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The Role of Labour Standards in Shaping Migration: The ASEAN Perspectives

(Peranan Piawaian Buruh dalam Membentuk Migrasi: Perspektif ASEAN)

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ABSTRACT

This study attempts to investigate the role of labour standards in explaining the pattern of bilateral migration flows in ASEAN; and it is motivated by the target of ASEAN Economic Community Blueprint that aims to promote free flow of skilled labour in the region. To answer the research question, this paper used a panel data set consisting 45 countries and applied pooled ordinary least squares technique for the empirical analysis. The study proxies labour standards with four different indicators: number of strikes, average actual weekly hours worked, cases of occupational injuries, and trade union density rate. Interestingly, the analysis obtained mixed results to explain the effect of labour standards on bilateral migration flows in ASEAN countries, depending on what indicator being used to measure the level of labour standards in the empirical analysis. When the level of labour standards was represented by number of strikes and/ or average weekly hours worked, the results demonstrated that better labour standards increase the bilateral migration flows among countries selected in the analysis. Nonetheless, the migration increased when there were more cases of occupational injuries reported, which implies that better working conditions do not attract workers to move. The findings suggest that governments should review and improve the existing labour policies in order to attract immigrants, especially those high-skilled.

Keywords: Labour standards; bilateral migration; ASEAN

ABSTRAK

Kajian ini bertujuan untuk menyiasat peranan piawaian buruh dalam menerangkan corak aliran migrasi dua hala dalam ASEAN; dan ia didorong oleh sasaran Rangka Tindakan Komuniti Ekonomi ASEAN yang bertujuan untuk menggalakkan aliran bebas tenaga kerja mahir di rantau ini. Untuk menjawab persoalan kajian, kertas kerja ini menggunakan satu set data panel terdiri daripada 45 buah negara dan menggunakan teknik pooled ordinary least squares(POLS) untuk analisis empirikal. Kajian ini menggunakan empat petunjuk yang berbeza untuk proksi piawain buruh, iaitu: bilangan mogok, purata mingguan jam bekerja sebenar, kes-kes kecederaan pekerjaan, dan kadar kepadatan kesatuan sekerja. Analisis ini mendapat hasil empirik yang berbeza untuk menjelaskan kesan piawaian buruh ke atas penghijrahan dua hala di negara-negara ASEAN, dan perbezaan ini bergantung kepada apa petunjuk yang digunakan untuk mengukur tahap piawaian buruh dalam analisis empirikal. Apabila tahap piawaian buruh diwakili oleh bilangan mogok dan / atau purata mingguan jam bekerja sebenar, keputusan menunjukkan bahawa piawaian buruh yang lebih baik meningkatkan aliran penghijrahan dua hala antara negara-negara yang dipilih dalam analisis. Namun begitu, penghijrahan meningkat apabila terdapat lebih banyak kes-kes kecederaan pekerjaan dilaporkan, di mana ia membayangkan bahawa keadaan kerja yang lebih baik tidak menarik pekerja untuk bergerak. Hasil kajian menunjukkan bahawa kerajaan perlu mengkaji semula dan mempertingkatkan dasar buruh yang sedia ada untuk menarik pendatang, terutama yang berkemahiran tinggi.

Kata kunci: Piawaian buruh; penghijrahan dua hala; ASEAN

INTRODUCTION

The modern world of globalized economy that emphasizes on the mobility of factor of productions has encouraged the interregional migration; acting as an important mechanism to restore and maintain equilibrium in resource markets (Nakosteen, Westerlund & Zimmer 2008). In their study, Docquier and Rapoport (2012) demonstrated that migration to the OECD area does not increase at the same rate as trade; nonetheless, high-skill immigration from developing to developed countries rose at a much faster pace. The importance of migration as one of the major aspects of globalization has lead to an extensive body of research. These researches have shed light on the issues related to migration; which can be distinguished into two main streams. The first stream of literature mainly addresses the causes of worker mobility; i.e. focusing on the determinants of decision to migrate (Hunt & Mueller 2004; Borjas, Bronars & Trejo 1992; Falaris 1988; Nakosteen & Zimmer 1980). The other

stream of studies focuses on the returns to migration (Finnie 2004; Yankow 1999; Nakosteen & Zimmer 1982).

Asian countries had experienced massive migration outflows in the 1970s with the Middle Eastern countries being the popular destination at that time. The Asian workers were highly demanded to fill in the shortages of skilled labours due to rapid expansion of the economies after the booming of oil price. Later in the 1980s, the pattern of migration flows had significantly changed where other Asian countries becoming the preferred destinations for migrant workers (Kaur 2007). Specifically, these new destinations are located in East Asia (Japan, Republic of Korea, Hong Kong SAR and Taiwan) when these economies took off as newly industrialized economy (NIEs) (UN 2002). Additionally, three of the ASEAN countries (Singapore, Malaysia and Thailand) are also receiving large number of migrant workers (Pasadilla 2011).

Table 1 presents the data of labour flow for ASEAN countries in year 2010, except for Myanmar (estimation based on year 2007). Indonesia, the Philippines and Vietnam were the major labour exporting countries; while Malaysia, Singapore and Thailand were major labour importers in the region. The high emigration rates of Indonesia and the Philippines were partly due to those governments' policy that encourages their nationals to work abroad as a way to reduce the burden of excess labour in their countries.

If we observe the statistics shown in Table 1 carefully, there are two distinguishable patterns in cross border labour mobility of the region (Manning & Bhatnagar 2004). The first pattern is observed around the Mekong River with Thailand being the destination country for workers from the neighbours (Myanmar, Lao PDR, Cambodia and Vietnam). Another pattern is in the Malay states where workers from Indonesia and the Philippines moved into Singapore, Malaysia and Brunei Darussalam.

In addition, Pasadilla (2011) argued that there is an asymmetric pattern in the intra-ASEAN labour mobility. Refer to Table 1, except for Thailand, the labour importing countries host large number of ASEAN migrants. More than 80% of foreign workers in Malaysia, Brunei Darussalam and Cambodia originated from ASEAN countries. Meanwhile, Singapore has a slightly lower share of intra-ASEAN migration due to the presence of a large number of non-ASEAN expatriate workers. In terms of emigration, most Malaysian workers moved to other ASEAN countries, especially to the neighbour, Singapore. Besides, more than half of Indonesian and Burmese migrants stayed in other ASEAN countries. The Philippines has the lowest share of intra-ASEAN migration rate, despite of the fact that the Philippines being the major labour exporter of the region. There is only 8% of Filipinos went to other ASEAN countries.

The asymmetric labour mobility in the region could be explained by the disparity in the level of development among ASEAN countries. Unlike European Community which was initially formed by relatively homogenous western European countries, the ASEAN consists high-income (Brunei Darussalam and Singapore); upper-middle income (Malaysia and Thailand); lower-middle income (Indonesia, Lao PDR, Philippines and Vietnam); and low-income (Cambodia and Myanmar) countries. The income level inequality likewise reflects the employment opportunities as well as the wages; whereby the richer countries are more attractive to the surplus labourers in the region. Hence, the disparity

TABLE 1. Labour Flow Data for ASEAN Countries

Country	Outward Migration		Inward Migration		Share of Intra-ASEAN to Total Migration (%)	
	Intra-ASEAN	Total	Intra-ASEAN	Total	Outward Migration	Inward Migration
Brunei Darussalam	9,313	24,343	120,578	148,123	38.26	81.40
Cambodia	53,722	350,485	320,573	335,829	15.33	95.46
Indonesia	1,518,687	2,504,297	158,485	397,124	60.64	39.91
Lao PDR	82,788	366,663	10,134	18,916	22.58	53.57
Malaysia	1,195,566	1,481,202	1,882,987	2,357,603	80.72	79.87
Myanmar**	321,100	514,667	814	98,008	62.39	0.83
Philippines	335,407	4,275,612	9,096	435,423	7.84	2.09
Singapore	122,254	297,234	1,162,960	1,966,865	41.13	59.13
Thailand	262,721	811,123	448,218	1,157,263	32.39	38.73
Vietnam	221,956	2,226,401	21,511	69,307	9.97	31.04
Total	4,123,514	12,852,027	4,135,356	6,984,461	32.08	59.21

Note: ** means that the data are based on estimates by the World Bank in 2007, while the rests are from the 2010 released data.
Source: Modified from Table 1 in Pasadilla (2011).

in the level of development among ASEAN countries is reflected in the asymmetric pattern of labour mobility in the region.

The intra-ASEAN labour mobility does not only have asymmetric movement pattern, the proportion of skilled and low-skilled migrant workers is imbalanced too. Orbeta Jr. (2013) estimated that 87% of the migrants who moved within the region are those unskilled/ low-skilled workers. These workers are willing to take up the 3D jobs (dirty, dangerous and demeaning) as long as the pays are higher than what they can earn in their countries of origin. The disproportion between skilled and low-skilled workers would be a challenge to ASEAN. This is because the region is working towards harmonization and standardization in facilitating the free flow of skilled workers in the region to achieve the target set by ASEAN Economic Community (AEC) Blueprint. Skilled workers are believed to be more concerned about the working conditions as well as their deserved rights. Therefore, they will be more attracted to countries with higher labour standards and good enforcement of the standards than countries with lower labour standards.

Although quite a number of studies had analysed the problems and challenges faced by the migrant workers in the ASEAN region, there are still very limited studies that provide empirical evidence in explaining the effects of migrants' rights (or labour standards, in general) on the pattern of labour mobility in the region. The migration literature is more concern on wage-related determinants, but less focus on the institutional factors and enforcement of labour laws. This paper aims to fill in the gap and provide an analysis that assesses the role of labour standards in explaining the migration flows in the context of ASEAN. ASEAN countries have set the target to integrate the region into the global economy, indicating that wage differential between member countries would be minimized. Henceforth, non-wage determinants of labour mobility will play a much more important role in influencing the movement of workers in this region.

The organization of the paper is as follows: Section 2 presents a review on the literature. Section 3 describes the econometric model and estimation technique used in the study, as well as the description of the variables and sources of data. Estimation results and findings are discussed in Section 4. Lastly, Section 5 provides a conclusion for the study.

LITERATURE REVIEW

A vast literature had studied the causes and effects of migration – with the earlier works concentrated on rural-urban migration (e.g., Harris & Todaro 1970); and fewer studies on international migration focusing on remittances. However, in more recent years, migration and development are now a recognizable subfield; it leads to increasing research that stressed on global migration flows and complexities between migration and broader developmental process (Clemens, Özden & Rapoport 2014). As the migration issue gains more concerns from the researchers and policy makers, research interests have extended to more nuanced issues such as the role of networks or diasporas (Priebe & Rudolf 2015; Beine, Docquier & Özden 2011; Tilly 2007; Massey 1990), linkages between cultural norms and migration (Bertoli & Marchetta 2015; Beine, Docquier & Schiff 2013), and different types of migration flows that stemmed from the dynamics of economic integration.

Harris and Todaro (1970) suggested that international migration flows respond largely to regional disparities in prosperity. Neo-classical economists argue that international labour flows exist as a result of wage differences between countries, and the flows create a new international equilibrium real wages in all countries (Chiswick 1999; Borjas 1999; Bauer & Zimmermann 1998; Massey et al. 1993). Following to this theory, Jennissen (2003) suggested that in the context of bilateral migration, the wage difference between the source and destination country has a negative effect on source country and a positive effect on destination country. Furthermore, Martin, Abella and Kuptsch (2006) described that individuals move as a response to the differences between areas, i.e. to take advantage of higher incomes and jobs or more security and improved human rights.

While making the migration decision, individuals also take into account the risks and costs of movements as to maximize the gains from moving around. Migration costs correlate with the physical distance between countries (Lewer & Van den Berg 2008). The risks and costs are expected to rise with distance between the source and destination, as access to better information about labour market conditions is expected to be easier for closer destinations (Zaiceva & Zimmermann 2008). Apart from physical distance, migration costs are also associated with land and language proximities. Mayda (2010) suggested that common land border is likely to encourage migration flows. This is because land travel is usually less expensive than air or sea travel. In addition, she also highlighted that the linguistic and cultural similarity may reduce the magnitude of migration costs through the transferability of individual skill from one place to the other. Similar conclusion was drawn by Adsera and Pytlikova (2012) who discovered that migration rate increases with linguistic proximity.

Meanwhile, based on the human capital model suggested by Sjaastad (1962) and Becker (1964), individuals with younger age and higher education should exhibit a higher migration probability. The likelihood of migration should decrease with age in reflecting the smaller expected lifetime return from moving for older people. Those who attained higher education can reduce their risks of migration through a higher ability to collect and process information for decision-making.

Several studies had found that emigrants from Asian countries tend to be better educated than origin populations (Borjas 1994 & 1991; Demery 1986), and Asia has provided a large part of the more skilled migration flows into OECD countries in recent years (OECD 2012). Based on OECD SOPEMI (1997), a skilled or highly skilled worker is a person possessing university degree or has extensive experience in a given field. These people include specialists, independent executives and senior managers, specialized technicians, investors, "key-workers" and sub-contract workers.

There are a number of studies that focus on the issue of migration in the ASEAN countries. Among others, Prasai (1993) and Pasadilla (2011) both observed that the Malaysian migration outflows are of predominantly professional and technical manpower; while the inflows are almost entirely temporary low-skilled contract labours. As shown in Table 1, Malaysia is one of the most popular sources and a destination country in the region. On one hand, the Malaysian emigrants mostly worked in Singapore. On the other hand, majority of the immigrants come from neighbouring countries such as Indonesia, the Philippines, Cambodia and Vietnam. Contrary to Malaysia, foreign workers in Singapore are disproportionately represented at the top and bottom ends of the skills ladder, reflecting the industrialized economy of the nation.

Susanto and Windyastuti (n.d.) categorised the factors that support the movement of skilled labour into two categories. The first is due to disparity in wages and employment among ASEAN countries; and the second is the proximity of geographical and socio-cultural conformity in ASEAN countries. In addition, Chia (2011) suggested another two factors that contribute to the regional labour mobility; those are disparities in educational development and policy factors. High quality education attainment and foreign language proficiency (particularly English) both explained the capacity of ASEAN professionals in securing overseas employment. Last but not least, policy factor plays the important role in explaining the mobility of professionals and skilled manpower. For example, professionals and skilled migrant workers are allowed to have their families accompanying them, whereas low-skilled workers are not granted this privilege in Malaysia. In Singapore, not only there are policies that encompassed an elaborate arrangement of migrant levies on low-skilled workers and incentives for highly skilled professional (Kaur 2010); highly skilled workers are also recruited with the assurance that they will be able to qualify for citizenship status (Chia 2011).

Furthermore, the increased migration in Asia is also driven by the specific overseas labour-deployment policies of some countries such as Indonesia and the Philippines. Kaur (2004) documented that both Indonesia and the Philippines include targets for the number of workers they plan to send abroad in their economic development plans. This evidence implies that the export of labour has become an important strategy in addressing poverty, easing domestic unemployment pressures, generating foreign exchange and fostering growth.

Although United Nation (UN) and International Labour Organization (ILO) have put efforts in ensuring countries to ratify conventions that aim to protect migrants; the incidences of migrants being marginalized and exploited continue to happen. The incidences do not only happen in developing countries, but also in developed and high-income countries. Ruhs and Martin (2008) argued that there is a trade-off between the number and the rights of migrants employed in low-skilled jobs in high-income countries. The authors suggested two reasons for the trade-off effect, with the primary reason pinpoints to cost-benefit consideration in which labour rights can cost employers. Moreover, labour costs are inversely associated with the demand for labour. The second reason is due to the political considerations in most high-income countries. Here, these countries minimize the fiscal cost of low-skilled immigrant, which leads to the governments keeping the migrant numbers low or restricting their access to the social welfare system.

In the context of ASEAN, Piper (2006) found that Malaysia and Singapore provide strict temporary contract schemes for lower or unskilled migrant workers, with settlement and the acquisition of citizenship being rare, if not totally out of reach. Singapore even officially prohibited migrants who are employed in low-wage jobs from co-habiting with or marrying a Singaporean resident (Piper & Iredaleφ 2003). Unlike the restrictions faced by low-skilled workers, the professionals and skilled workers in both countries are granted more privileges and rights.

Piper (2006) classified the key issues and concerns centred upon workplace grievances for foreign workers working in ASEAN countries into two broad categories: (1) employment related; and (2) welfare, occupational health and safety issues. On top of these two categories, the study also discovered some other major problems faced by foreign workers in Malaysia and Singapore. These problems include inconsistent or non-existent migration policies, employers' illegal practices and contract violations, denial on due process of law, and abuse of the right to freedom of movement and association. As highlighted by Lim (2003), in many cases, 'host' governments work hand-in-hand with local firms to institutionalize exclusionary practices designed to ensure that the transnational migrant workers are kept isolated, marginalized, and disempowered. For instance, in Singapore and Malaysia, foreign workers are not permitted to form their own organizations in the country. Thus, no such formal organization run by migrants exists. Thus, foreign workers face difficulties in seeking solutions for the disputes, partly due to political considerations by governments.

In fact, not only foreign workers are restricted from joining organized associations, Crinis (2002) commented

that Malaysia has been effective in preventing the growth of a strong labour movement. Consequently, there is a combination of flexible workers with little worker protection in the labour market. In his later study, Crinis (2010) conducted interviews with the workers employed in Malaysian garment and textile industry. The researcher discovered that the working conditions of Malaysia citizens employed in the industry appeared to be satisfactory. However, there was a big difference for a large majority of foreign workers who worked in the industry. Most migrants in Malaysia had little knowledge of labour laws or their rights to organize. Additionally, in many factories in most states, there was no union for them to join anyway. Therefore, the main problem for foreign workers appeared to be the violation of their rights by employers – low wages, poor working and living conditions, and other breaches of contracts.

Although quite a number of studies had analysed the problems and challenges faced by the migrant workers in the ASEAN region, the migration literature is more concerned on the wage-related determinants. It focuses less on the institutional factors and enforcement of the labour laws. There are very scarce studies providing empirical evidence that explain the effects of migrants' rights (or labour standards in general) on the pattern of labour mobility in the region. ASEAN countries have set the target to integrate the region into the global economy, indicating that the wage differential between member countries would be minimized. Henceforth, non-wage determinants of labour mobility will play a much more important role in influencing the movement of workers in this region.

METHODOLOGY

This paper followed the model used by Mayda (2010) with some modifications to empirically examine the effects of labour standards on the migration. Apart from the determinants suggested in previous studies (Clark, Hatton, & Williamson 2007; Borjas 1999), such as income differences between source and destination countries, geographical, cultural and demographic factors, Mayda (2010) also included the changes of immigration policies in destination countries into her bilateral migration model. This study modified her model by substituting the immigration policies variable with the indicators of labour standards.

Based on the theoretical framework suggested in literature, the econometric equation should have bilateral migration flows as the dependent variable, while all other migration determinants are explanatory variables. Hence, the equation can be written as:

$$lnM_{ijt} = \rho_0 + \varphi_1 lnw_{it-1} + \varphi_2 lnw_{jt-1} + \varphi_3 lnD_{ijt} + \varphi_4 Cont_{ijt} + \varphi_5 Lang_{ijt} + \varphi_6 lnyoung_{it-1} + \varphi_7 LS_{jt} + \varepsilon_{ijt} \quad (1)$$

Eq. (1) was assessed using pooled ordinary least square (OLS) where, i refers to source countries; j refers to destination countries and t indicating year. lnM_{ijt} denotes bilateral migration flows from source country into destination country at time t; while $lnLS_{jt}$ represents labour standards of the source countries. This paper will use four different indicators to proxy the labour standards, namely number of strikes and lockouts (*lnStr*), cases of occupational injuries (*lnInj*), trade union density rate (*TUD*) and average weekly working hours (*lnHrs*).

We used w to represent the average wages for workers; which lnw_{it-1} and lnw_{jt-1} reflecting the average wages in source and destination country respectively. These two variables measure the income differences in source and destination countries for the labour. Hence, the expected sign for coefficient φ_1 is negative (as the average wage in source country is a push factor), while φ_2 is positive (as the average wage in destination country is a pull factor).

Meanwhile, D measures the physical distance between source and destination countries, and the coefficient φ_3 is expected to be in negative sign to indicate distance is a push factor for migration. The further apart the countries are, the higher will the migration costs be; and therefore reduction in migration flows.

Besides the physical distance, the study also included two other variables, common border (*Cont*) and language (*Lang*) to capture the migration costs. *Cont* and *Lang* are dummies that take the value of 1 respectively if source and destination country sharing common border and language (Mayda 2010). Thus, both coefficients are expected to carry positive sign based on the consideration of both variables being pull factor for migration.

Furthermore, a person who migrates when he is still young will obtain higher return from the migration than an older migrant, consistent with the human capital model by Becker (1964). We would then expect the share of young population, denoted by *young* in the origin country to be positively associated with the bilateral migration flows.

The empirical analysis employed a set of panel data that consists all ten ASEAN member states, 17 European Union (EU) countries, 7 American countries and 11 other Asia Pacific countries (China Mainland and Hong Kong SAR are treated as two separated countries). Due to the migration data available in database are presented in decades, we were only able to include three years as time series (year 1990, 2000 and 2010) for the study.

The dependent variable, lnM_{ij}, refers to the bilateral migration stocks from origin country to destination countries. Statistics for year 1990 and 2000 were retrieved from *Global Bilateral Migration Database*, World Bank; while statistics for year 2010 were obtained from the *Migration and Remittances Factbook 2011*. This paper is constrained by the availability of bilateral aggregate migration data mostly from censuses that are conducted

every ten years; and this problem has been acknowledged by Docquier and Rapoport (2012).

Labour standards variable, $lnLS_{jt}$, refers to the level of labour standards in the destination country. This study used four different indicators as the proxy of labour standards. The first indicator used in the estimation is average weekly hours worked (ln*Hrs*) in all economic activities (*ISIC Rev. 2 & 3*). Previous studies (e.g.: Samy & Dehejia 2011; Beers 1998; Rodrik 1996) suggested that actual working hours is more appropriate and accurate in reflecting the working conditions as opposed to established statutory maximum working hours. Second indicator used in this paper is the number of strikes and lockouts (*lnStr*). This measure refers to temporary work stoppage when workers express their grievances, and it reflects the ability of workers to voice out their concerns. This article also used trade union density rate (*TUD*) to represent the right to organize and collective bargaining. Lastly, total number of cases of occupational injuries in all economic activities (ln*Inj*) is used to measure the working environment of workers, i.e. whether it is hazardous or safe. These data were obtained from *Labour Statistics Database*, International Labour Organization (*LABORSTA*).

The first explanatory variable for migration model reflects the disparity of income level between the population in origin and destination countries; those are lnw_{it-1} and lnw_{jt-1}, which are the proxies with GDP per person employed (constant 1990 PPP $), and the data were obtained from *World Development Indicators*, World Bank (2014). Another explanatory variable, the share of young population (aged between 15 to 29 years old) in origin country, labelled as $young_{it-1}$ is based on the data from *Health Nutrition and Population Statistics*, World Bank.

Meanwhile, lnD_{ij} measures the great circle distance between country i and j; while *Cont* and *Lang* are dummy variables equal to 1 if both countries share a common border and language, respectively. The data for distance, common language and border were obtained from the *Centre d'Etudes Prospectives et d'Informations Internationales* (CEPII).

FINDINGS AND DISCUSSIONS

Table 2 presents the estimation results for Eq. (1) using pooled OLS. We estimated the Eq. (1) without labour standards' variables used as a baseline model for reference and named it Model (1). All the coefficients were significant with expected sign, except for $lnYoungShare_{it-1}$. The coefficient of lnw_{it-1} was negative and significant; indicating that average wage in origin country is a push factor, whereby relatively lower average wage in origin country will lead to emigration. Meanwhile, the coefficient of lnw_{jt-1} was positively significant; suggesting that higher average wage in destination countries would attract migrants flow into the country. The distance between countries was negatively associated with the migration flows, while countries sharing common border and language tended to increase migration between countries. All these results are consistent with the migration theory described by literature. However, the coefficient of $lnYoungShare_{it-1}$ was insignificant, though it carries the expected positive sign. This implies that country with larger young population has higher possibility of migration outflows, but the effect is insignificant. This finding is different from Mayda (2010) who found that the share of young population is an important determinant to explain the bilateral migration flows.

The insignificant effect of this estimate could be explained by the demographic change of ASEAN countries in recent years. A few studies discovered that ASEAN countries have a younger population as compared to other Asian countries (Jones 2013; Hugo 2007; Mason, Lee & Russo 2006). For instance, Roy, Puhani and Hsieh (2012) who are researchers from Credit Suisse found that the median age for most of ASEAN countries ranged between 21.5 – 28.9, except Thailand (34.2) and Singapore (37.6). Hence, in the context of ASEAN, the size of young population is not as important as the return of migration; given that both origin and destination countries have a large pool of young population.

Next, we included different labour standards' variables separately into the regression to capture the effect of labour standards in influencing the pattern of migration. The estimation results are shown in Model (2) to (5) respectively. Note that the numbers of observations are lesser than the basic model due to the availability of data. We observed that the sign and significance level for all non-labour standards explanatory variables remained after the inclusion of labour standards' variable into the regression models. Thus, these explanatory variables play an important role in explaining the variation of bilateral migration flows, as suggested by the literature. Furthermore, the results also evidenced that these models are not sensitive to the different measures of labour standards.

We first included the number of strikes and lockouts as the indicator of labour standards in Model (2). Interestingly, the coefficient was positively significant, suggesting an increase in the number of strikes and lockouts lead to an increase in the bilateral migration flows. This indicator represents the right of workers to express their grievances, and to certain extent, reflects the strength of unions in collective bargaining. Although workers are allowed to form trade unions, the governments (like the case of Malaysia) tend to discourage strikes activities by imposing strict legislative restrictions that make it virtually impossible for workers to go on a legal strike. The MTUC reported that there were no strikes during 2008, and there were only eight lunchtime pickets took place that year (ITUC 2010). Therefore, we expect stronger unions act as a confidence assurance to workers

TABLE 2. Pooled OLS estimation results

Explanatory Variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
lnw_{it-1}	-0.553*** (0.1)	-0.554*** (0.12)	-0.539*** (0.12)	-0.849*** (0.17)	-0.579*** (0.14)
lnw_{jt-1}	0.902*** (0.09)	0.791*** (0.12)	0.366*** (0.12)	0.688*** (0.17)	0.381*** (0.14)
lnD_{ijt}	-0.858*** (0.12)	-0.802*** (0.15)	-0.939*** (0.16)	-0.266 (0.21)	-0.864*** (0.19)
$Cont_{ijt}$	1.834*** (0.51)	2.212*** (0.64)	1.359** (0.64)	3.755*** (1.04)	1.163 (0.95)
$Lang_{ijt}$	1.695*** (0.23)	1.78*** (0.27)	1.78*** (0.27)	1.733*** (0.31)	1.905*** (0.29)
$lnYoungShare_{it-1}$	0.107 (0.19)	0.168 (0.21)	0.126 (0.20)	0.224 (0.38)	0.247 (0.26)
$lnStr_{jt}$	-	0.127*** (0.05)	-	-	-
$lnInj_{jt}$	-	-	0.425*** (0.05)	-	-
$lnTUD_{jt}$	-	-	-	-0.009* (0.005)	-
$lnHrs_{jt}$	-	-	-	-	-6.51*** (0.99)
Constant	10.644*** (1.38)	10.47*** (1.78)	11.613*** (1.7)	10.773*** (2.52)	39.93*** (4.86)
VIF	1.27	1.32	1.34	1.24	1.32
Adj. R^2	0.2727	0.2806	0.3073	0.2272	0.2894
No. of observations	944	642	615	419	471

Note: lnw_{it-1} & lnw_{it-1}= real GDP per person employed, constant 1990 PPP$
$lnYoungShare_{it-1}$ = share of population ages 15-29 to total working age population (ages 15-64)
$lnStr_{jt}$ = number of strikes and lockouts
$lnInj_{jt}$ = total cases of injuries (fatal + non-fatal) in all sectors
$lnTUD_{jt}$ = trade union density as a percentage of paid employment.
$lnHrs_{jt}$ = weekly average working hours of all economic activities
***, ** and * indicate significance level of 1%, 5% and 10%. Standard errors are shown in parentheses.

that they are protected and assistance are provided should they face any disputes or exploitations.

To test the impact of trade union, this study included the trade union density as the measure of labour standards into Model (4); we obtained a weak significant negative coefficient for the indicator. Higher trade union density rate reduces the bilateral migration flows, an opposite to the expectation and result in Model (2). The trade union density rate has a weak influence on migration flows, possibly due to weakening power of unions (Serrano 2005; Kuruvilla, Das, Kwon & Kwon 2002). Not only the developing countries have limited the activities of unions, participation of migrants in union activities are restricted even in developed countries. Wickramasekara (2008) pointed out that some major destination countries are reluctant to ratify or enforce the provisions of the international migrant worker conventions.

In the meantime, the estimate of total cases of injuries also provides an interesting result to the regression. The coefficient was positively significant, implying that bilateral migration flows increase with respect to higher number of injuries happened in the economy. Perhaps this phenomenon could be explained by the substitution effect from two perspectives. First, the injured workers (who are locals) are replaced with the migrant workers, especially in countries like Malaysia and Singapore that established temporary guest worker program. Second, local workers are not willing to work in jobs that record a high number of injuries as this means the jobs are dangerous. The unwillingness of local workers has given the opportunity to migrants who tend to take on jobs that local workers no longer prefer to do (Orbeta 2013). Firms are forced to employ more migrants to maintain the cost competitiveness of their products; and the temporary recruitment offers more flexibility in the labour market, allowing firms to meet their labour needs more flexibly across business cycles (Pholphirul 2013).

Lastly, when we included weekly average working hours into the estimation model, we obtained a significant negative coefficient for the variable. The bilateral

migration flows were negatively associated with the average working hours, i.e. longer working hours decrease the migration flows. This result implies that migrant workers are concerned about their quality of life too, despite earning more when they work overtime (most of the data for average working hours included paid overtime).

The mixed results are probably affected by the three key aspects of Asian migration proposed by Walmsley and Ahmed (2008); which best described the complexity of intra- and inter- regional migration patterns. In the case of Asian countries, the authors highlighted that it is common for a country to be both an important source and destination of foreign workers with significant flows occurring in both directions. For example, there is a huge number of Malaysians working in Singapore, which represents a significant worker outflow from Malaysia. Meanwhile, Malaysia is also receiving a large pool of Indonesian workers through the temporary worker programme. Thus, it may be difficult to conclude the push and pull factors that determine the migration flows.

Secondly, while there is a strong global preference for skilled migrant workers, the demand for low-skilled/ unskilled workers tends to be slightly higher in the Asian economies than other recipient countries around the world. Although AEC has set a target to promote free flow of skilled workers within the region, most of the migrant workers are still classified as low-skilled workers. These workers are more concerned about the return they could gain from working abroad than the rights they have in the destination countries.

Lastly, migration within Asia is more temporary in nature than migration elsewhere. Therefore, the workers may compromise with lower labour standards and lesser protections during their stay in the destination countries. The weak significant coefficient of trade union density we obtained in the analysis lends a support to this assumption.

To check the robustness of the findings, the empirical analysis proceeded to sensitivity analysis by replacing the labour standards variables in the study with another set of statistics. For sensitivity analysis, the study used four indicators, namely (1) number of workers involved

TABLE 3. Pooled OLS estimation results for sensitivity analysis

Explanatory Variables	Model (1)	Model (2)	Model (3)	Model (4)
lnw_{it-1}	-0.553*** (0.1)	-0.525*** (0.12)	-0.706*** (0.13)	-0.668*** (0.15)
lnw_{jt-1}	0.902*** (0.09)	0.95*** (0.13)	0.525*** (0.13)	1.175*** (0.20)
lnD_{ijt}	-0.858*** (0.12)	-0.783*** (0.16)	-0.542*** (0.16)	-0.623*** (0.19)
$Cont_{ijt}$	1.835*** (0.51)	2.168*** (0.65)	2.258*** (0.75)	3.64*** (0.80)
$Lang_{ijt}$	1.695*** (0.23)	0.832*** (0.28)	1.708*** (0.30)	1.711*** (0.29)
$lnYoungShare_{it-1}$	0.107 (0.19)	0.194 (0.21)	0.129 (0.23)	0.108 (0.25)
$lnWorkStr_{jt}$	-	0.141*** (0.03)	-	-
$lnInjrate_{jt}$	-	-	-0.007 (0.01)	-
$lnTU_{jt}$	-	-	-	0.333*** (0.07)
Constant	10.644*** (1.38)	7.71*** (1.82)	12.836*** (2.02)	4.519 (2.92)
VIF	1.27	1.34	1.24	1.55
Adj. R^2		0.2903	0.2448	0.3175
No. of observations		616	524	439

Note: lnw_{it-1} & lnw_{it-1}= real GDP per person employed, constant 1990 PPP$
$lnYoungShare_{it-1}$ = share of population ages 15-29 to total working age population (ages 15-64)
$lnWorkStr_{jt}$ = number of workers involved in strikes
$lnInjrate_{jt}$ = rate of injuries per 100,000 workers (fatal +non-fatal)
$lnTU_{jt}$ = number of trade unions
$lnHrsMan_{jt}$ = weekly average working hours of manufacturing sector
***, ** and * indicate significance level of 1%, 5% and 10%. Standard errors are shown in parentheses.

in strikes (*lnWorkStr*); (2) rate of injuries per 100,000 workers (fatal + non-fatal) (*lnInjrate*); (3) number of trade unions ($lnTU$); and lastly (4) weekly average working hours of manufacturing sector (*lnHrsMan*). The estimates are shown in Table 3.

As we can see in Table 3, the sign and significance level for the standard migration determinants (average wages, distance, common border and language, and share of young population) do not show drastic change. Thus, it is safe to conclude that the empirical results are not sensitive to the statistics used in the estimation process.

When we added the indicators of labour standards into the estimation models separately, we observed several differences in the results as compared to the previous ones shown in Table 2. The coefficient for $lnWorkStr_{jt}$ was positively significant, indicating an increase in the number of workers who involved in strikes taken place in destination countries (reflecting an improvement in labour standards); thus, leading to an increase in the migration inflow to these countries. The sign and significance level of the strike variable remained unchanged even after we substituted with a different set of data for the variable. This result implies that both number of strikes and number of workers involved are an important indicator to reflect the level of labour standards as the workers are able to exercise their granted rights to show grievances.

The second data used in the study to proxy the labour standard is the rate of injuries (including both fatal and non-fatal cases) per 100,000 workers. Interestingly, the coefficient had changed to negatively insignificant, in contrast to the positively significant coefficient obtained in Table 2. Although worsening of working condition (represented by increased rate of injuries) would lead to a decrease in migration flows, the impact is insignificant.

The third variable used in the sensitivity analysis is number of trade unions in the country. Once again, the sign and significance level for this labour standards indicator vary from the ones presented in Table 2. The estimated coefficient was positive and highly significant; suggesting that number of trade unions existing in the country is a better proxy of labour standards than trade union density rate. The more trade unions established in the destination country, the more migrant workers move will there be into the country. The number of trade unions exist in the country is a better proxy of labour standards than trade union density rate, especially when trade unions are threatened by the forces of globalization.

Serrano (2005) discussed on the expansion of geographical areas where there is little or no union tradition, and likewise is a union avoidance tactic. These areas include the export processing zones, industrial parks and regional industrial centres. In the Philippines, unions organised in Special Economic Zones (SEZs), where production for exports takes place, are facing difficulties as evidenced by reports. This is due to several forms of anti-union discrimination and employer interference. ITUC (2012) reported that the enforcement of labour legislation in SEZs is ineffective, as the SEZs authorities claimed that labour inspection comes under their competences. Hence, in this context, the number of trade unions represents the success of labour movement in raising the awareness of workers' right, and also forcing the government to enforce the labour laws effectively.

We had tried to use average weekly hours worked in the manufacturing sector to proxy the labour standards in the robustness checking analysis. However, unfortunately, we failed to obtain estimated coefficient due to insufficient data for the regression process. Hence, we do not include the estimation results in Table 3.

CONCLUSION

This paper uses a panel data set consisting 45 countries to determine the role of labour standards in explaining the pattern of bilateral migration flows in ASEAN. The study applies pooled OLS estimation technique for the empirical analysis, partly because there are only three time series statistics (year 1990, 2000 and 2010) available in the databases for the migration data (which normally compiled based on census). Besides labour standards, this empirical study also includes other migration determinants, such as the average income of workers in source and destination countries, geographical and cultural factors, and demographic variable.

The empirical analysis suggests that the effects of labour standards on bilateral migration flows in ASEAN countries are mixed, depending on which labour standards indicator is used in the analysis. When the level of labour standards is represented by the number of strikes and average working hours, the results showed that better labour standard increases the bilateral migration flows among countries selected in the study. However, the migration increases when there are more cases of occupational injuries reported, which implies that better working condition does not attract the workers to move. Lower trade union density rate also tends to attract migration inflows, though the effect is less significant.

Based on the findings obtained, this study concludes that the ASEAN governments should review their existing labour policies and make necessary amendments to improve labour standards. For instance, governments should not restrict workers from conducting strikes, pickets or boycotts to express their grievances with the excuse of these activities would impede productions and exports. It should be seen in a broader perspective; whereby allowing workers to exercise their given rights reflects the presence of high labour standards level. This

will attract more migrants, especially those talented skilful workers who have higher awareness and are concerned about human rights.

Meanwhile, employers should not view the trade union as a rival; instead, trade union can act as a bridge that eases the communication between workers and management. An enterprise-level trade union is expected to be able to encourage the cooperation between workers and management; resulting in mutual gains for both parties. It is assumed that cooperation could produce more efficient work practices and improves financial performances; and in return, firms would then share with their workers through better wages and working conditions. This approach has been used in Britain, though it does not bring fruitful result as expected.

In addition, in view that migration in ASEAN is more temporary in nature as described before, the rights and benefits accruing to temporary migrant labour are crucial for their reintegration into their home countries. The governments should be concerned about this issue as it raises the urgency and importance of having regional policies that ensure the migrants' accessibility to formal social protection in both source and destination countries. Before dealing with the accessibility and portability of social protection, the ASEAN governments also need to pay serious attention to the issue of the mass of low-skilled or otherwise undocumented migration that persists in the region, and not to limit the recognition to only those skilled and professional talents.

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APENDIX

TABLE A1. Selected countries

Region	Country
ASEAN (10 countries)	Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam
European Union (17 countries)	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom
Americas (7 countries)	Argentina, Brazil, Canada, Chile, Cuba, Mexico, United States
Asia Pacific (11 countries)	Australia, Bangladesh, China Mainland, Hong Kong SAR, India, Japan, Korea Republic, Nepal, New Zealand, Pakistan, Sri Lanka

TABLE A2. Sources of data

Variable	Proxy	Source
Migration	Bilateral migration stock	1. Migration and Remittances Factbook 2011 (http://go.worldbank.org/JITC7NYTT0)) 2. Global Bilateral Migration Database (http://data.worldbank.org/data-catalog/global-bilateral-migration-database)
Labour standards	1. Average weekly hours worked in all economic activities 2. Number of strikes and lockouts 3. Trade union density rate 4. Total cases of occupational injuries in all economic activities	*Labour Statistics Database*, International Labour Organization(http://www.ilo.org/global/statistics-and-databases/lang--en/index.htm)
Income differences	GDP per person employed (constant 1990 PPP $)	*World Development Indicators,* World Bank (http://data.worldbank.org/topic/labor-and-social-protection)
Young population	1. Total population ages 15-24 2. Total population ages 15-29 3. Share of population ages 15-29 to working age population (total population ages 15-64)	*Health Nutrition and Population Statistics,* World Bank (http://data.worldbank.org/data-catalog/health-nutrition-and-population-statistics)
Geographical and cultural	1. Great circle distance between capital of countries 2. Common border 3. Common language	*Centre d'Etudes Prospectives et d'Informations Internationales* (CEPII) (http://www.cepii.fr/CEPII/en/bdd_modele/bdd.asp)