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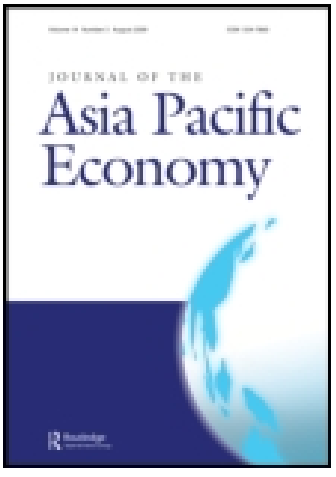

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Globalization of industrialization and its impact on clothing workers in Myanmar

Myo Myo Myint[a], Rajah Rasiah[a] & Kuppusamy Singaravelloo[a]
[a] Faculty of Economics and Administration, University of Malaya, Kuala Lumpur, Malaysia
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Globalization of industrialization and its impact on clothing workers in Myanmar

Myo Myo Myint, Rajah Rasiah* and Kuppusamy Singaravelloo

Faculty of Economics and Administration, University of Malaya, Kuala Lumpur, Malaysia

This article examines the impact of foreign capital inflows and export expansion on employment and wages in the clothing industry in Myanmar. Although economic sanctions since 2003 by the United States affected foreign capital inflows, the evidence shows that clothing exports have steadily recovered since 2005. While wages in the industry are still low, they have improved over the period 2006–2012. Foreign firms showed higher mean wages, export-intensity and technological capabilities than national firms. The statistical results show that foreign equity has a positive impact on export-intensity and technological capabilities. Also, wages and employment were positively linked to export-intensity and technological capabilities. Hence, despite the exploitative nature of capitalist integration, the clothing industry shows that not only has wages and employment grown, the statistical results suggest that they will grow further.

Keywords: globalization; industrialization; clothing workers; Myanmar

JEL Classifications: J31, J61, J81, L67

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1. Introduction

Although Hirschman (1958, 1970) had argued convincingly about the positive role export markets offered poor countries in their efforts to develop by providing the scale essential to stimulate backward linkages, it was not until the stark consequences of static import-substitution policies that had not clearly monitored technological upgrading target until the 1980s in countries, such as China, India, Indonesia and Brazil, that the debate on export-oriented industrialization was clear. On the one hand, Wallerstein (1979), Frobel, Heinrich, and Kreye (1980) and Henderson (1989) had argued that foreign-capital-led, export-oriented industrialization models merely created low-value-added jobs that were both transient and exploited on low wages in such economies. On the other hand, Warr (1987, 1989) and Jomo (1990) argued that export-processing zones simply created temporary jobs that were strongly subsidized through incentives by host governments. While developing economies openly invite foreign industrialists, they do contribute to the growth of local economy in the recipient country and provide opportunities required by them. However, the extent of transfer of technological know-how into local economy is still debated. Interestingly, the private sector contributed over 85% of Myanmar's GDP in 2005 (Than and Thein 2007).

Following the successful economic catch up of South Korea, Taiwan and Singapore, which became high-income economies by the 1980s, the debate shifted to whether these economies are unique cases that cannot be imitated either because of their conditions, or developed through geopolitical considerations, and if so, whether the changed liberalizing

*Corresponding author. Email: rajah@um.edu.my

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economic environment will allow similar policies (World Bank 1993). While we contend that economic development is a difficult process that requires governments to make tough decisions and governance capacity to affect it, governments seeking to achieve it must follow a routine that is highly disciplined with a strong focus on transforming economic activities from low- to high-value-added and target strong investment in public goods that generate national synergies. While this shall be the ultimate objective of the Myanmar government, we address a small objective in this article to see if increased flows of foreign direct investment (FDI) and exports have been accompanied by improvements in wages and working conditions in the clothing industry.

The rest of the article is organized as follows. Section 2 discusses the important theories that are important in locating the analysis. Section 3 presents the methodology and data. Section 4 examines FDI inflows. Section 5 analyses the impact of FDI on the labour process in the clothing industry. The article presents the conclusions in Section 6.

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2. Globalization of Myanmar's clothing industry

The role of FDI in stimulating economic growth through employment creation and exports is now evident (see Rasiah 1995), though some still question its relevance. FDI inflows and exports, and with that learning from inflows of knowledge from abroad, have significantly globalized Myanmar's clothing industry since the late 1990s. While power, and oil and gas have been the prime destination of FDI inflows, though small, the share going to manufacturing has slowly grown from 6.9% in 2011 to 7.9% in 2013 (see Table 1). The number of manufacturing approved projects rose sharply from 64 in 2011 to 293 in 2013. However, the projects going to industrial estates have remained the same

Table 1. Approved foreign direct investment and enterprises, Myanmar, 2011–2013

	2011			2013 (November)		
Sector	No.	US$ million amount	%	No.	US$ million amount	%
Power	5	18,873.7	46.69	7	19,284.4	43.71
Oil and gas	104	13,815.4	34.18	115	14,372.2	32.57
Manufacturing	64	2794.5	6.91	293	3480.03	7.88
Industrial estate	3	193.1	0.48	3	193.1	0.44
Mining	160	1753.9	4.34	68	2833.73	6.42
Livestock and fisheries	25	324.3	0.80	26	347.4	0.79
Other agriculture	7	173.1	0.43	12	191.9	0.44
Transport and communication	16	313.2	0.77	16	313.9	0.71
Hotel and tourism	45	1064.8	2.63	51	1797.9	4.07
Real estate	19	1056.4	2.61	22	1229.1	7.90
Other services	2	37.7	0.09	12	41.9	0.09
Construction	6	23.7	0.06	2	37.8	0.09
Total	456	40,424.07	100.0	627	44,123.6	100.0

Source: Directorate of Investment and Company Registration, Ministry of National Planning and Economic Development.

Table 2. Clothing firms, Myanmar, 2000–2011.

Year	State-owned enterprises	Foreign JV		100% foreign firms	National private firms	Total
		With MTI/ UMEH	With private			
2000	1	–	5	18	248	272
2001	1	7	5	23	194	230
2002	0	6	4	27	180	217
2003	0	6	4	27	165	202
2004	0	4	4	22	112	142
2005	0	2	4	21	115	142
2006	0	2	4	21	126	153
2007	0	2	4	21	139	166
2008	0	2	2	21	145	170
2009	0	2	2	21	140	165
2010	0	2	2	21	145	170
2011	0	2	2	21	155	180

Source: MGMA (2012).

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at 3 with the share of FDI inflows falling slightly from 0.48% to 0.44%, respectively, in 2011 and 2013. The number of investments has declined only in mining and construction sectors although their contributions have increased, especially in mining.

The clothing industry, which is labour-intensive and export-oriented, has experienced a decline in FDI inflows since the Americans imposed trade sanctions on Myanmar in 2003. Prior to the sanctions, half of the exports of garment industry products were to the United States and over 80% of the United States imports from Myanmar were clothes (Kudo 2005). Kudo (2005) further claimed that by 2004, about 25% of the garment factories involving a workforce of about 60,000 had closed. The anticipated lifting of sanctions in 2014 did not materialize so far, and hence, FDI inflows into the clothing sector have not increased significantly over the last few years. Nevertheless, the rising demand from other countries, including Japan, has helped sustain exports from the industry.

Nevertheless, since a decline from the peak of 2003, when there were 27 wholly foreign-owned firms, they have remained at 21 over period 2005–2011. National private firms fell from 248 firms in 2000 to its trough of 112 firms in 2004, before rising again to 155 firms in 2011 (see Table 2). Completely state-owned enterprises ceased to exist from 2002, while joint ventures with government-related agencies and private firms remained at two firms each in 2011. Overall, the number of wholly foreign-owned and joint-venture firms remained stagnant between 2008 and 2011. With the upward turnaround in the number of local private firms beginning 2009, the total number of clothing firms in 2011 registered the highest since 2004. The composition of firms is still dependent on national private firms more than those by FDI.

3. Theoretical considerations

The literature on FDI has long shifted from a focus on investment and employment creation to include spillover effects (including technology). On the one hand, while there is

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now some evidence of spillovers and technological rooting at host sites in developing economies (Rasiah 2004), the maquiladoras of Mexico have painted a negative dent on such accounts (Gibbs 2004). On the other hand, some argue that the global division of labour in the clothing industry has undergone considerable transformation, though uneven, which offered the potentials for technological upgrading (Rasiah and Myint 2013). The focus in this review is on the implications of FDI inflows on labour markets in poor economies.

Frobel, Heinrich, and Kreye (1980) had postulated that a new international division of labour had evolved with the poor countries becoming the new global 'sweatshops' for the rich countries through the spread of tax- and union-free export-processing zones that hire cheap unorganized labour. This argument rested on the view that capital seeking to extend valorization relocated operations from the developed economies to low-cost poor economies. This division of labour was argued to have facilitated production specializations in which the rich countries exported goods produced by high-skilled labour, and knowledge and capital-intensive production techniques, while the poor economies exported goods produced by low-skilled labour.

To Frobel, Heinrich, and Kreye (1980), the new international division of labour was conditioned by its drivers in the rich countries, while the poor countries were merely absorbed into the division of labour. The clothing industry was considered to have experienced such a fate in the l970s−1980s, as the multi-fibre arrangement (MFA) quotas were partly used by the rich countries to promote investments in non-Communist countries and friendly allies, which enjoyed a fairly good basic infrastructure and political stability. As the advantages of low-cost labour evaporated from the newly industrialized countries (NICs) of East Asia (i.e. South Korea, Taiwan, Hong Kong and Singapore) and the second-tier industrializing economies of Malaysia and Thailand, a further differentiation of the division of labour in the clothing industry began to take shape since the 1990s. The expiration of the MFA in 2004 and the introduction of preferential access clause to the least developed countries (LDCs) that met certain conditions (e.g. International Labour Organization [ILO] covenants in Cambodia) opened the way for a relocation of clothing manufacturing to the LDCs, such as Bangladesh, Cambodia, Laos and Myanmar (UNCTAD 2005; Rasiah 2009).

At the same time, the theorizing of the changing global division of labour took on a new dimension since the 1990s as Gereffi (1994, 2003) advanced the concepts of 'producer-driven commodity chains'[1] and buyer driven commodity chains.[2] Gereffi (2003) and Rasiah (2012) also recognized the emergence of 'triangle manufacturing' in which contract firms from South Korea, Hong Kong, Taiwan, China, Singapore and Malaysia organize work in different countries (e.g. Bangladesh, Cambodia, Indonesia, Philippines and Vietnam) to meet retail buyers demand in the developed countries. These contract manufacturers not only took advantage of low-wage costs offered by the LDC sites but also the preferential access quotas these countries enjoyed in major markets. By outsourcing production to multiple suppliers, the contractors also placed the risk of losing orders onto the suppliers (Barrientos 2008).

Indeed, contract firms from the newly industrialized economies (NIEs) and Malaysia have increasingly connected into clothing value chains to organize production, including R & D related to production to deliver buyers' orders from a wide range of locations taking account of relative wage costs, transport costs and access to major markets, including Myanmar. This development has offered poor locations the opportunity to connect and participate in clothing value chains.

However, while further decentralization and relocation of clothing manufacturing into locations little governed by effective labour regulations have offered employment

opportunities to thousands of workers, it has also aggravated further asymmetries between labour and management in the industry. Hence, trade union lobby groups in the developed countries have increasingly flagged the development as targeted at the exploitation of cheap labour, including the hiring of transient female and child labour. Mounting criticisms against such Race to the Bottom practices led to calls for a 'social clause,' which led several trans-national corporations (TNCs) to adopt voluntary 'Codes of Conduct' (CoC) to escape threats of consumer and labour boycotts in their home markets (Barrientos and Smith 2007; Barrientos 2008). However, because significant production has moved to poorly governed locations, it is not uncommon for many of the TNCs and their suppliers to escape such social audits.

Nevertheless, taking the cue from Rasiah, McFarlane, and Kuruvilla (2014), and especially the early works of Beresford (1989) and Beresford and Dang (2000) on Vietnam, we assume that employment is the first step towards appropriating benefits in the capitalist system, and that exploitation rather than super-exploitation is a necessary condition to reward workers for the sale of their labour power (Marx 1957; Luxembourg 2003). Also, as argued by Marx (1967) and Brenner (1977), the fundamental dynamism of industrial capitalism is that valorization is primarily drawn from relative rather than absolute surplus value. While Marx's articulation of these concepts was abstract as it is impossible to measure the organic composition of capital in precise terms, we simply focus here on the impact of foreign equity on wages and employment in the clothing industry in Myanmar. Also, while Myanmar's integration into the capitalist clothing production system would reflect an extension of absolute surplus appropriation by means for low-wage labour, once integrated, in as much as it would be exploitative, the material conditions of workers are likely to improve if capital continues to invest and reinvest once relative surplus value appropriation sets it. And as argued by Hirschman (1970), national governments have a strong role to ensure that the conditions of accumulation quickens a shift from absolute to relative surplus value appropriation in the industry. Hence, in addition to employment, we track changes in wages and working conditions against inflows of FDI into the clothing industry in Myanmar.

However, while critics are right in the sense that working conditions in the LDCs are inferior to those in more developed economies, and often violate the principles contained in the CoC, few studies have actually examined if FDI inflows into particular industries have been accompanied gradually with improvements in these conditions – including wages, skills and autonomy enjoyed by subsidiaries in the global value chain. Exceptions to such studies on Myanmar include Rasiah and Myint (2013). Hence, we examine in this article if inflows of FDI into clothing manufacturing have resulted in improvements to the labour process in the industry in Myanmar.

4. Methodology and data

In the absence of detailed information on FDI inflows by firms in the clothing industry, we use an analytic framework that interpretively analyses the link between FDI inflows and the unfolding labour processes in the clothing industry. Nevertheless, the data available are adequate to make the link between capital inflows and their consequences on the labour process in Myanmar. Indeed, it is the connectivity offered through linking with global value chains – both the subcontract firms from abroad and national firms – that has facilitated employment generation and exports from the industry in Myanmar.

We rely on a meta-physical methodology that uses a survey data collected in 2012. We obtained 72 observations out of the 100 sets of questionnaires distributed through the

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Table 3. Breakdown of sample by ownership and size, clothing firms, Myanmar, 2011

	Employment size			
	<500	≥500	Total	% population
National	22	29	51	32.7
Foreign*	12	9	21	87.5
Total	34	38	72	40.0
% population	23.9	100.0	40.0	

Note: *Foreign equity of 50% or more.
Source: Compiled from Authors' survey (2012).

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Myanmar Garment Manufacturing Association (MGMA). A sampling frame on the basis of ownership and employment size was used. We ensured that all key questions were answered through follow-up interviews.

The sample data collected for this article are shown in Table 3. We sought data of 100 firms on the basis of ownership and data from the MGMA. We finally obtained 72 firm responses that answered all the critical questions used in this article. The responses exceeded the minimum allowable response rate of 67.5%, and hence, the missing values were just excluded.

The sample comprised 32.7% of the national firms and 87.5% of the foreign firms in the population. By employment size, the sample comprised 23.9% of firms with workforce of less than 500, and 100% of firms with employment of 500 and more. The workforce size category was chosen on the basis of advice given by the MGMA officials who distinguished high volume producers with steady export market orders from the other firms.

The key variables used in the multivariate analysis were measured as follows:

Foreign ownership (FO) = foreign equity/total equity.
Wages = total payroll of non-management workers/workers in US dollars.
Employment = total workforce in actual numbers
Export intensity = exports/total output

In addition, we estimated technological capability (TC) by normalizing and training expenditure in payroll (embodied in labour), the deployment of cutting edge processes (automation, time-motion studies and order lead time embodied in processes) and adaptive engineering expenditure in sales (embodied in machinery, production layouts and products). The normalization was undertaken using the usual formula:

$$(X_i - X_{\min}) = (X_{\max} - X_{\min})$$

where X_i refers to the observation examined, $X_{\min}$ the minimum value of the variable and $X_{\max}$ the maximum value of the variable. The three proxies were then added to constitute TC. The purpose of estimating TC was to examine how technical change influenced employment and wage growth.

$$\text{Hence, } \mathrm{TC} = (\mathrm{TE}, \mathrm{PT}, \mathrm{AE})$$

where TE, PT and AE refers to training expenditure in payroll, use of automation, time-motion studies and actual lead time, and expenditure incurred in the adaptation of machinery and product enhancement in sales, respectively.

The following equations were run:

$$X/Y = \alpha + \beta_1 \mathrm{A} + \beta_2 \mathrm{FO} + \beta_3 \mathrm{TC} + \beta_4 \mathrm{W} + \beta_5 \mathrm{E} + \mu \quad (1)$$

$$\mathrm{TC} = \alpha + \beta_1 \mathrm{A} + \beta_2 \mathrm{FO} + \beta_3 \mathrm{W} + \beta_4 \mathrm{E} + \mu \quad (2)$$

where *A*, FO, *W* and *E* refer to age (in years), foreign ownership, wages and employment. Because of collinearity problems between FO, TC, wages and employment, separate regressions were estimated. For foreign equity to demonstrate a positive impact on exports and technological capabilities, the sign for FO must be positive. Also, for export intensity and technological capability to generate positive effect on wages and employment, *W* and *E* shall have positive signs. Age was included as a control variable.

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5. Impact on labour market variables

In this section, we analyse the relative influence of foreign equity on employment and wages, and the relationship between these variables and export intensity and technological capabilities, respectively, using the 72 firm survey. Because the data collected are cross-sectional for the year 2011, we do not generate any causal relationships. Nevertheless, the results are indicative of the influence of foreign equity on wages, employment, export intensity and technological capabilities.

The descriptive statistics of the data collected is presented in Table 3. We chose to drop the answers on skills as there was a wide inconsistency in reporting as in some firms skilled workers carried the requisite qualifications while they did not in other firms. This distinction became all the more difficult to interpret as we found during the interviews several skilled sewers who could neither speak English nor possessed any skill certificates.

5.1. Univariate analysis

The minimum, mean and maximum firm-based wages of non-management staff in 2011 were US$29.2, US$57.1 and US$90.0 monthly, respectively (see Table 4). The minimum, mean and maximum firm-level employment were 125,674 and 2800, respectively. The minimum, mean and maximum firm-based export intensities were 20%, 75.4% and 100%, respectively. Since the TC variable was normalized, it is a relative measure of embodied technology among the 72 clothing firms. Since the firm at the technology frontier will have a maximum possible score of 3 owing to the three proxies (one each) used,

Table 4. Descriptive statistics, clothing firms, Myanmar, 2011

	Monthly wages			Employment			X/Y			TC		
	N	F	O	N	F	O	N	F	O	N	F	O
SD	7.8	9.9	8.5	551	516.2	554.9	26.7	14.7	25.9	0.43	0.44	0.44
Mean	56.5	58.4	57.1	744	515	674	68.7	90.5	75.4	1.62	1.75	1.66
Max	70.0	90.0	90.0	2800	2600	2800	100	100	100	2.78	2.76	2.78
Min	29.2	50.0	29.2	150	125	125	20	50	20	0.77	1.19	0.77

Note: N, F and O refer to national, foreign and overall, respectively.
Source: Computed from Author survey (2012).

the mean of 1.7 denotes being to the simple mean of 1.5. However, the range between the firms is high as the minimum and maximum values were 0.8 and 2.8, respectively.

By ownership, the mean wages, X/Y and TC of foreign firms were higher than the national firms. Foreign firms also paid the highest wage while a national firm paid the lowest wage in 2011. While the minimum X/Y of foreign firms was 50%, it was 20% among national firms. A national firm showed the highest TC, and another showed the lowest TC. National firms enjoyed the highest mean employment and enjoyed being the largest employer. Overall, foreign firms show higher means among the critical variables of wages, X/Y and TC suggesting that exposure to foreign capital in the clothing industry has generated positive benefits for Myanmar.

Also, the mean wages of clothing workers in 2011 were also significantly higher than the mean wages reported for similar workers in Myanmar over the years 2006 and 2010 suggesting that the material conditions of the workers have improved over time (see Rasiah 2009; Rasiah and Myint 2013). In addition, while foreign firms offered higher wages and technological capabilities than national firms, the mean differences were not very high. It appears that national firms have caught up with the practices of foreign firms, which can only be argued to be a consequence of demonstration effect and competing in export markets.

5.2. *Multivariate analysis*

The statistical results from the survey produced interesting results. The results passed the model fit (F-stats and χ^2-stats) tests for interpretation (Table 5).

Not only are the key variables highly significant and show the right signs, the constants are either insignificant or are only significant at the 10% level. The latter suggest the absence of endogeneity problems with the results. First, the foreign capital has not only been strongly correlated with export intensity and technological capabilities, the coefficients are positive and highly significant. Clearly, then foreign capital has been strongly influential in expanding clothing exports from Myanmar. Technological capabilities positively influence clothing exports (see Table 5). Also, the rising foreign capital also raises technological capabilities.

Second, wages are positively correlated with both export intensities and technological capabilities. Hence, not only has one pillar of globalization, i.e. exports, improves wages, rising wages also has a positive impact on technological capabilities. In other words, firms hire higher paid workers to participate in export markets, and to introduce higher technological capabilities.

Third, clothing employment rises with export intensities and technological capabilities. Whilst the first finding confirms Hirschman's (1958, 1970) argument that export markets provide the scale for the expansion of employment, the second finding shows that technological capabilities does not reduce employment in clothing firms in Myanmar.

Overall, while national capital has been the prime employment generator, foreign capital shows higher mean wages, export intensity and technological capabilities generally confirming the mean differences found in the descriptive analysis. National firms enjoy a higher mean in only employment. Also, FO is positively and strongly correlated with X/Y and TC, suggesting that the participation of foreign equity generates positive impact on export orientation and technological capabilities. In addition, both wages and employment are positively correlated with export intensity and technological capabilities.

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Table 5. *X*/*Y*, TC and FO, clothing firms, Myanmar, 2011

	OLS: *X*/*Y*				Tobit: TC		
A	0.103 (1.285)	0.193 (1.904)*	0.125 (1.101)	0.069 (0.739)	0.022 (0.198)	0.059 (0.415)	−0.042 (−0.262)
FO	0.412 (6.975)***				0.453 (5.157)***		
TC		0.185 (2.543)**					
W			0.497 (4.567)***			0.555 (3.012)***	
E				0.223 (6.437)***			0.293 (4.655)***
C	0.328 (1.545)	−0.012 (1.732)*	−0.385 (−1.832)*	−0.812 (−1.867)*	0.304 (1.824)*	−0.710 (−1.046)	−0.283 (−0.700)
N	72	72	72	72	72	72	72
R^2	0.449	0.139	0.301	0.423			
F-stats	26.122*	6.639***	13.711***	23.987***			
χ^2-stats					−27.558***	−34.635***	−27.721***

Note: Figures in parentheses refer to '*t*' and '*z*' statistics; ***, ** and * refer to statistical significance at 1%, 5% and 10%, respectively.
Source: Computed from Authors' survey (2012).

6. Conclusions

Consistent with the orientation of Beresford's (1989) work, this article followed the argument advanced by Marx (1967), Luxembourg (2003) and Brenner (1977) that exploitation is an integral component of capitalist relations and that relative surplus appropriation is the engine of industrial capitalism. While the analysis avoided the abstractions that Marx, Luxembourg and Brenner had used so as to deal with real data, it suggests that the results are consistent with the argument they had advanced, that capitalist integration through the inflow of foreign equity and link with export markets will be destructive initially but shall eventually offer the opportunity for local accumulation. While the cross-sectional data did not allow a direct assessment on the changes to the material conditions of workers, the comparison with evidence from past works shows significant improvement in mean wages.

While national capital has been the prime employment generator, foreign capital shows higher mean wages, export intensity and technological capabilities. National firms enjoy a higher mean in only employment. Also, FO is positively and strongly correlated with X/Y and TC, suggesting that the participation of foreign equity generates positive impact on export orientation and technological capabilities. In addition, both wages and employment are positively correlated with export intensity and technological capabilities. In other words, increased integration into global capitalist markets, however exploitative they may be, has positive outcomes on wages and technological capabilities. Also, increasing technological capabilities also suggest positive improvements in wages.

However, the evidence amassed did not allow for an assessment of other working conditions, role of unions and skills. While the highest incidence of unionization recorded in Myanmar by industry was reported in the clothing industry, we did not have evidence on their effectiveness. Similarly, the significant role of firms' participation in training was reported in our survey suggesting that skills have improved, but we did not have reliable data to draw conclusions on this. Hence, future research should deal with these issues.

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Notes

1. In such chains, TNCs organize global production chains that are shaped by the capital- and technology-intensive nature of their products, such as automobiles (Gereffi 2003).
2. In such chains TNCs and distributors coordinate production through decentralized production chains, such as clothing (Gereffi 2003).

Notes on contributors

Myo Myo Myint obtained her doctoral degree in economics from University of Malaya in 2012. She is currently undertaking research on labour issues in Myanmar.

Rajah Rasiah is Professor of Economics and Technology Management in University of Malaya.

Kuppusamy Singaravelloo is a senior lecturer at the Faculty of Economics and Administration, University of Malaya.

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