

## CHAPTER 2

### 2.1 LITERATURE REVIEW

Studies on the subject of International trade have been done by economists since the seventeenth and eighteenth centuries by a group of men known as mercantalists (merchants, bankers, government officials and even philosophers). They wrote that the way for a nation to become rich and powerful was to export more than to import. The gain from external trade would cause the inflow of bullion, precious metals, primarily gold and silver. The more gold and silver a nation had, the richer and more powerful it will be. Mercantalists believed that in order to be richer and mre powerful the nation must stimulate exports and discourage imports.

One of the most influential mercantalist's writer is Thomas Munn (1571-1641)<sup>1</sup>. He wrote that;

..to increase our wealth and treasure is by foreign trade, where we must ever observe this rule; to sell more to strangers yearly than we consume of theirs in value...

We may diminish our importations, in our exportations we must not only regard our superfluities, but also we must consider our neighbours necessities, that so we may gain so much of the manufacture as we can..<sup>2</sup>

The above Munn's statement showed us that the nation should encourage exports and restrict imports because they believed that the nation could gain in trade only at the expense of other nations (i.e trade was a zero-sum game).

Adam Smith (1937)<sup>3</sup> gave a different view on international trade compared to the mercantalists. According to Adam Smith, when two nations trade with each other voluntarily, both nations must gain. If one nation gains nothing or loses, it will simply refuse to trade. To answer the question of how the mutual gain arises, Adam Smith uses the principle of absolute advantage.

When one nation can produce a commodity more efficiently than another and less efficiently than the other in the production of second commodity, the nation should specialize in the product that it has efficiency (absolute advantage) and exchanging part of its output with the other nation for the commodity of its absolute disadvantage (inefficient). The country will specialize in the product which it has absolute advantage and export some of it to exchange for the imports of other products in which it has absolute disadvantage. Following is an excerpt from Adam Smith writing;

..If a foreign country can supply us with a commodity cheaper than we ourselves make it, better by it of them some part of the produce of our own industry employed in a way in which we have some advantage...As long as the one country has those advantages, and the other wants them, it will always be more advantageous for the latter, rather to buy of the former than to make (pp.424 - 426)<sup>4</sup>

Another important writing on international trade was that of Ricardo (1817)<sup>5</sup>. Ricardo introduced the law of comparative advantage to the international trade. This is one of the most

important and still unchallenged laws of international trade. According to Ricardo, even if one nation is less efficient than the other in the production of both commodities, there is still a basis for mutual beneficial trade. The first nation should specialize in the production of the product in which it has a smaller absolute disadvantage (inefficient). In other words the nation should manufacture the product it has less absolute disadvantage at home and import the other products which it has greater absolute disadvantage. For example a business manager, though a great typist himself, employs somebody else to do his typing because it is better for him to concentrate upon those tasks in which has superiority, and thus his comparative advantage, is greatest.

Although Ricardo made a significant contribution to the theory of international trade by introducing the laws of comparative advantage but because its laws of comparative advantage is based on the "labour theory of value" which means that the value of price of a commodity depends exclusively on the amount of labor going into the production of the commodity. This imply that labour is the only factor and it is homogenous in the production of a commodity which cannot be accepted by later economists such as Haberler (1936). This is because according to Haberler labour is neither the only factor of production nor is it homogeneous.

In 1933, Bertil Ohlin (former student of Eli Heckscher), a

Swedish economist, published his famous book "Interregional and International Trade" which is based on the article "The effect of Foreign Trade on the Distribution of Income," published by Eli Heckscher (1919)<sup>6</sup>. Since the essence of the model was first introduced by Heckscher, due credit is given to him by calling the theory Heckscher-Ohlin. Theory Heckscher-Ohlin goes much beyond what had been explained by classical economists such as Ricardo and Adam Smith. Heckscher-Ohlin theory extended the classical trade theory by re-explaining the basis for comparative advantage.

Heckscher-Ohlin presented his theory by using the factor intensive and factor abundant argument. Factor intensity shows the rate at which the use of one factor is higher than the other. For example, we say that commodity Y is capital intensive if the capital ratio ( $K/L$ ) is greater. Factor abundance shows the greater proportion in which one factor of production is available in one nation compared to another nation. According to Heckscher-Ohlin the nation exports those commodities whose production requires intensive use of the nation's relatively abundant and cheap factors and inversely imports the commodity which requires scarce and more expensive factors of production.

Mac Dougall (1951 - 1952)<sup>7</sup>, was the first economist to do the empirical test of the Ricardian trade model by using the data year 1937. The Mac Dougall study showed that there is a positive relationship between labour productivity and exports as shown in



the trade between the United States and the U.K. Those industries where the productivity of labour is relatively higher in United States than in United Kingdom, are the industries with the higher ratio of U.S to U.K. exports. the Mac Dougall expirical study seems to support the Heckscher-Ohlin theory. That is, the actual pattern of trade seems to be based on the different labour productivities in different industries in the two nations.

Another empirical test was done by Wassily Leontief<sup>8</sup> in 1951 by using the United States data for the year 1947 to test the Heckscher-Ohlin model. The result shown by Leontief was opposite to the prediction of Heckscher-Ohlin theory. Since the United States was the most capital abundant nation in the world, Leontief expected to find that it exported capital-intensive commodities and imported labour-intensive commodities. By using the input-output table of the United States, Leontief's findings showed that United States imports capital intensive commodities and inversely exports the labour-intensive commodities. This result is against what Heckscher-Ohlin had stated earlier. In order to support his argument Leontief sbusequently repeated his studies by using the 1951 trade data. However, his study still shows that the United States exports labour-intensive commodities and imports capital intensive commodities. One of the reasons given by Leontief was that the Uniteds States labour was about three times as productive as foreign labour, if we multiply the United States labour forces by three the United States is the labour abundant country and not capital abundant. Further studies by Kravis (1956)<sup>9</sup> and Baldwin

(1971)<sup>10</sup> showed that the Leontief paradox was biased. This is because Leontief in his studies included only physical capital and excluded the human capital such as education and job training which contributed to their productivity.

Balassa(1957)<sup>11</sup> found that international trade also takes place if there is product differentiation and differences in taste among nations. That is German cars may be exchanged for French and Italian cars, French washing machines may be exchanged for German washing machines, and Italian typewriters for German and French typewriters and so on.

Thus far we have seen that the theory of international trade is static in nature. However, in the real world the factor endowment and technology would change as time passes. According to the Rybczynski theorem (1955)<sup>12</sup>, the factor endowments and technology would changes over time and as a result the nation's comparative advantage also change over times. For example, in 1972 the Nobel Prize winner, John Hick<sup>13</sup> (British economist) showed the effect of technical progress on the nation's production function. The technical progress would cause the production function shift out from the original position or in other words the nation could produce larger quantities with the existing production factors. The degree of the shift in production fuction would depend on the rate of technical progress. The higher the level of technological progress in the nation, the higher the level of the endowment factors in that counrtry.

Throughout the literature review it can be seen that different economists presented different views regarding the subject of international trade. These differences can be seen from the Merchantalist view to the Rybczynski theorem.

With regards to the Malaysian study on the subject of international trade, only a few studies have been undertaken. These included the studies on bilateral trade between Malaysia-Japan and Malaysia-China. Bilateral trade between Malaysia and Japan has been carried out by Sumitha (1994)<sup>14</sup>. Bilateral trade between Malaysia and China has been carried-out by Lin Jin Zhong (1994)<sup>15</sup> and Sirirat Sae-Lim<sup>16</sup>.

Sumitha shows that there are two main factors that influenced the import and export between Malaysia and Japan. These factors are price and income elasticities. She also used exchange rate in the regression but the results show that the exchange rate is not significant in the analysis. To analyse the factors influencing import, she used the import demand function with and without lag variables (introduced by Saratides, in the article of Economic International, Vol., 25, Feb 1972, pg 108-109). The import demand functions are as follows;

#### A. IMPORT FUNCTION WITHOUT LAG VARIABLE

$$M = f (P_m, Y_m, ER) \dots (1)$$

where M = the real import demand of Malaysia for Japanes goods,

computed by dividing value of imports by the index price of imports to Japan

$P_m$  = the calculated price index of imports from Japan

$Y_m$  = the real Gross Domestic Product (GDP) of Malaysia

$ER$  = the exchange rate between the Malaysian dollar and the Japanese Yen

The above equation transform to the log form which can be expressed as follows

$$\log M = a + b_1 \ln P_m + b_2 \ln Y_m + b_3 \ln ER \dots (2)$$

where,  $a$  is a constant

$b_1, b_2, b_3$  are regression coefficients

## B. IMPORT FUNCTION WITH LAG VARIABLE

The import function with lag variable also uses the same independent and dependent variables of the import demand equation as those of the previous equation. The income and price elasticity estimates derived from the adjusted parameters of the import demand when lags are used, involve dividing the estimated parameters by 1 minus the estimated coefficient of the lagged dependent variable

The import function with lag variables shows the same result without the lag variable and the equation is as follows;.

$$\log M = a + b \log Y_m - \log P_m + b ER + b \log (M_d - 1)$$

### C. PRICE AND INCOME ELASTICITIES OF COMMODITY IMPORTS FROM JAPAN

Here Sumitha used a few main products which Malaysia imports from Japan to regress by using the same equation with the import demand function with the import lag variable and the result shows that there are differences in both price and income elasticities of demand across commodity groups. Here she found out that Malaysia's imports from Japan are income elastic that is greater than unity, especially for manufactured goods and machinery (capital product). The price elasticity of demand for import shows that imports of food are more price elastic compared to imports of manufactured goods and machinery.

### EXPORT DEMAND AND OUTPUT SUPPLY MODELS

In this section, Sumitha has her analysis into two parts. They are the output supply function function of Malaysia and export demand function. The models analyses goods exported by Malaysia to Japan and the domestic production capacity of Malaysia. The purpose of this investigation is to access the price responsiveness of both export demand and output supply, using annual data, from 1971-1990

#### A. OUTPUT SUPPLY FUNCTION OF MALAYSIA

$$\ln q = b_0 + b_1 X_t + b_2 M_t + b_3 C_t + b_4 N_t \dots$$

where;

$X_t$  = Quantity of export

$M_t$  = Quantity of import

$C_t$  = Consumer Price Index

$N_t$  = Domestic demand (taking population into consideration)

The results obtained are found to be significant at 5 percent level, except for population which is significant at 10 percent level.

## B. EXPORT DEMAND MODEL

Sumitha used export demand function which is introduced by Khan and Mohsin(1974).

$$\log X = a + B Y_j - b P_x + b ER \dots\dots$$

where,  $b > 0$  and  $b < 1$

$X$  = The real export demand for Malaysia,s goods by Japan; obtained by dividing the value of export by the index price of exports

$Y_j$  = The GDP of Japan

$P_x$  = the calculated index price of exports to Japan

$ER$  = Exchange rate

The simple export demand function explains that Japan's GDP has a significant relationship with demand for exports from Malaysia, where a buoyancy in the Japanese economy would increase Japan's demand for Malaysian goods and Malaysia's exports are

influenced by the price competitiveness in the international market ( reflected by the price index of exports to Japan and the exchange rate), and Japan's GDP.

### C. PRICE AND INCOME ELASTICITIES OF EXPORTES TO JAPAN

Under this section Sumitha examine the price and income elasticities of a few selected products which Malaysia exports to Japan. She selected the commodities which from the major exports to Japan where the price of individual goods are obtained by dividing the value of exports by the quantity of exports.

Sumitha concluded that Malaysia has a higher income elasticity of demand for its imports from Japan, compared to Japan's income elasticity of demand for Malaysia's exports. Thererore Malaysia has experienced more rapid import growth than export growth. This, along with the lower price elasticity of imports compared to exports, has caused Malaysia to experience deterioration in its trade balance and eventual pressure on its exchange rate.

The Studies on bilateral trade between Malaysia and China carried out by Lin Jin Zhong(1994) and Sirirat Sae-Lim are different from Sumitha. This is because Lin Jin Zhong and Sirirat did not use econometric models to do the empirical analysis. Both

of them used interviews as the method of study. Their field of study is on the history of trade relations between Malaysia and China and the pattern of commodity trade between the two countries. They examined the type of commodities Malaysia imports from China and the type of products exported to China. Lin Jin Zhong also examined the sources and stability of trade growth. The issues of trade balance is also discussed. He also reviewed of the prospects of bilateral merchandise trade, and in the last part of the thesis Lin Jin Zhong also examined the bilateral trade in services and Malaysia's investment in China.

The bilateral trade between Malaysia and China has accelerated after the visit of Malaysia's Prime Minister Dato Seri Dr. Mahathir Mohammad in 1985. The annual average growth rate of the trade during 1985-90 registered at 42.7 per cent, compared to 10.2 per cent during 1974-1984. According to Lin, the major sources of the trade growth were generated from the market expansion between both countries. In addition, bilateral trade between the two countries was also characterised by trade imbalance which was mostly in favour of China. He concluded that as the bilateral foreign relationship improved and the bilateral trade growth accelerated, the trade imbalance between the two countries diminished. By using the intra-industry trade index, Lin also found that trade between Malaysia and China can be explained by the differences in resources endowment.

My main objective of doing this project paper is to examine



the trade patter between Malaysia and Thailand. The second objective is to relate the findings with international trade theories. Besides that, trade balance of bilateral trade between the two nations will also be examined. This will help us to determine the main causes of trade imbalance between the two nation.

## CONCLUSION

According to Adam Smith trade only can take place if both nations gain from international trade. This is against the Merchantalist views that international trade can take place even though one nation gains and the other nation gain nothing. Ricardo introduced the law of compartive advantage to the subject of international trade. This is considered as one of most important and still unchallenged theories of international economics.

The Heckscher-Ohlin theory, also known as the modern theory of international trade, states that the difference in relative factor abundance or factor endownments among nations is the basic cause of comparative advantage. The Rybczynski theorem went one step further by showing that the previous theories are static in nature and can not be applied to the real world. This is becuase in the real world, factor endownments change over time, technology usually

improves and tastes may also change.

The studies by Sumitha, Lin Jin Zhong and Sirirat concluded that although the Malaysian trade balance is in Japan's and China's favour the trend might be changing in the next decade, Malaysia is changing to industrialise nation and currently experiencing comparative advantage in certain manufactured goods, such as electrical and electronics, textile and telecommunications equipment.

## FOOTNOTES

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16. Sirirat Sae-Lim, *Analisa Perdagangan Dua Hala China-Malaysia*, (Kertas Projek), University of Malaya, Kuala Lumpur, 1995.