

Chapter 7

Conclusion and Recommendations

7.1 Summary of the Economic Problem

As we have seen in Table (1.1) in Chapter 1, Myanmar economic indicators are very weak despite the fact that the geographical size of the country is second only to Indonesia within the ASEAN region. This economic weakness is not only represented by GDP per capita (at current market prices) in terms of US\$ PPP but also international trade volume (export and import) which were the lowest in ASEAN in 2009. The low trade volume might in fact be one of the causes of the lowest GDP per capita of the country, as the theory of trade and its literature state that especially a small country (like Myanmar, whose economic size is small in terms of GDP per capita) should encourage the external sector, especially for high value added products. However, current international trade volume gives clear information to both economists and researchers that Myanmar still lacks international collaboration and consequently receives less in foreign direct investment (FDI). As a result, the country has unfavorable conditions for using capital investment, experts, R&D, and of course, technology. Furthermore, employment creation in the country is unsuccessful. As a result of high inflation, the real purchasing power of the people is shrinking. The end result could be that consumption and employment opportunities from the outside world may lure labour and human resources out of Myanmar. These various problems

are manifest in Mawlamyine town as well. Therefore, the economic problems of consumption, employment and income become focal research issues.

7.2 Summary of the Research

Our research is based on formulating the impacts of a better highway system in Mawlamyine, the end point of the EWEC, even though the EWEC in Myanmar is only 9% completed to date. While the EWEC plans remain in limbo, Myanmar highways have already been upgraded in various areas. In Mawlamyine, the general condition of the improved highway system has been documented in two surveys. It is hypothesized that some people and some sectors may suffer unfavorable effects from an improved highway system. Therefore, this research is designed to explore the impact of the highway on consumption, employment, income, and the equality of income distribution. More specifically, this research has addressed the following objectives:

- (1) Analyze the factors that affect households' economic condition and the distribution of income and well-being in urban, semi-urban and rural populations within Mawlamyine Township.
- (2) Confirm the potential vs. probable impacts of Mawlamyine on growth in terms of income and employment condition.
- (3) Explore the condition of inequality among rural, semi-urban and urban area in Mawlamyine.
- (4) Optimize the strategy to open the economic system by reducing the hindrances in the current condition. This will both support further development step and lessen

problems of uneven distribution of income and job opportunities that may be expected from opening the EWEC.

(5) Make policy recommendations to government and production-marketing recommendations to the private sector to harness the potential of Mawlamyine's strategic location and road access.

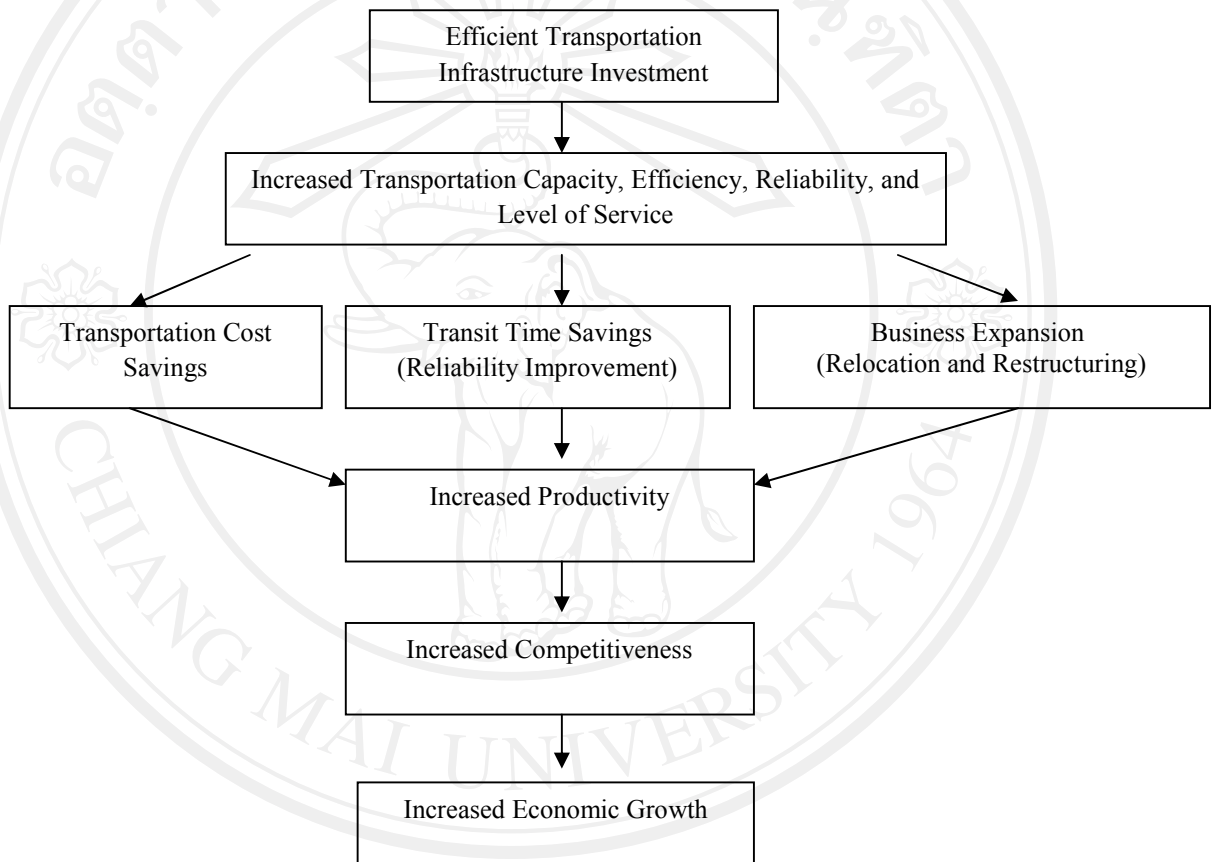
In doing so, we have applied the SUR regression to find out the determinants of consumption, health and transportation consumption in Mawlamyine. These results portray the general condition of Mawlamyine's consumption and economic structure.

Secondly the poverty and inequality in Mawlamyine were analyzed to understand the conditions necessary for a further stage of balanced economic growth in the township. In order to measure the burden of poverty on the poor, we have used poverty dummy in the truncated regression model of income–expenditure model. The result proved to be there is a burden of poverty on consumption as poor families are more likely to spend a more share on food than that of a non-poor family. As a result, the poor cannot spend on nonfood items such as clothing, health care, and education. Therefore the condition of the poor will be a vicious cycle unless an effective pro-poor policy is implemented.

Thirdly and finally, we have constructed our SAM to grasp the overall structure of the township. The model gives us an appropriate result to explain the reality of the problem even if we don't have most fully robust data on Mawlamyine's economic structure. Our optimization based on the SAM offers insight into how the Mawlamyine economy can be developed by full utilization of its resources, especially labour.

7.3 Research Findings and Real World Application Based on Literature

In order to accept Penne's (2004) model, several things must be upgraded while the transportation infrastructure investment is doing the transport network. In Chapter 2 we have presented Penne's model for the transportation and the economy as follows:



Source: Penne, L. (2004). Freight Transportation and The Economy, a presentation to the China Highway Study Group

Based on our findings of the regression results and survey experiences, the following are essential for the full utilization of the emerging transportation infrastructure:

- Job creation for the poor

- Awareness raising and knowledge sharing for local people regarding the costs and benefits of the improvements to the transportation system.
- Provide public utilities at a reasonable price in order to increase the poor's access to these utilities.
- Promote the agricultural sector, especially paddy farming and orchards, to reduce agriculture imports and increase self-sufficiency in rice consumption.

The above measures, implemented as part of a well-designed economic development plan, are likely to reduce the town's poverty condition and to increase the level of equality.

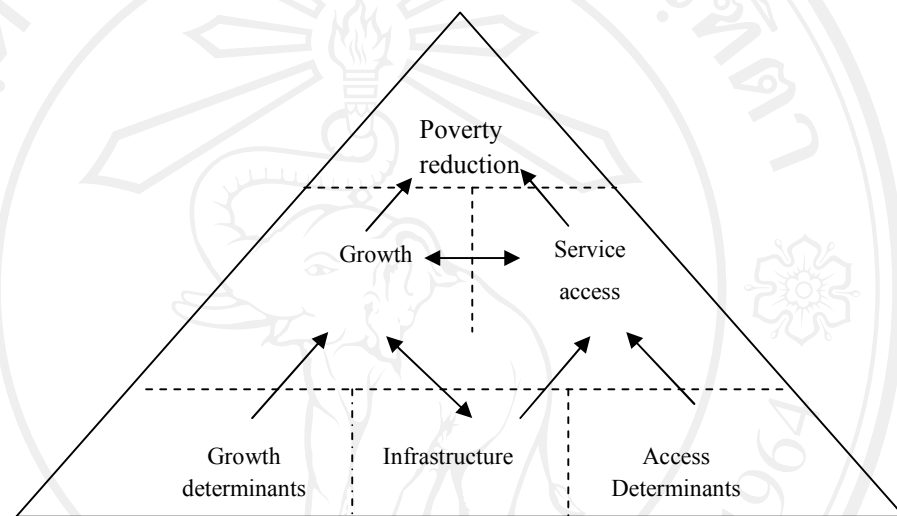
Penne's model seems to be more appropriate when a country or business sector has logistical challenges. Countries applying that model may not typically be developing countries struggling with other constraints. As we know the characteristics of developing countries³³, Myanmar has been facing those problems as one of developing countries. Therefore, investing in infrastructure or highways alone may not be a sufficient or even appropriate condition for spurring overall economic growth and development.

Rather, it might be more appropriate for developing economies to consider another model for "connecting" East Asia" a model formulated by the Japan Bank for International Cooperation (JBIC) (Figure 7.1). This model gives equal priorities to growth determinants, infrastructure and access determinants. The final goal of connecting road infrastructure is to reduce poverty, unlike in the Penne model. In order to apply the JBIC model, a country needs to consider what kind of sector could

³³. lower level of income, inadequate health care, housing, limited education, etc

be the growth determinants for a country. There might be different determinants in different countries although infrastructure and access determinants are likely to remain common problems throughout the developing world.

Figure 7.1 Linkages between infrastructure, poverty reduction and growth



Source: Asian Development Bank, World Bank and Japan Bank for International Cooperation, 2005

Combining that framework of infrastructure development with the results of our scientific research, we can propose a suitable policy framework for Mawlamyine's future economic development and poverty reduction.

7.4 Decision for Hypotheses

We have been following five research hypotheses presented in Chapter 1.

- (1) Proximity to the main road or part of the EWEC directly and significantly reduces the proportion of food consumption and transportation expenditure within overall household expenditure per capita.

- (2) Better transportation and proximity to highways significantly increase the knowledge people can use to focus on their income and health care.
- (3) There has been significant growth in equality of income in the Mawlamyine area.
- (4) Overall income per capita and the number of jobs in the Mawlamyine area could increase by at least 25% if the above constraints were removed.
- (5) The income, employment, and consumption multipliers of the road infrastructure and transportation-related economic sectors are significantly higher than for other sectors.

The result of our study and the validity of these hypotheses can be found below.

Hypothesis (1) could not be accepted due to following reasons: The results from the SUR have proved that the distance variable has been increasing Engel's coefficients of food consumption while Engel's coefficient of transportation consumption comes out to be negative and insignificant. The result of distance from double truncation makes Engel's coefficient of food consumption positive while non-food consumption including transportation is negative.

Hypothesis (2) could not be accepted due to following reasons: A distance coefficient of healthcare consumption came out as a negative sign on healthcare expenditure and insignificant, although total education on Engel's coefficient has positive and significant impact.

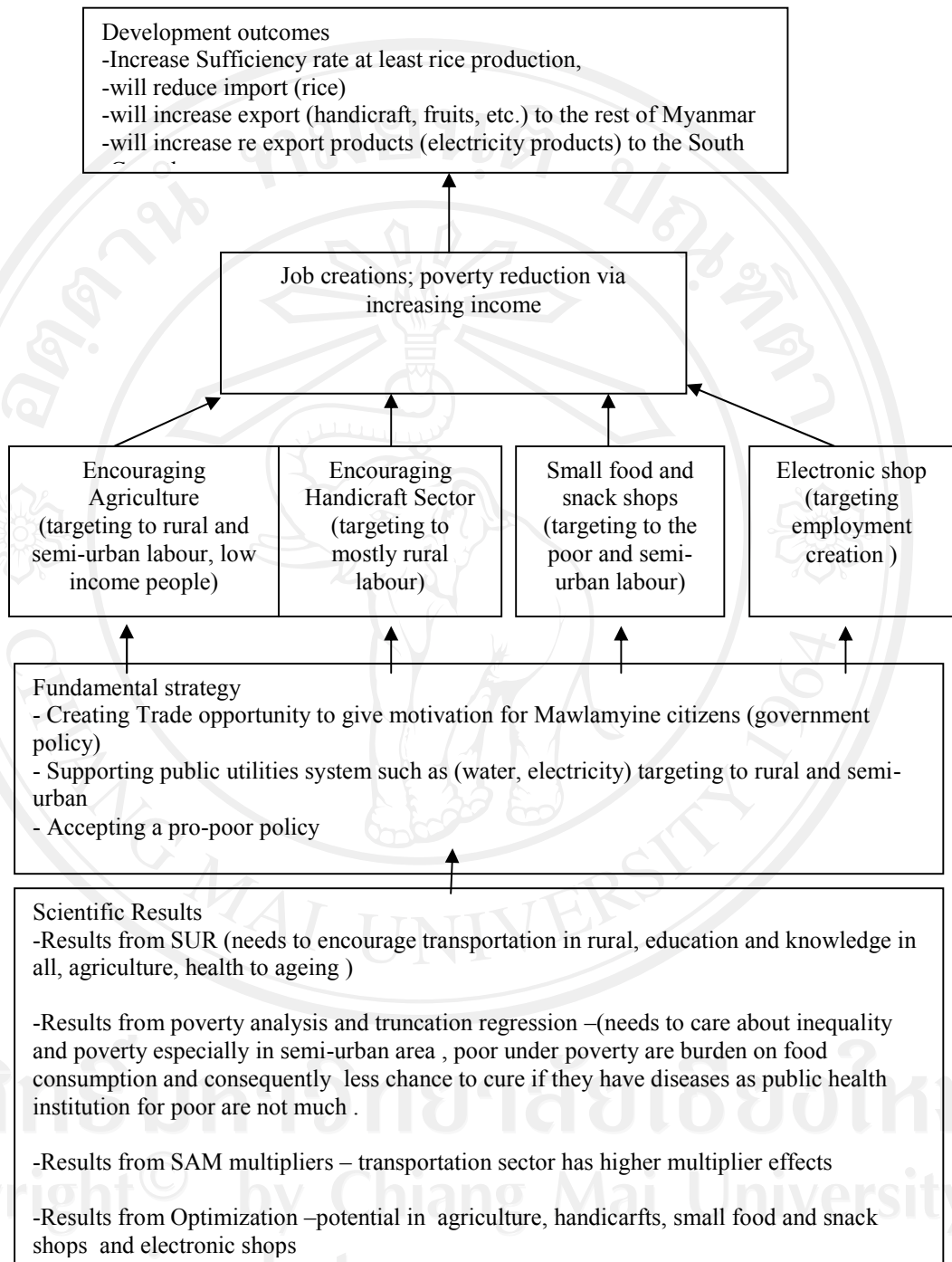
Hypothesis (3) could not be accepted since our GINI coefficient and poverty measures portray that there is increasing inequality compared to the previous average of poverty incidence.

Hypothesis (4) could be accepted as our optimization analysis in Chapter (6) tells us that 30 % of labour could have been employed and overall average income per capita 88% at the same time.

Hypothesis (5) could be accepted as the gross income multiplier of transportation gives the highest one and the employment multiplier is also the second largest in production activities. In addition, the consumption multiplier is also the highest among production activities.

7.5 Proposed Policy Model for Mawlamyine

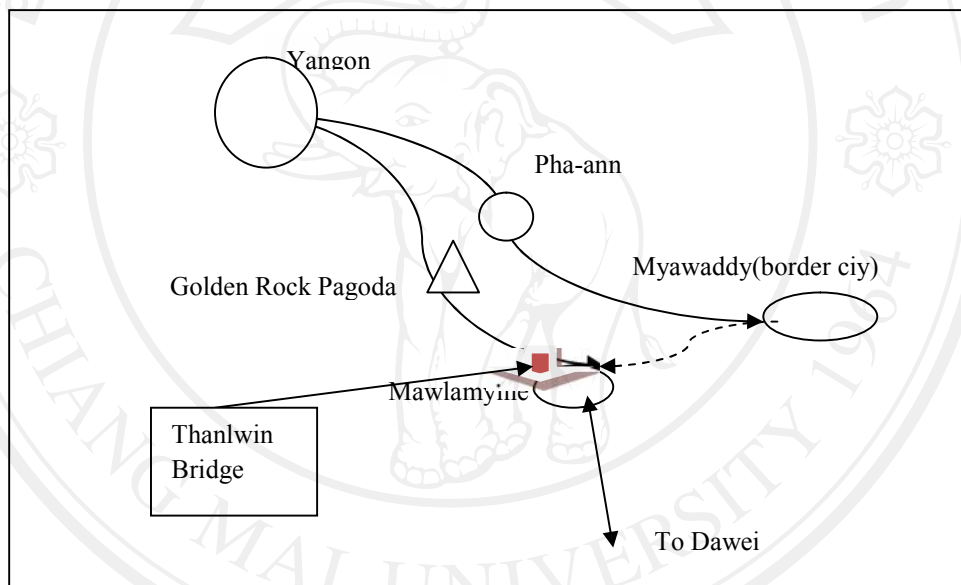
The proposed policy model for Mawlamyine's future economic development is shown in Figure (7.2)

Figure 7.2 Proposed Policy Model

Source: Created by author based on scientific results

Firstly, Mawlamyine has no visible attractions such as beaches, well known historical sites or famous handcraft sites unless the government were to physically create a tourist attraction. Secondly, it is not near enough to the well-known Golden Rock Pagoda, (*Kyaikhtheeyoe*) to take advantage of the flow of international and domestic tourists to that site.(Figure 7.3) .

Figure 7.3 Geographic condition of Mawlamyine



Therefore, we are hoping to foster the hotel and tourism sector in Mawlamyine only when the EWEC is finished and incentives for trade in the township economic sector such as handicrafts are created in Mawlamyine.

At the moment, the industrial and manufacturing sector should be of interest. Based on the township's current economic structure, Mawlamyine has developed a transit-based economy although the handicraft sector was once famous for its exports many decades ago. According to the experience gleaned from our firm survey, firms must import capital goods to use in the industrial and manufacturing sectors. For

example, car production requires imported engines to be installed in the chassis. Due to the nature of capital goods, the prices are much more expensive than those of agriculture goods. Encouraging car production and not encouraging agriculture and handicraft at the same time would only result in significant spending on imports and lose of the potential of exports from the agriculture and handicraft sectors.

7.6 Limitations of the Research

It is necessary to recall that the data used in the SAM were mostly 2009 survey data from households and small-scale firms in the informal sector. However, data for some cells such as government expenditure on productive activities have been estimated via the national budget from the year 2000, the last in which the national budget was made public. Therefore we estimated new data by inflating data from that budget with CPI. This process is legitimized by experts who have suggest this procedure where local data is inadequate to complete the SAM. As the Mawlamyine SAM is a pioneering use of this tool within this context, it might have some weak points due to various constraints in Myanmar. We cannot estimate government expenditure on households. Although there potentially should be values there, we leave those cells blank. This is because we know public utilities in Mawlamyine are significantly underfinanced (see details in Chapter 3 on public healthcare and education). Although we have some data limitations when constructing the SAM, we have tried as much as possible to obtain the appropriate SAM in order to explore the real world problem by using our unprecedented 2009 survey data. Private sector data is also hard to come by.

We lack updated information concerning how many gas shops are operating in the private sector. Lastly, this research still leaves some questions about how to create trade opportunities for Mawlamyine. Besides, It is a general trend that residence shops are found in semi-urban areas and that electronic shops are normally run by high income families. Therefore, policy formulation on those two categories should focus on encouraging residence shops as the shops need some amount of money and no need to assign outside labour, and only family labour can manage those shops. In other words, encouraging small residence shops may not create employments opportunities. For electronic shops, these enterprises should be supported by policy since these businesses will encourage domestic trading as well as employment opportunities of the working population. Still, there are many things to be seriously considered in regards to how to create trading opportunity for the whole Mawlamyine.

7.7 Further Studies and Extension of the Research

Until now, Myanmar does not provide macro SAMs or I-O tables of each production activity. Formulating policies based on SAM and I-O multiplier analysis and optimaization is much more concrete as SAM and I-O models show, trace, and interrelate the flows of income and expenditures of endogenous and exogenous variables. If it is possible, a true national SAM should be constructed.