INTRODUCTION

Background

The central and local government have developed various programs in order to improve the welfare of society in all Indonesian regions. Centralization of development has affected large gaps among regions in and out of Java, western and eastern part of Indonesia, and between urban and rural area. There are more than 70.611 villages in Indonesia, 32.379 of them are categorized as backward region with 62% of these villages are located in the eastern regions of Indonesia (KNPDT, 2004).

The Government of Indonesia (GoI) needs to accelerate development in backward regions to overcome the problems. The fundamental purpose of accelerating development in backward regions is to empower backward society to fulfill their basic needs so they can do the activities that play a crucial role in balancing with the other societies in Indonesia. Therefore, since 2004 the government has realized the importance of developing the State Ministry of Acceleration of Development in Backward Regions (KNPDT, 2004).

The functions of State Ministry of Acceleration of Development in Backward Regions (KNPDT) are (1) to formulate national policy in the field of development in backward regions sector, (2) to implement the policy (3) to organize stated-owned properties or assets, (4) to supervise the implementation of its duty, (5) to submit the evaluation report, suggestion and consideration in its assignment and function to the President (KNPDT, 2004). In order to reach these objectives, the GoI must know which are the prior concerns so that the development will be effective and efficient.

The GoI has used 33 explanatory variables to determine backward region status. These variables are possibly correlated one to another. Therefore, it is very important to simplify factors that most influence backward region status for further analysis. Ordinal logistic regression was implemented to find the most influential factor. In addition, biplot was used to present graphically information of relationships between explanatory variables and observations.

Objective

The objectives of this research were to

1. Determine factors that strongly influence the backward region status and give recommendation to the GoI for making good policy and appropriate allocation of assets or fund based on these factors.
2. Present graphical information of relationship between explanatory and observation variables. It is also interesting to compare the condition of western and eastern part of Indonesia, taking into mind that most of backward regions are located in the eastern regions of Indonesia.

LITERATURE REVIEW

Backward Regions

Backward regions are regencies in Indonesia that are relatively undeveloped compared with other regions in the country (KNPDT, 2004).

Poverty

Poverty is a deprivation of common necessities that determine the quality of life, including food, clothing, shelter and safe drinking water, and may also include the deprivation of opportunities to learn, to obtain better employment to escape poverty, and or to enjoy the respect of fellow citizens. The World Bank defines extreme poverty as living on less than US$ 1 per day, and moderate poverty as less than US$ 2 a day (Wikipedia, 2008).

Ordinal Logistic Regression

Logistic regression extends categorical data analysis to data sets with binary response and one or more continuous factor (Freeman 1987). Ordinal logistic regression perform logistic regression on an ordinal response variable. One way to use category ordering forms logit of cumulative probabilities for ordinal response Y with c categories, $\underline{x}$ are explanatory variables. The cumulative probability for each category can be formulated as

$$P(Y \le j \mid \underline{x}) = F_j(\underline{x}) = p_1(\underline{x}) + \ldots + p_j(\underline{x}) \quad \ldots\ldots\ldots(1)$$

where $p_j(\underline{x})$ is the response probability of the j^{th} category of an explanatory variable $\underline{x}$. Cumulative logits for each category j are defined as

$$L_j(x) = \ln\left[\frac{F_j(x)}{1-F_j(x)}\right]; \text{ where } j = 1,2,\ldots,c-1 \ldots\ldots(2)$$

A model that simultaneously uses all cumulative logits can be written as