



4. TRANSLATING ECONOMIC GROWTH INTO WELL-BEING

Preamble

A wide range of socio-economic policies to achieve economic growth and development were embarked upon since the First Outline Perspective Plan in 1971. The success of these policies is reflected by the average annual GDP growth rate of 6.3 per cent for the period from 1970 to 2012. Per capita Gross National Product (GNP) increased 25 times in the same period, from RM1,197 to RM30,856.

Economic growth can lead to prosperity only if it improves people's well-being. Evidence from many countries in the world supports the claim that the relationship between economic growth and improvement in well-being is not straight forward¹⁶. There are countries that score low in their state of well-being despite being high income economies while there are those that enjoy both a high level of income and well-being. The benefit of growth will only be optimal if the *rakyat* gains from it. As such, it is important to look at the direction and magnitude of the conversion from growth into well-being in order to make the necessary policy adjustments. In this chapter, the conversion of growth into well-being and its various components is explored by examining the relationship between the GDP and the Malaysian Well-being Index (MWI) including its 14 components.

Economic growth is defined as an increase in a country's real level of national output following an increase in the value of goods and services produced in an economy. It is quantitative in nature and usually measured by the GDP or income of the nation. Economic development, on the other hand, is a normative concept and defined as an

increase in living standards including through income improvement, self-esteem needs and freedom from oppression as well as having greater choices (Todaro & Smith, 2009). MWI complements the conventional measure of economic growth by taking into account the progress made in the social, environmental and economic areas that contribute to the well-being of the *rakyat*.

Improvement in literacy rate, infant mortality, poverty incidence and access to several basic amenities such as water supply and electricity indirectly provides indication of the benefits that are derived from economic growth. Thus, this assessment of the relationship between economic growth and MWI is aimed at evaluating the degree of responsiveness of the state of well-being to the changes in income. The well-being indicators can either move in tandem with the movement of income (GDP) or move in the opposite direction. For example, environmental deterioration is associated with excessive exploitation of resources. In countries such as United Arab Emirates, United States and Canada, ecosystem sustainability is negatively correlated with GDP per capita (Porter, Stern & Loria, 2013).

¹⁶ For further elaboration please refer to *From Wealth to Well-being* (Boston Consulting Group, 2012) and *The Social Progress Index 2013* (Porter, Stern and Loria, 2013)

Methodology

The analysis of the relationship between GDP and the well-being indices is done in two steps. The first step is to calculate the correlation between the variables. Correlation provides indication of the existence of meaningful association between the variables. This is done under the assumption that the relationship between the variables is linear. The second step is to examine the elasticity of the

indices to the changes in the GDP. The elasticity coefficient explains the magnitude of change in the indices to a change in the GDP. Further details on the methodology to analyse the relationship between GDP and the well-being indices are provided in *Appendix 1: Technical Notes*.

Correlation between GDP and Indices

The correlation test between the GDP and the MWI from 2000 to 2012 indicates that there is a strong association between the variables. As shown in *Table 4.1*, the MWI and its two sub-composite indices scored positively with GDP values, either at the current or constant prices as well as at different lag times. In other words, economic growth has been in parallel with economic development. The

economic well-being sub-composite index scored higher than that of the social well-being. This is because most of the indicators under the economic sub-composite index such as mean monthly household income, Internet subscribers and ownership of private motorcars and motorcycles are directly influenced by national income.

Table 4.1 Correlation between the MWI and Sub-composite Indices with GDP

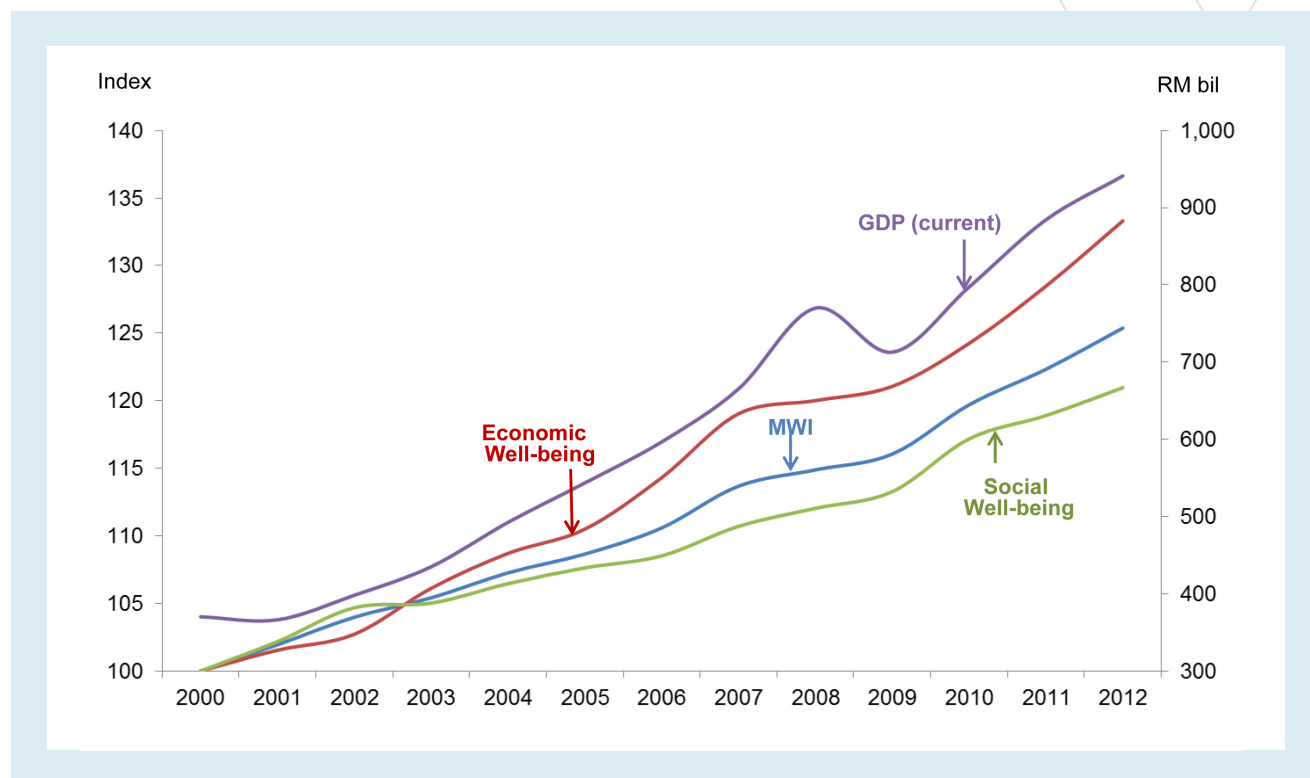
Index	GDP (constant)	GDP (constant at 1-year lag)	GDP (constant at 2-year lag)
MWI	0.9944*	0.9853*	0.9821*
Economic Well-being	0.9975*	0.9910*	0.9786*
Social Well-being	0.9842*	0.9719*	0.9756*
Index	GDP (current)	GDP (current at 1-year lag)	GDP (current at 2-year lag)
MWI	0.9895*	0.9776*	0.9762*
Economic Well-being	0.9930*	0.9807*	0.9638*
Social Well-being	0.9792*	0.9670*	0.9784*

Note : * Significant at 5%

All the variables, namely the GDP (at current price), the MWI, the economic sub-composite index and the social sub-composite index have the same increasing trend, as shown in *Figure 4.1*. The GDP recorded an average annual growth rate of 8.1

per cent for the period from 2000 to 2012. The MWI grew at 1.9 per cent per annum contributed by both the economic sub-composite index at 2.4 per cent and the social sub-composite index at 1.6 per cent.

Figure 4. 1 Trend of GDP, MWI and the Sub-composite Indices



The social well-being of the population continued to record an increasing trend despite several hiccups in economic growth in the last 12 years. In 2009, even though the GDP recorded a negative growth of 1.9 per cent due to the global recession, social well-being continued to record an improvement of 1.35 points. This was partly due to the continuous commitment given by the Government to ensure that the social sector¹⁷ was accorded sufficient resources in the interest of the *rakyat*.

Similarly, all components of the MWI, with the exception of family and environment components, registered significant and positive correlation with the GDP. The figures in Table 4.2 indicate that the association is very strong either with GDP at current or constant prices as well as at different lag times. The impact of GDP on well-being is immediate as indicated by the lower value of correlation with GDP at 2-year lag.

¹⁷ Refers to development expenditure allocation for education & training, health and public housing

Table 4.2: Correlation between the Component Indices with GDP

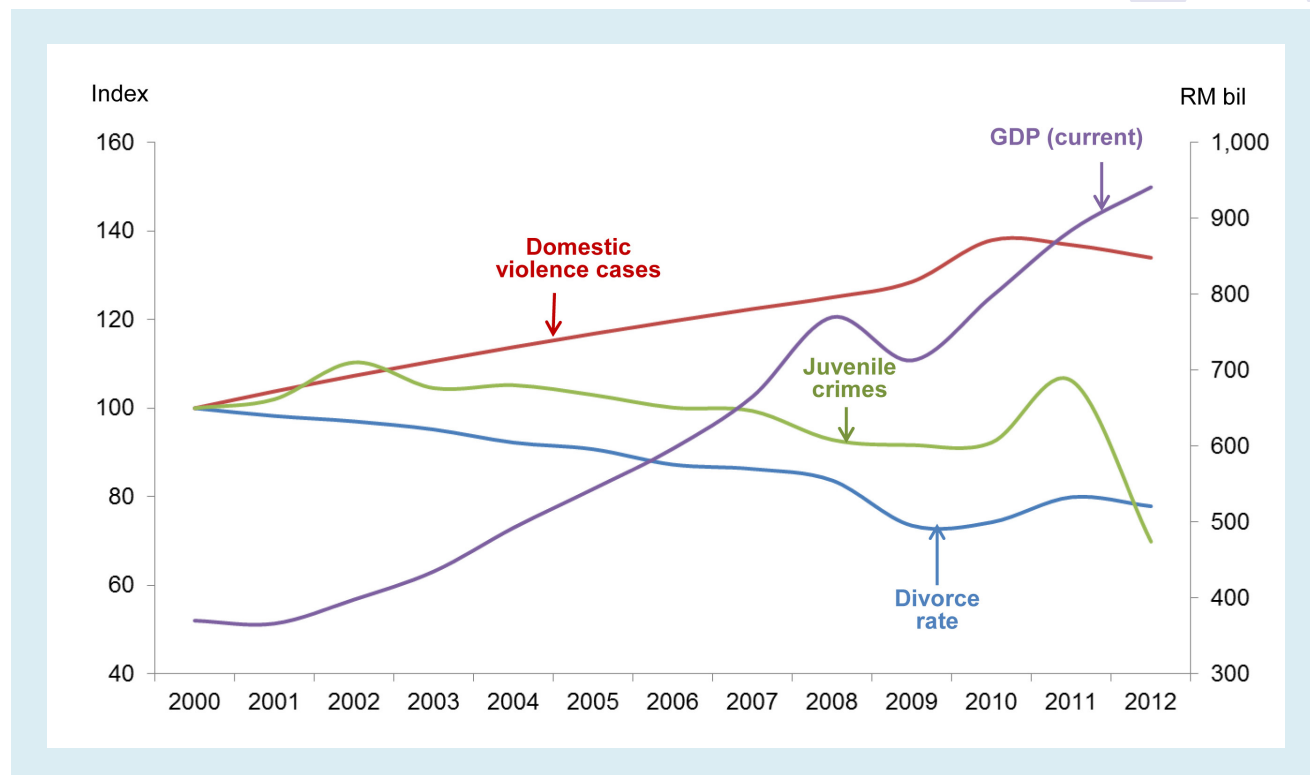
Index	GDP (constant)	GDP (constant at 1-year lag)	GDP (constant at 2-year lag)	GDP (current)	GDP (current at 1-year lag)	GDP (current at 2-year lag)
1. Income and Distribution	0.9897*	0.9802*	0.9638*	0.9866*	0.9620*	0.9426*
2. Working Life	0.9524*	0.9369*	0.9038*	0.9481*	0.9192*	0.8801*
3. Transport	0.9918*	0.9886*	0.9789*	0.9873*	0.9844*	0.9680*
4. Communications	0.9399*	0.9291*	0.9216*	0.9429*	0.9356*	0.9238*
5. Health	0.9658*	0.9735*	0.9766*	0.9753*	0.9704*	0.9677*
• Level of Health	0.8757*	0.8141*	0.7564*	0.8738*	0.7832*	0.7358*
• Healthcare Services	0.9348*	0.9644*	0.9852*	0.9482*	0.9719*	0.9814*
6. Education	0.9823*	0.9757*	0.9647*	0.9695*	0.9572*	0.9445*
• Education Equality	0.9731*	0.9640*	0.9548*	0.9591*	0.9475*	0.9379*
• Education Quality	0.9802*	0.9731*	0.9565*	0.9686*	0.9529*	0.9331*
7. Housing	0.9204*	0.9502*	0.9807*	0.9051*	0.9431*	0.9761*
8. Family	0.7769*	0.6887*	0.5912	0.7682*	0.6471*	0.5969
• Institution	-0.2908	-0.4425	-0.5289	-0.2961	-0.4857	-0.5095
• Financial Health	0.9932*	0.9922*	0.9931*	0.9876*	0.9829*	0.9829*
9. Social Participation	0.6172*	0.6062*	0.6594*	0.6295*	0.6344*	0.6997*
10. Public Safety	0.8082*	0.7578*	0.7497*	0.8022*	0.7642*	0.7729*
11. Culture	0.9535*	0.9692*	0.9804*	0.9512*	0.9646*	0.9754*
12. Environment	0.5810*	0.4163	0.2427	0.5712*	0.3663	0.2121
13. Leisure	0.9870*	0.9760*	0.9554*	0.9808*	0.9535*	0.9308*
14. Governance	0.9543*	0.9436*	0.9655*	0.9455*	0.9438*	0.9687*

Note : * Significant at 5%

The family institution sub-component index had a very weak and negative association with GDP. This could be due to the non-linear relationship between the variables. Of the three indicators

in the family institution sub-component, only the domestic violence index showed a parallel trend with GDP, as shown in Figure 4.2.

Figure 4.2 Trends in Family Institution Indices and GDP



Elasticity between Income and Well-being

While the high correlations between economic growth and well-being indices provide indication of a strong relationship between the two, it would be more meaningful if the exact magnitude of the relationship was examined under the hypothesis of causality assumption. One way to accomplish this was by examining the elasticity of the movement in the well-being indices to changes in GDP. The elasticity coefficient in Table 4.3 shows that the MWI increased by 0.21 per cent for every one per cent increase in the GDP in current terms. This reflects that economic growth in the last 12 years had improved the well-being of the *rakyat*. The relationship between economic growth and well-being could be attributed to the successful

implementation of appropriate strategies and programmes. The social sector has always been a priority to the Government as evidenced by the development allocation of about 30 per cent to this sector over the years.

In terms of the economic well-being sub-composite index, a one per cent increase in GDP led to an improvement of 0.28 per cent in the index. However, the social well-being sub-composite index, recorded a lower improvement of only 0.16 per cent for every one per cent increase in GDP. This could be due to the smaller improvement in the social well-being sub-composite indices such as family, health and environment.

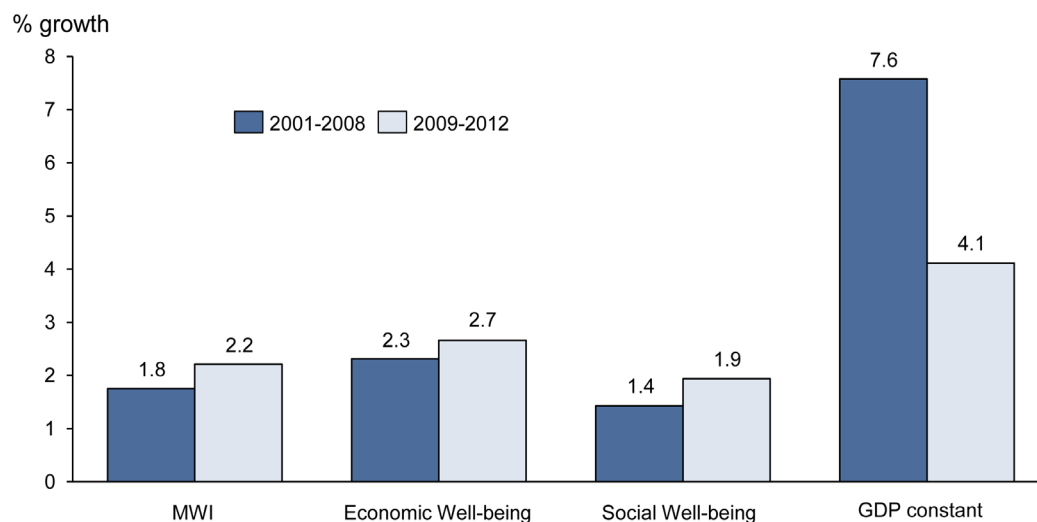
Table 4.3 Elasticity of the MWI and Sub-composite Indices to GDP

Index	GDP Current	GDP Current at 1-year lag	GDP Current at 2-year lag
MWI	0.21*	0.21*	0.21*
Economic Well-being	0.28*	0.28*	0.27*
Social Well-being	0.16*	0.16*	0.16*

Note : * Significant at 5%

The positive trend in the relationship between GDP and well-being can also be seen when comparing the growth rates of GDP and the indices between two time periods of 2000 to 2008 and 2009 to 2012. Both the GDP and the indices grew higher in the second period, as shown in the *Figure 4.3*. The MWI increased at an average of 2.2 per cent

annually in the second period as compared to 1.7 per cent in the first period. Similarly, the two sub-composite indices also recorded a higher growth rate in the second period. This trend reflects the effectiveness of Government policies including the national transformation agenda in improving the well-being of the *rakyat* during the 9MP and 10MP.

Figure 4.3 Growth Rates of GDP and Well-being Indices

In terms of the relationship between GDP and the component indices, the findings can be categorised into three, namely, high and significant (>0.2 per cent), moderate and significant (0.05 to 0.2 per cent) and moderate to low or not significant (<0.05 per cent), as shown in *Table 4.4*. Income and distribution, working life, transport, communications, education,


housing, culture, leisure, governance and healthcare services sub-components fell into the first category. Health, family, public safety, environment, and level of health and financial health sub-components fell into the second category while social participation and family institution sub-component fell into the third category.

Table 4.4: Elasticity of the Component and Sub-component Indices to GDP

Index	GDP (current)	GDP (current at 1-year lag)	GDP (current at 2-year lag)
1. Income and Distribution	0.30*	0.31*	0.30*
2. Working Life	0.25*	0.24*	0.23*
3. Transport	0.29*	0.29*	0.30*
4. Communications	0.26*	0.27*	0.29*
5. Health	0.14*	0.15*	0.17*
• Level of Health	0.08*	0.07*	0.08*
• Healthcare Services	0.21*	0.23*	0.26*
6. Education	0.28*	0.27*	0.25*
• Education Equality	0.27*	0.26*	0.25*
• Education Quality	0.29*	0.28*	0.26*
7. Housing	0.26*	0.22*	0.20*
8. Family	0.06*	0.05*	0.04*
• Institution	-0.03	-0.05	-0.06
• Financial Health	0.14*	0.14*	0.14*
9. Social Participation	0.11	0.13	0.17*
10. Public Safety	0.16*	0.16*	0.17*
11. Culture	0.23*	0.26*	0.27*
12. Environment	0.05*	0.03	0.02
13. Leisure	0.28*	0.27*	0.26*
14. Governance	0.21*	0.20*	0.19*

High and significant
 Moderate and significant
 Moderate to low or not significant

Note : *Significant at 5%



The analysis on the relationship between economic growth and well-being reflected the positive impact of the various development policies implemented

thus far. Nonetheless, targeted initiatives are needed particularly in the areas related to the health, family, social participation and environment.