MIGRANT WORKERS: THE EFFECTS ON THE HOST COUNTRY

by Sharina Farihah HASAN[**] and Kakuya MATSUSHIMA[***] and Kiyoshi KOBAYASHI[****]

1. Introduction

Globalization creates many impacts on the world business and industry. Over the past two decades, foreign trade and the cross border movement of technology, labor and capital have been massive and irresistible. Millions of people moved to other countries in search of work, higher pay or good working environment and etc. The scenario is wide spread all over the world.

Malaysia, like the rest of the world is affected by globalization. The country's economy has consistently recorded impressive and sustained economic growth. The robust growth led to substantial job creation, with employment expending faster compared with the labour force growth. The wide economic and demographic differences between Malaysia and its immediate neighbors triggered the cross-border movements of labor. The country started to rely on migrant labor, particularly unskilled due to the structural changes and labor market segmentation that first emerged in the early 1970s. The unprecedented influx of these labors, following unabated high growth since mid-1980s, had raised several social, political and economic concerns. The popular perception was that migrant labors were affecting local unskilled labors; both in wages and living standard.

This paper aims to report on a study concerning migrant workers and their effects on the host country. The objective of the study is to investigate the effect of migrants on (i) the relative price and the wage rate, and (ii) the welfare of the native inhabitants in the host country. The methodology for the study involves two-factors and two-commodity model developed to measure the effects. It is based on the previous research conducted by Kondoh (1999). The current model however has been expanded and further improved to suit the nature of the study.

2. Background Problem

Every year millions of people moved to other countries in pursuit of better opportunity. Nowadays they can be seen in various parts of the world and they are commonly known as migrant workers. Kondoh (1999) classified them into three types of migrants, namely; permanent migrants, temporary migrants, and cross-border migrants. Many studies have been done to address the issues related to migrant workers (i.e; Ethier, 1985, 1986, Kondoh , 1999, Chao 2002,

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** Doctoral Student, M.Sc., Dept. of Urban Management, Faculty of Engineering, Kyoto University,
(Kyotodaigaku Katsura, Nishikyo-ku, Kyoto, 615-8540, Japan TEL 075-383-3224, FAX 075-383-3224
*** Member of JSCE, Associate Professor., Dept. of Urban Management, Faculty of Engineering, Kyoto University,
(Kyotodaigaku Katsura, Nishikyo-ku, Kyoto, 615-8540, Japan TEL 075-383-3223, FAX 075-383-3224
**** Member of JSCE, Professor., Graduate School of Management., Kyoto University,
(Yoshidahonmachi Sakyo-ku, Kyoto, 606-8501, Japan TEL 075-383-3222, FAX 075-383-3224

Carter, 2005, Kanapathy, 2006, etc.). In addition, there have been a growing number of studies on the welfare effects of migrant workers on the native inhabitants of the host country. The main debate focuses on the question whether the migrant labors were displacing local labors and suppressing wages and living standard.

These studies, for example Kondoh (1999) concluded that under perfect competition environment; permanent, temporary, and cross border migration have very different effects on the host country. He found that immigration is beneficial to the host country. Whilst Chao (2002) introduces imperfect competition for the non-traded sector and his paper suggested that if the nontraded sector is relatively skilled-labor intensive, immigration of skilled workers is welfare enhancing while entry of unskilled workers can be welfare reducing. Carter (2005) analyzes illegal immigration and the effects of immigration enforcement policies. He concluded that an increase in migration depth lowers migrant wages and raises the income of host-country capital and labor, but when migrants move into what had been host-country jobs, native labor may be suffer. Kanapathy (2006) studied the impact of migrant workers on the Malaysian economy. According to him, cross-country empirical evidence suggests that immigration has not caused any net increase in the unemployment rate in the host country, and any negative impact of migration on wages is small.

This paper will further investigate the effects of migrants on (i) the relative price and the wage rate, and (ii) the welfare of the native inhabitants in the host country under perfect competition environment. Kondoh's (1999) model which adopting two-commodity (tradable and nontradable goods), two-factor (labor and capital) is analyzed and used as the basis for the study. It is observed that in his model, he assumed that labors are moveable between the two commodities under the same wage rate. Under normal circumstances, this is not the case, whereby the wage rate between the two commodities is different. It is obviously due to the varying nature of the works and the skill or level of productivity involved. It is certainly worthwhile to study the model by including the difference wage rates between the two commodities. This point is addressed in the model which is presented in the next section. The new model, theoretical in nature, shows another perspective on the same area of study.

3. The Model

The model is developed by considering a country with small open economy. There are two goods; tradable and nontradable and two factors; labor and capital. The study focuses on cross border labor, employed only in the nontradable goods therefore it is assumed that labor is immobile between the two goods while capital is internationally immobile.

The production function for tradable good is $T = T(L_T, K_T)$ and nontradable good is $N = N(L_N, K_N)$. L_T and L_N are inputs of labor while K_T and K_N are the inputs of capital for the production of the tradable and nontradable goods, respectively. Both functions are assumed to be linearly homogeneous. It is further assumed to be under perfect competition and full employment condition. By taking the tradable good as numeraire, the following equations are derived from the aforementioned assumptions:

$$p_N \frac{\partial N}{\partial L_N} = w_N \qquad (1a)$$

$$\frac{\partial T}{\partial L_T} = w_T \qquad (1b)$$

$$p_N \frac{\partial N}{\partial K_N} = \frac{\partial T}{\partial K_T} = r \qquad (1c)$$

$$L_T + L_N = \bar{L} + L_B \qquad (1d)$$

$$K_T + K_N = \bar{K} \qquad (1e)$$

The difference wage levels are highlighted by equations 1(a) and 1(b) whilst p_N, w_N, w_T and r represent the price, wage for labor in nontradable and tradable goods and rental price, respectively. In addition, L_B is the inflow of cross border labor (employed only in nontradable good thus L_T being constant), L and K are the endowment of labor and capital in the host country of which both are assumed to be given and constant. The supply function of the two goods relies on the relative price and the inflow of labor whereas the demand function depends on the relative price and the total income spent in the country. The total income is denoted as:

$$Y = rK + w_N L_N + w_T L_T$$

Y is the total income, a sum of rK ;rental of capital, $w_N L_N$; wage of labor in nontradable good and $w_T L_T$; wage of labor in tradable good. Under the equilibrium condition for both goods markets, therefore;

$$D_N(p_N, Y) = S_N(p_N, L_B) \tag{2}$$

Here, the Walrasian Law is adopted whereby one equilibrium condition is omitted and the condition of the nontraded good market is shown. In this general equilibrium system, equations 1(a), 1(b), 1(c), 1(d), 1(e) and 2 determine eight endogenous variables p_N, w_N, w_T, r, L_T, L_N, K_T and K_N, if L, K and L_B is given exogenously.

(1) The Analysis of Prices Responses

This section investigates the effects of an increase in cross border labor on prices in the host country. Differentiation of equation (2) with respect to p_N and L_B derives:

$$\frac{dp_N}{dL_B} \equiv p_N^B = \frac{S^{L}/_{N}}{D_N^P - S_N^P + D_N^Y\left(\dfrac{\partial Y}{\partial p_N}\right)} \tag{3}$$

According to Walrasian price-adjustment process;

$$\dot{p}_N = D_N(p_N, Y) - S_N(p_N, L_B)$$

The equilibria must be stable and the stability condition $d\dot{p}_N / dp_N < 0$ ensures that the denominator of Equation (3) is negative. From Equation (3), $dp_N / dL_B > 0$ if the nontradable good is capital intensive. In addition, $Y = rK + w_N L_N + w_T L_T$ and due to the factor-price-equalization theorem, when p_N is unchanged, w_N, w_T, and r are also unchanged. According to Rybczynski theorem, $S^{L}/_{N} > 0$ if the nontradable good is labor intensive, and $S^{L}/_{N} < 0$ if it is capital intensive. It can therefore be concluded that $dp_N / dL_B > 0$ if the nontradable good is capital intensive and $dp_N / dL_B < 0$ if it is labor intensive.

From the above, the effect of an increase in the inflow of cross border labor on factor prices is further analyzed:

$$\frac{dw_N}{dL_B} = \frac{\partial w_N}{\partial L_B} + \frac{\partial w_N}{dp_N}\frac{dp_N}{dL_B} = \frac{\partial w_N}{dp_N}\frac{dp_N}{dL_B} = \left(N^{LL}\frac{dL_N}{dp_N} + N^{LK}\frac{dK_N}{dp_N}\right)\frac{dp_N}{dL_B} = \frac{-N^{LK}N^{K}k_n}{p_N}\frac{dp_N}{dL_B} \tag{4}$$

$$\frac{dr}{dL_B} = \frac{\partial r}{\partial L_B} + \frac{\partial r}{dp_N}\frac{dp_N}{dL_B} = \frac{\partial r}{dp_N}\frac{dp_N}{dL_B} = \left(N^{KK}\frac{dK_N}{dp_N} + N^{KL}\frac{dL_N}{dp_N}\right)\frac{dp_N}{dL_B} = \frac{N^{KL}N^{K}}{p_N}\frac{dp_N}{dL_B} \tag{5}$$

$k_N \equiv K_N / L_N$, $N^{LL} \equiv \partial N^L / \partial L^N$ and N^{LK}, N^{KK} , N^{KL} are defined in similar manner. Adopting the result from dp_N / dL_B , hence equation (4) dw_N / dL_B is positive and equation (5) dr / dL_B is negative if the nontradable good is capital intensive and the opposite result if it is labor intensive.

(2) The Analysis of Welfare

This section looks into the analysis of welfare in the host country. The aggregate utility function, which signifies the welfare of natives (both capital and labor), is: $U = U(D_N, D_T)$. D_N and D_T refers to the demand of the nontradable and tradable good by native labors.

$$\frac{1}{\partial U / \partial D_T} \frac{dU}{dL_B} = (N - D_N) \frac{dp_N}{dL_B}$$

Hence the result, ie; the natives increase their production of the nontradable good and start extend trading with the immigrants even though the aggregate production of the nontradable good decreases and vice versa. Therefore if the nontradable good is labor intensive, $N < D_N$ and $dp_N / dL_B < 0$ thus $dU / dL_B > 0$.

4. Conclusion

The study mostly concurs with the theorems by Kondoh (1999) that if the nontradable good is capital intensive (labor intensive), an increase in the inflow of cross-border labor raises (lowers) the relative price of nontradable good; and a marginal increase in the inflow of cross-border labor give rise to an aggregate welfare gain of natives in the host country. However, based on our model, this study suggests that an increase of the inflow of cross-border labor raises the wage rate and lowers the rental price. This is where the two models differ. For the purpose of future research, the model will be expanded and used to analyze the effects of migrant labors on the Malaysian economy.

The study is not without its limitations, particularly the methodology used. The authors adopted the methodology established by the previous researcher with some modifications. Naturally further in-depth studies are required.

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