



Working Hours in Chinese and Thai Supply-Chain Factories

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Executive Summary

This report statistically analyses characteristics of Chinese and Thai supply-chain factories and workers that require and who work excessive hours. 'Excessive hours' is defined as working in excess of 60 hours per week, or for more than six consecutive days.

Main findings include that women work more hours and more often than men; married female workers, and factories with a higher percentage of female workers are more likely to work, and have workers who are more likely to demand, excess working hours and to work more than six days in a row; Chinese workers work fewer hours, but more days in a row than Thai workers; workers in China were less likely than Thai workers to work an excess of 60 hours per week, but more likely to work more than six days in a row, and; training and awareness reduce total hours demanded and worked.

Policy implications of these findings for factories must include plans for training and communication on the impact of excessive working hours on workers' health and productivity, as well as a decline in the quality of their product during overtime hours. Training for management and workers on how to better manage production schedules, reduce risks that lead to excessive overtime, and on how to integrate workers into the decision-making process is also necessary to improve this situation.

Main Findings

Characteristics of employees working and factories reporting more than 60 hours per week

- Workers living in factory dormitories were more likely to work in excess of 60 hours per week.
- Married females were more likely to work in excess of 60 hours per week.
- Workers who reported feeling not sufficiently skilled or trained to do their job were more likely to work in excess of 60 hours per week.
- Workers in larger factories were more likely to work in excess of 60 hours per week.
- Workers in factories with a higher proportion of migrant workers were more likely to work in excess of 60 hours per week.
- Workers in factories with a higher proportion of female workers were more likely to work in excess of 60 hours per week.
- Workers were more likely to work in excess of 60 hours per week in factories that face higher factory- and worker-related risks.
- Workers who reported awareness of how to refuse overtime were less likely to work in excess of 60 hours per week.
- If both the firm and worker confirmed that the worker had received training on expected hours of work, workers were less likely to work in excess of 60 hours.
- Workers in China were less likely to work in excess of 60 hours than workers in Thailand.

Highlights

Women work more hours and more often Married female workers, and factories with a higher percentage of female workers are more likely to work, and more likely to demand, excess working hours and working more than six days in a row.

Chinese workers work fewer hours, but more days in a row than Thai workers Workers in China were less likely than Thai workers to work an excess of 60 hours per week, but more likely to work more than six days in a row.

Training and awareness reduce total hours demanded and worked

Policy Implications

Awareness must be the key focus when updating working hour practices There are certain characteristics and norms of working excess hours that can and should be addressed through training and improved policy.

Characteristics of employees working more than six days in a row

- Female workers were less likely to work more than six days in a row.

- Workers in factories with a higher proportion of female workers were more likely to report working more than six days in a row.
- Workers in factories with a high proportion of migrant workers were less likely to work more than six days in a row.
- Workers who responded that they were aware of how to refuse overtime were less likely to work more than six days in a row.
- Workers in China were more likely to work in excess of six days in a row than workers in Thailand.

The main policy implications

- Certain worker characteristics are associated with working excessive hours. An example would be workers that live in factory dormitories. To tackle excessive overtime, awareness and education campaigns could target workers with these characteristics.
- Factories with certain characteristics are more likely to employ workers who work excessive hours. These characteristics can include a high level of female workers, a high percentage of migrant workers and large factories, among others. To tackle excessive overtime, awareness and training programs could be aimed at workers in factories with these characteristics.
- Being aware of how to refuse overtime reduces a worker's excessive hours. Campaigns designed to increase awareness amongst workers about the choice to refuse overtime, and how they can refuse do this is likely to lead to a reduction in workers working long hours.

Introduction

Hours worked has been shown to correlate with job satisfaction, work-life balance including family relationships and social interaction as well as mental health, industrial injuries and productivity in the workplace, among other factors. Hours worked is also considered an important aspect when evaluating the quality of a job. The adverse effects of working very long hours on social capital and well-being of workers are well known.

The purpose of this report is to examine the determinants of hours worked in supply chain factories in China and Thailand, using data from the 'hours worked module' that formed a part of the Fair Labor Association (FLA's) 'Soccer Project'. In particular, the report focuses on the determinants of working excessive hours, defined as an excess of 60 hours per week and for more than six consecutive days.

In this report we use a matched employer-employee dataset, or data on employee characteristics and hours worked that can be matched with data on the characteristics and policies of the factories for which they work. This allows us to examine both the worker characteristics and firm characteristics that effect hours worked. The dataset is especially illuminating because in addition to data on firm characteristics, we also have data on firm policies on hours worked.

Context of the Study

The dataset used in this paper was collected as part of the FLA's 'Soccer Project'. In the lead-up to the FIFA World Cup in 2006 in Germany, there was widespread criticism of factory conditions in the supply chain for football products (apparel, foot-

balls and shoes) in countries such as China, Pakistan and Thailand. In Pakistan complaints centered on the use of child labor in producing footballs. In China and Thailand, complaints focused on grievance procedures and hours worked in supply chain factories. The FLA's 'Soccer Project' examines these issues in factories producing a range of products – balls, boots and clothing accessories - for major brand companies affiliated with the FLA (FLA, 2009a). Specifically, as part of the 'Soccer Project', the FLA administered questionnaires to both factory managers and workers in 15 factories in China and Thailand that are footwear and sporting apparel supply-chain factories. This report uses data from the 'Hours of Work' segment to examine determinants of hours worked in export-oriented supply-chain factories in China and Thailand.

The controversy over hours worked in football supply chain factories occurs against the backdrop of more general concern about hours worked in China and Thailand. According to the ILO (2006), in Thailand 46.7 percent of people work in excess of 48 hours per week, which is the third highest in the world. Previous studies have documented the poor working conditions of migrant Thai workers (Pangsapa, 2007) and poor occupational health and safety conditions of Thai factory workers (Pooanathanasarn & Lochachit, 2005). Poapongsakorn (1987) additionally documented long-working hours in export-oriented factories in the garment industry in Thailand. Poapongsakorn (1987) also found that 43 per cent of workers in Thai export factories worked at least 72 hours per week, while the corresponding figure for non-exporting factories was 20 per cent less. Many of the workers in Thai export-oriented factories are female and in the sample for the present study 78 percent of employees in the Thai factories were female. That females work long hours in such

factories has been shown to generate adverse social outcomes, among other negative outcomes. For example, previous research for Thailand has shown that female employment and long working hours have been linked with marital instability.

In China, concern about excess hours has focused on migrant workers, a group who make up 94 per cent of the workforce in the factories sampled in China in the present study. Migrant workers who move from rural to urban environments number 130 million, and are the engine that drives China's high rate of growth. Studies have shown that Chinese workers, particularly migrant workers, work excessive hours. One study of migrant workers' working hours found that nearly twice as many migrants as urban residents worked six days a week, and almost 60 per cent of migrants worked seven days a week (ILO, 2007). Another study of the working hours of rural-urban migrants in Shanghai found that the mean hours worked was 55.5 per week, with 40 per cent working 40 to 60 hours per week; 25 per cent working 70 hours per week and 7 per cent working more than 70 hours per week (Feng et al., 2002). Long working hours have adverse implications for China's migrant workers. Fritjers et al. (2009) found that long working hours have an adverse effect on the mental health of China's rural-urban migrant workers. Verite (2004) found long working hours in supply chain factories were linked to fatigue, depression and sadness. Long-working hours have also been shown to positively correlate with workplace accidents and occupational diseases among rural-urban migrant workers in China (Jackson et al., 2007; Nyland et al., 2005).

Long-working hours leave little time for leisure. Qualitative studies undertaken by Jacka (2005) and Li (2006) reported that rural-urban migrants in China allocate little time to leisure activities. Li (2006) inter-

viewed 26 rural-urban migrants in Tianjin about their leisure activities. Twenty interviewees in Li's sample indicated that they never went out after work because they were exhausted or did not want to spend money on socializing. Nielsen and Smyth (2007) found that when rural-urban migrants did engage in leisure activities, it involved going to a park or a library that attracted no charge.

Data

FLA-accredited service providers collected the data in the 15 factories participating in the Soccer Project between April and May 2008. Data were collected from eight factories in Thailand and seven factories in China. Two FLA-designed questionnaires were administered: the Sustainable Compliance Assessment Tool (SCAT), an on-line questionnaire for factory managers designed to assess factory performance on sustainable compliance issues and the Sustainable Compliance Perceptions (SCOPE), a questionnaire administered to workers by local FLA service providers during working hours. The number of workers selected to participate in the SCOPE survey from each factory was based on the size of each factory using a sample size calculator. The sample size varied from about 80 workers in small factories to 200 workers in large factories. Within each factory workers were randomly selected to complete the SCOPE survey and, depending on the factory's workforce characteristics, stratification was applied whenever necessary. Results from the SCAT and SCOPE surveys can be directly compared, providing matched employer-employee data.

As shown in Table 1, 2083 SCOPE questionnaires were administered to workers of which 652 were administered to workers in

Table 1: Number of Workplace and Employee Observations

Sample	Factories	Workers Surveyed	Mean Workers Surveyed per Factory	Valid Responses	
China	7	652	93	351	53.83%
Thailand	8	1431	179	579	40.46%
Total	15	2083	139	930	44.65%

Chinese factories and 1431 were administered to workers in Thai factories. The average number of workers surveyed per firm across the sample was 139, with the corresponding figures in China and Thailand being 93 and 179 respectively. For the sample as a whole, there are 930 valid responses to all questions employed in the analysis in this paper, representing 44.7 per cent of the total. In China there were 351 valid responses (53.8 per cent of the total) and in Thailand this number was 579 (40.5 per cent of the total).

The questions in the SCOPE survey related to working time focused on working excessive hours. The FLA Workplace Code of Conduct reads, in part: 'Except in extraordinary business circumstances, employees shall (i) not be required to work more than the lesser of (a) 48 hours per week and 12 hours overtime or (b) the limits on regular and overtime hours allowed by the law of the country of manufacture ...and (ii) be entitled to at least one day off in every seven day period' (FLA, 2009a, p. 37). The FLA Code of Conduct, on this point, reflects ILO guidelines on appropriate hours worked (see, e.g. ILO, 2006). The SCOPE survey was designed to identify the propor-

tion of workers working excessively long hours in breach of FLA (and ILO) guidelines. Specifically, the working time questions in the SCOPE survey asked workers: How often did you work more than 60 hours per week in the last three months? How many hours did you work when you worked more than 60 hours per week in the last three months? How often did you work more than six consecutive days in the last three months? What is the highest number of continuous days worked? Workers were required to provide answers to these questions in categories as shown in Table 2.

Table 2 shows that in terms of frequency, 45% of workers sampled had worked more than 60 hours per week in the three months previous to the study. In China, approximately 36 per cent of workers sampled had worked in excess of 60 hours per week in this time period, while in Thailand the corresponding figure was approximately 53 per cent. The finding that a large number of workers work excessive hours is consistent with previous results for China (Feng et al., 2002; ILO, 2007; Meng & Bain, 2007; Meng & Zhang, 2001) and Thailand (ILO, 2006; Poapongsakorn, 1987). At the

Table 2: Hours and Days Worked in Chinese and Thai factories

	Total	China	Thailand		Total	China	Thailand
Worked more than 60 hours/week in last 3 months (%)				Worked more than 6 consecutive days in last 3 months (%)			
Never	52	63.71	46.80	Never	78.48	64.57	84.69
Rarely	18.21	16.96	18.76	Rarely	8.31	14.17	5.69
Sometimes	20.20	13.95	22.98	Sometimes	7.58	9.45	6.74
Often	7.11	3.80	8.57	Often	4.81	10.71	2.18
Always	2.48	1.58	2.88	Always	0.83	1.10	0.70
Hours worked, when working more than 60 hours/week (%)				Greatest number of continuous days worked			
61-63 hours	55.81	64.93	53.2	7 days	74.42	81.17	67.13
64-66 hours	20.93	18.96	21.5	8-12 days	12.90	10.31	15.64
67-69 hours	10.78	5.21	12.38	13-18 days	4.84	3.59	6.16
70-72 hours	10.04	6.64	11.02	19-24 days	3.00	1.35	4.74
>72 hours	2.43	4.27	1.90	>24 days	4.84	3.59	6.16

high end, about 10 per cent of respondents stated that they 'often' or 'always' worked in excess of 60 hours per week. Of those who did work in excess of 60 hours per week in the three months before the study, around three-quarters worked between 61 and 66 hours per week. At the high end, there were more than 10 per cent of those working more than 60 hours per week who worked more than 70 hours per week in both countries.¹

About 15 per cent of respondents in Thailand and one third of respondents in China stated that they had worked more than six consecutive days during the three months before the study. Around 12 per cent of respondents in China stated that they had 'often' or 'always' worked in excess of six days, while in Thailand the corresponding

figure was about three per cent. Of those who stated that they had worked in excess of six consecutive days, about three quarters stated that the highest number of consecutive days worked was seven. There was, however, a significant difference between countries. Of those who stated that they had worked in excess of six consecutive days in the previous three months in China, 81 per cent stated that the highest number of consecutive days worked was seven, while in Thailand the number was 67 per cent. At the same time, more than 10 per cent of respondents who worked more than six consecutive days in Thailand worked at least 13 consecutive days, while in China the corresponding figure was five per cent.

¹ The reported working hours suggest a trend in overtime hours. However, it is worth noting that such figures might be underreported. Workers might have been coached by the factory not to give true answers or sometime there might be reluctance or fear to provide all the information to outsiders even though the questionnaire is anonymous. Based on the FLA's experience and observation over the time, workers are more likely to report overtime when they feel it is alright to do so.

The results presented in Table 2 point to two conclusions. First, compared with Thai factories, in Chinese factories excessive overtime was more likely to occur in the form of longer working periods without a rest day than excessive daily overtime. To some extent, this difference may be explained by different regulations governing work hours between the two countries. Generally speaking, Thai labor law is more liberal than Chinese labor law. While both countries require one rest day per week and set the maximum regular working hours at eight hours per day, the overtime regulations differ significantly. Chinese labor law states that overtime should be no longer than three hours per day and should not be more than 36 hours per month. Thai labor law does not define daily overtime limits and sets the weekly limit for overtime at 36 hours per week, thus allowing for extremely long working days (FLA, 2009b). Second, as mentioned above, each of the factories surveyed have agreed to follow the standards specified in the FLA Code of Conduct. The results suggest that for the sample as a whole, 48 per cent of workers reported working hours that exceeded the 60 hour per week FLA code limit and 25 per cent of workers were working consecutive days in excess of the FLA code requirement that states they must have at least one day off in every seven-day period. This finding is consistent with the conclusion of Verite (2004) who surveyed workers in 40 export-oriented supply-chain factories in China, predominantly in the garment, knitting and footwear industries. Verite (2004, p.8) concluded that 'both legal limits and the guidelines outlined in corporate codes of conduct are routinely violated in Chinese supplier factories'.

Table 3 presents descriptive statistics for the sample in four categories: labor supply characteristics of workers; human capital (i.e. level of education and training) charac-

teristics of workers, characteristics of the firm, and firm policies on hours of work.

Of the workers who provided valid responses, 73.4 per cent were female, 59.8 per cent were married, 8.9 per cent lived in a factory dormitory and the average length of time working in the factory was 42.3 months. In terms of human capital, 26.8 per cent had completed a primary school education or less, 42.8 per cent had completed middle school, 27.7 per cent had completed high school and 2.7 per cent had completed university. The average age of respondents was 30 years old. In response to the question "Do you agree that you do not have the skills/training to do your job?" almost half agreed or 'more or less' agreed. In the factories that participated in the Soccer Project, the average number of employees per factory was 2106 and over 70 per cent of employees were female. About 54 per cent of employees were rural to urban migrants although there was a sizable difference between China and Thailand in this regard. In China 93.7 per cent of employees in the participating factories were rural-urban migrants, while in Thailand this figure was 6.7 per cent. We also included variables for factory-related risks, worker-related risks and client-factory risks that all potentially impact work schedules and hours worked in the factory. Finally, we included a series of variables related to the firm's policies on hours of work. These variables cover whether the firm has a policy on hours of work, worker's awareness on such a policy and whether the worker was aware of the right to refuse overtime and do so without reprisal.

Results

We examined the relationship between firm and worker characteristics and proclivity to

Table 3: Descriptive Statistics

	Total	China	Thailand
Labor supply characteristics of workers			
Female (Yes = 1) (%)	73.38	62.54	77.8
Married (Yes = 1) (%)	59.78	61.28	59.12
Number of children (maximum)	9	4	9
Live in factory dormitory (Yes = 1) (%)	8.83	26.7	0.91
Human capital characteristics of workers			
Highest educational qualification (%)			
Primary school or below	26.83	7.43	35.43
Middle school	42.79	69.51	30.95
High school/Technical school	27.71	21.96	30.25
University	2.67	1.11	3.36
Age (mean in years)	30	27	31
Do you agree that you do not have the skills/ training to do your job? (%)			
Not at all	31.08	53.75	21.11
Not really	22.16	31.90	17.88
More or less	39.50	9.09	52.88
Yes, mostly	3.12	1.75	3.72
Yes, absolutely	4.14	3.51	4.42
Length of time working in the factory (months)	42.33	23.17	50.52

work excessive hours defined in terms of 'how often do you work more than 60 hours per week?' and 'how often do you work more than six days in a row?' using statistical analysis. This entailed examining whether there was a positive or negative relationship between each of the variables in Table 3 and proclivity to work long hours. The full results are reported in Appendix 1. A summary of the main findings for each proxy for long working hours follows.

Results for 'How often do you work more than 60 hours per week?'

Characteristics of workers

We found that **workers living in factory dormitories were more likely to work in excess of 60 hours per week.** The main explanation for this result is that workers living in factory dormitories are 'on hand' and available to work, particularly when there is a need to fill orders. We found that **married females were more likely to work in excess of 60 hours per week.** This differs from Western contexts in which married women typically work lower hours in order to spend more time with their families. Two factors might explain this result. First, for non-migrants, who can be expected to live with their families, extended families are the norm in China and Thai-

Table 3: Descriptive Statistics - Continued

	All	China	Thailand
Characteristics of the firm			
Average number of workers	2106	2726	1565
Proportion of female workers (mean) (%)	71.62	62.8	79.34
Proportion of migrant workers (mean) (%)	53.55	93.74	6.67
Scale for risks related to client-factory relationship (scale: from 1 to 5, where 1 is 'regularly' and 5 is 'never') (mean) ^(a)	3.82	3.53	4.07
Scale for factory-related risks (scale: from 1 to 5, where 1 is 'regularly' and 5 is 'never') (mean) ^(b)	3.52	3.59	3.45
Scale for worker-related risks (scale: from 1 to 5, where 1 is 'regularly' and 5 is 'never') (mean) ^(c)	2.92	3.02	2.83
Annual turnover rate (mean) (%)	6.44	7.22	5.85
Firm policies on hours of work			
Both firm and worker confirmed that there is a policy on hours of work (yes=1) (%)	72.54	51.50	82.04
Worker responded that he/she was aware of how to refuse overtime (yes=1) (%)	81.43	70	86.45
Both firm and worker confirmed that workers can reject overtime without fear of reprisal (yes=1) (%)	56.15	46.18	60.61
Both firm and worker confirmed that new workers received training on expected hours of work (yes=1) (%)	95.73	94.48	96.44

(a) This variable is an index of risks as follows: (i) The purchaser changed the style after placing the order. (ii) The purchaser changed the order on pre-packaged goods at short notice. (iii) The purchaser demanded a price reduction. (iv) The purchaser requested an increase in quantity at short notice.

(b) This variable is an index of risks as follows: (i) Machine breaks down. (ii) Problems with production equipment (eg. needles break). (iii) There is an above average reject level. (iv) Raw materials/components do not arrive on time. (v) The quality of raw materials is not acceptable. (vi) The factory accepts orders that exceed its production capacity. (vii) The factory fails to meet planned production levels. (viii) There is limited ability to adapt capacity to fluctuating orders.

(c) This variable is an index of risks as follows: (i) Workers were absent because of illness. (ii) Workers were absent without giving notice. (iii) Workers demanded more overtime. (iv) There was a shortage of workers during peak periods. (v) There was a shortage of skilled workers. (vi) There were insufficient workers because of a high level of turnover.

land. Hence, married females have support from the extended family at home and can work longer hours. Second, many married

migrant women in China work in the city separate from their husband and children. Their prime objective is to earn as much as

possible to send back to their hometown. These women do not have the need to find time to spend with a partner and, hence, have more flexibility to work longer hours.

Education and job training of workers

There was no statistical relationship between age and education and working more than 60 hours, but **those workers who reported feeling not sufficiently skilled or trained to do their job were more likely to work in excess of 60 hours per week relative to those who felt they had sufficient skills or training.** An explanation for this result is workers who felt they did not have the skills or training to do their job are likely to take more time to complete assigned tasks, resulting in much longer working hours.

Characteristics of the firm

Workers in larger factories were more likely to work in excess of 60 hours. In factories with a higher proportion of migrant workers, workers are also more likely to work in excess of 60 hours per week and factories with a higher proportion of female workers were more likely to work in excess of 60 hours per week. The results for the proportion of females in the factory may reflect the fact that these factories are not 'female-friendly' in terms of policies that promote work-life balance, which would often be the case in workplaces having a large female workplace in developed countries. Females are represented in disproportionate numbers because the skills required to produce sporting apparel and footwear are not as physically demanding, nor do they require the physical strength, that work in construction or heavy industry requires. In large factories that employ a high proportion of migrant and female workers, there is a 'norm' of excessive hours that leads to long hours over and above individual worker characteristics.

Workers were more likely to work in excess of 60 hours per week in factories that face higher factory and worker-related risks. If machines break down, if there are problems with the production line or if the firm receives excessive production orders, workers need to put in longer hours to meet production schedules. Similarly if workers are absent because of illness, or there is otherwise a shortage of workers, workers are more likely to work excessive hours to get orders out in time.

Factory policies on hours of work

Of the variables capturing factory policies on hours of work, workers who reported awareness of how to refuse overtime were less likely to work in excess of 60 hours per week. If both the factory and worker confirmed that the worker had received training on expected hours of work, workers were less likely to work in excess of 60 hours.

Country differences

Workers in China were found less likely to work in excess of 60 hours relative to workers in Thailand. This finding is consistent with the discussion earlier that there are stricter labor laws in China than in Thailand regarding the number of hours that can be worked overtime in a day and in a week.

Results for 'How often do you work more than six days in a row?'

Characteristics of workers

Female workers are less likely to work for more than six days in a row.

Education and job training of workers

There was no relationship between education, experience and job training of workers

and their proclivity to work in excess of six days in a row.

Characteristics of the firm

Workers in factories with a higher proportion of female workers were more likely to report working more than six days in a row. Interestingly, respondents in factories with a high proportion of migrant workers were less likely to work more than six days in a row. The norm in factories with a high proportion of female employees is for workers to work both in excess of 60 hours per week and work more than six consecutive days, while in factories with a high proportion of migrant workers, excessive overtime comes in the form of working 60 hours per week not in working a high number of consecutive days.

Factory policies on hours of work

Workers who responded that they were aware of how to refuse overtime were less likely to work more than six days in a row.

Country differences

Workers in China were more likely to work in excess of six days in a row relative to workers in Thailand. This result confirms the earlier conjecture that excessive work hours in China takes the form of working more than six consecutive days, while in Thailand excessive work hours is more likely to take the form of working in excess of 60 hours per week. This result, as discussed earlier, is consistent with the tighter Chinese labor laws on the maximum number of hours that employees can work overtime in a day. Chinese factories circumvent this law by having their employees work more than six consecutive days more often than Thai factories.

Conclusion

This has been the first study to systematically examine the determinants of hours worked in developing countries. It has done so using a unique dataset on blue collar workers in supply-chain factories in China and Thailand collected as part of the FLA's Soccer Project.

There is evidence that employees in these factories are working excessive overtime that is non-compliant with FLA code standards and ILO guidelines. Second, the form of excessive overtime varies between countries. In Thailand, employees are more likely to work in excess of 60 hours per week, while in China employees are more likely to work in excess of six consecutive days. Third, in addition to worker characteristics, there is evidence that workplace characteristics are important. The composition of the workforce in the factory and the risk factors that the factory confronts in meeting production targets are both important in explaining variation in excessive overtime.

Finally, having a factory policy on hours of work and being able to reject overtime without fear of reprisal are not as important in explaining excessive overtime as the worker simply being aware of how he or she could refuse overtime. There is a strong negative relationship between being aware of how to refuse overtime and both working greater than 60 hours per week and working more than consecutive six days.

References

- Edwards, J.N., Fuller, T.D., Vorakitphokatorn, S. and Serm Sri, S. (1992) 'Female Employment and Marital Instability: Evidence From Thailand', *Journal of Marriage and the Family*, 54(1): 59-68.
- Fair Labor Association (FLA) (2009a) Fair Labor Association 2008 Annual Report, Washington DC: Fair Labor Association.
- Fair Labor Association (FLA) (2009b) 'Widespread Overtime and Why it Doesn't Work', FLA Field Survey Report 08, Washington DC: Fair Labor Association.
- Feng, W., Zuo, X. and Ruan, D. (2002). 'Rural Migrants in Shanghai: Living Under the Shadow of Socialism', *International Migration Review*, 36: 520-545.
- Fritjers, P., Johnston, D.W. and Meng, X. (2009) 'The Mental Health Cost of Long Working Hours: The Case of Rural Chinese Migrants', Unpublished Manuscript, Department of Economics, University of Queensland.
- International Labor Organization (ILO) (2006) *Working Time Around the World: Trends in Working Hours, Laws and Policies in a Global Comparative Perspective*, Geneva: International Labor Organization.
- International Labour Organization (ILO) (2007) *Internal Labor Migration in China: Features and Responses*, Geneva: International Labour Organization.
- Jacka, T. (2005). 'Finding a Place: Negotiations of Modernization and Globalization Among Rural Women in Beijing', *Critical Asian Studies*, 37(1): 51-74.
- Jackson, S., Sleigh, A., Wang, G.J. and Lui, X.L. (2007) 'Labor Migration and Tuberculosis in Rural China: A Case Study of Henan Province'. In I. Nielsen, R. Smyth and M. Vicziany (Eds.) *Globalization and Labor Mobility in China*, Melbourne: Monash University Press.
- Li, B. (2006). 'Floating Population or Urban Citizens? Status, Social Provision and Circumstances of Rural-urban Migrants in China', *Social Policy & Administration*, 40(2): 174-195.
- Meng, X. and Bain, N. (2007) 'How Much Have the Wages of Unskilled Workers in China Increased? Data From Seven Factories in Guangdong'. Unpublished Manuscript, Department of Economics, Research School of Pacific and Asian Studies, Australian
- Meng, X. and Zhang, J. (2001) 'Two-tier Labor Markets in Urban China: Occupational Segregation and Wage Differentials Between Urban Residents and Rural Migrants in Urban China', *Journal of Comparative Economics*, 29, 485-504.
- Nielsen, I. and Smyth, R. (2007) 'The Comparative Basic Living Condi-

tions and Leisure Activities of China's Off-farm Migrants and Urban Locals'. In I. Nielsen, R. Smyth and M. Vicziany (Eds.) *Globalization and Labor Mobility in China*, Melbourne: Monash University Press.

Nyland, C., Smyth, R. and Zhu, C. (2005) 'Globalization and Occupational Health and Safety Regulation in China'. In R. Smyth, O.K. Tam, M. Warner and C. Zhu (Eds.) *China's Business Reforms: Institutional Challenges in a Globalized Economy*, London: Routledge.

Pangsapa, P. (2007) 'Enslavement in Thailand: Southeast Asia as the Microcosm of 21st Century Slavery', *Global Social Policy* 7(1): 10-14.

Poapongsakorn, N. (1987) 'Wages and Working Conditions in Thailand: A Case Study of the Garment Industry', Unpublished Manuscript, Overseas Development Institute, London.

Poosanathanasarn, N. and Lochachit, C. (2005) 'The Health of Workers in A Metal Autoparts Factory in Eastern Thailand', *Southeast Asian Journal of Tropical Medicine*, 36(3): 783-789.

Verite (2004) 'Excessive Overtime in Chinese Supplier Factories: Causes, Impacts and Recommendations for Action' Verite Research Paper, Amherst, Massachusetts.

APPENDIX

Appendix Table 1: OLS Model for 'How often do you work more than 60 hours per week?'

	OLS		OLS
Labor supply characteristics of workers		Characteristics of the firm	
Female	-.1009 (-1.17)	Number of workers	.00007* (5.51)
Married	-.1849 (-1.74)	Proportion of female workers	.0153* (4.83)
Number of children	.0779 (0.79)	Proportion of migrant workers	0.0184* (4.81)
Married X Female	.3721** (2.89)	Scale for risks related to client-factory relationship	.2469 (.85)
Female X Number of children	-.1739 (-1.58)	Scale for factory-related risks	-.1512** (-3.13)
Live in factory dormitory	.1861** (2.31)	Scale for worker-related risks	-.2761** (-2.67)
Human capital characteristics of workers		Annual turnover rate	.0062* (3.32)
Highest educational qualification		Firm policies on hours on work	
Primary school and below	.0430 (0.35)	Worker responded that he/she was aware of factory-related how to refuse overtime	-.2524** (-2.57)
Middle school	.0749 (0.90)	Both firm and worker confirmed that there is a policy on hours of work	-.0397 (-0.26)
High school/technical school	-.0441 (-0.56)	Both firm and worker confirmed that workers can reject overtime without fear of reprisal	-.0516 (-0.82)
Age	-.0200 (-0.48)	Both firm and worker confirmed that new workers received training on expected hours of work	-.4669** (-2.25)
	OLS		OLS
Age-squared	.0003 (0.38)	Country dummy for China	-1.3200** (-2.73)
Do you agree that you do not have the skills/training to do your job?		Constant	1.0205 (0.95)
Not really	.0966 (1.39)	Number of observations	930
More or less	.1222*** (1.99)		R-squared=0.2358

		The Wald Test/F-test	
	Yes, mostly	.4137 (1.80)	
	Yes, absolutely	.2886*** (2.18)	Labor supply characteristics F(7,9)=3.69**
Length working in the factory		-.0003 (-0.54)	Human capital characteristics F(9,9)=2.26
			Characteristics of the firm F(7,9)=159.25*
			Firm policies F(4,9)=3.66**

Note: *(**)(***): statistically significant at .01(.05)(.10) level; in the ordered probit model, figures in parentheses are Z-values and in the OLS model, figures in parentheses are t-values. Standard errors are clustered at the firm level. The reference category for education is 'workers with university education'. The reference category for Do you agree that you do not have the skills/training to do your job? is 'not at all'.

Appendix Table 2: OLS for 'how often do you work more than six days in a row?'

	OLS		OLS
Labor supply characteristics of workers		Characteristics of the firm	
Female	-.2130** (-2.60)	Number of workers	-.00001 (-1.18)
Married	.0841 (0.69)	Proportion of female workers	.0113* (3.25)
Number of children	-.0224 (-0.35)	Proportion of migrant workers	-.0075** (-3.16)
Married X Female	.0785 (0.52)	Scale for risks related to client-factory relationship	.7993* (3.45)
Female X Number of children	.0103 (0.21)	Scale for factory-related risks	-.0349 (-0.52)
Live in factory dormitory	.1792 (1.31)	Scale for worker-related risks	-.2949** (-2.91)
Human capital characteristics of workers	.0007 (0.80)	Annual turnover rate	-.0027 (-1.44)
Highest educational qualification		Firm policies on hours of work	
Primary school and below	-.4023 (-.96)	Worker responded that he/she was aware of how to refuse overtime	-.2554*** (-2.10)
Middle school	-.4570 (-1.02)	Both firm and worker confirmed that there is a policy on hours of work	-.1625 (-1.61)
High school/technical school	-.4799 (-1.11)	Both firm and worker confirmed that workers can reject overtime without fear of reprisal	-.0016 (-0.04)
Age	-.0422 (-1.78)	Both firm and worker confirmed that new workers received training on expected hours of work	.0669 (0.35)
	OLS		OLS
Age-squared	.0007 (1.63)	Country dummy for China	1.8846* (5.42)
Do you agree that you do not have the skills/training to do your job?		Constant	-.3728 (-0.33)
Not really	.0479 (0.91)	Number of observations	931
More or less	-.0003 (-0.01)		R-squared=0.1604

	Yes, mostly	.2309 (0.87)	The Wald Test/F-test	
	Yes, absolutely	-.0219 (-0.15)	Labor supply characteristics	F(7,9)=2.65**
Length working in the factory		.0007 (0.80)	Human capital characteristics	F(9,9)=2.29
			Characteristics of the firm	F(7,9)=10.9*
			Firm policies	F(4,9)=1.88**

Notes: See notes to Appendix Table 1