

ABSTRACT

The aims of this study are (1) to produce a simple measurement of knowledge as a knowledge index. (2) to examine whether knowledge able to promote regional economic growth. The study uses Romer's perspective to analyze that relation,

Knowledge Index is formed by formal education, the progression of information and communication technology, research, development and innovation as well as local values. Knowledge facilitates technological progress in the production by increase the creation of intermediate capital goods used in production and also the use of this technology increases the stock of knowledge during final goods and services production.

This research was conducted on 27 regencies and city in Papua Province from 2012-2017. The research begins with the formation of a knowledge index. While the estimation model applies a dynamic panel data model with Error Correction Model (ECM) to determine the effect of changes in production inputs in the short term towards long term growth.

The findings of this study are (1) the knowledge in the index describes the condition of knowledge in the area which is quite different between the Eastern Central Mountains region and parts of the Western Central Mountains region with coastal areas, river plains and southern parts of Papua. (2) Knowledge takes time to produce output in the short run but in the long run knowledge affects output growth (3) Low labor productivity in Papua may have a negative effect in short and long term employment effect on output.

Keywords: economic growth, knowledge, human capital, Error Correction Model