted that, during the period 1949-1965, especially during 1950-1957, Indonesia did not have any significant economic growth. During 1958-1965, growth rate dropped because of the worst conditions in political atmosphere and inappropriate economic policy. Soekarno attempted to make Indonesia economically independent and self-sufficient. Dick (2002) and Mackie (1967) point out that there were economic problems in Indonesia in some years during 1945-1965 due to the economic system and policies of Soekarno, which eliminated foreign economic control and kept the dominant role of the Army. In fact, real GDP per capita of Indonesia decreased from 1959 to 1960 and again from 1961 to 1964 (see Table 2.2).

Table 2.2: Real GDP and Real GDP Per Capita in Indonesia, 1958-1965

Year	Real GDP (Rp. Billion)	Real GDP per capita (Rp.)
1958	386.5	4289
1959	387.9	4212
1960	390.5	4145
1961	406.5	4217
1962	403.4	4091
1963	396	3929
1964	406.6	3940
1965	429.7	4054

Source: Central Bank of Indonesia (BI), 1966:3

Note: All GDP values are in constant 1960 prices.

In his Independence Day speech of 17 August 1959, President Soekarno inaugurated "Guided Democracy" *(Demokrasi Terpimpin)* and its corollary "Guided Economy" *(Ekonomi Terpimpin*). The "Guided Economy" *(Ekonomi Terpimpin)* was run by both market processes and foreign enterprises, and it worked until September 1965. Hal Hill (1996) claims that Indonesia experienced modest economic progress during the early years of independence. However, the political environment became increasingly volatile and unpredictable towards the end of the decade, especially following the regional insurrections and the expropriation of Dutch properties in 1957-58.

Although the majority of Indonesian people supported Soekarno because of his charismatic leadership, Indonesia still faced many types of barriers in achieving economic development. A significant barrier was the variety of ethnics, which contributed to poor economic conditions. There are hundreds of ethnics and lingual

groupings and they blocked each other especially in business networking, so it led to a large income gap among communities.

Glassburner (1971) divided Indonesian ethnics into four broad categories of economic significance, namely, the Chinese minority; Hindu inland community based on wet-rice culture; the trade oriented, strongly Islamic coastal people; and the tribal groups of mountainous interior regions (mainly in the outer islands). Of these the Hindus in interior regions were by far the most numerous. It was the Chinese, however, who had a vastly disproportionate share of economic power. They were hard workers and also had a very neat and strong business network especially in the trading field. In practical terms, the indigenous were paid more attention by the government; so many Chinese had tried to become Indonesian citizens for their rights as well as indigenous, but most of the Chinese failed and it led to a negative impact on Indonesian economic growth.

Glassburner (1971) states that as the economy generally faltered under President Soekarno's leadership, the Chinese lost financially, and were subjected to harassment and occasional expulsion, particularly in the villages and rural areas. During the bloody aftermath of the attempted political coup in 1965, the situation deteriorated still further for many Chinese. In many localities the purge was much more anti-Chinese than anti-communist, and thousands of Chinese were killed. However, the economic position of strength held by the Chinese had by no means been destroyed.

Another problem was in the area of education. Not many children could attend the schools. It was because of a very limited university and school facilities, which lacked human resources. Low incomes of people and income inequality were other reasons. Moreover, Indonesia lacked infrastructure. Most children still lived in the small villages and they had to walk for some kilometres to get to the school or university. The government had insufficient funds to build new school buildings and just used the school buildings built during the Dutch era.

2.5.1.2. *1966-1996 Period*

After Soekarno lost his power base because of his involvement in the 30 September 1965 coup, General Soeharto had his authority as the Indonesian leader on 11 March 1966 by the Presidential Decree (referred as *Supersemar*, the acronym of *Surat Perintah Sebelas Maret*, Presidential Decree of 11 March 1966), There were several commands in this decree such as to restore order, to facilitate the functioning of the government, to protect the President, and to safeguard the Indonesian revolution. Kian Wie (2002:194) states that the dismissal of Soekarno was followed by the appointment of Soeharto as Acting President in March 1967 by the Provisional People's Consultative Assembly, the country's highest state body.

Based on the government's programme and policies, Soeharto's development programme can be divided into three phases as follows:

1. 1966-1973: stabilisation, rehabilitation, partial liberalisation and economic recovery.
2. 1974-1982: oil booms, rapid economic growth and increasing government intervention.
3. 1983-1996: post-oil boom, deregulation, renewed liberalisation and rapid export-led growth.

The three priorities were followed by *Repelita* Programs or the five planning developments with eight lines of equity. Mubyarto (2003b) says that the Indonesian economy, which was known as a socialist economy until 1966, was replaced by a capitalist economy on the New Order Economy during 1966-1998. The economic system was based on the philosophy of the Indonesian State (hereafter *Pancasila*) and the Constitutional Court of Indonesian Republic (hereafter UUD 1945) article 33 (sub article 2), but actually it was economic inequality practically, and led to bigger income gaps among the people. Hill (2000, p.11) points out that, "the economy of Indonesia recovered amazingly from the dislocation of the 1960s, and the GDP was in double-digit growth for the first time in 1968. Thereafter, rapid annual growth, of at least 5 per cent, was maintained until 1982, when softening international oil markets induced a sharp slowdown. This subdued expansion continued until 1986. In 1984 a massive oil and gas investment came on stream, boosting industrial expansion to 10 per cent. By the end of the 1980s, the economy had recovered and growth rates in the 6-7 per cent range were again being recorded, not too far short of those of the high-growth oil boom period".

As Table 2.3 shows Indonesian GDP has recorded the highest growth rates during 1990 - 1996.

Table 2.3: Economic Growth in Indonesia, 1965-1996

	Annual Average Growth Rate (%)		
	1965/1990	1980/1990	1990/1996
GDP	7.0	6.1	7.7
Agriculture	4.3	3.4	2.8
Services	7.3	7.0	7.4

Source: World Bank 1992: 220, 222; 1998b: 177, 181.

Kian Wie (2002) argues that even though there was rapid economic growth during Soeharto regime, it was not followed by improvements in primary health care or education. Moreover, the government did not pay any attention to people below poverty line, and the rural sector was forgotten because government just focused on multinational companies.

2.5.1.3 1997-1999 Period

Following the spread of the currency and economic crisis that originated in Thailand ("the Asian Crisis"[1]), by July 1997, Indonesian economy changed for the worse. Indonesian currency (rupiah) began to depreciate heavily. Julianery (2002) notes that by the second week of July 1997 the Indonesian currency depreciated from Rp 2,432 per $US to about Rp 3,000 per $US. It further depreciated to Rp 11,050 per $US by the end of January 1998. Kian Wie (2002) states that the rupiah depreciated continuously by 80 per cent to January 1998 while inflation rate increased by more than 50 per cent, resulting in a multidimensional economic crisis.

All of the above conditions pushed Soeharto to resign as the Indonesian President on 21 May 1998 and BJ. Habibie was appointed as an acting president until 20 October 1999.Conditions in Indonesia suddenly changed after Soeharto was replaced by BJ. Habibie (as the acting president). Habibie attempted to develop a process of democratisation and reduction of military power in Indonesia. But the economic conditions did not significantly change. Hill (2001) states that from March

[1] There is a considerable body of literature on the causes, consequences and aftermath of the Asian Crisis. For example, see Garnaut (1998), McLeod and Garnaut (1998), Miller (1998), Radelet and Sachs (1998), Tobin (1998), Wade (1998), Agenor, Miller, Vines and Weber (1999), Corden (1999), Karunaratne (1999), and Stanford (1999).

to September 1998, inflation rate was high and then gradually declined several months after.

Habibie became the third president of Indonesia, while Indonesia was experiencing the impact of the currency crisis since 1997. With the government policies, Indonesia was able to recover from the crisis, but the recovery was slower than in Malaysia, Thailand and South Korea. Bird (2001) notes that Indonesia's progress toward the recovery relative to the other countries most seriously affected by the deeper currency crisis and Indonesia had the biggest fall in GDP in 1998. Indonesia's real economic growth dropped significantly from the first quarter 1997 to the third quarter 1998, from about 8 per cent to 2 per cent.

McLeod (1998, p.31) notes that "in the first half of 1997, the Indonesian economy seemed to be performing very well. Inflation, having averaged a moderate 9 per cent per annum since the early 1980s, had been reduced to 6 per cent in 1996 and to 5.1 per cent in the year to June 1997. Output grew rapidly in the year to June 1997, by 7.4 per cent, and investment grew by 16.5 per cent. The budget had been managed in a conservative manner for years – so much so that the government had built up a nest egg estimated at US$ 11 billion (before the float) in banking system deposits and was able to prepay a small but significant amount of its outstanding debt in 1996".

Unfortunately, in July 1997 crisis began to emerge in Indonesia and impacted on the real sector. It was despite a huge improvement in competitiveness by virtue of devaluation, exports failed to take off as might have been expected. Notwithstanding the spreading recession, inflation began to accelerate rapidly towards the end of 1997

and early in 1998 led to a great pressure on the rupiah price of tradable. The CPI increased at an annual rate of about 104 per cent per annum for the six months through May 1998. Among the South East Asian countries, Indonesia had the worst and longest financial and economic crisis. This can be seen from the comparison of GDP growth rates presented in Table 2.4.

Table 2.4: Comparison of GDP Growth Rates of East Asian Countries, 1997 to 1999 (in per cent)

Country	1997	1998	1999
South Korea	5.0	-5.8	10.3
Indonesia	**4.7**	**-13.7**	**0.3**
Malaysia	7.7	-6.7	5.0
Philippines	5.2	-0.5	3.3
Singapore	9.0	0.3	7.2
Thailand	-1.3	-9.4	4.2
China	8.8	7.8	7.6

Source: IMF (1999), World Economic Outlook.

The worsening economic and financial conditions and resultant social unrest put pressure on Soeharto to resign as the Indonesian President on 21 May 1998 and BJ. Habibie was appointed as acting president until 20 October 1999. Habibie became the third president of Indonesia, while Indonesia was experiencing the impact of the currency crisis. Habibie attempted to develop a process of democratisation and reduction of military power in Indonesia. But the economic conditions did not change significantly. With the government policies, Indonesia was able to recover from the crisis, but the recovery was slower than in Malaysia, Thailand and South Korea because Indonesia was most seriously affected by the deeper currency crisis and in 1998 Indonesia had the biggest fall of GDP. Hill (2001) states that, from March to September 1998, inflation rate was high, but after that gradually declined for several months.

2.5.1.4 A Comparison of Economic Structure of the Provinces of Indonesia in the Centralisation Era

The economic structure of selected provinces in Indonesia such as Aceh, East Kalimantan, Central of Java, Bali and South Sulawesi in relation to the sector-wise distribution of GDP in 1975 is represented in Table 2.5. The agricultural sector dominated the GDP in the provinces of Aceh, Central of Java and South Sulawesi, except East Kalimantan where the mining sector dominated the GDP.

Table 2.5: Comparison of the Structure of Gross Domestic Product of Selected Provinces of Indonesia, 1975 (percentage)

Sector	Province				
	Aceh	East Kalimantan	Central of Java	Bali	South Sulawesi
Agriculture	47.3	13.9	47.1	47.8	53.0
Mining	16.7	51.9	0.6	0.6	0.1
Manufacturing	3.5	4.8	10.4	3	3.6
Utilities	0.2	0.1	0.2	0.3	0.5
Construction	2.4	1.9	3.1	7.9	0.9
Trade	9.8	11.2	2.9	11.1	17.3
Transport and communication	7.8	7.8	18.3	8.4	6.2
Finance	0.1	0.5	1.1	0.9	0.7
Accommodation	2.6	2.1	3.7	1.3	3.3
Public administration	8.3	5.2	9.7	5.2	13.7
Other services	1.3	0.7	2.9	12.6	0.9

Source: Hill, 1991.

Trade, public administration, transport and communication sectors were the second largest sectors after agriculture for Aceh and East Kalimantan, manufacturing and transport and communication sectors for Central of Java, other services and trade for Bali, while trade and public administration dominated in the South Sulawesi province.

After ten years, in 1984, the structure of GDP among the provinces was comparable to that in 1975, except Aceh. In 1984, mining dominated the GDP of Aceh province. In 1975, only East Kalimantan had mining as the main component of GDP. The details of the GDP structure in the selected provinces in1984 can be seen in Table 2.6.

Table 2.6: Comparison of the Structure of Gross Domestic Product of Selected Provinces of Indonesia, 1984 (percentage)

Sector	Province				
	Aceh	East Kalimantan	Central of Java	Bali	South Sulawesi
Agriculture	15.9	14.5	34.5	42.2	44.5
Mining	68.6	53.4	0.5	0.7	1.1
Manufacturing	1.8	7.1	7.2	4.4	3.9
Utilities	0.1	0.2	0.7	0.8	1.0
Construction	1.1	10.5	6.2	6.3	1.9
Trade	4.9	8.3	6.3	15.6	19.3
Transport and communication	4.5	3.4	20.2	9.5	11.1
Finance	0.3	0.5	1.7	2.2	1.6
Accommodation	0.5	0.8	3.2	0.9	3.3
Public administration	2.4	0.9	15.2	8.1	11.5
Other services	0.3	0.6	4.3	9.2	0.8

Source: Hill, 1991.

In 1984, mining and agricultural sectors were the main components of GDP in Aceh and East Kalimantan provinces. The dominance of almost all other sectors declined in 1984 compared to 1975, except mining for Aceh, while in East Kalimantan the share of construction sector in GDP gradually increased and reached 10.5 per cent. In 1984, after agriculture, trade, transport and communication, and public administration sectors had the largest shares in GDP in the provinces of Central of Java, Bali and South Sulawesi.

The economic structure of Central of Java in relation to the sector-wise distribution of GDP during 1994-1996 is represented in Table 2.7. During this period, the industrial sector dominated the GDP in the Central of Java. The other major sectors were trading, agriculture and other services.

Table 2.7: GDP Structure of Central of Java Province by Sector, 1994-1996

(based on Constant Price 1993; Rp 000,000)

Sector	1994	1995	1996
1. Agriculture	7.782,1	8.211,2	8.488,0
2. Mining	432,9	471,6	527,6
3. Industry	11.322,1	12.260,2	13.327,6
4. Electricity, Gas & Water	264,7	304,1	346,8
5. Contruction	1.688,7	1.808,2	2.011,5
6. Trading	7.580,7	8.337,9	9.034,3
7. Transportation & Telecomunication	1.378,9	1.510,6	1.705,2
8. Finance & Sevice Industry	1.869,2	1.974,2	2.114,6
9. Other services	4.025,9	4.135,9	4.306,6
Total	36.345,2	39.013,9	41.862,2

Source: BPS, Central Statistics Bureau of Indonesia, 1996

2.5.2 Decentralisation in Indonesia: Background and Impact

Indonesia embarked upon the decentralisation era when President Habibie's government approved the Law No 22/1999 which explained fiscal and finance issues and the Law No 25/1999 related to administrative matters. But each of the regional governments was not ready to use these Laws for the development of their regions. Each regional government had to prepare everything from scratch, especially to find the experts in administrative and fiscal and finance fields. Thus, President Abdurahman Wahid's government implemented both of these Laws to be effective for all the provinces in Indonesia since January 2001.

Indonesia had a marked change after decentralisation (regional autonomy policy) was implemented. The direction of development of the provincial regions was not from the centre of government anymore, so each province can propose their budgets every year. It led to increase Java and regional budgets, and it was expected that each province's economy will grow faster, and the number of people living below the poverty can be reduced.

Lewis (2001) states that beginning in fiscal year 2001, provincial and local governments assume major new expenditure responsibilities. Substantial functions for provinces have been outlined in a 1999 government regulation *(Republik Indonesia* 1999c*)*. Local government responsibilities, regrettably, have been rather vaguely defined via a 'negative list', but are nonetheless expected to be considerable. *Kabupaten* and *kota* (districts and municipalities) essentially became responsible for all public services that the central and provincial governments did not deliver, at least in 11 important areas: public works, health, education and culture, agriculture, communications, industry and trade, capital investment, environment, land, cooperatives and labour.

By implementing the autonomy the regional governments also can obtain the revenue from natural resources such as the revenues from fisheries, forestry, mining, gas and oil. Moreover, the provinces obtain a share of personal income tax. The most important point is the important inter-governmental grants that have been created, namely the *Dana Alokasi Umum* (DAU, General Purpose Fund) and *Dana Alokasi Khusus* (DAK, Specific Purpose Fund).

The decentralisation has had resulted in some positive impacts on the Indonesian economy. Indonesian GDP growth rate was positive during 2001 to 2005, and GDP per capita increased by 4.8 per cent annually during the same period, increasing from US$ 675 in 2001 to US$ 1,267 in 2005. This was in contrast to the decline of GDP Growth rate to –13 per cent in 1998. When the decentralisation era started in 1999, GDP growth gradually increased from 1 per cent in 1999 to about 5 per cent in 2000. Even though Indonesian GDP increased in the next several years, it grew very slowly at around 4 per cent in 2001 and 6 per cent in 2005.

The detailed indicators of economic performance of Indonesia during the decentralisation era are presented in Table 2.8.

Table 2.8: Indicators of Economic Performance in Indonesia during the Decentralisation (2002-2006).

No	Indicator	2002	2003	2004	2005	2006
1	GDP with constant price of year 2000 (trillion Rp)	1,506.10	1,579.60	1,660.60	1,749.60	905.6 (1)
2	GDP Growth (%)	4.38	4.88	5.13	5.6	4.97 (1)
3	Inflation (%)	10.03	5.06	6.4	17.11	4.96 (2)
4	Total Export (billion US$)	57.0	55.6	69.7	85.57	73.47 (3)
5	Non Oil and Gas Export (billion US$)	44.9	43.1	54.1	66.32	57.52 (3)
6	Total Import (billion US$)	31.2	29.5	46.2	57.55	45.63 (3)
7	Non Oil and Gas Import (billion US$)	24.8	22.6	34.6	40.16	31.16 (3)
8	Trade Balance (billion US$)	25.8	26.1	23.5	28.02	27.84 (3)
9	Current Account (billion US$)	4.7	4.0	2.9	0.93	3.42 (1)
10	Foreign Reserves (billion US$, year end)	32.0	36.3	35.93	34.72	39.77 (7)
11	Foreign Debt Position (billion US$)	131.3	135.4	136.1	133.5	131.8 (8)
12	Rupiah/US$ (Bank Indonesia Middle Rate)	8,940	8,330	9,355	9,830	9,110 (7)
13	Total Government Revenue (trillion Rp)	299.0	340.7	407.5	516.2	539.4 (*)
14	Total Government Expenditure (trillion Rp)	244.0	258.1	306.1	542.4	559.3 (*)
15	Budget Deficit (trillion Rp)	-23.2	-37.7	-17.4	-26.18	-19.9 (*)
16	Base Money (trillion Rp)	138.3	136.5	199.7	239.8	250.1 (4)
17	Money Supply (trillion Rp)					
	a. (M1)	191.9	207.6	253.8	281.9	311.82 (5)
	b. (M2)	883.9	911.2	1,033.50	1,203.20	1,248.2 (5)
18	Banking Third Party Fund (trillion Rp)	845.0	866.3	965.1	1,134.10	1,199.2 (4)
19	Banking Credit (trillion Rp)	365.4	411.7	553.6	689.7	723.7 (4)
20	Interest Rate (%, annually)					
	a. 1 month SBI	12.9	8.1	7.4	12.75	11.75 (4)
	b. 1 month Time Deposits	12.8	7.7	6.4	11.98	11.1 (5)
	c. Working Capital Credits	18.3	15.8	13.4	15.92	16.1 (5)
	d. Investment Credit	17.8	16.3	14.1	15.43	15.9 (5)
21	Investment Approval					
	- Domestic (trillion Rp)	25.3	16.0	36.80	50.58	107.93 (3)
	- Foreign (billion US$)	9.7	6.2	10.3	13.58	10.52 (3)
22	JSX Composite Index	424.9	742.5	1,002.20	1,162.60	1,582.6 (7)
23	JSX Market Capitalization (trillion Rp)	268.4	411.7	679.9	758.4	932.2 (5)

Source: BPS, BI and JSX

1) 1st Semester
2) January – October 2006
3) January – September 2006
4) Position at the end of August 2006
*) in the State Budget 2006

5) Position at the end of July 2006
6) Position on August 8th 2006
7) Position at the end of October 2006
8) Position at the end of 1st Quarter of 2006

Note:
BPS (*Biro Pusat Statistik*/Central Statistics Bureau of Indonesia)
BI (Bank Indonesia/Central Bank of Indonesia); JSX (Jakarta Stock Exchange)

Real GDP increased gradually from 2002 to 2005, from Rp 1,506.10 trillion to Rp 1,749.60 trillion, but in the meantime it was followed by a fluctuating inflation rate (10.03 per cent to 5.06 per cent to 6.4 per cent and jumped to 17.11 per cent in 2002, 2003, 2004, and 2005, respectively). Indonesia's total exports were greater than its imports each year from 2002 to 2006. Trade balance was stable around $US 25.8 billion to $US 27.84 billion 2002 to 2006. However, the current account surplus gradually dropped from $US 4.7 billion in 2002 to $US 0.93 billion in 2005. The foreign reserves were stable between $US 32 billion and $US 40 billion during 2002 to 2006.

Indonesia's foreign debt had fluctuated from $US131.3 billion in 2002, to $US 136.1 in 2004. But, the government revenue increased each year; it increased from Rp 299.0 trillion in 2002 to Rp 516.2 trillion in 2005. The government expenditure also increased during that period, and it was more than double, from Rp 244.0 trillion in 2002 to 542.4 billion in 2005, so the government budget was in deficit year by year during the period. Indonesia's interest rate was in two digits from 2002 to 2006 (except in 2003 and 2004 when it was below 10 per cent). Both the domestic and foreign investments increased during this period.

2.6 Conclusion

Even though Indonesia experienced several different eras such as pre-colonial era, colonial era and post-colonial era, Indonesians proved that they were one nation, one land, and one language, which is called Indonesia because the regions had relationships between each other and it stimulated to build Indonesia as a republic

nation. The most important relationships are geography and population characteristics, historical and political relationships, social relationships, and economic relationships.

Indonesia experienced two main economic policy regimes, namely centralisation era and decentralisation era. Centralisation era is divided into two periods, 1945 to 1966 and 1966 to 1999. From 1945 to 1966, Soekarno as the first president of Indonesia Republic had development strategies of stabilisation of political conditions and economic growth by implementing the liberalism system during 1945 to 1960, and then that system was replaced by socialism and communism during 1960 to 1965. The economic conditions were getting worse due to the instability of political conditions and Indonesia experienced the worst inflation rate in 1965.

The New Order Government of General Soeharto took over the Soekarno's power during September 1965 until May 1998. In this period, Soeharto attempted to implement his development strategies, namely Short Term Development Planning known as Five Year Development Planning (*Rencana Pembangunan Lima Tahun*), and Long Term Development known as Thirty Years Development Planning (*Rencana Pembanguna Tiga Puluh Tahun*). Soeharto succeeded in leading to recover Indonesian economic growth, especially in the1980s, but in 1997, Indonesia experienced economic and monetary crisis that led the people power forcing Soeharto to resign as the Indonesian President on 21 May 1998 and BJ. Habibie replaced him until 1999.

Indonesian government attempted to implement decentralisation (regional autonomy) policy by announcing the law No 25/1999 about administrative matters, and on fiscal and finance issues, which were implemented effectively since 2001. With the implementation of decentralisation policy, Indonesia experienced a radical change because the development policy became a bottom up policy (from provincial governments to the central government). For more than 50 years until 2001, Indonesian government was running the top down policy (policy only from the central government). Indonesian economic conditions improved and the GDP showed a positive growth rate during 2001 to 2005, and GDP per capita increased by 17 per cent annually during the same period, increasing from US$ 675 in 2001 to US$ 1,267 in 2005.

The next chapter (Chapter 3) will present a literature review related to federalism and decentralisation theories, fiscal decentralisation theories, and decentralisation experience in Indonesia in comparison with that in Australia and Colombia.

CHAPTER 3
LITERATURE REVIEW:
FEDERALISM AND DECENTRALISATION

3.1 Introduction

The centralisation and decentralisation economic systems are adapted from several concepts that have contributed to establish economic systems including economic interchange between central and provincial governments. The most important concepts are *federalism* and *decentralisation*. The aim of this chapter is to review the concepts, theories and empirical studies related to federalism and decentralisation in order to provide the conceptual and theoretical foundations required for the empirical analysis undertaken in chapters 5 and 6 of the thesis. The remainder of Chapter 3 is structured as follows: Section 3.2 explains the concept and theories related to federalism. The literature on decentralisation and regional autonomy concepts will be reviewed in section 3.3. Section 3.4 focuses on a review of fiscal decentralisation theories. Implementation of inter-governmental fiscal relations is discussed in Section 3.5. A discussion of experiences related to decentralisation processes of Colombia (a developing country) and Australia (a developed country), in comparison with the decentralisation process of Indonesia, is provided in Section 3.6. A conclusion is included in Section 3.7.

3.2 Federalism

Some countries, for example Australia and India, have adopted federalism as their system of government. Federalism is appropriate for geographically large countries with several large territories, and the territories should be divided into several regions

in order to implement the economic development process effectively. All territories have a degree of autonomy, and they are defined as a group of regions. Each region is then divided into several orders or levels as a permanent formation to become an integrated territory, so the division of labour especially in management of national resources contributes to the effective implementation of federalism. In federalism, the regions have relationships with each other in the three basic fields of political, economic and socio-cultural. Frankel (1986) states that federalism requires relatively high degree of regional autonomy, and in implementing government policy with multi-level governments, the delegation of authority to regions (autonomy) is required in federalism.

Federalism itself could be established from constitutional development for the process of nation building bringing together the states or communities (Ramphal, 1979). In federalism, clusters of states consist of unifying of power, while the unified state consists of decentralising power. Federal state is divided into centralised state and regional states. The central (federal) state has the hierarchical authority over the regional states, while regional states have equal, shared or separate authority for managing the resources of the regional states. A federal country is different from a unitary state (Hunter, 1977). In a unitary state the whole of local authority's activities are determined by the nature of legislation; the local power is delegated from the centre, and the local governments are not independent in legislative responsibility. It means that in federalism central government could exist alongside several local governments.

In multi-level governments, relationships between any two levels of government create some problems especially in inter-governmental issues. Jaensch (1977) argues that these problems depend on the extent to which the two levels of government are independent, such that neither level can subordinate the other to it, nor act wholly independently of the other across the whole range of government functions. Mathews (1975) focuses on the advantages of federalism as a system of government such that the opportunities are provided for diversity within a unified economic and political framework. The powerful central government is allowed in federalism, and each region has different conditions, so it is possible to retain sovereignty in some areas, but not in others. In federalism, it is not only some degree of heterogeneity of the population of the nation such as racial, linguistic, and other variations involved, but also geographical factors (Wilshire, 1986).

"Federalism" is a normative term because multi-tiered governments should be combined as elements for the sharing-rule and regional self-rule. The rules should be based on how to accommodate, preserve, promote, and explore both the unity and the diversity. The essence of federalism as a normative principle is the perpetuation of both the unity and non-centralisation (decentralisation) at the same time (Watts, 1999). Multi-level governments need to properly manage for achieving their main aims, while each region has different aims and resources.

3.3 Decentralisation

Decentralisation could be defined in several ways, but it should typically involve increased autonomy and responsibilities for lower-level entities in one dimension or another (Rodden, 2003). Public finance as one of government's responsibility has been analysed by Samuelson (1954) in order to develop principles for optimising government expenditure on public goods. Diamond and Mirrlees (1971) specify some principles in developing an optimal tax structure, while Musgrave (1959) presents the classic assignment of powers and responsibilities in a federal structure from the perspective of what level of government is the most effective to control the government tasks.

Tiebout (1956) argues that selfish government (landowners, in fact) would - under stringent conditions including mobile residents (who "vote by their feet") – efficiently provide public goods. His argument is supported by the assumption that government implements limited policies regularly, while Oates (1972) states that small jurisdictions are more efficient since decentralised governments can differentiate policies among jurisdictions. If the decentralisation can be implemented properly, it leads to an efficient government.

Musgrave (1959) argues that local governments exist in hierarchical setting, and local public goods exist along with public goods and externalities with regional or national benefits. Gordon (1989) and Inman and Rubinfeld (1997) state that optimal structures aim to take account of redistribution problems and externalities that result from taxation and migration. Rodden (2003) states that decentralisation can undermine efficiency within jurisdictions. The soft budget constraint problem – when

the local government believes that the centre ex-post will accommodate and share in local excessive expenditure – is but one example of such externalities.

From the above it is obvious that the division of functions between central and local governments should be clear. Davey (1993) argues that the central government provides and organises the entire economy, which has impacts on national stability, national defence, external relations and monetary policy. On the other hand, local governments should provide local public goods, which cannot be provided by the private sector.

The implementation of decentralisation depends on several factors such as social background, cultural, political, and other institutional factors, including social capital (Isham and Kahkonen, 1999), social and ethnic heterogeneity (Bardhan and Mookerjee, 2000, Gugerty and Miguel 2000), economic inequality (Khwaja 2001), and electoral rules. Fiscal behaviour is one of the most important factors influencing the decentralisation (Ter-Minassian and Craig, 1977), and the role of political systems is another factor (Dillinger and Webb, 1999).

Centralisation system can be changed to become the decentralisation system for achieving government aims, because the centralisation system cannot function effectively in a country that has a very large territory (Bowman and Hampton, 1983). It means that it is necessary to delegate several central government authorities in both political and administration fields. Delegation of some of central government authorities includes the domain of decentralisation policies (Oentarto, Suwandi and Riyadmadji 2004). Thus, the essential feature of decentralisation is the reflection of

power sharing or distribution of authorities between central and provincial governments.

Rondinelli and Cheema (1984) states that there are several models of delegation of authorities in decentralisation. The first model is *devolution*; delegation of authorities from central government to local government or provincial government. The second model is *de-concentration* where central government delegates some authorities to central government officials who are in charge of local government territories. The third model of decentralisation is *delegation;* central government could delegate some authorities for running an institution or governmental units to achieve specific aims. The fourth model is *privatisation* in which central government attempts to reduce public services capacity and then delegates to private companies that should follow government regulations or rules.

Rondinelli and Cheema (1993) state that one or more of the models of decentralisation mentioned above are usually implemented by most of the countries, and each model has a specified aim. Local people need their equality of rights, income and work opportunities, so devolution can be implemented for fulfilment of such requirements. On the other hand, Loughlin (1981) argues that local government is formed to accommodate pluralism factors and to avoid tyranny by the central government.

The implementation of decentralisation involves problem solving and establishing central government power to keep local government territories safely. Rondinelli and Cheema (1984) states that the central government's working capacity

need to be reduced, and that the central government's responsiveness for needs of people, managing national economic development need to be more efficient and effective, so decentralisation can be used to solve these issues. Maddick (1983) focuses on the benefits of decentralisation such us to upgrade government officials' ability especially in grasping local government conditions and needs. Smith (1985) claims that decentralisation can be used for supporting national development policy by communicating with local people.

Mardiasmo (1999) argues that the delegation of authorities should be undertaken in order to avoid over-domination of the central government in developing local government territories that leads to reduce the capability of local government in stimulating local development.

3.4 Fiscal Decentralisation Theories

Most of the countries in the world consist of several levels of governments, which are also called multi-level governments, such as the central government, provincial governments, local governments, districts and municipalities. All of the different levels of government are usually divided conventionally by the scope of geographical or administrative area that is decided by central government.

According to Robertson (1993), from the perspective of democratic principles, decentralisation means the distribution of power between elected authorities. This can simply mean that detailed decisions are made by local representatives of local authorities, though always within policy guidelines, and probably funding arrangements, directed by the central government.

Public policy such as the provision of non-market services, and the redistribution of income and wealth financed primarily by taxes and other compulsory levies on non-governmental sector should be performed by each level of government, but some fiscal activities are carried out by non-government public sector agencies (IMF, 1986). For those responsibilities, it is necessary to establish several levels of governments with clear division of responsibilities.

The relationship between different levels of government varies widely among countries, from federations in which individual states or provinces have considerable powers, through federal structures with a strong central government, to unitary forms of government by powers of taxation and expenditure responsibilities distribution (IMF, 2001).

3.5 Implementation of Inter-governmental Fiscal Relations

Multi-level governments commonly consist of the central government, provincial (regional) governments, local governments, and local authorities. Local authorities are usually divided into several sub-levels. Lower levels of government usually undertake fiscal functions both on expenditure and revenue sides (Broadway and Hobson, 1993). Taxes are usually allocated and shared among the various levels of government, including the flow of funds, which is decided by both the central (national) and lower levels of government.

Table 3.1 presents a sample of the structure of sub-national governments in selected countries. Table 3.1 shows that multi-level of governments in the selected

countries consists of intermediate (province, states, city, department, county councils, regions, districts, municipalities, counties) and local governments *(minicipios, municapilities, woredas*, communes, urban local bodies, rural local bodies, towns, local authorities, *barangayas,* metropolitan districts).

Table 3.1: Structure of Sub-national Governments in Selected Countries

Country	Intermediate	Local
Argentina	23 provinces	1617 *minicipios*
Brazil	27 states	4,974 *municipios*
Colombia	32 departments	1,068 municipalities
Ethiopia	9 regions, plus 2 city administrations., 66 zones	550 *woredas*
France	22 regions, 96 departments	36,772 communes
India	25 states, 7 union territories	3,586 urban local bodies 234,078 rural local bodies
Italy	22 regions 93 provinces	8,100 municipalities
Kenya	39 county councils	52 municipal, town and urban councils
Malaysia	13 states	143 city, municipal and district councils
Mozambique	10 provinces	33 municipalities
Philippines	76 provinces	64 cities 1,541 municipalities 41,924 *barangayas*
South Africa	9 provinces	850 local authorities
Tanzania	21 regions (incl. Zanzibar)	92 district councils, 18 municipal and town councils
Uganda	45 districts, 13 municipalities	950 sub-counties, 39 municipal divisions, 1 city council (Dar Es Salaam)
United Kingdom	Counties	540 rural districts, Metropolitan districts and London boroughs
United States	50 states	39,000 counties and municipalities 44,000 special-purpose local authorities

Source: World Bank (2004) and Fjeldstad & Semboja (2004).

Inter-governmental fiscal systems are established based on the different historical and geographical characteristics, the degree of heterogeneity of population and the extent of government intervention in the economy (Bird, 1990). Experiences are very useful to identify the potential strengths and weaknesses of the implementation of inter-governmental fiscal systems (Bird and Vaillancourt, 1998).

Oates (1972) argues that establishing the standard functions and finances for each level in multi-level of government is the most important matter in inter-governmental fiscal relationship, especially those related to public sector namely macroeconomic stabilisation, income redistribution, and resources allocation. Bird (1990) states that problems of macro-economic management could arise in the lower-levels of governments in the sharing of national revenue.

It is difficult to implement the real inter-governmental fiscal relations related to macroeconomic stabilisation because most of the grants are not financed by central government revenues, which lead to government deficits of large magnitude at the provincial government level. This situation, combined with extensive borrowing by the provincial governments from the Central Bank or from banks controlled by the provincial governments, contributes to unsustainable public sector fiscal deficits that undermined 'national efforts to attain price stability and to promote sustainable economic development' (World Bank, 1990:ii). The local governments have a tendency to impose high taxes on companies so most companies move to other local government areas that have lower taxes.

Sewel (1996) argues that redistributive policies for local authorities should include public health care, primary education, and water supply, housing and public transportation. In a democratic society, decentralisation will result in an ideal match of supply and demand for local public goods (Oates, 1972). Local authorities can easily recognise people's needs because they are closer to the people. (Enemuo, 2000; Rondinelli and Cheema, 1988). Moreover, decentralisation leads to an increase of healthy competition among jurisdictions (Brennan and Buchanan, 1980; Breton, 1989). Prud'homme (1995) is concerned with how to satisfy basic needs in developing countries, to choose the taxpayers of each jurisdiction, and to reduce a gross mismatch between available resources and promised expenditure.

The basic rationale for a system of transfers creates a fiscal gap or fiscal imbalance so it needs to be reduced by tax revenue or grants (Ahmad, 1997). The first type of revenue is tax revenue that central and local government can share on a tax-by- tax basis (Tanzi, 2000). The central government usually takes a tax as the first type revenue because it needs to be collected by central government enforcement efforts. An unconditional block grant as the second revenue is based on transfer of a portion of the national proceeds of a tax according to a predetermined formula.

The main mechanism for inter-governmental transfers is the grants from central to local governments. Ahmad (1997) notes that there are three broad categories of grants:

1. *Unconditional grants*: These are general-purpose transfers aimed at addressing vertical fiscal imbalances between central and local governments.[2]
2. *Conditional grants*: These grants carry conditions regarding the use of the funds. Sometimes the conditions are tied to the performance to be achieved in the programmes financed.
3. *Equalisation grants*: These are used to address horizontal imbalances between local authorities. The purpose of horizontal equalisation is to equalise the capacity of local governments to provide a 'national standard' level of public goods and services. The grants also have the effect of closing the vertical fiscal gap.

Brosio (2000) argues that there are a variety of unconditional (or general) grant systems in use by which central governments distribute some per cent of total revenue to sub-national governments (local governments). Wolman (1990) focuses on conditional grant as a grant that has a certain broad-based services, such as primary education, primary health, water supply, agricultural extension and roads, but it is also justified by minimum standards. Fjeldstad and Semboja (2001) states that equality of income distribution needs to be addressed, so equalisation grants should be established based on redistributive criteria including population, income per capita, indicators of backwardness factors, poverty line, and it is followed by a minimum standard of service and performance indicators.

[2] Vertical imbalance occurs when some levels of government (e.g. provincial, local) are unable to meet their expenditure from the revenue they raise from their own resources.

3.6 Some Country Experiences Related to the Decentralisation Process

3.6.1 Decentralisation in Colombia

Colombia has implemented its decentralisation for the past fifteen years and this has led to increase in the sub-national governments' budgets dramatically, especially in health and education programs and other local services. Moreover, it affected to increase the fraction of national revenues transferred to lower-level governments. Chaparro, Smart and Zapata (2004) show that Colombia has experience in decentralisation to improve management and government accountability and to organize the development of local fiscal resources.

By implementing decentralisation, sub-national governments received greater budgets than before, to supporting local government fiscal policies to reduce the resulting fiscal gap. The grants from the central government are followed by transparent formula in the last several years. On the other hand, most government transfers led to dependence of local government revenue due to distorted spending priorities. These problems are especially acute given that the sub-national governments have ill-developed capacity in stimulating local fiscal needs. Local government money spending based on national mandate satisfaction with two different directions such as local spending powers and in oversight from the centre.

Regarding fiscal decentralisation, article 357 of the new constitution established that the transfers to municipalities would increase from a level of 14% of the current national income in 1993 to 22% in 2002. This article expanded the rate as well as the base of the automatic transfers. As a consequence, the total transfers to

sub-national governments (both departments and municipalities) increased from 38% to 52% of the current national income between 1991 and 1998 (Vargas, Jorge and Alfredo, 1997, 33).

Colombian constitutional reforms started in 1991 and the national government as the controller of tax base was expected to increase the share of revenue to departmental and municipal governments. Greater controls were needed for evaluating the social spending by implementing the local Law 60 of 1993 and the revised Law 715 of 2001 dealing with the revenue sharing arrangements. Colombia experienced budget deficits because of the greater growth in transfers from central to local government. Therefore, it was necessary for the central government to reduce its expenditures transferred to the sub-national level. Distribution of transfers should be flexible, and it needs more space for either efficient local provision of services or adequate exercise of local fiscal responsibility.

Colombia's own-source revenues finance less than half of the municipalities' total expenditures. *Participaciones Municipales* (PM) was the Colombia's revenue sharing program under the local government transfers. The government had changed *Particicpciones Municipales* (PM) to General Share System (SGP) by which block grant was scheduled to grow at a constant rate in real terms, and it stimulated the national government finances in the long run.

Chaparro, Smart and Zapata (2004) state that the rapid growth of transfers in the 1990s was considered to be unsustainable, and a further reform was undertaken in 2001 to convert them to a block grant that was not linked to current revenues of the

national government. Legislative Act 01 and Law 715 of 2001 created the General Shares System (SGP), which combines the *Situado Fiscal*, the *Participaciones Municipales*, and other transfers into a single fund. The SGP would grow at a fixed rate in aggregate, equal to CPI inflation plus two per cent in the next four years and 2.5 per cent in the four years after that. The goal is that transfers in 2010 will once again equal 46.5 per cent of the national government revenues. Transfers under the SGP (as with its predecessor the PM) come with tight conditions imposed by the national government on how the funds are spent, and they are allocated among municipalities according to a complex formula as shown in Table 3.2.

Table 3.2: Municipal Transfer Arrangements in Colombia, 1994–Present

	Level of municipal transfers	Distribution criteria	Spending rules
1994-2001 (National Constitution and Law 60 of 1993)	22% of national revenue in 2001, up from 14% in 1992	40%: Poor Population 20%: Relative Poverty 22%: Total Population 6%: Fiscal Efficiency 6%: Administrative Efficiency 6%: Progress in life quality	30%: Education 25%: Health 20%: Water utilities 5%: Sports and recreation 20%: Free investment
2002 and after (Constitutional Reform 02 and Law 715 of 2001)	Total SGP transfers set at 5.8% of 2001 GDP, to grow at CPI inflation plus 2-2.5% until 2008. Of the total, 16.32% is allocated to municipalities for general purposes, with most of the remainder paid to departments and large municipalities for health (23.52%) and education (56.16%).	40%: Relative Poverty 40%: Population 10%: Fiscal Efficiency 10%: Administrative Efficiency	General purpose transfers: 41%: Water utilities 7%: Sports and recreation 3%: Culture 49%: Other earmarked investments[a]

[a]For "low rank" municipalities (determined on the basis of population and tax revenue), 21% is earmarked and 28% is unrestricted.

Source: Chaparro, Smart and Zapata (2004).

Local poverty rates is one of the factors to be considered in the Colombian fiscal system, which is called NBI (Narrow Based Index), but in fact the governments

pay more attention to urbanisation development than poverty by mentioning many factors including health and local infrastructure At the same time, vertical fiscal balance with the proposed appropriate sharing arrangements for national taxes and the aggregate size of transfers were designed. It led to les attention paid to horizontal equity among municipalities.

Equalising the actual outlays of local governments in per capita terms (increasing all to the level of the richest local government) in effect ignores differences in local preferences and hence one of the main rationales for decentralisation in the first place. It also ignores local differences in needs, in costs, and in own revenue-raising capacity. Equalising actual outlays would discourage both local revenue-raising effort and local expenditure restraint, since under this system those with the highest expenditures and the lowest taxes get the largest transfers. To avoid such problems, most countries which have formal equalisation transfers avoid revenue pooling and generally aim either to equalise the capacity of local governments to provide a certain level of public services or the actual performance of that level of service by local governments (Bird and Smart, 2002).

A better alternative that can be implemented is a system of capacity equalisation, where local government should have sufficient funds including its own-revenue and transfers from the central government for creating several type of services. Differentials in the cost of providing services may or may not be taken into account, so the transfers from the central government to local governments should consider each jurisdiction's potential revenue raising capacity (such as the assessed

values for property taxes or measured tax base for other taxes) and not actual revenues.

3.6.2 Decentralisation in Australia

Prior to 1901 Australia was a commonwealth country with six colonies. Australia implemented the federal system since 1901 as the result of a series of conventions and referendums. The federation consists of the former six colonies plus two territories (Australian Capital Territory and Northern Territory). Brown (2005, 2006) states that administrative innovation to cope with Australian demography and economic geography has been ongoing since the advent of responsible government in the 1850s, and accelerated by Federation in 1901 and the rise of the modern federal welfare state through the late 20th century. The units of Australian federation are shown in Table 3.3.

Table 3.3 Units of Australian Federation, 2004

Unit	Population, 000	Land Area, km2
New South Wales	6,720,791	803,161.2
Victoria	4,962,970	227,594.4
Queensland	3,888,077	1,734,156.8
Western Australia	1,978,079	2,532,428.5
South Australia	1,532,727	985,334.5
Tasmania	482,236	67,914.3
Australian Capital Territory	324,119	2,349.4
Northern Territory	199,834	1,352,158.
Australia	20,091,504	7,703,556.6

Source: Australian Bureau of Statistics website, www.abs.gov.au, updated 2006

Brown (2005:20) states that it does not mean that the regional (state) conception provided an accurate description of the social, economic, political and

cultural demography of the nation. Regionalisation may be normative, such as Australia's first official national regionalisation in 1949, setting out 97 'regions for development and decentralization'.

Australia implements its fiscal federalism between the levels of government by the assignment of the functions related to expenditure responsibilities; taxation powers and inter-governmental grants. In term of expenditure responsibilities, there are several principles that should be followed in implementing fiscal federalism. The first principle is subsidiarity, which has been interpreted in a federal system of government as implying that provision of goods and services should be administered at the lowest level feasible within the national interest (Brown, 2002). The second principle is correspondence, which argues that where consumption or use of particular good or service is limited to the boundaries of particular jurisdiction and its provision should be allocated to a sub-national government whose boundaries are defined by the spatial benefit boundaries associated with that good or service (Oates 1972; Warren 2006; Williams 2005a). The third principle involves giving due recognition to economies of scale in the provision of goods and services, with a case generated for movement of provision at the higher level where it costs less if produced or provided by single jurisdiction rather than separate smaller ones (Access Economics 2004; Williams 2005b). The fourth principle is recognizing the constraints imposed by existing jurisdictional boundaries and argues for the need for a mechanism to resolve inter-jurisdiction spillovers or spill-ins of benefits (and/or cost) of particular good or service (Oates 1972, Productivity Commission, 2005, 2006). The final principle is that accountability is strengthened if responsibility for particular function is tier-specific (Brogden, 2005).

Dealing with taxation power, it should contain the principle of fiscal equivalence implying that each level of government should finance its assigned functions with funds it raises itself (Access Economics 2004; Dahlby 2001; Productivity Commission 2006). However, inter-governmental grants should come with fiscal imbalance, where the Commonwealth Government's revenue collection exceeding its expenditure needs by up to 40 per cent (House of Representative Standing Committee, 2003). On the other hand, transfers of the Commonwealth of Good and Service Tax (GST) revenues to the States have made significant inroads into addressing the latter's own source revenue shortfalls. Similar arrangements remain elusive for local governments (Access Economics 2004; Productivity Commission 2006). By the inter-governmental grants, it is expected that each level of government create the same effort to increase revenue from its own sources and operated at the same level of efficiency. (Morris 2002; Williams 2005b).

3.6.3 Implementation of the Decentralisation Process in Indonesia

Indonesia had a radical change of political system since the downfall of the second president of Indonesia, Soeharto in May 1998. That was the starting point to re-definition of the relationship between the central and provincial governments in Indonesia by embarking upon an ambitious program of fiscal decentralisation. It produced and promoted two laws, both promulgated in May 1999, one on administrative matters and the other on fiscal and finance issues (Republik Indonesia 1999a, 1999b).

The extra-ordinary session of Indonesia's highest decision-making body, the People's Consultative Assembly (MPR), in October 1998 opened the door for a revision of the antiquated Law No. 5/1974 on the Principles of Regional Government by means of the MPR Decree No. XV/MPR/1998. Based on the MPR decision, the Ministry of Home Affairs put together a team of senior civil servants, academics and advisors to formulate the draft for what would later become Law No. 22/1999.

For supporting Law No. 22/1999, a team in the Ministry of Finance established on a reform of the system of inter-governmental finance and formulated the draft for Law No. 25/1999, and both of the Laws were approved in 1999. Both Laws were implemented effectively since January 2001, after preparing for two years by the MPR Decree No. IV/MPR/2000.

The key features of Law 22/1999 are the devolution of a wide range of public service delivery functions to the regions, and the strengthening of the elected regional councils (*Dewanc Perwakilan Rakyat Daerah* - DPRD), which received wide-ranging powers to supervise and control the regional administration. The Law No. 25/1999 on Fiscal Balance between the Centre and the Regions aimed at empowering and raising regional economic capabilities, generating a financing system for the regions which is "just, proportional, rational, transparent, participatory, accountable and provides certainty", and at realising a funding system that reflects the division of functions (between levels of government) and which reduces regional funding gaps.

These two laws have been supported by several of implementing regulations for foundation of action. Beginning in fiscal year 2001, provincial and local

governments assumed major new expenditure responsibilities. Substantial functions for provinces have been outlined in a 1999 government regulation (*Republik Indonesia* 1999c).

Both Laws needed a multitude of implementing regulations in order to become fully operational as shown below:

1. Government Regulation No. 25/2000 concerning Government Authority and The Provincial Authority as an Autonomous Region.
2. Government Regulation No. 104/2000 Concerning Equilibrium Funds.
3. Government Regulation No. 105/2000 Concerning Region's Financial Management and Accountability.
4. Government Regulation No. 107/2000 Concerning Regional Borrowing.
5. Government Regulation No. 108/200 Concerning the Accountability Mechanism for the Head of Region).
6. Government Regulation No. 129/2000 Concerning Requirements of the Establishment and for the Criteria of Setting-Up, Abolishing and Merging Regions.
7. Government Regulation No. 20/2001 Concerning Fostering and Supervision of Local Governance.
8. Government Regulation No. 39/2001 Concerning Implementing Deconcentrated Tasks.
9. Government Regulation No. 52/2001 Concerning Implementing Co-Administration Tasks.
10. Government Regulation No 56/2001 Concerning Reporting the Implementation of Local Governance.

11. Government Regulation No. 65/2001 Concerning Regional Taxes.
12. Government Regulation No. 66/2001 Concerning Regional Levies.
13. Government Regulation No. 8/2003 Concerning Regional Apparatus Organisations.
14. Government Regulation No. 33/2006 Concerning Generate Allocated Fund (DAU).

Local government responsibilities have been only rather vaguely defined via a 'negative list', but are nonetheless expected to be considerable. *Kabupaten* and *kota* (districts and municipalities) essentially become responsible for all public services that the central and provincial governments do not deliver, at least in 11 important areas: public works, health, education and culture, agriculture, communications, industry and trade, capital investment, environment, land, cooperatives and labor. Regional governments have not been awarded new authority over any major tax bases. Districts and municipalities will instead be allowed to create their own taxes through local by-laws, provided they satisfy a number of 'good tax' criteria (*Republik Indonesia* 2000a).

By decentralisation law, local governments can access to significant amounts of natural resource revenues (from fisheries, forestry, mining, gas and oil), and it also will receive a share of personal income tax. All of local government revenues are regulated in two new and important inter-governmental grants, namely the *Dana Alokasi Umum* (DAU, General Purpose Fund) and *Dana Alokasi Khusus* (DAK, Specific Purpose Fund). The latter has not yet been made fully operational, and the 2001 fiscal year's allocations are relatively insignificant. These two transfers together

replace the old system of *Subsidi Daerah Otonom* (SDO, Autonomous Region Subsidy) and *Instruksi Presiden* (In press, Presidential Instruction) grants. From the central government funds (APBN), a floor of 25 per cent of domestic revenues is earmarked for the equalisation fund, 22.5 percent will be transferred to the local level, and 2.5 percent to the provincial level.

The main goal of the General Allocation Fund (DAU), according to existing laws and regulations, is to 'make even the fiscal capacities of regional governments to finance their expenditure needs' in achieving 'equalisation' among all of local governments in Indonesia. The DAU will be a significant source of finance for regional governments in 2001 and beyond; it will fund approximately one-third of provincial and between two-thirds and three-quarters of local government expenditures in the first year. And it will clearly offer regional governments more flexibility in its use than under the old system.

Local governments should have full authority over how they spend the grant. It may be helpful to recognise at the outset that allocation procedures differ significantly between districts/municipalities and provinces. The distribution mechanism for districts and municipalities was assigned first. The first procedures were generated by the Ministry of Finance (MOF) during the period up to 15 November 2000, when the allocations were first approved by the *Dewan Pertimbangan Otonomi Daerah* (DPOD, Regional Autonomy Advisory Council) and (semi-officially) announced to districts/municipalities and provinces. Soon after the original allocations were announced, certain assumptions in the draft state budget (RAPBN, *Rancangan Anggaran Pendapatan dan Belanja Negara*) were altered.

These changes (relating most importantly to the price of oil and the foreign exchange rate) resulted in an increase in the total amount of money available to the DAU, and this aggregate increase, of course, necessitated a change in individual district/municipality and provincial allocations. The Ministry of Finance took this opportunity to make some other changes to the allocation system as well. The second stage, therefore, comprised the adjustments made to the original allocation procedures that resulted in the new distributions. These latter allocations were approved by the DPOD and ratified in the form of a Presidential Decision (*Republik Indonesia*, 2000b) signed by the then president on 20 December 2000. However, the central government will reduce DAU for richer regions year by year by implementing the Law 33/2006.

3.6.4 A Comparison and Contrast of Decentralisation between Colombia, Australia and Indonesia

Indonesia, Colombia and Australia have implemented their own specific decentralization systems, although these countries have different systems of government. Indonesia and Colombia are Republic countries, while Australia is Federal or Commonwealth country, but they have some similarities in relation to decentalisation. Decentralisation in these countries was meant to improve public services, efficiency of the budget allocation and fiscal system of the local territories and to develop those territorial entities.

The first similarity is related to public sectors, which are dominated by central government (Commonwealth and Federal government for Australia). Fletcher and Walsh (1991) note that the Commonwealth government of Australia representing about 50 per cent of total public sector outlays raises about 80 per cent of taxation (or about 71 per cent of total 'own source revenues' when gross operating surpluses of

public sector enterprises, property income and the like are taken into account). The States, with own purpose outlays which are almost 45 per cent of total public sectors outlays, collect only 16 per cent of taxation revenues from own sources and no more than 25 per cent of total own source revenue: in aggregate, the States rely on payments from the Commonwealth for 43 per cent of their total revenue.

Abdullah (2002) claims that the Central government of Indonesia dominates and raises 85 per cent of oil revenue and 70 per cent of gas revenue (after deducting tax components). In Colombia; according article 37, Law 60, the municipalities are responsible for investing in the construction and maintenance of school buildings. Together, departments and municipalities in Colombia are responsible for managing the educational services of pre–school, primary school, secondary school, and high school levels. The national level retained jurisdiction over curricula and general educational guidelines, and the three levels shared responsibility for the evaluation of the educational system. Apart from the distribution of responsibilities between the levels of government, the law also established the distribution of resources among the sub-national units and the creation of committees (*comisiones veedoras*) both at the departmental and municipal levels to ensure that the transfers were properly allocated according to the law. It also granted 0.01 % of the total transfers to the municipalities for the promotion of welfare and representation of all its members, the districts and municipalities.

The second similarity is related to the grants where all of these countries distribute their grants from central or federal government to their local or state government such as specific purpose grant and general grant (block grants). Another

similarity is regarding implementation of local or state government authorities in deciding and exploring their economic sources to fulfill their regional budget and expenditure even they have to consider all of relevant laws.

However, there are several differences between Indonesia, Colombia and Australia in implementing their decentralisation processes, which have led to the different fiscal components in each of these countries (summersied in Table 3.4).

Table 3.4 Fiscal Components of Indonesia, Colombia and Australia

Fiscal Components	Indonesia	Colombia	Australia
1. Political Structure	Unitary country (Republic)	Unitary country (Republic)	Federal
	33 provinces (including 2 specific autonomies and 1 specific region), 437 regencies/cities	32 departments, 3 special districts, 1080 municipalities	6 states and 2 territories (8 states)
	(Regencies/cities are authorized of the decentralization)	(All sub-nationals are authorized of the decentralization)	(The states are authorized of the decentralization)
2. Transfer of Revenue	1. General Allocated Fund (*Dana Alokasi Umum*/ DAU) is block grant.	1. The *Situado* Fiscal (SF) 24.5 per cent (for 32 dept and 3 special districts)	1. Specific Purpose Payments (40 -60 per cent of state's revenue namely Tied Specific Purpose Grants)
	a. Transfer to regencies/ cities : 90% x 25% x National Income x Regencies/Cities Weight Index	2. The Municipal Participation (MP) approximately 22 per cent in 2002	2. General Purpose Grants (Approximately 45 per cent of payments from the Commonwealth to the states are general purpose grants emanating from a pool of funds which is then divided among the states) such as Untied (General Purpose GST Revenue) Grants.
	b. Transfer to provinces: 10% x 25% x National Income x Province Weight Index	3. Royalties (R) is levied by the Central Government (47.5 per cent are transferred to the departments, 12.5 per cent to producing municipalities, 8 per cent to municipalities where ports operate and 32 per cent to The National Royalty Fund (FNR)	state governments collect roughly 28 per cent of total revenue

Table 3.4 continued...

Fiscal Components	Indonesia	Colombia	Australia
	2 Profit Sharing Fund (*Dana Bagi Hasil*)		
	a. Acquisition of land and building rights, Natural Resources 80 per cent to regencies/cities		
	b. Oil Mining : 15 per cent is transferred to regencies/cities		
	c. Gas : 30 per cent is transferred to regencies/cities		
	d. Tax Income (business) : 80 per cent is transferred to regencies/cities		
	3. Specific Allocated Fund (*Dana allokasi khusus*) is transferred based on emergency needs of provinces, regencies/cities		
3. Tax Revenue	1. Individual : 20 per cent is transferred to local government	50 per cent of Tax Revenue namely value added tax (VAT) or sales tax is transferred to autonomy departments (provincial sub-division) and municipalities.	The Commonwealth collects around 80 per cent of taxation revenue, including the GST, but responsible 54 per cent of outlays, while the States collect about 16 per cent of taxation revenue and account 40 per cent of own-purpose outlays.
	2. Land and Construction : 90 per cent is transferred to local government		States are only excluded in the constitution from levying duties of customs and excises which have been interpreted by the High Court as including all sales taxes.

Table 3.4 continued...

Fiscal Components	Indonesia	Colombia	Australia
			State governments also make up an average of 12 per cent of their revenue from proceeds from publicly owned enterprises through user charges
4. Tax Autonomy	Tax rate	Tax rate	Tax base and Tax rate
5. Borrowing Power	Sub-national has a power to borrow money.	Sub-national has a power to borrow money.	Sub-national has a power to borrow money.
			(Federal and state borrowing are coordinated by the Australian Loan Council, taking into account each jurisdiction's fiscal position and infrastructure needs as well as macroeconomic objectives)
6. Political	Municipal election	Municipal election	Municipal election
Decentralization	Provincial election	Provincial election	State election
	Democracy	Democracy	Democracy
7. Hard Budget	The national government	The national government	The national government
	implicitly to do SNG	implicitly to do SNG	explicitly to do SNG
	borrowing activities	borrowing activities	borrowing activities
8. Constraint	No guarantee for the borrowing activity of sub-national government	No guarantee for the borrowing activity of sub-national government	No guarantee for the borrowing activity of sub-national government

Source : Treisman (2000),
Source : IMF Year Book (2005)
Source : Worldbank (2004) www.worldbank.org/publicsector/decentralization/data.htm
Source : Marshall and Jaggers (2000) Polity IV Project

3.7 Conclusion

Federalism is a concept defined as a system in which decision been making involves a certainty of territoriality and it influences to the implementation of decentralisation. The decentralisation concept consists of three models namely devolution, deconcentration, and delegation.

Indonesia, Colombia and Australia are the countries that have implemented their own decentralisation programs with some specific characteristics. Even though these countries have different conditions such as political structure, transfer of revenue, tax revenue, tax autonomy, borrowing power, political decentralisation, hard budget, and constraints, they have some similarities such as the dominating public sector and creating some of the grants to the sub-national governments.

In Chapter 4, a discussion of the background and an overview of the economy of East Kalimantan province of Indonesia will be presented to provide the setting in which the analyses in Chapters 5 and 6 will be conducted. In relation to the background of the province, an overview of its geography, demography, human resources, natural resources, and infrastructure conditions will be presented. In relation to the overview of the economy of the province, its gross domestic product (GDP), investment, exports and imports, and poverty conditions will be discussed.

CHAPTER 4

EAST KALIMANTAN: AN OVERVIEW

4.1 Introduction

This thesis aims to conduct a study of economic interchange between the Central government of Indonesia and its provincial government of East Kalimantan. This chapter (Chapter 4) provides an overview of East Kalimantan to set the scene for the detailed analyses in Chapters 5 and 6, and presents a discussion of the background and the regional economy of East Kalimantan. The rest of Chapter 4 is organised as follows: Section 4.2 provides a discussion of geographic, demographic and human development aspects of East Kalimantan. An overview of the economy of East Kalimantan is presented in Section 4.3. Conclusion is included in Section 4.4.

4.2 Background of the Province

East Kalimantan (Kalimantan Timur) was announced legally as a province on 1 January 1957, and it has changed markedly after decades, especially in dealing with the exploration of resources, regular cultivation, direction of exports and policy. East Kalimantan is one of the wealthiest provinces among the 33 provinces in Indonesia. An economic survey of East Kalimantan in the late 1970s described the province as one 'of superlatives and economic extremes' (Daroesman, 1979, p.43), owing to its huge natural resource base and its vast untapped hinterland. With its extensive petroleum, liquefied natural gas (LNG), and timber exports, it is one of Indonesia's richest provinces, similar in some respects to other provinces such as Riau and Aceh.

East Kalimantan Province has about 211,440 Km^2 of area and this is one and half times larger than Java and Madura Islands, and it accounts for 37 and 10 per cent of the land area of Kalimantan and Indonesia, respectively. East Kalimantan has a population density of about 11.22 persons per square Kilometer (Km^2), one of the lowest population densities in Indonesia, but higher than that of Central Kalimantan and Irian Jaya (West of Papua). East Kalimantan's surface area mainly consists of land, about 20,039,500 Hectares or 81.71 per cent, while water is only 18.29 per cent of the surface area. The province has hundreds of rivers, which are spread throughout the regencies and municipalities with Mahakam as the longest one.

The borders of East Kalimantan are as follow: Sabah State of East Malaysia to the North, Makassar Strait, Sulawesi Sea and strait to the East, South Kalimantan to the South, and Central Kalimantan, West Kalimantan and Sarawak State of East Malaysia to the West. The map of East Kalimantan (Kalimantan Timur) is presented in Figure 4.1.

Figure 4.1: Map of East Kalimantan

The capital city of the East Kalimantan Province is Samarinda, which is located around Mahakam River. Samarinda could be reached by land and air from Sepinggan International Airport, Balikpapan, or by domestic flight to Temindung Airport, Samarinda. East Kalimantan province is divided into 4 municipalities, 9 regencies and 122 districts, 1,347 villages, and 191 suburban areas. About 53.35 per cent of the population in East Kalimantan lives in urban areas, while another 46.65 per cent lives in suburban areas (BPS, 2006).

East Kalimantan province had a very small cultivable area of about 5 per cent of total land area in 1980. On the other hand, Kalimantan Island as a whole

(consisting of the provinces of South Kalimantan, Central Kalimantan, East Kalimantan, and West Kalimantan) has 58 per cent of cultivable land, while Java has 84 per cent cultivable area. However, the utilisation of land area in East Kalimantan is higher. The cultivable area utilised become *Sawah*, which is usually very small, and estates are non-existent, while uncultivable area is utilised as *'ladang berpindah'*. *Ladang berpindah is* made by land clearing by deforestation, making bush fire, clearing the area, and starting to cultivate the area. *Ladang berpindah* is used only once and then the cultivation moves to a new area.

Demographically, too, East Kalimantan is a unique province. Although it is one of the less populous provinces of Indonesia, it has consistently recorded one of the highest rates of population growth since 1970, exceeding the other resource-rich province of Jakarta, and second only to Lampung. Fertility rates are comparable to, indeed slightly below, elsewhere, so the explanation for the high population growth must be migration. Immigrants accounted for about 24 per cent of the population in 1980, the third highest share in the country (Hugo, 1987, p. 177). The Central Statistical Bureau records that there are 4 provinces as the domain of migration to East Kalimantan, namely East Java, South Sulawesi, South Kalimantan, and Central of Java. East Kalimantan's population was only 1,472,573 in 1985, which has almost doubled in 16 years, to become 2,936,388 in 2006. The details of East Kalimantan's population and the gender break down are given in Table 4.1.

Table 4.1: East Kalimantan's Population from 1977 to 2006

Year	Gender				Total
	Male	(%)	Female	(%)	
(1)	(2)		(3)		(4)
1977	503,409	49.91	478,159	47.41	1,008,568
1978	542,337	52.06	499,318	47.94	1,041,655
1979	551,832	51.11	527,863	48.89	1,079,695
1980	643,418	52.82	574,620	47.18	1,218,038
1981	667,671	52.48	600,523	47.20	1,272,269
1982	682,134	52.45	618,310	47.55	1,300,444
1983	713,519	52.25	652,144	47.75	1,365,663
1984	737,687	51.96	682,101	48.04	1,419,788
1985	767,400	52.11	705,173	47.89	1,472,573
1986	811,780	52.22	742,704	47.78	1,554,484
1987	840,429	52.16	770,700	47.84	1,611,129
1988	864,718	52.15	793,366	47.85	1,658,084
1989	885,675	52.15	812,629	47.85	1,698,304
1990	970,664	52.62	874,087	47.38	1,844,751
1991	998,752	52.59	900,415	47.41	1,899,167
1992	1,016,913	52.53	919,129	47.48	1,936,024
1993	1,052,053	52.42	954,880	47.58	2,006,933
1994	1,072,439	52.34	976,520	47.66	2,048,959
1995	1,103,401	52.32	1,005,587	47.68	2,108,988
1996	1,483,581	56.61	1,137,320	43.39	2,620,901
1997	1,256,188	51.46	1,184,829	48.54	2,441,017
1998	1,284,130	52.22	1,174,812	47.78	2,458,942
1999	1,286,029	50.98	1,239,451	49.14	2,522,480
2000	1,251,841	51.92	1,159,225	48.08	2,411,066
2001	1,292,210	51.90	1,197,778	48.10	2,489,988
2002	1,330,229	51.99	1,228,343	48.01	2,558,572
2003	1,408,336	52.07	1,296,515	47.93	2,704,851
2004	1,431,335	52.04	1,319,034	47.96	2,750,369
2005	1,486,179	52.31	1,354,695	47.69	2,840,874
2006	1,528,576	52.06	1,407,812	47.94	2,936,388

Source: BPS, East Kalimantan, 2008

The workforce of East Kalimantan was only about 30s per cent of population in 1986, and was about 40 per cent in 2004. The proportion of males in the workforce has increased and the proportion of females decreased from 1986 to 2004 (see Tables4.2 and 4.3).

Table 4.2: Workforce (more than 15 years old) in East Kalimantan From 1986 to 1999

Year	Gender				Total
	Male	(%)	Female	(%)	
1986	405,086	68.47	186,582	31.53	591,668
1987	426,381	63.60	243,992	36.40	670,373
1990	509,987	67.62	244,190	32.38	754,177
1991	527,202	68.01	247,995	31.99	775,197
1992	562,945	67.42	271,998	32.58	834,943
1993	597,275	66.37	302,619	33.63	899,894
1994	612,644	65.74	319,351	34.27	931,955
1995	654,571	67.40	316,573	32.60	971,145
1996	688,106	67.48	331,649	32.52	1,019,755
1997	741,771	69.10	331,712	30.90	1,073,483
1998	746,930	69.16	333,064	30.84	1,079,994
1999	753,548	68.02	354,366	31.98	1,107,914

Table 4.3: Workforce (more than 15 years old) in East Kalimantan from 2000 to 2004

Year	Male	(%)	Female	(%)	Total
2000	718,290	68.17	335,311	31.83	1,053,601
2001	748,955	69.17	333,784	30.83	1,082,739
2002	787,128	71.38	315,536	28.62	1,102,664
2003	840,420	72.72	315,350	27.28	1,155,770
2004	839,585	73.79	298,145	26.21	1,137,730

Source: BPS East Kalimantan, 2008

The Human Development Index (HDI) is one of the indicators of the human progress of a country. If HDI is higher, it means human quality of life is relatively high, and then it is easy to achieve the government's target, especially in economic development. East Kalimantan's HDI has been quit low and stagnant, and in it was 66.30 in 1990 and 70.20 in 1995 (Table 4.4), 69.90 in 2001 (Table 4.5), and 74.40 in 2007 (Table 4.6).

Table 4.4: Human Development Index (HDI) of East Kalimantan Province from 1990 to 1995

Regencies/ Municipalities	**Year**					
	1990	**1991**	**1992**	**1993**	**1994**	**1995**
Pasir	65.50	64.50	65.00	65.00	65.00	64.70
Kutai Barat	64.20	65.50	66.00	68.80	68.80	69.10
Kutai Kartanegara	67.60	68.80	69.00	69.00	70.00	71.80
Kutai Timur	65.50	66.50	67.00	69.00	69.00	69.00
Berau	66.20	65.00	67.00	68.00	68.50	68.50
Malinau	64.20	65.00	65.00	67.00	67.00	68.00
Bulungan	66.20	66.20	68.00	69.90	72.00	72.00
Nunukan	67.00	68.00	69.70	69.70	69.90	70.30
Penajam paser Utara	66.50	69.00	68.50	69.00	71.00	71.00
Balikpapan	68.50	67.50	68.00	71.80	71.90	72.00
Samarinda	68.50	68.90	69.00	71.80	71.90	72.00
Tarakan	65.70	66.70	67.80	67.80	69.00	71.00
Bontang	66.30	66.80	67.50	68.90	69.50	73.20
East Kalimantan	**66.30**	**66.80**	**67.50**	**68.90**	**69.50**	**70.20**

Source: BPS, East Kalimantan, 2008.

Table 4.5: Human Development Index (HDI) of East Kalimantan Province from 1996 to 2001

Regencies/ Municipalities	Year					
	1996	1997	1998	1999	2000	2001
Pasir	71.00	71.00	64.70	64.70	64.70	69.50
Kutai Barat	69.00	70.00	68.90	69.10	69.10	67.50
Kutai Kartanegara	72.00	71.00	69.50	70.00	70.00	68.60
Kutai Timur	69.00	70.00	69.00	69.00	69.00	66.00
Berau	68.50	70.00	67.50	68.50	68.50	67.70
Malinau	68.20	69.90	67.10	68.00	68.00	68.00
Bulungan	72.10	72.00	72.00	72.00	72.00	69.00
Nunukan	71.20	71.00	69.90	69.90	70.00	70.00
Penajam paser Utara	72.50	71.90	71.00	71.00	71.90	72.00
Balikpapan	73.20	74.00	71.50	72.00	72.90	73.00
Samarinda	72.80	74.00	72.00	72.00	72.10	72.40
Tarakan	72.00	73.00	68.50	69.00	72.10	72.00
Bontang	71.50	73.00	69.30	69.60	71.00	73.00
East Kalimantan	**71.00**	**71.60**	**69.30**	**69.60**	**70.10**	**69.90**

Source: BPS, East Kalimantan, 2008.

Table 4.6: Human Development Index (HDI) of East Kalimantan Province from 2002 to 2007

Regencies/ Municipalities	Year					
	2002	2003	2004	2005	2006	2007
Pasir	69.90	73.00	73.00	73.50	73.50	74.20
Kutai Barat	67.80	71.50	72.00	72.00	72.00	73.50
Kutai Kartanegara	67.80	70.10	72.50	72.50	73.00	74.30
Kutai Timur	66.10	70.00	71.00	72.00	72.00	73.00
Berau	67.70	70.00	71.10	72.00	72.00	72.20
Malinau	68.00	71.10	72.20	72.00	72.50	73.00
Bulungan	69.50	72.50	73.40	73.50	73.50	74.00
Nunukan	72.50	72.20	72.40	73.00	73.00	74.00
Penajam paser Utara	71.10	71.80	72.00	72.00	73.00	74.50
Balikpapan	73.00	74.40	75.70	76.00	75.00	76.90
Samarinda	73.60	74.50	74.40	75.40	75.00	76.30
Tarakan	72.30	73.50	74.00	74.00	75.50	75.60
Bontang	72.00	74.00	74.00	75.00	75.50	75.70
East Kalimantan	**70.10**	**72.20**	**72.90**	**73.30**	**73.50**	**74.40**

Source: BPS, East Kalimantan, 2008.

The progress of HDI is shown in the HDI related factors, such as the numbers of teachers, lectures, universities and colleges, and doctors, hospitals, and health centers. Table 4.7 shows the number of teachers and students in different levels of schools in East Kalimantan from 1985/1986 to 2006/2007.

The number of primary school teachers per hundred primary school students was 4 in 1985/1986 and this number increased to about 6 in 2006/2007. At the secondary school level, the number of teachers per hundred students was about 7 in 1985/1986, which increased to 7.5 in 2006/2007. The number of teachers per hundred students at the high school level was 7.6 in 1985/1986 and this number increased to about 8.4 in 2006/2007.

A comparison between lecturers and students in universities/colleges from 1987/88 to 2006/20007 is shown in Table 4.8. At the university/college level, the number of lecturers per hundred students was 9.8, which in fact declined to 7.6 in 2006/2007.

Table 4.7: Comparisons between Teachers and Students in Schools in East Kalimantan from 1985/1986 to 2006/2007

Year	Prem Sch Teachers	Prem Sch Students	Yunior High Sch Teachers	Yunior High School Students	Senior High School Teachers	Senior High School Students
1985/1986	11,340	283,057	4,339	62,984	2,376	31,226
1986/1987	12,349	295,269	4,672	68,240	2,608	35,198
1987/1988	13,292	305,124	5,138	73,262	2,987	39,833
1988/1989	13,973	315,557	5,717	75,163	3,597	44,945
1989/1990	14,471	319,729	5,827	75,054	3,787	47,519
1990/1991	14,358	321,634	2,893	28,074	4,125	49,018
1991/1992	14,871	325,624	2,733	28,217	4,058	50,313
1992/1993	15,335	330,957	2,759	29,209	4,391	53,278
1993/1994	15,951	335,734	2,743	31,971	4,716	55,615
19941995	16,222	335,154	2,518	31,744	4,460	57,291
1995/1996	15,900	329,565	6,802	96,579	3,849	58,940
1996/1997	16,211	336,483	6,507	97,966	4,551	62,614
19971998	6,313	329,047	6,524	100,483	4,816	69,095
1998/1999	15,848	332,083	6,651	108,732	4,929	74,585
1999/2000	16,112	332,082	7,523	100,853	5,178	74,977
2000/2001	14,313	346,252	6,550	101,968	5,098	78,154
2001/2002	16,826	331,755	6,960	97,551	5,568	79,014
2002/2003	19,854	362,819	8,667	115,443	7,278	102,915
2003/2004	20,670	384,480	9,249	128,324	9,414	127,997
2004/2005	20,670	384,480	9,249	128,324	9,414	127,997
2005/2006	22,679	387,753	10,023	128,402	9,211	129,578
2006/2007	24,311	417,072	10,023	132,949	9,139	109,386

Source: BPS, East Kalimantan, 2008

Table 4.8: Comparisons between Lectures and Students in East Kalimantan 1987/1988 to 2006/2007

Year	Univesity/ College Students	University/ College Lecturers
1987/1988	78,400	42820
1988/1989	80,880	48542
1989/1990	80,881	51306
1990/1991	30,967	53143
1991/1992	30,950	54371
1992/1993	31,968	57669
1993/1994	34,714	60331
19941995	34,262	61751
1995/1996	103,381	62789
1996/1997	104,473	67165
19971998	107,007	73911
1998/1999	115,383	79514
1999/2000	108,376	80155
2000/2001	108,518	83252
2001/2002	104,511	84582
2002/2003	124,110	110193
2003/2004	137,573	137411
2004/2005	137,573	137411
2005/2006	138,425	138789
2006/2007	142,972	118525

Source: BPS, East Kalimantan, 2008

East Kalimantan has limited health care facilities including health centres, doctors, and paramedics. The number of doctors and paramedics are shown in Table 4.9. In 1987, there were 126 doctors and paramedics, while the province's population was counted at 1,611,129 meaning 1 doctor/paramedic handling 12,587 people. By 2007, doctors and paramedics significantly increased, counted at 1184 doctors and paramedics handling about 2,936,388, or 1 doctor/paramedic handling 2,480 people.

Table 4.9 Doctors and Paramedics in East Kalimantan from 1987 to 2007

Year	Doctors	Dentists	Specialists					Total
			Midwives	Surgery	Children	Interns	Others	
1987	68	28	5	4	8	7	6	126
1988	95	24	15	9	16	12	35	206
1989	108	34	5	7	7	6	18	185
1990	290	67	6	8	8	6	23	408
1991	312	72	7	6	8	7	23	435
1992	363	121	9	11	10	12	31	557
1993	399	124	10	12	12	11	35	603
1994	426	145	11	10	13	9	44	658
1995	442	145	10	11	13	10	40	671
1996	328	132	10	13	13	11	40	547
1997	380	158	10	12	12	11	46	629
1998	380	152	15	11	17	12	59	646
1999	374	154	17	15	19	14	62	655
2000	399	159	17	19	20	15	62	691
2001	402	155	19	20	22	11	43	672
2002	435	176	24	25	24	13	52	749
2003	470	186	25	26	26	15	63	811
2004	544	213	28	29	29	16	72	931
2005	582	265	35	33	35	21	153	1124
2006	643	209	41	35	36	33	171	1168
2007	648	211	43	36	37	36	173	1184

Source: East Kalimantan BPS, 2008.

4.3 An Overview of the Economy of East Kalimantan

The economy of East Kalimantan is characterised by a heavy dependence on the extraction and exploration of natural resources, especially oil, natural gas and logging. East Kalimantan's Gross Domestic Product is contributed by large-scale investment projects mainly in offshore oil and gas fields, and mining. East Kalimantan's economic performance and structure are quite different compared to most other provinces of Indonesia. Since 2005, East Kalimantan's GDP per capita has continuously been the highest in Indonesia and its non-oil per capita GDP is also one of the highest.

As shown in Table 4.10, during 1983-1992, East Kalimantan's Gross Domestic Product (GDP) gradually increased based on both current and constant prices. In 1983, the real (at 1983 prices) GDP was about Rp 4,316 billion which increased to about Rp 5,660 billion in 1992. This represents an annual average real GDP growth of about 3.1 per cent.

Table 4.10: Gross Domestic Product (GDP) of East Kalimantan Province (Rp 000,000) from 1983 to 1992

Year	Real GDP (At 1983 Prices)
1983	4,316,373.46
1984	5,268,812.21
1985	5,325,781.90
1986	5,397,216.13
1987	5,477,342.54
1988	5,432,219.06
1989	6,023,940.42
1990	6,479,294.34
1991	5,297,070.00
1992	5,659,572.00

Source: BPS, East Kalimantan, 2008

As shown in Table 4.11, during 1993 to 1999 East Kalimantan's real GDP (at 1993 prices) gradually increased from about Rp 15,708 billion in 1993 to Rp 23,318 billion in 1999. This represents an annual average real GDP growth of about 6.9 per cent.

Table 4.11: Gross Domestic Product of East Kalimantan Province (Rp 000,000) from 1993 to 1999

Year	Real GDP (at 1993 prices)
1993	15,708,419.00
1994	17,522,973.00
1995	18,442,677.00
1996	17,295,198.00
1997	20,958,040.00
1998	22,133,685.00
1999	23,317,635.00

Source: BPS, East Kalimantan, 2008

East Kalimantan's real GDP (at 2000 prices) had grown from Rp 82,465 billion in 2000 to Rp 114,931 billion in 2007 (see Table 4.12), representing an annual average real GDP growth of 4.9 per cent. The rapid increase in real GDP during this period was mainly due to the growth in oil and gas value added and growth of manufacturing industries. This was followed by increasing oil export prices in international markets from $US 60 per barrel in 2004 to $US 63.91 per barrel in 2005 which benefited East Kalimantan as an oil exporting province.

Table 4.12: Gross Domestic Product of East Kalimantan Province (Rp 000,000) from 2000 to 2007

Year	Real GDP (at 2000 prices)
2000	82,465,052.00
2001	86,831,742.00
2002	88,686,290.00
2003	90,802,588.00
2004	93,584,548.00
2005	97,821,711.00
2006	101,813,597.00
2007	114,930,788.00

Source: BPS, East Kalimantan, 2008.

In 1999, before decentralisation, oil and gas contributed about 47 per cent of East Kalimantan's GDP, while other sectors contributed 53 per cent. The GDP composition was different after decentralisation where oil and gas dominated the contribution of GDP. For example, in 2004, the GDP consisted of about 57 per cent of oil and gas, and 43 per cent from other sectors.

The annual percentage growth of real GDP per sector of East Kalimantan from 2000 to 2005 is shown in Table 4.13. East Kalimantan's economic growth fluctuated, but still positive during 2000–2005. In 2000 and 2001 East Kalimantan's economic growth percentages were significant at about 17 and 12 respectively, and in 2005 the province's economic growth percentage was 14. In general, services, construction and transport and communication sectors grown at higher percentage rates. Mining (including oil and gas) sectors have also recorded generally impressive growth rate.

Table 4.13: Real GDP Growth per Sector in East Kalimantan from 2000 to 2005

No.	Sector	Year					
		2000	2001	2002	2003	2004	2005
1	Agriculture	7.48	9.41	11.46	14.29	12.16	10.77
2	Mining [a]	3.27	6.29	7.63	3.07	1.29	3.51
	Mining [b]	14.24	(1.70)	25.33	31.20	44.83	7.83
3	Manufacture industries [a]	8.48	3.58	-4.06	-0.66	-0.77	0.17
	Manufacture industries [b]	7.93	(0.51)	3.63	25.94	34.57	8.81
4	Electricity and water	26.49	21.17	34.93	18.47	31.23	7.48
5	Constructions	24.19	13.45	12.20	13.14	14.30	15.72
6	Trading, Hotel and Restaurant	11.66	6.49	8.94	24.86	23.14	20.77
7	Transportation and Communication	10.53	18.35	16.37	13.45	24.46	15.43
8	Finance, Leasing and Company Services	16.53	9.45	12.24	19.18	16.26	14.49
9	Services	32.79	30.53	23.68	11.23	19.64	25.11
	GDP Growth [b]	16.87	11.85	16.53	19.08	24.51	14.05

Note: [a] without oil and gas, [b] with oil and gas

Source: BPS, of East Kalimantan, 2006

East Kalimantan's labor market structure is broadly similar to that of other provinces in Indonesia. In 2004, agricultural and forestry, services and trading sectors have dominated the sources of employment in East Kalimantan (see Table 4.14). The sectors are characterised by the highest share of underemployment. Manufacturing sector also contributes to a significant share of employment. It is estimated that forestry related jobs account for about 6 to 8% of total employment. The oil and gas sector accounts for almost 50 per cent of GDP, but employ less than 10 per cent of the total labor force.

Table 4.14: Distribution of Labor Per Sector in East Kalimantan from 2002 to 2004

Sector	Year					
	2002	(%)	2003	(%)	2004	(%)
Agriculture and Forestry	349,892	34.70	349,677	33.87	367,161	33.87
Mining	47,505	4.71	43,559	4.22	45,737	4.22
Manufacturing Industries	110,138	10.92	107,724	10.43	113,110	10.43
Electricity, gas and water	5,424	0.54	3,929	0.38	4,125	0.38
Construction	63,667	6.31	74,412	7.21	78,133	7.21
Trading	206,217	20.45	200,100	19.38	210,105	19.38
Transportation, warehouse and communication	61,856	6.13	71,175	6.89	74,734	6.89
Finance, Insurance and Leasing	12,578	1.25	21,478	2.08	22,552	2.08
Services	151,072	14.98	160,325	15.53	168,341	15.53
Total	1,008,349	100.00	1,032,379	100.00	1,083,998	100.00

Source: BPS, East Kalimantan, 2004

The growth of domestic investment in East Kalimantan from 1983/1984 to 2006 is shown in table 4.15. In 1983/84, value of domestic investment was about Rp143.47 billion, and it decreased to Rp 100.7 billion in 1984/85 which is about 30 per cent decline. After 1984, domestic investment significantly increased until 1990 and then started to fall until 1995. From 1995 to 2006, only in 1996, 2000, 2003, 2004 and 2006 the province had a positive growth in domestic investment. The highest domestic investment value was in 2006, and it amounted to Rp 51,554 billion.

The data on the growth of foreign investment value in East Kalimantan from 1983/84 to 2006 are presented Table 4.16. The annual values of foreign investment in East Kalimantan fluctuate heavily. In 1983/84 the foreign investment value was only Rp 10 billion. From 1985/1986 to 1987/1988 it gradually increased. The foreign investment value jumped from Rp 21 billion in 1987/1988 to Rp 587 billion in 1989. The highest foreign investment value was in 1995, which amounted to Rp 1,969

billion, and then until 2006, the foreign investment value had fluctuated between Rp 41 billion in 1999 and Rp 958 billion in 2003.

Table 4.15: Domestic Investment of East Kalimantan Province (Rp 000,000) from 1983/1984 to 2006

Year	Projects	Capital (Rp 000,000)	Labour	
			Indonesians	Foreigners
1983/1984	11	143,468.20	15,133	198
1984/1985	10	100,706.00	10,428	147
1985/1986	7	513,060.00	2,478	32
1986/1987	11	325,214.80	3,704	17
1987/1988	21	528,688.00	22,395	130
1989	9	305,607.80	15,123	57
1990	13	3,400,220.60	39,803	488
1991	17	1,284,329.80	50,496	110
1992	5	2,216,153.10	13,788	105
1993	15	1,989,265.80	33,752	241
1994	14	2,024,959.50	40,947	130
1995	16	2,173,078.20	18,363	97
1996	25	4,204,433.70	96,378	252
1997	22	3,528,291.40	56,085	80
1998	15	1,771,757.00	13,085	95
1999	12	899,124.00	4,944	44
2000	24	6,623,694.00	18,917	35
2001	24	3,409,693.40	16,252	105
2002	13	1,932,519.80	9,069	29
2003	23	2,709,475.50	11,884	66
2004	26	4,552,879.10	19,474	115
2005	13	1,782,911.81	6,797	9
2006	26	51,554,001.85	27,664	-

Source: BPS, East Kalimantan, 2008

Table 4.16: Foreign Investment of East Kalimantan Province (Rp 000,000) from 1983/1984 to 2006

Year	Projects	Capital (Rp 000,000)	Labour	
			Indonesians	Foreigners
1983/1984	1	10,000.00	Na	Na
1984/1985	-	-	-	-
1985/1986	1	11,000.00	Na	Na
1986/1987	3	12,185.00	135	15
1987/1988	14	21,000.00	58	5
1989	-	587,325.00	260	6
1990	2	559,500.00	1,110	24
1991	-	4,000.00	300	8
1992	3	285,443.40	4,517	27
1993	2	19,305.00	133	21
1994	5	540,368.30	20,996	49
1995	11	1,969,501.10	21,668	208
1996	7	482,351.30	215	32
1997	12	578,093.70	1,231	99
1998	8	408,829.00	5,011	54
1999	3	40,993.80	241	35
2000	20	124,483.70	13,526	128
2001	31	185,327.04	3,045	195
2002	25	223,676.46	90,19	149
2003	28	958,870.70	5,502	173
2004	27	102,376.63	2,089	188
2005	59	548,066.51	15,048	170
2006	54	536,263.34	17,035	66

Source: BPS, East Kalimantan, 2008

Economic growth could be supported by the growth of exports. It is obvious that as the provincial governments makes efforts to fulfill the demand of export commodities, the real sector needs to be upgraded, more labor need to be employed, investment needs to be stimulated by favourable economic factors. Oil is the main export commodity of East Kalimantan, and from 1987 to 1991, oil had dominated East Kalimantan's export value. The oil export value is about thrice of the non-oil export commodities. From 1992 to 2006, oil still dominated the export value, but non-oil export value also has shown a significant growth. The value of non-oil export

commodities increased by almost 30 per cent in 1992, and then gradually increased until 2006 by at about more then 10 per cent each year. The total value of exports gradually increased every year, but only in 2005 and 2006 it increased more then 40 per cent and 20 per cent respectively. The growth of export value in East Kalimantan can be seen from Table 4.17.

The growth of import value can be seen in Table 4.18. In East Kalimantan, non-oil commodities dominated imports from 1987 to 2000, but since 2001. Non-oil dominated import commodities almost double in 2002 and more than double from 2003 to 2006. The total value of imports gradually increased every year. It accounted $US 285 million in 1987 and $US 4,405 million in 2006.

Table 4.17: Exports of East Kalimantan Province ($US 000'), from 1984 to 2007

Year	Oil Exports		Non-Oil Exports		Total Exports
	Value	(%)	Value	(%)	Value
1984	1,331,742	74.69	451,222	25.31	1,782,964
1985	1,431,980	74.28	495,848	25.72	1,927,829
1986	1,556,501	74.69	527,498	25.31	2,083,998
1987	1,729,445	75.70	555,261	24.30	2,284,706
1988	1,623,735	71.07	661,044	28.93	2,284,779
1989	1,763,835	68.85	798,117	31.15	2,561,952
1990	2,498,091	74.42	858,620	25.58	3,356,711
1991	2,643,945	72.68	993,874	27.32	3,637,819
1992	2,782,085	68.86	1,258,243	31.14	4,040,328
1993	2,620,383	62.18	1,593,579	37.82	4,213,962
1994	2,814,273	64.36	1,558,108	35.64	4,372,381
1995	3,071,292	65.49	1,618,212	34.51	4,689,504
1996	3,737,287	69.33	1,653,248	30.67	5,390,535
1997	3,964,203	69.09	1,773,891	30.91	5,738,094
1998	2,952,516	67.04	1,451,384	32.96	4,403,900
1999	3,790,086	71.01	1,547,306	28.99	5,337,392
2000	6,749,157	79.28	1,764,175	20.72	8,513,332
2001	6,943,322	78.36	1,918,030	21.64	8,861,352
2002	5,959,075	76.92	1,788,422	23.08	7,747,497
2003	7,017,807	77.72	2,011,331	22.28	9,029,138
2004	8,547,723	78.32	2,365,967	21.68	10,913,690
2005	10,822,026	75.80	3,455,521	24.20	14,277,547
2006	11,604,953	71.36	4,657,304	28.64	16,262,257
2007	12,185,201	71.36	4,890,169	28.64	17,075,370

Source: BPS, East Kalimantan, 2008

Table 4.18: Imports of East Kalimantan Province ($US 000'), from 1984 to 2007

Year	Oil Imports		Non-Oil imports		Total Imports
	Value	(%)	Value	(%)	
1984	2,538	1.02	246,578	98.98	249,116
1985	2,729	1.07	251,610	98.93	254,339
1986	2,873	1.06	267,670	98.94	270,543
1987	3,157	1.11	281,758	98.89	284,915
1988	39,988	9.53	379,667	90.47	419,655
1989	88,373	18.59	387,029	81.41	475,402
1990	197,796	27.33	526,018	72.67	723,814
1991	296,427	37.87	486,352	62.13	782,779
1992	220,137	29.07	537,025	70.93	757,162
1993	358,397	66.58	179,931	33.42	538,328
1994	311,092	41.99	429,742	58.01	740,834
1995	437,912	43.97	557,956	56.03	995,868
1996	612,480	40.54	898,481	59.46	1,510,961
1997	659,504	47.20	737,690	52.80	1,397,194
1998	335,535	33.18	675,769	66.82	1,011,304
1999	430,567	37.93	704,711	62.07	1,135,278
2000	628,265	48.46	668,186	51.54	1,296,451
2001	979,250	54.98	801,730	45.02	1,780,980
2002	1,167,754	62.63	696,771	37.37	1,864,525
2003	1,499,841	67.58	719,665	32.42	2,219,506
2004	2,253,181	82.21	487,448	17.79	2,740,629
2005	2,507,924	71.50	999,565	28.50	3,507,489
2006	3,059,157	71.91	1,195,156	28.09	4,254,313
2007	3,150,932	71.52	1,254,914	28.48	4,405,846

Source: BPS, East Kalimantan, 2008

The number of people living in poverty is one of the important indicators, which show up as a result of economic development. As economic development occurs, it should lead to a reduction of poverty. The data related to

poverty in East Kalimantan during 1998-2006 are shown in Table 4.19. The percentage of population living in poverty in East Kalimantan was largest in 1998. After 2000 there has been a gradual reduction in the percentage of population living in poverty. The largest number of people in poverty in East Kalimantan was 779,415 in 1998. The poverty line in 1998 was specified as Rp 69,995 per capita per month. The number of people in poverty increased significantly to 315,200 in 2006 with the poverty line specified as Rp 205,664 per capita per month.

Table 4.19: Number of People Living in Poverty in East Kalimantan Province, from 1998 to 2006

Year	Number of People in Poverty	Per cent of Total Population	Total Population	Poverty Line (Rp/Capita/Month)
1998	779,415	21.69	2,441,017	69,995
1999	401,701	15.91	2,458,942	99,286
2000	532,711	22.10	2,525,480	90,769
2001	329,110	15.75	2,411,066	99,928
2002	313,004	12.20	2,558,672	147,659
2003	328,602	12.15	2,704,851	156,491
2004	318,200	11.57	2,750,369	165,755
2005	299,100	10.57	2,848,798	193,950
2006	315,200	10.74	2,936,388	205,664

Source: BPS, East Kalimantan, 2008

4.4 Conclusion

East Kalimantan has an impressive record of economic and social development since 1970. Although its per capita GDP figures overstate living standards, there is no doubt that it is one of Indonesia's most prosperous provinces where wages are high, employment is generally plentiful, and social indicators are good. The twin resource booms have generated considerable local spin-off in the form of downstream

processing industries using timber, oil, and gas. The local government revenue base is buoyant, and there are many indirect linkages, including rapidly growing construction and trade sectors.

But equally formidable challenges remain. One of the issues is the disparity among various sectors of the economy. A kind of 'technological dualism' has emerged in the province, comprising a capital- intensive modern sector in oil, gas, wood products, and some construction activities, alongside a traditional labour-intensive sector engaged in agriculture, petty trade, and other activities. The linkage between these sectors are still weak, even to the point that the modern sector frequently employs labour from outside the province, although there does appear to be a shift of labour in the province out of agriculture to better paid employment in the construction, mining, and manufacturing industries.

In the next chapter (Chapter 5), the conceptual framework and models employed for the purpose of economic interchange process between the Central government and East Kalimantan provincial government of Indonesia will be presented and analysed. Chapter 5 also presents and examine the models used for fund allocation between the Central and provincial governments, discusses the weaknesses of the models and suggests the ways in which the models can be modified.

CHAPTER 5

ECONOMIC INTERCHANGE BETWEEN CENTRAL AND PROVINCIAL GOVERNMENTS: CONCEPTUAL FRAMEWORK AND MODELS

5.1 Introduction

The aim of this chapter is to present and examine the conceptual framework and models employed for the purpose of economic interchange process between the Central government and East Kalimantan provincial government of Indonesia. Prior to presenting and examining the conceptual framework and models of economic interchange, section 5.2 presents the definitions of the key thematic terms used in this chapter. The conceptual framework is presented and discussed in Section 5.3. The models used for fund allocation between the Central and provincial governments and the variables in the models are specified, weaknesses of the models are discussed and the ways in which the models can be modified are described in Section 5.4. Concluding remarks are included in Section 5.5.

5.2 Definitions of Key Terms

5.2.1 Fiscal Decentralisation

Fiscal decentralisation is defined as the assignment of fiscal decision-making powers and management responsibilities from the Central government to the provincial government.

5.2.2 Regional Governance Law

Regional government law is the Law, which is used for implementing the decentralisation program, such as the Law number 22 of 1999 on Regional Government and the Law number 25 of 1999 on Balancing Fund between Central and Provincial Governments. Law number 33 of 2004 on Regional Governance amended these laws.

5.2.3 Inter-governmental Transfers

Inter-governmental transfers are defined as 'grants from one level of government to another (often from higher to lower level of government) for the purpose of funding government activities'. The term 'transfer' is often used interchangeably in some countries with the term of 'grant' or 'subsidy'. In Indonesia, the term 'grant' is often used interchangeably with 'transfer' (Boex, 2001).

5.3 Conceptual Framework of Economic Interchange Process

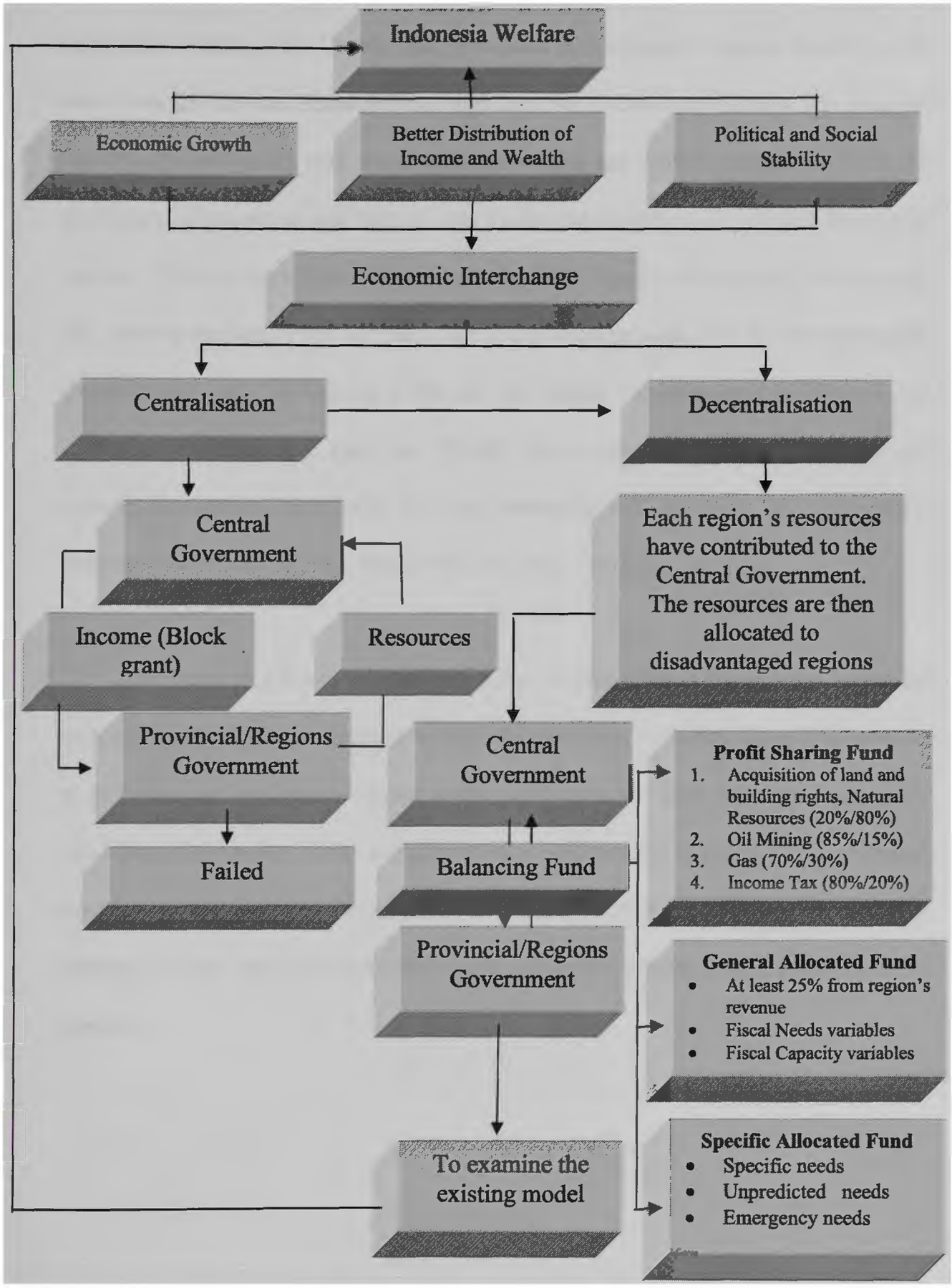
A conceptual framework is required to lay the foundations to understand the economic formulations and models dealing with the economic interchange process between the Central government and East Kalimantan provincial government in Indonesia, based on the concepts of decentralisation in general and fiscal decentralisation in particular. Figure 5.1 diagrammatically presents the detailed conceptual framework. The central objective of the pattern of economic interchange in Indonesia is the promotion welfare for the population at large. Increased welfare in turn is dependant on high rates of economic growth, a reduction in income inequality and poverty (human development) and political and social stability. It is contended that a successful pattern of economic interchange can greatly assist in achieving these

ends. The basis of economic interchange can be summarised as either that of a centralised or a decentralised approach.

Indonesia implemented two different kinds of economic development processes namely centralisation from 1945 to 2000 and decentralisation from 2001 until present day. Although the centralised model did have some advantages such as the fact that most economic decisions were coordinated by the Central government and conflicts could be more readily anticipated, the approach is considered to have failed to achieve the central objective of raising the welfare of the Indonesian populace. In the centralisation era, all of the planning, including provinces' budgets came from the Central government, while the provincial governments only implemented the plans that has been already decided by the Central government. The centralised basis of economic interchange was abandoned in 1999 and replaced by a decentralised approach, which has been in operation since 2001.

Under the decentralised model of economic interchange, provincial income consisting of local owned revenue, Balancing Fund, aid and loans, and other legitimate income contributed to the provincial revenue. Domestic income of the province consisted of income tax, value added tax, land and building tax, duties on land and building transfer, excises and other taxes. The Balancing Fund consisted of three types of funds: (1)) The Profit Sharing Fund *(Dana Bagi Hasil),* (2) The General Allocation Fund *(Dana Alokasi Umum)* and (3) The Specific Allocation Fund *(Dana Alokasi Khusus).*

Figure 5.1: The Conceptual Framework of Indonesian Economic Interchange



The Profit Sharing Fund decreed by Law No 25/1999 states that the division of income between the Central and provincial governments is to address vertical fiscal imbalances between the Central and provincial governments. This is based on two laws; Law 25/1999 on Fiscal Balance and Law No 17/2000 on Personal Tax Income. Law No 25/1999 deals with the acquisition of land and building rights tax (20% for the Central Government and 80% for the Provincial Government), Natural Resources income (20% for the Central Government and 80% for the Provincial Government), Oil /Mining income (85% for the Central Government and 15% for the Provincial Government), and Gas income (70% for the Central Government and 30% for the Provincial Government). Law No 17/2000 deals with Tax Income (80% for the Central Government and 20% for the Provincial Government). The percentage distribution of Profit Sharing Fund is shown in the Table 5.1.

The General Allocation Fund states that at least 25% of the revenue raised by each province will be reallocated back to the province. A further allocation may be made based on fiscal needs related to the population, the land mass, the geographic conditions, the amount of the population below the poverty line and the future fiscal capacity of the province (dependant on future potential income such as industry potential, natural resources potential, human resources potential, and gross domestic product).

Table 5.1: The Percentage Distribution of Profit Sharing Fund

Income	Central Government	Provincial Government	Originating local govt.	Other local governments in the same province	All the local governments
Oil (non-tax, onshore)	85	3	6	6	
Gas (non-tax, onshore)	70	6	12	6	
Mining: Land-rent	20	16	64		
Mining: Royalty	20	16	32	32	
Forestry: Land-rent	20	16	64		
Forestry: Resource rent	20	16	32	32	
Fishery	20				80
Land and Building tax	9	16.2	64.8		10
Land, building Transfer fee		16	64		20
Personal income Tax	80	8	12		

Source: Law No 25/1999; Law No. 17/2000; Government Regulation No 104/2000; Government Regulation No. 84/2001; World Bank, 2003.

Law 25/1999 stipulates that the Central government should allocate at least 25 per cent of its revenue for the General Allocation Fund, but it is still not clear whether this should be done before or after sharing of revenue. It was supported by Government Regulation No 104/2000 on inter-governmental transfer, which clarifies that 25 per cent is net of revenue sharing and be based on actual revenue. From the total value of General Allocation Fund, 90 per cent goes to regencies/municipalities and 10 per cent flows to the provincial government.

The calculation of the value of the General Allocation Fund, as stipulated under Law 22/199 and Government Regulation No 104/2000 with the amendment No 84/2001, explains the principle of fiscal gap that is the difference between expenditure needs and revenue capacity of all of the provincial governments.

The formula of **General Allocation Fund** could be written as follows:

GAF = fiscal needs – fiscal capacity,

where,

Provincial Fiscal needs = population index + land area index + building material price index + poverty index; and

Provincial Fiscal capacity = own revenue + share of land and building tax + land and building transfer fee + personal income tax + natural resource revenues.

The **General Allocation Fund** could be worked out as:

GAF for provincial Government A = GAF weighting of provincial Government A x ***National GAF,***

where,

GAF weighting of provincial Government A = provincial GAF needs / national GAF needs.

The Government Regulation No 84/2001 revised the Government Regulations No 104/2000, and stipulates different weighting for the variable of fiscal needs, which was implemented in 2002. For calculating GAF 2001, each of the variables such as population, land area, building material prices and poverty indices were of same weighting, but for calculating GAF 2002, population and land area variables were

attached 40 per cent weight, while building material price and poverty variables were attached 10 per cent weight each.

On the fiscal capacity, the calculation of GAF 2001 did not take into account the provincial shares of revenues due to the unavailability of the data as well as lobbying by the resource-rich provinces. For GAF 2002 onwards, shared revenues were included but not fully as for provincial share of natural resource revenue; only 75 per cent of the total was included due to lobbying by the resource-rich provinces (World Bank, 2003:27).

The GAF was supplemented by a "contingency fund" or "balancing fund" or "adjustment fund" to address the problems of mismatches between devolved expenditure functions and revenues. In 2001, the budgeted contingency fund was used to finance mismatch as well as to compensate the centrally mandated increase of civil servants' salaries. In 2002, the contingency fund was renamed as the balancing fund, and this fund was used to supplement richer provinces so that the amount of the GAF would be the same as that in 2001 or meets the base amount (World Bank, 2003:28). The balancing fund was renamed as the adjustment fund in 2003.

Finally, a Specific Allocation Fund can be granted because of province-specific conditions, for example environmental needs and unpredicted needs (earthquake, flood etc). Provincial domestic loans should be reported to the Central government, while foreign loans raised by provincial government should be approved by the Central government. These loans consist of private and government loans. The other domestic income is other legitimate income such as fixed asset selling income.

5.4 The Models of Fund Allocation and the Variables

As noted earlier, under the decentralised model, the funds available to a provincial government emanated from three sources. The first is the natural provincial income that is sourced from provincial taxes, levies and the non-natural income. All provincial government incomes (for example oil, gas and mining taxes), except taxes and levies, are known as natural income. The second is the funds that flow from the Central government (Balancing Funds, General Allocation Funds and Specific Allocation Funds) and the third source is loans (UU No 25/1999). In this context, we will examine below the models for the determination of the annual allocation of funds during both centralisation and decentralisation periods.

5.4.1 Fund Allocation during Centralisation Era

The models of fund allocation for provinces during the **centralisation era** were as follows:

$$PBR = POR + BF + AL + OLI \qquad (5.1)$$

where, **PBR** is provincial budget revenue, **POR** is province's own revenue, **BF** is balancing fund, **AL** is aid and loans, and **OLI** is other legitimate income.

$$POR = TI + VAT + LBT + DLBT + E + OT \qquad (5.1.1)$$

where, Province's own revenue (**POR**) consists of tax income (**TI**), value added tax (**VAT**), land and building tax (**LBT**), duties on land and building transfer (**DLBT**), excises (**E**) and other taxes (**OT**).

$$BF = PF + GAF + SAF \qquad (5.1.2)$$

where, **BF** is balancing fund, **PF** is profit sharing fund, **GAF** is the General Allocation Fund, **SAF** is Specific Allocation Fund.

5.4.2 Fund Allocation during Decentralisation Era

For the **decentralisation era,** three models of fund allocation for provinces are specified:

$$GAF = FN - FC \qquad (5.2)$$

where, **GAF** is general allocation fund, **FN** is fiscal need and **FC** is fiscal capacity.

$$FN = ALE = \alpha_0 + \alpha_1 IP + \alpha_2 IAr + \alpha_3 CnPI + \alpha_4 IHDI + \alpha_5 IGPDPpercap \qquad (5.2.1)$$

where, **FN** is the fiscal need which is the **ALE** (the average total local budget expenditure), **IP** is population index, **IAr** is surface area index, **CnPI** is construction price index, **IHDI** is inverse of **HDI** (Human Development Index), **IGPDPpercap** is inverse of **GPDP** per capita (Gross provincial Domestic Product per capita), and α_0 to α_5 are the coefficients which are estimated using linear regression.

$$FC = OSR + RsNat + RsT \qquad (5.2.2)$$

where, **FC** is fiscal capacity, **OSR** is own source revenues, **RsNat** is revenue sharing from natural resources and **RsT** is revenue sharing from taxes.

The amount of the general allocation fund (**GAF**) is then calculated based on the weighted value for each province. $Province_i$ will receive **GAF** based on the weighted value for $Province_i$ multiplied by the total weighted value for all provinces. Meanwhile, the weighted value for $Province_i$ is derived from dividing the fiscal gap for $Province_i$ by the total fiscal gap for all provinces.

GAF Province$_i$ = weighted value for Province$_i$ x weighted value for all provinces

(5.3)

weighted Province$_i$ = fiscal gap Province$_i$ /fiscal gap all provinces (5.3.1)

Or,

GAF Province$_i$ = Fiscal Gap (FG)$_i$ + Basic Amount Allocation$_i$ (5.3.2)

Article 32 of Law 33/2004 mandates three specific policies regarding the calculation on the fiscal gap formula that shall be implemented by 2008:

- If the result of formula for fiscal gap for Province$_i$ is equal to zero, then Province$_i$ will receive GAF as equal as the Basic-amount Allocation;

- If the result of formula for fiscal gap for Province$_i$ is negative and the negative value is lesser than the Basic-amount Allocation, then Province$_i$ will receive GAF as equal as Basic-amount Allocation minus the fiscal gap;

- If the result of formula for fiscal gap for Province$_i$ is negative and the negative value is equal or greater than the Basic-amount Allocation, then Province$_i$ will not receive the GAF.

Profit Sharing Income (PSI):

PSI = OI + GI + MLR + MR + FRR + FI + LBT + LBTF + PIT (5.4)

where, **PSI** profit sharing income, **OI** is oil income, **GI** is gas income, **MLR** is mining and land rent, **MR** is mining royalty, **FRR** is forestry resource rent, **FI** is

fishery income, **LBT** is land and building tax, **LBTF** is land and building transfer fees and **PTT** is personal income tax.

A **Specific Allocation Fund (SAF)** is allocated because of specific needs, unpredicted needs and emergency needs.

General Mining income consists of royalties and land rent, and it is regulated by Government Regulation No 13/2000. Royalties of mining range between 2 per cent to 7 per cent, and it depends on the type of mining items, so profit sharing received by regencies/municipalities (producers) varies between 0.64 per cent and 2.24 per cent of contractor's gross income. The amount of land rent in the general mining sector is divided into land rent from foreign investments and that from domestic investments. Land rent from foreign investments is between $US 3 per hectare (ha) of exploration or exploitation area, while land rent from domestic investments is between Rp 50 to Rp 1,500 per ha of exploration or exploitation area. The land rents are to be collected and evaluated every 6 months.

Forestry profit sharing is divided into Plantation Fund *(Dana Reboisasi),* Forest Resources Provision *(Provisi Sumber Daya Hutan/PSDH)* as a royalty and Forest Exploitation Right Fee *(Iuran Hak Pengusahaan Hutan/IHPH)* as a permanent land rent. The amount of plantation fund (reforestation) between 0 to $US 18 per m^3 or $US 18 per ton. Forest Resources Provision determined between Rp 5,000 to Rp 100,000 per m3, between Rp 2,000 to Rp 700,000 per ton and between Rp 10 to Rp 35,000 per bar of wood. Forest Exploitation Right Fee (IHPH) is between Rp 2,600 to Rp 50,000 per ha per 20 years.

Income from Fishery sector is from the Fishery Exploitation Fee *(Pungutan Pengusahaan Perikanan/PPP)* as license fee and Fishery Production Fee (*Pungutan Hasil Perikanan/PHP).* The amount of Fishery Exploitation fee is $US 500 for empty ship less than 50 Dead Weight Ton (DWT) and $US 1,000 for empty ship between 50 to 100 DWT, and these are charged as $US 1000 for over weight more than 100 DWT, and $US 250 for per 50 DWT until less than 100 DWT. Fishery Production fee depends on the kind of fish, and the transaction could be done on ship. It is between 1 per cent and 2 per cent per transaction.

Provincial Budget:

PBR = POR + BF + AL + OLI (5.1 repeated)

where, **PBR** is provincial budget revenue, **POR** is province's own revenue, **BF** is balancing fund, **AL** is aid and loans and **OLI** is other legitimate income. (It should be noted that for resource-rich provinces like East Kalimantan, **AL** is zero).

POR = TI + VAT + LBT + DLBT + E + OT (5.1.1 repeated)

where, **POR** is province's own revenue, **TI** is tax income, **VAT** is value added tax, **LBT** is land and building tax, **DLBT** is duties on land and building transfers, **E** is excises and **OT** is other taxes.

BF = GAF + PSI + SAF (5.1.2 repeated)

where, **BF** is balancing fund, **GAF** is general allocation fund; **PSI** is profit sharing income, and **SAF** is specific allocation fund.

5.4.3 Weaknesses of the Current Models of Fund Allocation in the Decentralisation Era and How these Models can be Modified

As already mentioned, the Profit Sharing Fund decreed by Law No 25/1999 states that the division of income between the Central and provincial governments is to address vertical revenue imbalances between the Central and local governments. The law decrees profit sharing as follows: land and building rights (20% for the Central Government and 80% for the Provincial Government), Natural Resources (20% for the Central Government and 80% for the Provincial Government), Oil /Mining (85% for the Central Government and 15% for the Provincial Government), Gas (70% for the Central Government and 30% for the Provincial Government). The Law No 17/2000 stipulates that Tax Income is to be shared as 80% for the Central Government and 20% for the Provincial Government.

In comparison, in Colombia 50 per cent of Tax Revenue (from value added tax or sales tax), is transferred to autonomy departments (provincial sub-divisions) and municipalities. In Australia the Commonwealth government collects around 80 per cent of taxation including GST, but is responsible for 54 per cent outlay, and the States collect about 16 per cent of taxation revenue and account for 40 per cent of own purpose outlays.

The formulation of Profit Sharing in case of Oil/Mining and Gas does not confer benefits for East Kalimantan. More than 60 per cent East Kalimantan's income is contributed by Oil/Mining and Gas sectors and these percentages of profit sharing are based on political consideration and it is profitable for the Central government. The central government's decision makers realised that more than 60 per cent national

income contributed by Oil/Mining, Gas and Tax Income, so they decided the Central government must have more than 60 per cent of profit sharing income from these sectors, while other items are not important for the Central government as long as it can control Oil/Mining, Gas and Tax Income.

There should be a new formulation for and percentages of profit sharing between the Central and provincial governments of Indonesia, especially in relation to Oil/Mining, Gas and Tax Income. By modifying profit sharing formulation, the aim is to increase the percentage of Oil/Mining, Gas and Tax Income flowing to the provincial government of East Kalimantan. In turn, provincial income will increase and then provincial budget expenditure obviously increases. If the provincial government allocates larger budget expenditure than at present, it can be hypothesised that increased budget expenditure will significantly enhance economic growth as well as human development. This hypothesis will be tested rigorously in Chapter 6.

Government's revenue consists of Non-Tax Revenue and Tax Revenue. The revenue for profit sharing comes from Non-Tax Revenue from natural resources exploration and exploitation. The sharing between the government and a contractor such as for production sharing contract and joint operation body is decided based on Net Operating Income (NOI) which is derived as production income minus production expenduture, while oil and gas government income are from contractors and *Government Mining and Petrol National Company (Pertamina).* Based on Law No 8/1971, 60 per cent of profit sharing between the government and *Pertamina* is categorised as government tax revenue, and there is no explanation as to how the

other 40 per cent of profit sharing, that is whether it is distributed to the provincial government or to the Central government.

The income from the mining production operation income in each province is categorised as tax and non-tax revenue, which consists of 85 per cent of net operating income (NOI) for Oil and 70 per cent of NOI for Gas. Government Tax Revenue from these items are 31.6 per cent of NOI from Oil and 43.19 per cent of NOI from Gas revenue, and only 53.4 per cent of NOI from Oil and 26.81 per cent of NOI from Gas revenue will to be distributed to the provincial governments. Based on The Law No 25/1999, profits are to be distributed to provincial governments (the regencies/municipalities where gas and/or oil are produced receive 3.2 per cent of NOI for Gas revenue and 3.22 per cent of NOI for Oil revenue). However, it is not very clear how to distribute revenue to others regencies or municipalities in the same province without gas or oil production income.

There are other weaknesses of Law No 25/1999 such as:

1. There is no cost of production standard for mining industries, and therefore it is hard to investigate about cost of production and NOI, so there is a need to decide on a mining cost of production standard.
2. Offshore mining locations in case of 12 miles away have no clear borders among regencies and municipalities, and this leads to a conflict between the regencies and municipalities. Therefore the government should demarcate clear borders in case of Offshore mining locations 12 miles away. In East Kalimantan, there are several offshore oil locations such as around Tarakan Island (Tarakan Regency) and Bunyu Island (Bulungan Municipality).

3. Oil and Gas mining activities depend on where oil and gas have been exploited. It is possible that the regencies/municipalities, which have oil and gas mining have exploited oil and gas in other regency or municipality, but these other regencies or municipalities may not get ant profit sharing income and it could create a new conflict. Therefore, there is a need to separate the regencies/municipalities that exploit oil and gas from those regencies/municipalities having the oil and gas resources.

Fiscal Needs based on Law 25/1999 need to be revised for East Kalimantan, because even though East Kalimantan is among the provinces that contribute large amount of revenue to the Central Government, East Kalimantan still lacks funds for investment in infrastructures including transportation facilities roads and bridges, ports and airports with good or international standards, so lack of funds have become an investment barrier.

The formulation of the General Allocation Fund (GAF) based on Law 25/1999 is still being used by the Central government without any change, especially by not including the infrastructure index, so from 2009, East Kalimantan will not receive any GAF, but only Profit Sharing Income.

Some of the reasons given for this by the Central Government are as follows:

1. The Central government attempted to use the formula consistently.
2. The General Allocation Fund (GAF) has not positively contributed to provincial development, especially for reducing the number of people living in poverty in East Kalimantan.

In fact since 2001, East Kalimantan's provincial government had spent all of its GAF for routine expenditure such as wages of government employees, whereas the GAF was meant for development or investment expenditure and reducing poverty in the province. Anyway, for East Kalimantan province the discontinuation of GAF is a controversial decision, because its provincial government needs sufficient funds to develop the province and reduce poverty. Therefore, East Kalimantan's provincial government has requested the Central Government to change its decision regarding the GAF.

5.5 Conclusion

This chapter presented and discussed the conceptual framework and models employed to examine the economic interchange process between the Central government and East Kalimantan provincial government of Indonesia. The models were presented and described separately for the centralisation era and decentralisation era. Further, weaknesses of these currently used models of economic interchange were discussed and the ways in which the models can be modified were described. The next chapter (Chapter 6) will develop, estimate, and discuss the results of the estimation of, regression models to examine the trends of East Kalimantan province's GDP, HDI and related variables, and to analyse the effects of the decentralisation policy on the trends of such variables, and the regression models to analyse the impact of provincial budget expenditure and decentralisation policy on East Kalimantan province's GDP and HDI.

CHAPTER 6

ANALYSING THE IMPACT OF PROVINCIAL BUDGET EXPENDITURE AND DECENTRALISATION

6.1 Introduction

The objective of this chapter is to develop and estimate the regression models, and discuss the results of estimation of such models, (i) to examine the trends and the effects of decentralisation policy on the trends of East Kalimantan province's gross domestic product (GDP), Human Development Index (HDI) and other related variables, and (ii) to analyse the impact of provincial budget expenditure and decentralisation policy on East Kalimantan province's GDP and HDI. Section 6.2 presents the trend models of East Kalimantan's GDP, HDI and related variables. Section 6.3 develops regression models to analyse the impact of provincial budget expenditure and decentralisation on East Kalimantan province's GDP and HDI. Section 6.4 describes sources of data and adjustment of data, and presents the data used in the estimation of regression models. Section 6.5 presents and discusses the estimation results of regression models. Conclusion is included in Section 6.6.

6.2 Trend Models of East Kalimantan's GDP, HDI and Related Variables

Prior to specifying the regression models for trend analysis of East Kalimantan's GDP, HDI and related variables, it is important to describe the concepts of GDP and HDI.

6.2.1 GDP Concept

The production side of the economy transforms inputs such as labour and capital into outputs. Inputs such as labour and capital are known as factors of production, while the payments made to the factors (wages and interest payments) are called factor payments.

The production function Y, relating to inputs of labour (N) and capital (K), can be written as Y = f (N, K), and can be expressed as:

$$Y = \text{payments for labour} + \text{payments for capital} + \text{profit} \qquad (6.1)$$

where, payments for labour equal the wage rate (w) times the amount of labour used (N) and the payments for capital equal the interest rate (i) times the amount of capital used (K), so GDP could be expressed as:

$$GDP = Y = (w \times N) + (i \times K) + \text{profit} \qquad (6.1.1)$$

Dornbusch, Begg and Fisher (2000, p. 27) state that GDP is the value of all final goods and services produced in the country within a given period, or can defined as the sum of all factor payments. Waud, Maxwell and Bonnici (1989, p. 111) state that GDP has several important characteristics such as GDP is a flow concept, measured in money terms, which only includes goods and services bought for final use, but not unfinished goods in the intermediate stages of production that are purchased for further processing and resale, and has two sides; income side and expenditure side.

The GDP, as a measure of both the total income and total expenditure of an economy, has several limitations (Gans, King, Stonecash, and Mankiw (2003, pp.

502-505). GDP omits important factors in the quality of life including leisure, the quality of the environment and the value of goods produced but not sold in formal markets (e.g. child rearing). Moreover, GDP does not indicate anything about the distribution of income within a nation. For this reason, GDP is not a perfect indicator of wellbeing of all people in an economy. A larger GDP, however, helps people enjoy a better standard of living (Gans, King, Stonecash, and Mankiw, 2003, pp. 502-505).

The *nominal* (money value of) GDP measures the dollar value of final goods and services produced in a given year at the prices at which they were actually sold in that year. The *real* GDP or GPD in constant prices measures the dollar value of final goods and services sold in a given year in terms of the prices at which those goods and services were sold in some base or benchmark year (Waud, Maxwell and Bonnici, 1989; p. 117).

6.2.2 Human Development Index (HDI) Concept

The Human Development Index (HDI) concept is widely used as an indicator of a country's average achievements in basic dimensions of human development such as life expectancy, educational attainment and adjusted real income measured in terms of purchasing power parity (PPP) in US$$ per person (Hopkins, 1991; Algunas, 1995). HDI is a concept that, according to the United Nations Development Program (UNDP), refers to the process of widening the options of persons, giving them greater opportunities for education, health care, income, employment, etc. The basic use of HDI is to rank countries by the level of "human development", which is also used to determine whether a country is a developed, developing, or underdeveloped country.

Algunas (1995) states that the HDI combines three basic dimensions:

- Life expectancy at birth, as an index of population health and longevity
- Knowledge and education, as measured by the adult literacy rate (with two-thirds weighting) and the combined primary, secondary, and tertiary gross enrollment ratio (with one-third weighting).
- Standard of living, as measured by the natural logarithm of gross domestic product (GDP) per capita at purchasing power parity (PPP) in United States dollars (US$).

As Quinlivan and Davies (2006) states, HDI represents the average of the following three general indices:

- Life Expectancy Index = $$\frac{LE - 25}{85 - 25}$$ (6.2)
- Education Index = $$\frac{2}{3} \times ALR + \frac{1}{3} \times ER$$ (6.3)
- Adult Literacy Index (ALI) = $$\frac{ALR - 0}{100 - 0}$$ (6.4)
- Gross Enrollment Index (EI) = $$\frac{ER - 0}{100 - 0}$$ (6.5)
- GDP Index = $$\frac{\log(GDPpc) - \log(100)}{\log(40000) - \log(100)}$$ (6.6)

where, LE is life expectancy at birth, ALR is adult literacy rate (ages 15 and older), ER is combined gross enrollment ratio for primary, secondary and tertiary schools and GDPpc is GDP per capita at PPP in US$.

6.2.3 Trend Equations

In order to identify the trends and to examine the effects of decentralisation policy, a trend analysis of the following variables of the East Kalimantan province is undertaken first for the period 1984 to 2007: real GDP (**PGDP**), budget real expenditure (**PBE**), real investment (**INV**), workforce (**WOF**), real exports (**EXP**) and real imports (**IMP**). This will also test the hypothesis (mentioned on page 10 of the thesis) that during decentralisation era East Kalimantan province has achieved a greater level of economic progress compared to the level of economic progress recorded during the centralisation era. A trend model for each of these variables can be specified as, for example,

$$PGDP = f(T, DYD) \qquad (6.7)$$

where, **PGDP** is provincial real gross domestic product, **T** is time (1 for year 1984,.....,24 for year 2007) and **DYD** is the dummy variable for decentralisation policy since 2001 (**DYD** = 0 for years 1984 to 2000 and 1 for years 2001 to 2007).

It is believed that the time series data for **PGDP**, **PBE**, **INV**, **WOF**, **EXP** and **IMP** increase (or decrease) by equal percents or proportions, over the given period of time.[3]

[3] It is assumed that a linear (straight line) trend equation is unsuitable given the nature of time series data used here. A linear trend equation is used "...when it is believed that time series data are increasing (or decreasing) by *equal amounts*, on the average, from one period to another" (Mason, 1974, p. 183).

Therefore a semi-logarithmic trend equation is used to estimate the trends in these variables, for example,

$$LPGDP = \alpha_0 + \alpha_1 T + \alpha_2 DYD + \varepsilon \qquad (6.7.1)$$

where, α_0 is constant, α_1 and α_2 are coefficients to be estimated and ε is the error term. α_1 could be positive if there is an increasing trend, or negative if there is a decreasing trend, of the date series concerned. α_2 could be positive if there is a positive effect due to decentralisation on the relevant variable or α_2 could be negative if there is a negative effect due to decentralisation on the relevant variable.

In addition, to examine whether there is a structural break in the time series of the variables (**PGDP**, **PBE**, **INV**, **WOF**, **EXP**, and **IMP**) due to decentralisation policy, the **Chow Breakpoint Test** was conducted. The idea of this test is to fit trend equations for each variable for the centralisation period (1984-2000) and decentralisation period (2001-2007) separately and to see whether there are significant differences in the estimated equations. A significant difference indicates a structural change in the trend equation. The *F-statistic* obtained from the Chow breakpoint test will be used to identify significant structural breaks in the time series of the relevant variables.

A similar analysis is conducted for the following variables of the East Kalimantan province, for the period 1990-2007 (since HDI data are available only from 1990): **HDI**, teacher-student ratio (**TSR**) and doctors and paramedics per 1000 of population (**DOC**). This will also test the hypothesis (mentioned on page 10 of the thesis) that during decentralisation era East Kalimantan province has achieved a

greater level of human development compared to the level of human development recorded during the centralisation era.

A trend model for each of these variables can be specified as, for example,

$$HDI = f(T, DYD) \quad (6.8)$$

where, **T** is time (1 for year 1990,.....,18 for year 2007) and **DYD** is the dummy variable for decentralisation policy since 2001 (**DYD** = 0 for years 1990 to 2000 and 1 for years 2001 to 2007). In semi-logarithmic form, the trend equation is specified as, for example:

$$LHDI = \beta_0 + \beta_1 T + \beta_2 DYD + \mu \quad (6.8.1)$$

where, β_0 is constant, β_1 and β_2 are coefficients to be estimated and μ is the error term. β_1 could be positive if there is an increasing trend, or negative if there is a decreasing trend, of the date series concerned. β_2 could be positive could be positive if there is a positive effect due to decentralisation on the relevant variable or β_2 could be negative if there is a negative effect due to decentralisation on the relevant variable.

In addition to examine whether there is a structural break in the time series of the variables (**HDI, TSR, DOC**) due to decentralisation policy, the **Chow Breakpoint Test** (F-test) was conducted.

6.3 Regression Models to Analyse the Impact of Provincial Budget Expenditure and Decentralisation on GDP and HDI

The effects of East Kalimantan province's budget expenditure and decentralisation policy implementation will be examined in terms of their contribution to the province's economy and human development. Thus, multiple regression analysis will be used to examine the impact of regional budget and decentralisation on East Kalimantan's GDP and HDI.

First, East Kalimantan province's real gross domestic Product **(PGDP)** is specified as a function of provincial budget real expenditure during the centralisation period (**PBEC**) and the provincial budget real expenditure during the decentralisation period (**PBED**).

$$\text{PGDP} = f(\text{PBEC}, \text{PBED}) \qquad (6.9)$$

Where **PBEC** = PBE x dummy for centralisation period and **PBED** = PBE x dummy for decentralisation period.

The log-log functional form is used in the estimation because it directly produces elasticities (percentage change of the dependent variable for one per cent change in each independent variable). In log-log form the model can be specified as:

$$\text{LPGDP} = \alpha_0 + \alpha_1 \text{LPBEC} + \alpha_2 \text{LPBED} + \varepsilon \qquad (6.9.1)$$

where, α_0 is constant, α_1, and α_2 are coefficients to be estimated and ε is the error term. The hypotheses to be tested are: $\alpha_1>0$, $\alpha_2>0$, and $\alpha_2>\alpha_1$. α_1 and α_2 are hypothesised to be positive as provincial budget real expenditure during both centralisation era and decentralisation era is expected to increase provincial real GDP. Further, α_2 is hypothesised to be greater than α_1 as provincial budget real expenditure

during decentralisation era is expected to contribute more positively to provincial real GDP that it did during the centralisation period.

Next, East Kalimantan province's Human Development Index (**HDI**) will be modelled as a function of: provincial budget real expenditure during the centralisation era (**PBEC**) and the provincial budget real expenditure during the decentralisation period (**PBED**).

$$HDI = f(PBEC, PBED) \qquad (6.10)$$

Where **PBEC** = PBE x dummy for centralisation period and **PBED** = PBE x dummy for decentralisation period.

In log-log form the model can be specified as:

$$LHDI = \beta_0 + \beta_1 LPBEC + \beta_2 LPBED + \mu \qquad (6.10.1)$$

where, β_0 is constant, β_1 and β_2 are coefficients to be estimated and μ is the error term. The hypotheses to be tested are: $\beta_1>0$, $\beta_2>0$, and $\beta_2>\beta_1$. β_1 and β_2 are hypothesised to be positive as provincial budget real expenditure during both centralisation era and decentralisation era is expected to increase provincial HDI. Moreover, β_2 is hypothesised to be greater than β_1 as provincial budget real expenditure during decentralisation era is expected to contribute more positively to provincial HDI that it did during the centralisation period.

6.4 Data Issues

6.4.1 Sources of Data Series

There are two main sources data, namely Central and provincial government sources. Central Statistics Bureau is the Central government source, and East Kalimantan's

Provincial Statistics Bureau is the East Kalimantan provincial government source. The quantitative data collected include GDP, provincial budget expenditure, investment, workforce, exports, imports, Human Development Index (HDI), numbers of teachers and students in schools and universities, and doctors per 1000 population. Annual time series data were collected as secondary data for the period 1984-2007, which were further classified into centralisation era (1984 to 2000), and decentralisation era (2001 to 2007).

6.4.2 Limitations of Data and Data Adjustment

It was expected to collect the longest possible time series data for the purpose of estimation of regression equations, but several constraints such as limited sources of data, poor data recording in both electronic and hardcopy form limited the period of time series data to be from 1984 until 2007. The GDP, provincial budget expenditure, investment, workforce, exports, and imports are well known economic indicators and hence documentation of data for these variables is relatively accurate. Moreover, relatively longer series data are available for these variables, and therefore data are available for the period 1984-2000 (centralisation era) and for the period 2001-2007 (decentralisation era). The Human Development Index (HDI) is a relatively new concept for Indonesia, which was known during the latest fifteen years and hence a shorter series of data on HDI is available. As such, data on the HDI, teacher/student ratio and doctors per 1000 population will be limited for the period 1990-2000 (centralisation era) and for the period 2001-2007 (decentralisation era).

The secondary data collected from different sources are of different type and relate to different periods. Hence the data had to be adjusted to become consistent data series, which can be then used for the estimation of regressions. Some data series originally

given on a financial year basis were converted to a calendar year basis, while the data (GDP, Budget Expenditure, Exports, Imports, Investment) given on the basis of current year money values were converted to real values using the relevant deflators. Detailed data tables showing the steps involving the adjustment of data for the relevant variables are presented in the *Appendix to Chapter 6.*

The adjusted data series used in the estimation of regression equations are presented in Table 6.1 below.

Table 6.1: Data Used in the Estimation of Regression Equations, Data from 1984 to 2007

Year	Real GDP (Rp 000,000)	Provincial Real Budget Expenditure (Rp 000)	Real Investment (Rp 000,000)	Workforce (Age 15 and over)
1984	5,268,812.21	86,762,793.89	120,108.78	511,444
1985	5,325,781.90	85,913,497.08	279,062.89	521,851
1986	5,397,216.13	100,624,603.35	427,438.62	532,501
1987	5,477,342.54	92,735,704.68	336,553.72	603,336
1988	5,432,219.06	117,550,936.65	188,339.79	678,759
1989	6,023,940.42	161,634,034.86	598,979.32	697,677
1990	6,479,294.34	195,121,017.89	2,417,116.71	751,449
1991	5,297,070.00	185,762,038.58	585,391.58	809,905
1992	5,659,572.00	213,876,333.50	1,065,098.35	838,760
1993	15,708,419.00	605,703,837.00	2,008,570.80	874,031
1994	17,522,973.00	622,034,707.44	2,378,827.71	917,780
1995	18,442,677.00	618,030,875.63	3,533,719.44	966,135
1996	17,295,198.00	568,784,725.50	3,350,335.98	971,995
1997	20,958,040.00	726,655,649.70	3,151,726.99	997,123
1998	22,133,685.00	523,235,186.91	955,642.91	1,012,079
1999	23,317,635.00	693,310,941.01	17,777.60	1,027,261
2000	82,447,052.00	8,967,635,983.50	131,107.39	1,053,601
2001	86,831,742.00	7,554,957,189.36	3,396,976.70	1,082,739
2002	88,686,290.00	8,066,311,483.97	2,039,341.97	1,102,664
2003	90,802,588.00	8,184,492,698.74	3,128,920.33	1,155,770
2004	93,584,548.00	7,177,746,669.42	3,258,385.76	1,137,730
2005	97,821,711.00	5,554,733,174.79	1,264,773.91	1,213,684
2006	101,813,597.00	6,034,350,311.92	26,737,637.40	1,325,888
2007	114,930,788.00	6,390,131,532.57	29,268,678.40	1,345,776

Source: BPS East Kalimantan, 2008.

Table 6.1 Continued... Data Used in the Estimation of Regression Equations, Data from 1984 to 2007

Year	Real Exports (US $ 000)	Real Imports (US $ 000)
1984	997,574	119,685
1985	1,058,258	122,711
1986	1,136,561	130,823
1987	1,198,251	137,804
1988	1,493,320	194,660
1989	1,538,710	232,822
1990	1,864,839	353,531
1991	1,846,609	382,496
1992	1,896,868	369,872
1993	1,796,999	262,682
1994	1,634,535	359,085
1995	1,510,307	487,310
1996	1,546,782	731,293
1997	3,690,093	695,712
1998	1,870,021	480,970
1999	1,710,703	571,295
2000	2,449,880	632,261
2001	2,104,834	755,848
2002	1,682,410	745,974
2003	1,917,014	765,096
2004	2,229,559	2,433,411
2005	2,544,428	2,562,549
2006	9,537,981	3,011,370
2007	8,495,209	2,838,361

Source: BPS, East Kalimantan, 2008

Table 6.1 Continued... Data Used in the Estimation of Regression Equations, Data from 1990 to 2007

Year	Human Development Index	Provincial Real Budget Expenditure (Rp 000)	Ratio of Teachers to Students	Ratio of Doctors and Paramedics Per 1000 Population
1990	66.30	195,121,017.89	0.157	4.521
1991	66.80	185,762,038.58	0.174	4.366
1992	67.50	213,876,333.50	0.177	3.476
1993	68.90	605,703,837.00	0.181	3.328
1994	69.50	622,034,707.44	0.184	3.114
1995	70.20	618,030,875.63	0.166	3.143
1996	71.00	568,784,725.50	0.154	4.278
1997	71.60	726,655,649.70	0.154	3.881
1998	69.30	523,235,186.91	0.161	3.806
1999	69.60	693,310,941.01	0.173	3.851
2000	70.10	8,967,635,983.50	0.174	3.489
2001	69.90	7,554,957,189.36	0.179	3.705
2002	70.10	8,066,311,483.97	0.197	3.416
2003	72.20	8,184,492,698.74	0.218	3.335
2004	72.90	7,177,746,669.42	0.227	2.954
2005	73.30	5,554,733,174.79	0.229	2.527
2006	73.50	6,034,350,311.92	0.216	2.945
2007	74.40	6,390,131,532.57	0.202	2.471

Source: BPS East Kalimantan, 2008

6.5 Discussion of Estimation Results

6.5.1 Trend Analysis

Ordinary least squares (OLS) multiple regression technique was used in estimating all of the trend regression equations. The trend regression equations were estimated using *EViews* econometrics software package. The estimation results are presented and discussed below.

The regression estimation results, together with relevant statistical and diagnostic tests[4], for the trend analysis of data for the period 1984-2007 in relation to East Kalimantan province's real GDP (**PGDP**), budget real expenditure (**PBE**), real investment (**INV**), workforce (**WOF**), real exports (**EXP**) and real imports (**IMP**) are presented in Tables 6.2 to 6.7.

As shown in Table 6.2, the coefficient for the time trend variable (**T**) is positive and significant, suggesting that East Kalimantan province's real GDP (**LPGDP**) has a significantly increasing trend over the period 1984-2007. The coefficient for the dummy variable for decentralisation (**DYD**) is also positive and significant, suggesting that there is a significant positive effect of decentralisation on East Kalimantan province's real GDP. Thus, on average, East Kalimantan's real GDP has been larger during the decentralisation era compared to that during the centralisation era. The Chow F-test statistic of 3.795 [probability: $F_{(2,20)} = 0.040$] shows that there is a significant structural break of East Kalimantan province's real GDP due to decentralisation.

[4] The statistical test are: *t* test for significance of the estimated coefficients, R^2 and adjusted R^2 test for explanatory power of the estimated model, F test for overall significance of the estimated model, D.W. test for auto (serial) correlation, and the diagnostic test are: Jarque-Bera normality test, Breusch-Godfrey LM test for serial correlation, White test for heteroskedasticity and Ramsey's RESET test for functional form.

Table 6.2: Estimates of the Trend Equation for East Kalimantan Province's Real GDP, 1984-2007

Dependent Variable: LPGDP

Independent Variable	Coefficient	t-statistic
T	0.137***	8.506
DYD	0.533**	2.170
Constant	14.967***	89.931

$R^2 = 0.930$; Adjusted $R^2 = 0.923$; $F = 140.021$***;
D.W. = 1.154
Note: *** = significant at the 1 per cent level.
** = significant at the 5 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 3.824$;
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,19)} = 2.240$
White heteroskedasticity Test: $F_{(4,19)} = 1.125$
Ramsey RESET Test: $F_{(1,20)} = 0.002$

Results presented in Table 6.3 show that the coefficient for the time trend variable (**T**) is positive and significant suggesting that East Kalimantan province's budget real expenditure (**LPBE**) has a significantly increasing trend over the period 1984-2007. The coefficient for the dummy variable for decentralisation (**DYD**) is also positive and significant (at the 10 per cent level), suggesting that there is a positive and significant (but weak) effect of decentralisation on East Kalimantan province's budget real expenditure. Hence on average, East Kalimantan's budget real expenditure has been larger during the decentralisation era compared to that during

the centralisation era. The Chow F-test statistic of 6.134 [probability: $F_{(2,20)} = 0.008$] shows that there is a significant structural break of East Kalimantan province's budget real expenditure due to decentralisation.

Table 6.3: Estimates of the Trend Equation for East Kalimantan Province's Budget Real Expenditure, 1984-2007

Dependent Variable: LPBE

Independent Variable	Coefficient	t-statistic
T	0.193***	7.222
DYD	0.767*	1.882
Constant	17.833***	64.531

$R^2 = 0.906$; Adjusted $R^2 = 0.897$; $F = 101.708$***;
D.W. = 1.684
Note: *** = significant at the 1 per cent level.
* = significant at the 10 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 21.136$;
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,19)} = 1.648$
White heteroskedasticity Test: $F_{(4,19)} = 4.248$
Ramsey RESET Test: $F_{(1,20)} = 2.293$

As shown in Table 6.4, the coefficient for the time trend variable (**T**) is positive but not significant suggesting that East Kalimantan province's real investment (**LINV**) has no significant trend over the period 1984-2007. The coefficient for the dummy variable for decentralisation (**DYD**) is not significant, indicating that there is no significant effect of decentralisation on East Kalimantan's real investment. The Chow F-test statistic of 1.676 [probability: $F_{(2,20)} = 0.212$] also

shows that there is no significant structural break of East Kalimantan province's real investment due to decentralisation.

Table 6.4: Estimates of the Trend Equation for East Kalimantan Province's Real Investment, 1984-2007

Dependent Variable: LINV

Independent Variable	Coefficient	t-statistic
T	0.060	0.887
DYD	1.345	1.305
Constant	12.803***	18.317

$R^2 = 0.351$; Adjusted $R^2 = 0.289$; $F = 5.691$***
D.W. = 1.018
Note: *** = significant at the 1 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 5.255$;
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,19)} = 3.137$
White heteroskedasticity Test: $F_{(4,19)} = 3.113$
Ramsey RESET Test: $F_{(1,20)} = 0.283$

As Table 6.5 indicates, the coefficient for the time trend variable (**T**) is positive and significant suggesting that East Kalimantan province's workforce (**LWOF**) has a significantly increasing trend over the period 1984-2007. However, the coefficient for the dummy variable for decentralisation (**DYD**) is negative and significant, indicating that there is a significantly negative effect of decentralisation on East Kalimantan's workforce. Thus, on average, East Kalimantan's workforce has been smaller during the decentralisation era compared to that during the centralisation

era. The Chow F-test statistic of 8.012 [probability: $F_{(2,20)} = 0.002$] shows that there is a significant structural break of East Kalimantan province's workforce due to decentralisation.

Table 6.5: Estimates of the Trend Equation for East Kalimantan Province's Workforce, 1984-2007

Dependent Variable: LWOF

Independent Variable	Coefficient	t-statistic
T	0.048***	14.624
DYD	-0.159***	-3.651
Constant	13.146***	387.389

$R^2 = 0.965$; Adjusted $R^2 = 0.962$; $F = 294.588$***
D.W. = 0.707
Note: *** = significant at the 1 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 1.616$;
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,19)} = 7.121$
White heteroskedasticity Test: $F_{(4,19)} = 1.816$
Ramsey RESET Test: $F_{(1,20)} = 23.824$

As shown in Table 6.6, the coefficient for the time trend variable (**T**) is positive and significant suggesting that East Kalimantan province's real exports (**LEXP**) have a significantly increasing trend over the period 1984-2007. The coefficient for the dummy variable for decentralisation (**DYD**) is negative but not significant, indicating that there is no significant effect of decentralisation on East Kalimantan province's real exports. However, the Chow F-test statistic of 9.056

[probability: $F_{(2,20)} = 0.001$] shows that there is a significant structural break of East Kalimantan province's real exports due to decentralisation.

Table 6.6: Estimates of the Trend Equation for East Kalimantan Province's Real Exports, 1984-2007

Dependent Variable: LEXP

Independent Variable	Coefficient	t-statistic
T	0.062***	4.545
DYD	-0.083	-0.320
Constant	13.752***	139.513

$R^2 = 0.550$; Adjusted $R^2 = 0.507$; $F = 12.825$***
D.W. = 1.014
Note: *** = significant at the 1 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 5.638$;
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,19)} = 2.718$
White heteroskedasticity Test: $F_{(4,19)} = 8.561$
Ramsey RESET Test: $F_{(1,20)} = 5.533$

As shown in Table 6.7, the coefficient for the time trend variable (**T**) is positive and significant indicating that East Kalimantan province's real imports (**LIMP**) have a significantly increasing trend over the period 1984-2007. The coefficient for the dummy variable for decentralisation (**DYD**) is not significant, suggesting that there is no significant effect of decentralisation on East Kalimantan province's real imports. However, the Chow F-test statistic of 5.599 [probability:

$F_{(2,20)} = 0.012$] shows that there is a significant structural break of East Kalimantan province's real imports due to decentralisation.

Table 6.7: Estimates of the Trend Equation for East Kalimantan Province's Real Imports, 1984-2007

Dependent Variable: LIMP

Independent Variable	Coefficient	t-statistic
T	0.126***	4.545
DYD	0.097	0.384
Constant	11.511***	122.385

$R^2 = 0.904$; Adjusted $R^2 = 0.894$; $F = 98.643$***
D.W. = 0.926
Note: *** = significant at the 1 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 1.309$;
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,19)} = 4.874$
White heteroskedasticity Test: $F_{(4,19)} = 6.906$
Ramsey RESET Test: $F_{(1,20)} = 2.202$

The estimation regression results, together with the relevant statistical and diagnostic tests, for the trend analysis of data for the period 1990-2007 in relation to East Kalimantan province's Human Development Index (**HDI**), teacher-student ratio (**TSR**) and doctors per 1000 of population (**DOC**) are presented in Tables 6.8 to 6.10.

Table 6.8 shows that the coefficient for the time trend variable (**T**) is positive and significant, suggesting that East Kalimantan province's Human Development

Index (**LHDI**) has a significantly increasing trend over the period 1990-2007. However, the coefficient for the dummy variable for decentralisation (**DYD**) is negative but not significant, suggesting that there is no significant effect of decentralisation on East Kalimantan province's **HDI.** The Chow F-test statistic of 2.101 [probability: $F_{(2,20)} = 0.0.156$] also shows that there is no significant structural break of East Kalimantan province's HDI due to decentralisation.

Table 6.8: Estimates of the Trend Equation for East Kalimantan Province's HDI, 1990-2007

Dependent Variable: LHDI

Independent Variable	**Coefficient**	**t-statistic**
T	0.006***	5.258
DYD	-0.015	-1.118
Constant	4.196***	476.489

$R^2 = 0.816$; Adjusted $R^2 = 0.791$; $F = 33.265$***;
D.W. = 0.732
Note: *** = significant at the 1 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 1.356$
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,13)} = 4.992$
White heteroskedasticity Test: $F_{(4,13)} = 10.112$
Ramsey RESET Test: $F_{(1,14)} = 0.035$

As shown in Table 6.9, the coefficient for the time trend variable (**T**) is positive but not significant suggesting that East Kalimantan province's teacher/student ratio (**LTSR**) has no significant trend over the period 1990-2007. However, the

coefficient for the dummy variable for decentralisation (**DYD**) is positive and significant, suggesting that there is a significantly positive effect of decentralisation on East Kalimantan province's **TSR**. The Chow F-test statistic of 5.625 [probability: $F_{(2,20)} = 0.016$] also shows that there is a significant structural break of East Kalimantan province's TSR due to decentralisation.

Table 6.9: Estimates of the Trend Equation for East Kalimantan Province's Teacher/student Ratio, 1990-2007

Dependent Variable: LTSR

Independent Variable	Coefficient	t-statistic
T	0.002	0.336
DYD	0.197***	2.845
Constant	-1.795***	-39.610

$R^2 = 0.696$; Adjusted $R^2 = 0.656$; $F = 17.247$***;
D.W. = 1.055
Note: *** = significant at the 1 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 1.131$
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,13)} = 3.902$
White heteroskedasticity Test: $F_{(4,13)} = 1.804$
Ramsey RESET Test ($F_{1,14}$)

Table 6.10 shows that the coefficient for the time trend variable (**T**) is negative and significant (at the 10 per cent level) suggesting that East Kalimantan province's doctors per 1000 (**LDOC**) population has a significantly decreasing trend over the period 1990-2007. However, the coefficient for the dummy variable for decentralisation (**DYD**) is negative but not significant, suggesting that there is no

significant effect of decentralisation on East Kalimantan province's **DOC.** The Chow F-test statistic of 2.657 [probability: $F_{(2,20)} = 0.110$] also shows that there is no significant structural break of East Kalimantan province's HDI due to decentralisation.

Table 6.10: Estimates of the Trend Equation for East Kalimantan Province's Doctors per 1000 Population, 1990-2007

Dependent Variable: LDOC

Independent Variable	Coefficient	t-statistic
T	-0.019*	-1.755
DYD	-0.033	-0.282
Constant	1.431***	18.493

$R^2 = 0.483$; Adjusted $R^2 = 0.414$; $F = 7.018$***;
D.W. = 1.048
Note: *** = significant at the 1 per cent level;
* = significant at the 10 per cent level.
Jarque-Bera Normality Test: $\chi^2 = 2.040$
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,13)} = 1.562$
White heteroskedasticity Test: $F_{(4,13)} = 1.449$
Ramsey RESET Test: $F_{(1,14)} = 2.465$

6.5.2 Impact of Provincial Budget Expenditure and Decentralisation on GDP

The results of the trend analysis in section 6.5.1 above indicated that East Kalimantan provinces real GDP (**LPGDP**) and budget real expenditure (**LPBE**) have increasing trends. Therefore, before estimating the regression equations for analysing the impact of Provincial Budget Expenditure and Decentralisation on GDP, the time series data

for the period of 1984-2007 for real GDP (**LPGDP**), budget real expenditure during the centralisation period of 1984-2000 (**LPBEC**) and the budget real expenditure during the decentralisation period of 2001-2007 (**LPBED**) are tested for unit root employing Augmented Dickey-Fuller (ADF) tests. The results of the ADF unit root tests are presented in Table 6.11. The results in Table 6.11 shows that all three variables (**LPGDP, LPBEC and LPBED**) are non-stationary in their level form, while all three variables are stationary in their first difference form [(i.e. integrated in order-one or I(1)].

Table 6.11: Results of the ADF Unit Root Tests: LPGDP, LPBEC, LPBED

Variable	ADF Test Statistic	95% Critical Value	Sample Period	NOB*	Conclusion
LPGDP	-2.826	-3.633	1984-2007	24	Non-stationary
ΔLPGDP	-4.601	-3.633	1984-2007	23	Stationary
LPBEC	-1.967	-3.622	1984-2000	17	Non-stationary
ΔLPBEC	-5.175	-3.633	1984-2000	16	Stationary
LPBED	-1.893	-3.622	2001-2007	6	Non-stationary
ΔLPBED	-4.671	-3.633	2001-2007	5	Stationary

Notes: ADF tests include an intercept and a linear trend.
ADF test is based on Akike Information Criterion.
NOB* = Number of observations.
Δ denotes first difference.

Thus, as the variables are stationary in their first difference form (see Table 6.11) it might be tempting to use those stationary first differences of variables in estimating the model for the GDP (regression equation 6.9.1). But that may show the short-run relationships between the independent variable and the dependent variable, leaving out important long run relationships which we are reluctant to abandon.

Hence, the GDP regression equation was estimated using the unrestricted error correction modelling (UECM) procedure in which variables are included both in the level form and the first difference form. The UECM provides a procedure to estimate short-run dynamics and long run relationships in one and the same model. Moreover, the UECM minimises the possibility of estimating spurious regression relationships (Cuthbertson, Hall and Taylor, 1992; Athukorala and Rajapathirana, 2000). The UECM is also known as the LSE approach (Hendry, 1995). The UECM procedure starts with the estimation of a general dynamic model with more lags than necessary. The estimated model is then progressively simplified reducing the lag length until a parsimonious estimation is obtained based on a series of a diagnostic tests. The UECM procedure is considered to be a most suitable approach for model estimation with small samples of data (Cuthberston, Hall and Taylor, 1992).

The UECM for the GDP equation (6.9.1) is specified as:

$$\Delta LPGDP = \alpha_0 + \alpha_1 \Delta LPBEC + \alpha_2 \Delta LPBED + \alpha_3 LPBEC_{t-i} + \alpha_4 LPBED_{t-i} + \alpha_5 LPGDP_{t-i} + \varepsilon_t \quad (6.11)$$

The hypothesised relationships are: α_1, α_2, α_3 and α_4 are positive, whereas α_5 is negative. α_1 and α_2 are short run coefficients, and α_3 and α_4 are lagged (intermediate run) coefficients. ε_t is the error term. Long run elasticity with respect to **LPBEC** is derived as $-(\alpha_3/\alpha_5)$, and the long run elasticity with respect to **LPBEC** is derived as $-(\alpha_4/\alpha_5)$.

The parsimonious ("best") estimates of the GDP equation is presented in Table 6.12. The estimates show that, as hypothesised, the first differences of the variables for the budget real expenditure during the centralisation period (**ΔLPBEC**) as well as

for the budget real expenditure during the decentralisation period (**ΔLPBED**) have significant and positive coefficients (0.524) and 0.518) suggesting that, in the short-run, budget real expenditure during both periods had a positive impact on East Kalimantan province's real GDP. However, the coefficient for the **ΔLPBEC** variable is of (slightly) smaller magnitude than that for the **ΔLPBED** variable, suggesting that, in the short-run, the budget real expenditure during the decentralisation period had a slightly smaller positive impact on East Kalimantan's real GDP than during the centralisation period.

Table 6.12: Estimated Parsimonious UECM Regression Results for East Kalimantan Province's Real GDP

Dependent Variable: ΔLPGDP

Independent Variable	**Coefficient**	**t-statistic**	**Long run Elasticity**
ΔLPBEC	0.524***	9.941	
ΔLPBED	0.518***	9.336	
$LPBEC_{(t-1)}$	0.245**	2.080	0.842
$LPBED_{(t-1)}$	0.240**	2.081	0.825
$LPGDP_{(t-1)}$	-0.291*	-1.856	
Constant	-0.037	0.968	

OLS Statistics:
$R^2 = 0.868$; Adjusted $R^2 = 0.829$; $F = 22.421$***; D.W. = 1.825
Note: *** = significant at the 1 per cent level. ** = significant at the 5 per cent level. * = significant at the 10 per cent level.
OLS Diagnostics:
Jarque-Bera Normality Test: $\chi^2 = 5.684$
Breusch-Godfrey Serial Correlation LM Test: $F_{(2,15)} = 0.748$
White heteroskedasticity Test: $F_{(6,16)} = 5.515$
Ramsey RESET Test: $F_{(1,16)} = 0.003$

The derived long run elasticities of East Kalimantan province's real GDP with respect to the budget real expenditure during the decentralisation period (**LPBEC**) is of smaller magnitude (0.825) than the long run elasticity of real GDP with respect the budget real expenditure during the centralisation period (**LPBED**) (0.842). This suggest that in the long-run, the budget real expenditure during the decentralisation period had a slightly smaller positive impact on East Kalimantan's real GDP than during the centralisation period. Elasticity in this context refers to the percentage change in East Kalimantan province's real GDP resulting from one per cent change in the relevant independent variable, given all other factors that affects real GDP remain constant (*ceteris paribus*). Thus, for example, an increase of one per cent in the provincial budget real expenditure during the centralisation era (**LPBEC**) would have resulted in 0.842 per cent increase in the province's real GDP. An increase of one per cent in the provincial budget real expenditure during the decentralisation era (**LPBED**), keeping other factors constant (*ceteris paribus*), results in an increase of 0.825 per cent of the province's real GDP. Based on this elasticity estimate and actual real GDP of East Kalimantan province in the year 2007 (Rp 114,930 billion), it is predicted that a one per cent increase in the provincial budget real expenditure, *ceteris paribus*, will result in a total provincial real GDP of Rp 115,878 billion in the year 2008 and Rp 116,834 billion in the year 2009.

6.5.3 Impact of Provincial Budget Expenditure and Decentralisation on HDI

The results of the trend analysis in section 6.5.1 above indicated that East Kalimantan province's HDI (**LHDI**) and budget real expenditure (**LPBE**) have increasing trends. Therefore, before estimating the regression equations for analysing the impact of

Provincial Budget Expenditure and Decentralisation on HDI, the time series data for HDI (**LHDI**) for 1990-2007, budget real expenditure during the centralisation period of 1990-2000 (**LPBEC**) and the budget real expenditure during the decentralisation period of 2001-2007 (**LPBED**) are tested for unit root employing Augmented Dickey-Fuller (ADF) tests. The results of the ADF unit root tests are presented in Table 6.13. The results in Table 6.13 shows that all three variables (**LHDI, LPBEC and LPBED**) are non-stationary in their level form, while all three variables are stationary in their first difference form [(i.e. integrated in order-one or I(1)].

Table 6.13: Results of the ADF Unit Root Tests: LHDI, LPBEC, LPBED

Variable	ADF Test Statistic	95% Critical Value	Sample Period	NOB*	Conclusion
LHDI	-1.834	-3.710	1990-2007	18	Non-stationary
ΔLHDI	-4.580	-3.733	1990-2007	17	Stationary
LPBEC	-2.206	-3.710	1984-2000	17	Non-stationary
ΔLPBEC	-4.282	-3.733	1984-2000	16	Stationary
LPBED	-2.066	-3.710	2001-2007	6	Non-stationary
ΔLPBED	-3.864	-3.733	2001-2007	5	Stationary

Notes: ADF tests include an intercept and a linear trend.
ADF test is based on Akike Information Criterion.
NOB* = Number of observations.
Δ denotes first difference.

However, the estimated UECM with different lag lengths proved to be unsatisfactory in statistical terms and produced noon significant coefficients. Thus, LHDI equation was tested for cointegration using Engel-Granger two-step procedure (Engle and Granger, 1987). If two variables are cointegrated, they would be linked to each other in the long run. In the first step, an OLS regression is estimated using level form of

the variables to obtain long run coefficients (elasticities). In the second stage an error correction model (ECM) is estimated using first difference forms of the variables and the lagged residual ($RESID_{t-1}$) from the estimated OLS regression. If the $RESID_{t-1}$ is negative and significant, the estimated cointegration relationship in the first step will be significant. The estimated cointegration (OLS) regression for LHDI is presented in Table 6.14 and the ECM results are shown in Table 6.15.

Table 6.14: Estimated Cointegration (OLS) Regression Results for East Kalimantan Province's Human Development Index (HDI)

Dependent Variable: LHDI

Independent Variable	**Coefficient**	**t-statistic**
LPBEC	0.013*	1.884
LPBED	0.013**	2.204
Constant	3.979***	29.175

OLS Statistics:
$R^2 = 0.573$; Adjusted $R^2 = 0.517$; F = 10.119***; D.W. = 0.444
Note: *** = significant at the 1 per cent level. ** = significant at the 5 per cent level.
* = significant at the 10 per cent level

As shown in Table 6.14, as hypothesised, the variables for the budget real expenditure during the centralisation period (**LPBEC**) as well as for the budget real expenditure during the decentralisation period (**LPBED**) have significant and positive coefficients suggesting that budget real expenditure during both periods had a positive impact on East Kalimantan province's HDI (**LHDI**). Contrary to the hypothesis, the magnitude of the estimated coefficients for **LPBED** and **LPBEC** variables is the same, suggesting that there has been a similar impact of the budget real expenditure

on East Kalimantan's **HDI** during both the centralisation period and the decentralisation period.

In Table 6.14, each of the estimated coefficients for **LPBEC** and **LPBED** can be interpreted as the elasticity of HDI (**LHDI**) with respect to each of these independent variables, given all other factors that affects HDI remain constant. Elasticity in this context refers to the percentage change in East Kalimantan province's HDI resulting from one per cent change in the relevant independent variable. Thus, for example, an increase of one per cent in the provincial budget real expenditure during both the centralisation era as well as the decentralisation era (**LPBEC** and **LPBED**), *ceteris paribus*, results in 0.013 per cent increase in the province's HDI. Based on this elasticity estimate and actual HDI of East Kalimantan province in the year 2007 (74.40), it is predicted that a one per cent increase in the provincial budget real expenditure, *ceteris paribus*, will result in a provincial HDI of only 74.41 in the year 2008 and 74.42 in the year 2009.

Table 6.15: Estimated Error Correction Model for East Kalimantan Province's Human Development Index (HDI)

Dependent Variable: ΔLHDI

Independent Variable	**Coefficient**	**t-statistic**
ΔLPBEC	0.003	0.736
ΔLPBED	0.002	0.560
$RESID_{(t-1)}$	-0.295*	-2.011
Constant	0.007**	2.350

OLS Statistics:
$R^2 = 0.296$; Adjusted $R^2 = 0.134$; F = 1.895*; D.W. = 2.142
Note: ** = significant at the 5 per cent level. * = significant at the 10 per cent level

6.6 Conclusion

This chapter developed and estimated the regression models, and discussed the results of estimation of such models: (i) to examine the trends and the effects of decentralisation policy on the trends of East Kalimantan province's gross domestic product (GDP), Human Development Index (HDI) and other related variables, and (ii) to analyse the impact of provincial budget expenditure and decentralisation policy on East Kalimantan province's GDP and HDI.

The results of the trend analysis suggest that East Kalimantan's real GDP, budget real expenditure, workforce, real exports, real imports, all have a significantly increasing trend over the period 1984-2007. However, real investment has a significantly decreasing trend during this period. There is a significant positive effect of decentralisation on East Kalimantan province's real GDP and budget real expenditure, while there is a significant negative effect of decentralisation on the workforce. There is no significant effect of decentralisation on East Kalimantan province's real investment, real exports and real imports. The Chow F-test shows that there are significant structural breaks of time series data for East Kalimantan province's real GDP, budget real expenditure, workforce, real exports and real imports, due to decentralisation. However, there are no significant structural breaks of time series data for real investment.

East Kalimantan province's human development index HDI shows a significantly increasing trend during 1990-2007. The teacher/student ratio does not have a significant trend. Doctors per 1000 of population have a significantly

decreasing trend. There is a significant positive effect of decentralisation on East Kalimantan province's teacher/student ratio whereas there is no significant effect of decentralisation on East Kalimantan province's HDI and doctors per 1000 of population. The Chow F-test shows that there is a significant structural break of time series data for East Kalimantan province's teacher/student ratio whereas there are no significant structural breaks of time series data for HDI and doctors per 1000 of population.

The estimated GDP (gross domestic product) UECM regression using data for the period 1984-2007 show that, in the short-run as well as in the long run, the budget real expenditures during both the centralisation period and during the decentralisation period have had a significant and positive impact on East Kalimantan province's real GDP. However, the budget real expenditure during the decentralisation period has had a slightly smaller positive impact on East Kalimantan's real GDP than during the centralisation period. The estimated elasticity of real GDP with respect to budget real expenditure during decentralisation period is 0.825, implying that an increase of 1 per cent in budget real expenditure, *ceteris paribus,* results in a 0.825 per cent increase in real GDP.

The estimated HDI (human development index) cointegration regression using data for the period 1990-2007 indicates that the budget real expenditures during both the centralisation period and during the decentralisation period have had a significant and positive impact on East Kalimantan province's human development index (HDI). However, the magnitude of the impact of budget real expenditure on East Kalimantan's HDI during both the decentralisation period and the centralisation

period are similar. The estimated long run elasticity of HDI with respect to budget real expenditure during decentralisation period is 0.013, implying that an increase of 1 per cent in budget real expenditure, *ceteris paribus*, results in a 0.013 per cent increase in HDI.

Chapter 7 concludes the thesis in that an overview of the thesis is presented, findings of the thesis are summarised, policy implications of the findings are highlighted, limitations of the thesis are outlined and areas for further research are indicated.

CHAPTER 7

SUMMARY AND CONCLUSIONS

7.1 Introduction

This chapter concludes the thesis by presenting an overview of the thesis, summarising the findings and policy implications of the findings of the thesis, outlining the limitations of the thesis, and suggesting some areas for further research. Section 7.2 provides an overview of the study. Section 7.3 presents a summary of findings. Policy implications of the findings are discussed in Section 7.4. Limitations of the thesis are outlined in Section 7.5. Suggestions on some areas for further research are included in Section 7.6.

7.2 Overview of the Study

This thesis aimed to accomplish the following specific objectives: (i) to explain the historical basis of the economic interchange between Central and provincial government in Indonesia, (ii) to examine economic changes taken place in the centralisation era and the decentralisation era, (iii) to establish the theoretical foundation for a study of economic interchange in Indonesia, (iv) to analyse the existing model used to determine the pattern of economic interchange, (vi) to discuss the weaknesses of the existing model of economic interchange, (vii) to present ways to improve the existing economic interchange model, and (vii) to analyse the impact of decentralisation on East Kalimantan's economic growth and human development.

To accomplish the objectives "(i) to explain the historical basis of the economic interchange between Central and provincial government in Indonesia, and (ii) to examine economic changes taken place in the centralisation era and the decentralisation era", *Chapter 2* of the thesis presented an overview of Indonesia and relationships between its provinces. The chapter focused on geographical characteristics, historical and political relationships, the nationalist and political movements, social and religious relationships, and on economic conditions and relationships during the centralisation era and the decentralisation era.

In order to achieve the objective "(iii) to establish the theoretical foundation for a study of economic interchange in Indonesia", *Chapter 3* provided a review of the concepts, theories and empirical studies related to federalism and decentralisation with a view to provide the conceptual and theoretical foundations required for the empirical analysis undertaken in chapters 5 and 6 of the thesis. Chapter 3 also examined the patterns of resource and revenue interchange between the Central/Federal government and provincial/regional governments in a developed country (Australia) and a developing country (Colombia) to see if the decentralised policy now in place in Indonesia has any parallels with existing interchange policies of these two economies.

Chapter 4 presented an overview of East Kalimantan province to set the scene for the detailed analyses in Chapters 5 and 6, and presents a discussion of geographic, demographic, economic and human development aspects of East Kalimantan.

To accomplish the objectives "(iv) to analyse the existing model used to determine the pattern of economic interchange, (vi) to discuss the weaknesses of the existing model of economic interchange, and (vii) to present ways to improve the existing economic interchange model, *Chapter 5* presented and examined the conceptual framework and models employed for the purpose of economic interchange process and fund allocation between the Central government and East Kalimantan provincial government of Indonesia.

In order to achieve the objective "(vii) to analyse the impact of decentralisation on East Kalimantan's economic growth and human development", *Chapter 6* developed and estimated a series of regression models, and discussed the results of estimation of such models. Specifically, *Chapter 6* examined the trends and the effects of decentralisation policy on East Kalimantan province's gross domestic product (GDP), Human Development Index (HDI) and other related variables, and analysed the impact of provincial budget expenditure and decentralisation policy on East Kalimantan province's GDP and HDI.

7.3 Findings of the Study

The Indonesian government attempted to implement decentralisation (regional autonomy) policy by announcing the Law No 25/1999 about administrative matters, and on fiscal and finance issues, which were implemented effectively since 2001. With the implementation of decentralisation policy, Indonesia experienced a radical change because the development policy became a bottom up policy (from provincial governments to the central government). For more than 50 years until 2001, Indonesian government was running the top down policy (policy only from the

central government). During decentralisation era, Indonesian economic conditions improved and the GDP showed a positive growth during 2001 to 2005, and GDP per capita increased by 17 per cent annually during the same period, increasing from US$ 675 in 2001 to US$ 1,267 in 2005.

Federalism is a concept defined as a system in which decision been making involves a certainty of territoriality and it influences to the implementation of decentralisation. The decentralisation concept consists of three models namely devolution, de-concentration, and delegation. Indonesia, Colombia and Australia are some of the countries that have implemented their own decentralisation programs with some country-specific characteristics. Even though these countries have different conditions such as political structures, transfers of revenue, tax revenue, tax autonomy, borrowing power, political decentralisation, hard budget, and constraints, they have some similarities such as the relatively dominating public sector and creating some of the grants to the sub-national governments.

Focussing on East Kalimantan province, it has an impressive record of economic and social development since 1970. Although its per capita GDP figures overstate living standards, there is no doubt that it is one of Indonesia's most prosperous provinces where wages are relatively high, employment is generally plentiful, and social indicators are good. The twin resource booms have generated considerable local spin-off in the form of downstream processing industries using timber, oil, and gas. The local government revenue base is buoyant, and there are many indirect linkages, including rapidly growing construction and trade sectors.

However, equally formidable challenges remain for East Kalimantan province. One of the issues is the disparity among various sectors of the economy. A kind of 'technological dualism' has emerged in the province, comprising a capital- intensive modern sector in oil, gas, wood products, and some construction activities, alongside a traditional labour-intensive sector engaged in agriculture, petty trade, and other activities. The linkage between these sectors are still weak, even to the point that the modern sector frequently employs labour from outside the province, although there does appear to be a shift of labour in the province out of agriculture to better paid employment in the construction, mining, and manufacturing industries.

The Profit Sharing Fund decreed by Law No 25/1999 states that the division of income between the Central and provincial governments is to address vertical fiscal imbalances between the Central and provincial governments. The law decrees profit sharing from Oil /Mining as 85% for the Central Government and 15% for the Provincial Government, and from Gas as 70% for the Central Government and 30% for the Provincial Government. For East Kalimantan province, this formulation of Profit Sharing in case of Oil/Mining and Gas does not confer benefits. More than 60 per cent East Kalimantan's income is contributed by Oil/Mining and Gas sectors and these percentages of profit sharing are based on political considerations and it is profitable for the Central government.

Based on the Law No 25/1999, profits from mining production (oil and gas) are to be distributed to provincial governments. The regencies/municipalities where gas and/or oil are produced receive 3.2 per cent of net operating income (NOI) for Gas revenue and 3.22 per cent of NOI for Oil revenue. However, it is not clear how to

distribute revenue to other regencies or municipalities in the same province without gas or oil production income. In this Law, a cost of production standard for mining industries has not been specified.

Offshore mining operations located 12 miles away have no clear borders among regencies and municipalities, and this leads to conflict between the regencies and municipalities. Oil and Gas mining activities depend on where oil and gas are being exploited. It is possible that the regencies/municipalities, which have oil and gas mining exploit oil and gas in other regencies or municipalities, but these other regencies or municipalities may not get ant profit sharing income and it could create a new conflict.

From 2009, East Kalimantan province will not receive any General Allocation Fund (GAF), but only Profit Sharing Income. Some of the reasons given for this by the Central Government are (i) that the Central government attempted to use the formula consistently and (ii) that the General Allocation Fund (GAF) has not positively contributed to provincial development, especially for reducing the number of people living in poverty in East Kalimantan. In fact since 2001, East Kalimantan's provincial government had spent all of its GAF for routine expenditure such as wages of government employees, whereas the GAF was meant for development or investment expenditure and reducing poverty in the province.

The results of the trend analysis suggest that East Kalimantan's real GDP, budget real expenditure, workforce, real exports, real imports, all have a significantly increasing trend over the period 1984-2007. However, real investment has a

significantly decreasing trend during this period. There is a significant positive effect of decentralisation on East Kalimantan province's real GDP and budget real expenditure, while there is a significant negative effect of decentralisation on the workforce. There is no significant effect of decentralisation on East Kalimantan province's real investment, real exports and real imports. The Chow F-test shows that there are significant structural breaks of time series data for East Kalimantan province's real GDP, budget real expenditure, workforce, real exports and real imports, due to decentralisation. However, there are no significant structural breaks of time series data for real investment. Thus, the findings supports the hypothesis (mentioned on page 10 of the thesis) that during decentralisation era East Kalimantan has achieved a greater level of economic progress compared to the level of economic progress recorded during the centralisation era.

East Kalimantan province's human development index HDI shows a significantly increasing trend during 1990-2007. The teacher/student ratio does not have a significant trend. Doctors per 1000 of population have a significantly decreasing trend. There is a significant positive effect of decentralisation on East Kalimantan province's teacher/student ratio whereas there is no significant effect of decentralisation on East Kalimantan province's HDI and doctors per 1000 of population. The Chow F-test shows that there is a significant structural break of time series data for East Kalimantan province's teacher/student ratio whereas there are no significant structural breaks of time series data for HDI and doctors per 1000 of population. Thus, the findings do not support the hypothesis (mentioned on page 10 of the thesis) that during the decentralisation era East Kalimantan has achieved a greater

level of human development compared to the level of human development recorded during the centralisation era.

The estimated GDP (gross domestic product) UECM regression using data for the period 1984-2007 show that, in the short-run as well as in the long run, the budget real expenditures during both the centralisation period and during the decentralisation period have had a significant and positive impact on East Kalimantan province's real GDP. However, the budget real expenditure during the decentralisation period has had a slightly smaller positive impact on East Kalimantan's real GDP than during the centralisation period. The estimated elasticity of real GDP with respect to budget real expenditure during decentralisation period is 0.825, implying that an increase of 1 per cent in budget real expenditure, *ceteris paribus,* results in a 0.825 per cent increase in real GDP.

The estimated HDI (human development index) cointegration regression using data for the period 1990-2007 indicates that the budget real expenditures during both the centralisation period and during the decentralisation period have had a significant and positive impact on East Kalimantan province's human development index (HDI). However, the magnitude of the impact of budget real expenditure on East Kalimantan's HDI during both the decentralisation period and the centralisation period are similar. The estimated long run elasticity of HDI with respect to budget real expenditure during decentralisation period is 0.013, implying that an increase of 1 per cent in budget real expenditure, *ceteris paribus*, results in a 0.013 per cent increase in HDI.

7.4 Policy Implications

There is a need to modify the existing formulation for profit sharing between the Central and provincial governments of Indonesia, especially in relation to Oil/Mining, Gas and Tax Income. The aim of modifying profit sharing formulation is to increase the percentage of Oil/Mining, Gas and Tax Income flowing to the provincial government of East Kalimantan. In turn, if East Kalimantan's provincial income increases, then the provincial budget expenditure can be increased. If the province's governments (including provincial administration and regional and municipal governments) spend larger budget expenditure than at present, then the increased expenditure will enhance investment, net exports, employment, economic growth as well as human development.

Fiscal Needs based on Law 25/1999 need to be revised for East Kalimantan, because even though East Kalimantan is one of the provinces that contribute a large amount of revenue to the Central Government, East Kalimantan still lacks funds for investment in infrastructure including transportation facilities, roads and bridges, ports and airports with good or international standards, so lack of funds have become an investment barrier. The discontinuation of General Allocation Fund (GAF) for East Kalimantan province is a controversial decision, because the provincial government needs sufficient funds to develop the province and reduce poverty. Therefore, East Kalimantan's provincial government has requested the Central Government to change its decision regarding the GAF.

As the results of the trend analysis demonstrate, on average, East Kalimantan's real investment was not any larger, and workforce became smaller, during the

decentralisation period, compared to the whole period trend during 1984-2007. Also the province's real exports were not any larger during the decentralisation period compared to the whole period trend during 1984-2007. Thus, there is a need for design and implementation of appropriate policies and programs to enhance government expenditure, domestic and foreign investment, employment and work opportunities, and exports of East Kalimantan province so that faster and higher rates of economic growth can be achieved.

The trend analysis also found that, on average, East Kalimantan province's human development index (HDI) was not any higher during the decentralisation period, compared to the whole period trend during 1990-2007. One of the HDI related factors, doctors per 100 of population were found to have a declining trend during 1990-2007. Thus, there is a need to improve doctor/population ratio and health facilities of East Kalimantan. This, together with enhanced life expectancy, educational facilities, literacy, and GDP growth will improve the human development index (HDI) of East Kalimantan province.

7.5 Limitations of the Study

This thesis concentrated on just one of the provinces (East Kalimantan) of Indonesia in analysing the fiscal relationships between the Central government and provincial governments in Indonesia. The results of that analysis, and the findings of this thesis in relation to the impact of the provincial budget expenditure on the economy and human development of East Kalimantan, cannot obviously be generalised to other provinces of Indonesia with diverse political, social and economic conditions.

This thesis considered the gross domestic product (GDP) and the human development index (HDI), recognising the well-known limitations of these as measures of economic progress and human development, respectively of a provincial economy. The thesis also does not recommend new formulations for fund allocation between the Central and provincial governments.

Another limitation arises from the unavailability of consistent data series for the period prior to1984 and therefore, the econometric estimation had to be confined to the period 1984-2007 for GDP and related variables. HDI data were available for the period 1990-2007. Hence the results from the regression analysis in relation to GDP, HDI and related variables need to be treated with caution.

7.6 Areas for Further Research

The limitations of this thesis point out the importance of conducting further research in relation to economic interchange process between the Central and provincial governments of Indonesia within the context of fiscal policy responsibilities of each level of government. Future Studies may be conducted on the economic interchange process between the Central government and East Kalimantan as well as some of the large and resource-rich provinces such as Aceh and Riau. Such studies may examine the existing models of fund allocation between Central government and these provinces, and modified models for fund allocation may be suggested. Moreover, the trends of GDP, HDI and related variables, and the impact of provincial government expenditure on the economic progress and human development, of these provinces during the centralisation period and the decentralisation period may be

examined using more appropriate measures than GDP and HDI and extended periods of data than used in this thesis.

APPENDIX TO CHAPTER 6

DETAILED DATA TABLES SHOWING THE STEPS OF THE ADJUSTMENT OF DATA FOR THE RELEVANT VARIABLES

Appendix Table 6.1: Adjusted Data: Teachers and Students of East Kalimantan Province, 1990 to 2007

Year	Teachers	Students	Teacher to Student Ratio
1990	74,955	476,438	0.157
1991	75,276	432,399	0.174
1992	78,094	440,258	0.177
1993	81,948	451,723	0.181
1994	84,346	458,243	0.184
1995	87,146	523,458	0.166
1996	91,887	595,001	0.154
1997	92,999	603,584	0.154
1998	99,253	618,208	0.161
1999	107,955	623,536	0.173
2000	109,091	625,590	0.174
2001	111,575	623,862	0.179
2002	129,964	659,059	0.197
2003	161,368	741,831	0.218
2004	176,744	778,374	0.227
2005	178,723	781,266	0.229
2006	171,350	793,269	0.216
2007	161,998	802,379	0.202

Source: BPS, East Kalimantan, 2008

Appendix Table 6.2: Adjusted Data: Ratio Doctors and Paramedics per 1000 population In East Kalimantan Province, 1987 to 2007

Year	Total Doctors and paramedics	Total Population	Ratio Doctors and paramedics (in 1000 population)
1987	126	1,611.13	12.787
1988	206	1,658.08	8.049
1989	185	1,698.30	9.180
1990	408	1,844.75	4.521
1991	435	1,899.17	4.366
1992	557	1,936.02	3.476
1993	603	2,006.93	3.328
1994	658	2,048.96	3.114
1995	671	2,108.99	3.143
1996	547	2,340.28	4.278
1997	629	2,441.02	3.881
1998	646	2,458.94	3.806
1999	655	2,522.48	3.851
2000	691	2,411.07	3.489
2001	672	2,489.99	3.705
2002	749	2,558.57	3.416
2003	811	2,704.85	3.335
2004	931	2,750.37	2.954
2005	1124	2,840.87	2.527
2006	997	2,936.39	2.945
2007	1224	3,024.48	2.471

Source: BPS, East Kalimantan, 2008

Appendix Table 6.3: Adjusted Data: Gross Domestic Product (GDP) of East Kalimantan Province (Rp 000,000), 1984 to 2007

Year	Current Price GDP	GDP Deflator	Real GDP
1984	5,575,144.04	105.81	5,268,812.21
1985	5,961,710.63	111.94	5,325,781.90
1986	5,439,010.30	100.77	5,397,216.13
1987	7,218,440.93	131.79	5,477,342.54
1988	7,927,378.08	145.93	5,432,219.06
1989	8,831,385.65	146.60	6,023,940.42
1990	10,614,284.75	163.82	6,479,294.34
1991	11,657,621.00	220.08	5,297,070.00
1992	13,292,522.00	234.87	5,659,572.00
1993	15,708,419.00	100.00	15,708,419.00
1994	18,897,253.00	107.84	17,522,973.00
1995	21,619,608.00	117.23	18,442,677.00
1996	24,195,022.00	139.89	17,295,198.00
1997	27,305,280.00	130.29	20,958,040.00
1998	50,505,145.00	228.18	22,133,685.00
1999	54,948,996.00	235.65	23,317,635.00
2000	82,465,052.00	100.00	82,447,052.00
2001	91,890,395.00	105.83	86,831,742.00
2002	93,769,928.00	105.73	88,686,290.00
2003	106,453,594.00	117.24	90,802,588.00
2004	133,704,073.00	142.87	93,584,548.00
2005	180,289,089.00	184.30	97,821,711.00
2006	198,349,233.00	194.82	101,813,597.00
2007	225,002,524.88	195.77	114,930,788.00

Source: BPS, East Kalimantan, 2008

Appendix Table 6.4: Provincial Nominal Budget Expenditure of East Kalimantan, 1984 to 2007; (Rp 000)

Year	First Stage Provincial Budget	Second Stage Provincial (Municipalities/ Regencies) Budget	GDP Deflator
1984	52,695,581.34	39,108,130.88	105.81
1985	56,335,736.63	39,835,832.00	111.94
1986	62,831,115.80	38,568,297.00	100.77
1987	76,831,216.20	45,385,169.00	131.79
1988	101,946,862.85	69,595,219.00	145.93
1989	135,876,867.60	101,078,627.50	146.60
1990	166,974,763.50	152,672,488.00	163.82
1991	166,115,340.00	242,709,754.50	220.08
1992	176,154,911.50	326,176,433.00	234.87
1993	216,755,529.50	388,948,307.50	100.00
1994	248,817,977.50	421,984,251.00	107.84
1995	279,719,948.50	444,797,647.00	117.23
1996	307,109,931.00	488,563,021.50	139.89
1997	425,555,763.50	521,203,882.50	130.29
1998	526,656,247.50	667,261,802.00	228.18
1999	885,645,856.50	748,141,376.00	235.65
2000	2,197,036,845.50	6,770,599,138.00	100.00
2001	1,572,138,012.00	6,423,273,181.50	105.83
2002	1,872,669,870.00	6,655,841,262.00	105.73
2003	2,687,506,468.00	6,907,992,772.00	117.24
2004	3,001,454,256.00	7,253,392,410.60	142.87
2005	2,621,311,210.00	7,616,062,031.13	184.30
2006	3,759,256,145.00	7,996,865,132.69	194.82
2007	4,113,252,112.00	8,396,708,389.32	195.77

Source: BPS, East Kalimantan, 2008

Appendix Table 6.5: Provincial Real Budget Expenditure of East Kalimantan, 1984 to 2007 (Rp 000)

Year	First Stage Provincial Real Budget	Second Stage Provincial (Municipalities/ Regencies) Real Budget	Total Provincial Real Budget
1984	49,802,080.46	36,960,713.43	86,762,793.89
1985	50,326,725.59	35,586,771.48	85,913,497.08
1986	62,351,013.00	38,273,590.35	100,624,603.35
1987	58,298,213.98	34,437,490.70	92,735,704.68
1988	69,860,112.97	47,690,823.68	117,550,936.65
1989	92,685,448.57	68,948,586.29	161,634,034.86
1990	101,925,749.91	93,195,267.98	195,121,017.89
1991	75,479,525.63	110,282,512.95	185,762,038.58
1992	75,001,026.74	138,875,306.77	213,876,333.50
1993	216,755,529.50	388,948,307.50	605,703,837.00
1994	230,728,836.70	391,305,870.73	622,034,707.44
1995	238,607,820.95	379,423,054.68	618,030,875.63
1996	219,536,729.57	349,247,995.93	568,784,725.50
1997	326,621,969.07	400,033,680.64	726,655,649.70
1998	230,807,365.90	292,427,821.02	523,235,186.91
1999	375,831,044.56	317,479,896.46	693,310,941.01
2000	2,197,036,845.50	6,770,599,138.00	8,967,635,983.50
2001	1,485,531,524.14	6,069,425,665.22	7,554,957,189.36
2002	1,771,181,187.93	6,295,130,296.04	8,066,311,483.97
2003	2,292,311,896.96	5,892,180,801.77	8,184,492,698.74
2004	2,100,828,904.60	5,076,917,764.82	7,177,746,669.42
2005	1,422,306,679.33	4,132,426,495.46	5,554,733,174.79
2006	1,929,604,837.80	4,104,745,474.12	6,034,350,311.92
2007	2,101,063,550.08	4,289,067,982.49	6,390,131,532.57

Source: BPS, East Kalimantan, 2008

Appendix Table 6.6: Adjusted Data: Nominal Domestic and Foreign Investment in East Kalimantan Province (Rp 000,000'), 1983 to 2007 (step 1)

Year	Domes investment (Rp 000 000)	Adj Dom. Inv.	Foreign Inv. (Rp 000 000)	Adj. For. Inv.
1983	143,468.20	143,468.20	10,000.00	10,000.00
1984	100,706.00	122,087.10	0	5,000.00
1985	513,060.00	306,883.00	11,000.00	5,500.00
1986	325,214.80	419,137.40	12,185.00	11,592.50
1987	528,688.50	426,951.65	21,000.00	16,592.50
1988		264,344.25		10,500.00
1989	305,607.80	290,778.68	587,325.00	587,325.00
1990	3,400,220.60	3,400,220.60	559,500.00	559,500.00
1991	1,284,329.80	1,284,329.80	4,000.00	4,000.00
1992	2,216,153.10	2,216,153.10	285,443.40	285,443.40
1993	1,989,265.80	1,989,265.80	19,305.00	19,305.00
1994	2,024,959.50	2,024,959.50	540,368.30	540,368.30
1995	2,173,078.20	2,173,078.20	1,969,501.10	1,969,501.10
1996	4,204,433.70	4,204,433.70	482,351.30	482,351.30
1997	3,528,291.40	3,528,291.40	578,093.70	578,093.70
1998	1,771,757	1,771,757	408,829.00	408,829.00
1999	899.124	899.124	40,993.80	40,993.80
2000	6,623.69	6,623.69	124,483.70	124,483.70
2001	3,409,693.40	3,409,693.40	185,327.04	185,327.04
2002	1,932,519.80	1,932,519.80	223,676.46	223,676.46
2003	2,709,475.50	2,709,475.50	958,870.70	958,870.70
2004	4,552,879.10	4,552,879.10	102,376.63	102,376.63
2005	1,782,911.81	1,782,911.81	548,066.51	548,066.51
2006	51,554,001.85	51,554,001.85	536,263.34	536,263.34
2007	56,709,402.04	56,709,402.04	589,889.67	589,889.67

Source: BPS, East Kalimantan, 2008

Appendix Table 6.7: Adjusted Data: Real Investment in East Kalimantan Province (Rp 000,000'), 1983 to 2007 (step 2)

Year	Total Nominal Inv. (Rp 000 000)	GDP Deflator	Total Real Inv. (Rp 000 000)
1984	127,087.10	105.81	120,108.78
1985	312,383.00	111.94	279,062.89
1986	430,729.90	100.77	427,438.62
1987	443,544.15	131.79	336,553.72
1988	274,844.25	145.93	188,339.79
1989	878,103.68	146.60	598,979.32
1990	3,959,720.60	163.82	2,417,116.71
1991	1,288,329.80	220.08	585,391.58
1992	2,501,596.50	234.87	1,065,098.35
1993	2,008,570.80	100.00	2,008,570.80
1994	2,565,327.80	107.84	2,378,827.71
1995	4,142,579.30	117.23	3,533,719.44
1996	4,686,785.00	139.89	3,350,335.98
1997	4,106,385.10	130.29	3,151,726.99
1998	2,180,586.00	228.18	955,642.91
1999	41,892.92	235.65	17,777.60
2000	131,107.39	100.00	131,107.39
2001	3,595,020.44	105.83	3,396,976.70
2002	2,156,196.26	105.73	2,039,341.97
2003	3,668,346.20	117.24	3,128,920.33
2004	4,655,255.73	142.87	3,258,385.76
2005	2,330,978.32	184.30	1,264,773.91
2006	52,090,265.19	194.82	26,737,637.40
2007	57,299,291.71	195.77	29,268,678.40

Source: BPS, East Kalimantan, 2008

Appendix Table 6.8: Real Exports of East Kalimantan Province ($US 000'), 1984 to 2007

Year	Oil Exports	Non-Oil Exports	Total Exports	Export Price Index	Real Exports
1984	1,331,742	451,222	1,782,964	178.73	997,574
1985	1,431,980	495,848	1,927,828	182.17	1,058,258
1986	1,556,501	527,498	2,083,999	183.36	1,136,561
1987	1,729,445	555,261	2,284,706	190.67	1,198,251
1988	1,623,735	661,044	2,284,779	153.00	1,493,320
1989	1,763,835	798,117	2,561,952	166.50	1,538,710
1990	2,498,091	858,620	3,356,711	180.00	1,864,839
1991	2,643,945	993,874	3,637,819	197.00	1,846,609
1992	2,782,085	1,258,243	4,040,328	213.00	1,896,868
1993	2,620,383	1,593,579	4,213,962	234.50	1,796,999
1994	2,814,273	1,558,108	4,372,381	267.50	1,634,535
1995	3,071,292	1,618,212	4,689,504	310.50	1,510,307
1996	3,737,287	1,653,248	5,390,535	348.50	1,546,782
1997	3,964,203	1,773,891	5,738,094	155.50	3,690,093
1998	2,952,516	1,451,384	4,403,900	235.50	1,870,021
1999	3,790,086	1,547,306	5,337,392	312.00	1,710,703
2000	6,749,157	1,764,175	8,513,332	347.50	2,449,880
2001	6,943,322	1,918,030	8,861,352	421.00	2,104,834
2002	5,959,075	1,788,422	7,747,497	460.50	1,682,410
2003	7,017,807	2,011,331	9,029,138	471.00	1,917,014
2004	8,547,723	2,365,967	10,913,690	489.50	2,229,559
2005	10,822,026	3,455,521	14,277,547	561.13	2,544,428
2006	11,604,953	4,657,304	16,262,257	170.50	9,537,981
2007	12,185,201	4,890,169	17,075,370	201.00	8,495,209

Source: BPS, East Kalimantan, 2008

Appendix Table 6.9: Real Imports of East Kalimantan Province ($US 000'), 1984 to 2007

Year	Oil Imports	Non-Oil Imports	Total Imports	CPI	Real Imports
1984	2,538	246,578	249,116	208.14	119,685
1985	2,729	251,610	254,339	207.27	122,711
1986	2,873	267,670	270,543	206.80	130,823
1987	3,157	281,758	284,915	206.75	137,804
1988	39,988	379,667	419,655	215.58	194,660
1989	88,373	387,029	475,402	204.19	232,822
1990	197,796	526,018	723,814	204.74	353,531
1991	296,427	486,352	782,779	204.65	382,496
1992	220,137	537,025	757,162	204.71	369,872
1993	358,397	179,931	538,328	204.94	262,682
1994	311,092	429,742	740,834	206.31	359,085
1995	437,912	557,956	995,868	204.36	487,310
1996	612,480	898,481	1,510,961	206.62	731,293
1997	659,504	737,690	1,397,194	200.83	695,712
1998	335,535	675,769	1,011,304	210.26	480,970
1999	430,567	704,711	1,135,278	198.72	571,295
2000	628,265	668,186	1,296,451	205.05	632,261
2001	979,250	801,730	1,780,980	235.63	755,848
2002	1,167,754	696,771	1,864,525	249.95	745,974
2003	1,499,841	719,665	2,219,506	290.10	765,096
2004	2,253,181	487,448	2,740,629	112.63	2,433,411
2005	2,507,924	999,565	3,507,489	136.88	2,562,549
2006	3,059,157	1,195,156	4,254,313	141.28	3,011,370
2007	3,150,932	1,254,914	4,405,846	155.23	2,838,361

Source: BPS, East Kalimantan, 2008

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