

Projecting Malaysia Input-Output Table Using Euro Method

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Input-Output (I-O) tables provide a detailed account of the flow of production and consumption of goods and services from producers to consumers. It serves as a dataset for I-O analysis which provide the tools to perform economic modeling. The construction of the I-O tables based on detailed census or surveys is a complex procedure that requires substantial financial expenditures, large human capital and time. The work involved to prepare an input-output table is enormous and therefore, has led to the emergence of non-survey updating techniques. Hence, the availability of updated input-output table has become a major concern in the analysis of the country's economy for an effective assessment of the contribution of industries to the economy. In view of its significant importance in providing up to date inputs for applications in a wide range of economic analysis and decision making activities, therefore, the aim of this study is to project the Malaysia Input-Output Table (MIOT) for the year 2014 using Euro Method which was proposed by Beutel (2002). The basic idea of using the Euro method is to generate estimates of the I-O tables which are consistent with official macroeconomic data. The actual MIOT 2010 was used as the base year for the iteration procedure to construct a projected MIOT 2014. The sectors in the MIOT 2010 were aggregated from 124 sectors to 12 main sectors (industries). The projection of MIOT involved an intensive iterative procedure using MS-Excel Visual Basic programming. The initial values for value added by sectors, total final demand by use category and total value added for the iteration process were obtained from Malaysia Gross Domestic Product for 2014. Next, using the projected MIOT 2014, we analyzed the inter-industrial linkages of the industries sector in Malaysia based on the forward and backward linkages using Hypothetical Extraction Method (HEM). The HEM was proposed by Strassert (1968) and further formalised by Dietzenbacher et al. (1993) and Dietzenbacher & van der Linden (1997). HEM was applied to quantify explicitly the importance sector to the economy. The findings of the HEM show that the manufacturing sector has a strong degree of the backward and forward linkages. The results suggest that the manufacturing sector is an important sector to the Malaysian economy.

i) Research Question: (a) The Malaysia I-O tables are published on average five years after reference year. The long time lag creates the opportunities for the reported data to change over time, such as, technological change. Therefore, what is the alternative solution to construct an updated Malaysia I-O table.

(b) How to identify the important sector for the development of the Malaysian economy.

ii) The method used: (a) The Euro Method for projecting I-O table and (b) Hypothetical Extraction Method to measure the linkages of the industries sector to the Malaysian economy.

iii) The data used: Malaysia I-O table 2010 and Malaysia Gross Domestic Product for year 2014.

iv) The novelty of the research: In view of the difficulty of obtaining up-to-date Malaysia's Input-Output Tables, therefore, there is a need to find a solution to the problem pertaining to the large time lag required to obtain the data for economic planning purposes. One such alternative is to project Malaysia I-O table with the hope that the projected data reflect the current economic environment. Currently, besides existing benchmark Malaysia's I-O table, there is no projected or updated I-O table produced in Malaysia. The projection of the I-O table involved an iterative process using Microsoft Excel Visual Basic Programming. This programme has been developed for the projection and can be very useful for the practical applications at Statistical Offices all over the world.