10 Making It in the City: Recent and Long-term Migrants in the Urban Labour Market in Indonesia

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1 INTRODUCTION

The crucial role of the urban labour market in providing jobs for rural people is well documented in the case of Indonesia, from the time economic growth began to accelerate almost half a century ago.¹ Research on rural-to-urban migration over the past several decades has focused in particular on the engagement of circular migrants in the informal sector in petty trade, transport and construction, as well as the movement of unskilled rural workers into the country's expanding export-oriented industries. However, there have been few studies examining how these cohorts of migrants have fared over time in the urban labour market, or comparing their jobs and wages with those of non-migrants. The present study seeks to fill this gap.

This chapter examines the earnings and other employment characteristics of migrants and non-migrants working in the formal, small business and informal sectors in four Indonesian cities. One research question relates to the extent to which rural-urban migrants have been disadvantaged in the job market compared with more established urban residents. Another concerns the experience of recent and longer-term migrants in the cities, drawing attention to the potential for greater occupational mobility among the longer-term migrants. We examine the performance of migrants and non-migrants during two very different periods of economic performance: before the economic crisis in 1998 when the Indonesian economy was growing quite rapidly, and during the decade since 1998 when formal-sector job expansion faltered.

In the context of the comparison between China and Indonesia, three points should be noted. First, there have been few formal constraints on migration from the villages to the cities in Indonesia, despite periodic but short-lived attempts by city authorities to limit the movement of people from rural to urban areas. Although migrants are required to hold identity cards based on their

place of residence, this has not been a major obstacle to permanent rural-urban migration, unlike in China, where the household registration (*hukou*) system has been used to discourage migrants from moving permanently to the cities. Second, migration to the cities has occurred over a much longer time period in Indonesia. It accelerated from the late 1960s, when the economy began to grow strongly on a sustained basis for the first time since Indonesia achieved independence in 1945. And third, Indonesia's rural-urban migrants are heavily engaged in the informal sector, especially petty trade and the sale of processed food, in contrast to the much greater involvement of migrants in wage employment in China (Meng and Zhang 2001).

To foreshadow some of the main results, we observe differences in labour market outcomes between both recent and long-term migrants relative to non-migrants. But the patterns are quite different for the two migrant groups. Whereas longer-term migrants actually receive higher wages than non-migrants, the opposite is true for recent migrants. Recent migrants fare worse than non-migrants in terms of earnings, even though they are more likely to be concentrated in wage jobs rather than self-employment. In this chapter, we examine variables associated with these different wage outcomes for each of the three migration-status groups and speculate on the reasons for the contrasting results for recent and long-term migrants.

The next section of the chapter examines some of the literature on the role migrants have played in the urban labour market in Indonesia and other developing countries. In the third we discuss methodology, the sample and the definition of key variables. The fourth compares the occupations held by migrants and non-migrants through the application of a multinomial logit model. We then examine earnings differentials and their determinants for the three groups, paying some attention to gender differentials.

2 MIGRATION AND THE URBAN LABOUR MARKET

The shift of labour out of agriculture is frequently associated with a spatial shift to a more urbanized economic environment, where economies of scale and scope offer a much greater range of job opportunities (World Bank 2009). Where such a shift occurs, one important question relates to how migrants fare in the urban labour market relative to non-migrants, and the extent to which these patterns change over time as migrants are assimilated into the urban labour force (Lucas 1997).

In the case of Indonesia, both the shift of labour out of agriculture and rural-urban migration have been features of the labour market since the late 1960s when economic growth began to accelerate.² The share of total agricul-

tural employment fell from close to 60 per cent in the early 1970s to 40 per cent on the eve of the economic crisis 25 years later, and has remained relatively constant since then (Manning 1998).³ Urban employment grew at rates of around 5–6 per cent per annum over the same period. This was roughly two to three times the rates of growth in rural employment, which were negative towards the end of the period in some of the better-integrated labour markets in parts of Java and Bali.⁴

Studies of migration in Indonesia have noted that migrants were most likely to enter the informal sector, except for a brief period in the late 1980s and early 1990s when export-oriented manufacturing played a dominant role in job creation (Hugo 2000). Over the past three decades, the informal sector share of total employment has remained relatively constant, except during the decade that preceded the economic crisis.⁵ Estimates suggest that it continued to expand after 1998, to account for 36 per cent of all urban jobs in 2007 (Manning 2008).

In this chapter, we distinguish between migrants who entered the urban labour market before the height of the economic crisis in 1998 and those who entered it afterwards. It makes good sense to distinguish between these two periods because of their differing rates of economic growth, separated by a severe economic downturn and regime change. During the former, 'Soeharto' period, Indonesia experienced sustained growth of approximately 7–8 per cent over 30 years, with very few periods of significant economic downturn.⁶ In the latter period, economic growth rates almost halved to an average of 4–5 per cent per annum (after a sharp decline in living standards in 1998), although they accelerated to close to 6 per cent between 2006 and 2008 (McLeod 2008). Whereas formal sector jobs grew quite quickly under Soeharto, demand for labour in this sector grew less rapidly subsequently, as economic growth rates slowed in the post-Soeharto period (Manning 2008). We might expect these trends to be reflected in the structure of jobs taken up by more recent migrants to the cities.

Outcomes in the urban labour market depend partly on the occupational mobility of migrants after they settle in the cities and partly on the extent to which governments allow migrants to settle permanently. We look briefly at each before turning to an assessment of labour market effects in the four surveyed cities.

Occupational Mobility

Both the segment of the labour market a migrant initially enters and the degree of occupational mobility in the labour market play a major role in determining the income of migrants relative to non-migrants. Initial entry into wage employment in the formal sector, especially export-oriented labour-intensive

industries, is common in countries where wage employment is growing rapidly, as in China in recent decades. In many other, less rapidly growing, economies, migrants tend to start out in informal sector jobs rather than in wage employment. This is particularly true if several conditions hold: there is an excess supply of labour at going wage rates in the agricultural sector; formal sector employment is relatively small and its growth is slow; and wages in the formal sector are held above market-clearing levels by institutional factors (Mazumdar 1994). Under such conditions, migrants typically crowd into informal sector jobs in trade and services in the towns and cities.

At the same time, it is a mistake to assume that migrants are occupationally immobile, even within the informal sector, or that they remain in the same low-wage jobs that they first take up in the cities (Katz and Stark 1986). Over time, opportunities for mobility into higher-income jobs arise as migrants accumulate skills and experience. The extent to which migrants avail themselves of these opportunities is therefore important.

The more general literature on occupational mobility suggests that migrants do not always view the informal sector as a stepping stone for movement into the formal sector, as assumed by some of the early models of rural–urban migration.⁷ In his seminal work on transition between the formal and informal sectors in Mexico, for example, Maloney (1998) distinguishes several distinct yet overlapping segments of the informal sector (including self-employed workers, informal salaried workers and contract workers) on the basis of differences in earnings, as well as labour mobility in relation to the formal sector. Labour tends to flow both in and out of the informal sector, making for a much greater 'churning' of labour markets than many had imagined, as has been identified in Latin America more generally (IADB 2004).

Government Restrictions

While there is widespread agreement that migrants benefit economically from having access to the urban labour market, the extent of the gain depends partly on government policies with regard to migration. One can imagine two extreme situations, with most policy regimes lying between the two. On the one hand, migration may be tightly controlled in an authoritarian context, through permits that control either the mobility or the place of residence of rural households. On the other hand, the movement of migrants may be quite seamless. In such an environment, migrants compete with one another and urban residents for jobs, largely unencumbered by government regulation.

The institutional environment in Indonesia is closer to the latter scenario, despite some (largely unsuccessful) efforts to slow urban growth by limiting the intake of rural–urban migrants.⁸ Rural–urban migrants are required to report to the local authorities, where their current address is registered on

a new identity and family card. In addition, from time to time city authorities have attempted to curtail migration from rural areas by banning informal sector activities from some parts of the larger cities. While sometimes costly and time consuming, these restrictions do not appear to have posed significant obstacles for migrants. Bribery has tended to undermine the controls that city authorities have sought to impose through registration systems. Unlike in China, urban slums have proliferated in many Indonesian cities.

The effectiveness of government restrictions has also changed over time. Since the fall of Soeharto's authoritarian regime in 1998, the police and military have proved less able to prevent rural people from crowding into the urban informal sector. Thus, compared with China, one might expect rural-urban migrants to blend in more easily with urban residents, and to share similar jobs and incomes, after taking differences in human capital into account.

3 APPROACH AND METHODOLOGY

The analysis is conducted in two stages. First, we examine the extent to which job allocation across the formal, small business and informal sectors is related to migration status, after controlling for a range of other personal, employment and regional characteristics of the working population. A multinomial logit model of job placement is adopted for this analysis. The second, and main, part of the analysis focuses on the determinants of earnings among the three migration-status groups, overall and by gender.

The sample covers all employed persons earning an income from work, and aged 15 and above, in the four cities studied: Tangerang near Jakarta in Banten (West Java), Medan in Sumatra, Samarinda in Kalimantan and Makassar in South Sulawesi.⁹ The focus is on 'earnings' workers, that is, permanent and casual wage employees, employers and self-employed persons. Family workers are not included in the analysis.

The three groups of interest are recent migrants, long-term migrants and non-migrants. To meet the definition of a rural-urban migrant, both recent and long-term migrants must have spent at least five years continuously in a rural area before turning 12 (see Chapter 11 for details). Note, however, that our definition of recent migrants is slightly different to that used in the other chapters on Indonesia in this book. We define recent migrants as all employed persons who moved to their current place of residence in one of the four cities studied in 1998 or later—rather than in the five years preceding the survey, as in Chapters 8 and 9 of this book. We adopt this approach on the grounds that a recent migrant's current sector of employment is likely to have been heavily influenced by the economic crisis of 1998, when labour market conditions changed significantly.

Long-term migrants are all employed persons who moved from a rural area to one of the four cities before 1998. Non-migrants are all employed persons who were not raised in a rural environment and currently reside in one of the four cities covered by the survey. Note that, under this definition, the 'non-migrant' group includes not only workers who were born and raised in one of the four cities but a group of urban-urban migrants who moved to one of the cities from another urban area.

Of particular interest in the analysis is the allocation of jobs between the formal, small business and informal sectors, and the extent to which participation in any one of these sectors affects the earnings differential between migrants and non-migrants. The three sectors of employment are defined in the following way. The formal sector grouping seeks to describe places of employment that provide relatively regular employment and earnings, such as large businesses and the public sector. Individuals included in the small business group deploy relatively small yet not insignificant amounts of capital and/or employ a small number of non-family employees (defined as 5–19 workers).¹⁰ The third group, the informal sector, covers self-employed persons who invest smaller amounts of capital, wage employees in micro enterprises and workers engaged by larger firms on a casual basis; this group in particular is likely to suffer considerable uncertainty in their wages and employment. Appendix A10.1 and Figure A10.1 describe the classification of the three sectors in greater detail.

Total earnings are defined as the net earnings of wage workers, employers and the self-employed from their main job in the month preceding the survey, including fringe benefits (food, transport and housing allowances, and the value of in-kind payments) and other emoluments accruing to wage and non-wage employees. The in-kind payments made to employees vary depending on the nature of their employment contract with the firm: whether they are permanent, contract or casual employees, and whether they are paid on a monthly or daily basis. Even in the formal sector, a high proportion of total earnings are in the form of cash payments; only 20 per cent or so of all wage employees receive some in-kind payments, and for these employees the payments amount to a quite small share of total monthly earnings. Thus, unlike in China, where allowances and other forms of in-kind income account for a significant portion of the difference in earnings between migrant and non-migrant workers (see Chapter 3 of this book), in Indonesia this is not the case.

What are the main hypotheses? We examine three with the help of a multinomial logit model and regression analysis.

First, we expect recent migrants to be more heavily concentrated in less stable, easy-to-enter activities in the informal sector, in contrast to non-migrants, who are more likely to be engaged in the formal and small business sectors. Earlier studies of migration have pointed to such a pattern in Indonesia. The

Figure 10.1 Indonesia: Share of Recent Migrants, Long-term Migrants and Non-migrants in the Formal, Small Business and Informal Sectors

Source: Rural–Urban Migration in Indonesia survey, 2008.

fact that the formal sector grew much less quickly after the 1998 crisis, and hence migrants had fewer opportunities to gain work there, would increase the likelihood of recent migrant engagement in the informal sector. Longer-term migrants might be expected to lie somewhere between non-migrants and recent migrants in terms of participation in the formal sector.

Second, we anticipate that the earnings of recent migrants would be lower than those of the other two groups, with earnings highest among non-migrants. Long-term migrants, with their intermediate levels of city connections and accumulated human capital, could be expected to fall between the other two groups in terms of earnings.

And third, the sector of employment in which a worker is engaged (formal, small business or informal) is predicted to play an important role in explaining earnings differentials, in addition to the standard demographic and human capital characteristics (age, gender, experience and schooling), other demand-side variables (industry of employment and occupation) and location.

Figures 10.1 and 10.2 provide an overview of the distribution of the three migration-status groups across sectors, and of their hourly earnings. Contrary to expectation, we find that recent migrants are concentrated in formal rather than informal sector jobs, whereas long-term migrants and non-migrants tend

Figure 10.2 Indonesia: Index of Hourly Earnings of Recent Migrants, Long-term Migrants and Non-migrants by Sector of Employment

Source: Rural–Urban Migration in Indonesia survey, 2008.

to work in the informal sector (Figure 10.1). Thus, at first glance, there is little evidence of a process of progression from informal sector to formal sector jobs as migrants became more familiar with an urban environment. Second, a higher proportion of longer-term migrants are employed in small business: 13 per cent, compared with just 5 per cent for non-migrants and recent migrants. Thus, migrants who moved to the city before 1998 are more likely to be engaged in small business than the other two groups, although we have not distinguished between those who started out in such activities (owing to greater opportunity or to the specific characteristics of this early cohort of migrants) and those who moved subsequently into business after migrating to the city.

There is relatively little difference in the mean monthly and hourly earnings of migrants and non-migrants (Table 10.1). However, there is some indication that our second hypothesis may be on the right track. From Figure 10.2, it is very clear that recent migrants in each sector of employment earn considerably less per hour than long-term migrants and non-migrants. Thus, while the average hourly earnings of recent migrants range from Rp 5,400 to Rp 8,100 (about US\$0.60–0.70), those of long-term migrants range from Rp 8,600 to Rp 15,000 (US\$1.10–1.30). While the magnitude of the difference appears large within each sector, the higher earnings of long-term migrants than recent migrants was

Table 10.1 Indonesia: Index of Mean Monthly Earnings, Hours Worked and Earnings per Hour by Migration Status and Sector of Employment

	All Migrants	Non-migrants	Total Sample
Mean monthly earnings			
Formal sector	1.1	1.0	1.1
Small business	1.3	1.6	1.4
Informal sector	0.8	0.9	0.8
Total (index)	1.0	1.0	1.0
Total (Rp thousand)	1,566	1,526	1,545
Mean hours worked			
Formal sector	0.96	0.99	0.98
Small business	1.16	1.25	1.20
Informal sector	1.00	0.97	0.98
Total (index)	1.00	1.00	1.00
Total (hours)	52.2	49.6	50.8
Mean hourly earnings			
Formal sector	1.1	1.0	1.0
Small business	1.5	1.3	1.4
Informal sector	0.8	1.0	0.9
Total (index)	1.0	1.0	1.0
Total (Rp)	9,020	8,818	8,913

Source: Rural–Urban Migration in Indonesia survey, 2008.

expected. The consistently higher earnings of long-term migrants than non-migrants regardless of sector of employment was not anticipated, however, and deserves special attention when interpreting the multivariate analysis.¹¹

The differences in hourly earnings do not appear to be explained by more intensive work on the part of recent migrants. All three groups work relatively uniform hours, at just over 50 hours a week, although recent migrants work slightly more hours than the other two groups (Table 10.2).¹²

To put these figures in perspective, the average monthly earnings of long-term migrants are more than 50 per cent higher than the 2008 minimum wage, which varies from around Rp 800,000 to Rp 1.2 million per month depending on the region. In contrast, the monthly earnings of recent migrants working in the informal and formal sectors are barely above the minimum wage, and only

Table 10.2 Indonesia: Descriptive Statistics for the Main Variables

	Recent Migrants			Long-term Migrants			Non-migrants		
	No. of Observations	Mean	Standard Deviation	No. of Observations	Mean	Standard Deviation	No. of Observations	Mean	Standard Deviation
Monthly earnings (Rp thousand)	587	1,273	1,084	853	1,804	2,368	1,554	1,578	4,259
Working hours (per week)	587	52.89	17.73	853	52.39	22.02	1,554	50.33	20.16
Hourly earnings (Rp)	587	6,353	5,922	853	10,904	21,705	1,554	9,042	24,065
Log of hourly earnings	587	8.51	0.72	853	8.73	1.03	1,554	8.56	0.96
Age	587	27.13	7.56	853	42.99	10.47	1,554	35.50	11.75
Age ²	587	793	532	853	1,957	963	1,554	1,399	934
Work experience (years)	587	2.36	2.84	853	12.22	9.97	1,554	7.55	8.77
Years of schooling	587	10.22	3.00	853	10.14	3.99	1,554	10.63	3.69
Household head ^a	587	0.74	0.44	853	0.75	0.43	1,554	0.44	0.50
Marital status ^a	587	0.47	0.50	853	0.04	0.20	1,554	0.30	0.46
Gender ^a	587	0.66	0.47	853	0.72	0.45	1,554	0.65	0.48
In good health ^a	587	0.97	0.17	853	0.94	0.24	1,554	0.96	0.19

^a Categories: household head: 1 = head, 0 = other; marital status: 1 = single, 0 = married, widowed or divorced; gender: 1 = male, 0 = female; in good health: 1 = in very good/good health, 0 = in poor health (subjective appraisal).

Source: Rural–Urban Migration in Indonesia survey, 2008.

30 per cent higher among small business operators. The average monthly earnings of non-migrants fall between these two extremes.

It should be noted that the disadvantage in the labour market experienced by recent migrants is not necessarily inconsistent with the findings in Chapters 8 and 9 of this book that recent migrants have higher levels of expenditure and lower levels of poverty than non-migrants, and a comparable health status. Both long-term migrants and non-migrants have a higher average age than recent migrants—43 and 36 years respectively, compared with just 27 for recent migrants (see Table 10.2)—and are more likely to be married with children. Given that they are supporting more dependants, it is not surprising to find that their per capita incomes are lower than those of recent migrants, many of whom are young and single.¹³

4 MIGRATION STATUS AND THE ALLOCATION OF JOBS

A major theme in the literature is the contrasting ways in which migrant and non-migrant workers adapt to urban labour market conditions and opportunities. In this section, we examine some of the similarities and differences between the two groups of workers in terms of job allocation.

What factors help determine the allocation of jobs between migrant and non-migrant workers? We constructed a multinomial logit model to examine the factors that influence job placement among recent migrants, long-term migrants and non-migrants. The dependent variable for this equation is the individual's current job. The three job classifications are the formal sector, the small business sector and the informal sector, with the informal sector used as the base category.¹⁴ The explanatory variables tested in relation to job attainment are migration status, individual and human capital characteristics, occupation, industry and location (in one of the four cities included in the study). The reference groups are non-migrants for the migration status variable, technical jobs for the occupation variable, trade for the industry variable and the city of Tangerang for the location variable. The estimated coefficients are interpreted relative to these reference groups.

The results are shown in Table 10.3.¹⁵ They indicate that migration status does not appear to be a major influence on job placement in the formal sector or the small business sector, relative to employment in the informal sector. Neither of the migration dummies (recent or long-term migrant relative to the omitted category, non-migrant) are significant in explaining the apparent greater participation of migrants than non-migrants in the formal sector. Thus, the greater engagement of recent migrants than non-migrants in the formal sector (shown in Figure 10.1), and the greater likelihood that non-migrants will

Table 10.3 Indonesia: Multinomial Logit Results for Employment Attainment among Migrants and Non-migrants^a

	Formal Sector			Small Business Sector		
	Coef-ficient	P > z	Marginal Effects ^b	Coef-ficient	P > z	Marginal Effects ^b
Migration dummies						
Long-term migrant	0.163	0.151	0.031	0.276	0.073	0.014
Recent migrant	-0.006	0.968	-0.006	0.147	0.543	0.010
Individual characteristics						
Age	-0.002	0.957	-0.003	0.087	0.034	0.006
Age ²	-0.000	0.245	-0.000	-0.001	0.074	-0.000
Years of schooling	0.191	0.000	0.044	0.077	0.000	-0.000
Household head	0.126	0.346	0.048	-0.608	0.007	-0.046
Marital status	0.338	0.016	0.103	-0.847	0.003	-0.054
Male	0.059	0.639	0.001	0.478	0.030	0.028
In good health	0.093	0.701	0.013	0.376	0.271	0.019
Work experience (years)	0.012	0.088	0.003	0.001	0.897	-0.000
Dummies for occupation						
Professional/manager	-0.317	0.162	-0.063	-0.496	0.114	-0.021
Clerk	0.092	0.801	0.043	-1.134	0.149	-0.048
Unskilled	0.026	0.903	0.028	-0.782	0.005	-0.051
Other occupation	-0.554	0.008	-0.114	-0.634	0.013	-0.025
Dummies for industry						
Manufacturing	1.620	0.000	0.401	-0.785	0.003	-0.077
Services	-0.089	0.524	0.009	-1.338	0.000	-0.068
Transport	0.402	0.024	0.101	-0.068	0.773	-0.015
Construction	-0.307	0.149	-0.046	-1.720	0.000	-0.061
Other industry	0.443	0.040	0.122	-0.509	0.096	-0.036
Dummies for location						
Medan	-0.689	0.000	-0.158	-0.061	0.737	0.014
Samarinda	-0.324	0.013	-0.075	-0.055	0.789	0.005
Makassar	-0.477	0.001	-0.098	-0.519	0.023	-0.020
Constant	-1.901	0.005		-3.547	0.001	
No. of observations	2,994.00					
LR chi ² (44)	1,052.49					
Pseudo R ²	0.19					
Log likelihood	-2,271.49					

a All variables significant at the 5 per cent level or higher are shown in bold. The base category is informal sector employment. Omitted categories: dummy for migration = non-migrant; dummy for marital status = married, widowed or divorced; dummy for gender = female; dummy for in good health = in poor health; dummy for occupation = technical; dummy for industries = trade; dummy for location = Tangerang.

b Marginal effects are evaluated at the variable mean.

Source: Rural–Urban Migration in Indonesia survey, 2008.

be placed in the informal sector, are not statistically significant, after taking the influence of personal characteristics, labour demand variables and location into account. The dummy for long-term migrants is, however, found to be significant and positive (at the 5 per cent level or higher) in helping to explain this group's greater participation in small business relative to non-migrants, after controlling for other variables. The greater likelihood of long-term migrants being engaged in small business is consistent with the bivariate relationship, which shows that this group is more than twice as likely to be engaged in small business as the other two groups.

These findings are of interest, since they do not support the surprising bivariate finding that recent migrants are more likely to work in the formal than in the informal sector. If anything, after controlling for other variables, recent migrants are *less* likely to work in the formal sector (the coefficient is negative, although very small), which is in line with our hypothesis. Second, the greater engagement of long-term migrants in small business makes sense, given that these people have spent at least 10 years in an urban area and at least 10 years in the workforce. It is understandable that these more experienced individuals would show a greater propensity to work in small business, and to make the transition from formal or informal sector jobs into small business, as they gain experience in the workforce.

What other variables influence job placement in the formal and small business sectors compared with placement in the informal sector? A range of variables related to personal characteristics, experience, occupation and industry are significant for placement in small business relative to the informal sector as the base category. Thus, almost all of the personal characteristics are significant, except good health. Workers engaged in small business are also more likely to work in technical occupations and the trade sector. The small coefficient for work experience is not so surprising in the case of small business. We know that one characteristic of this sector in Indonesia and many other countries is high rates of new start-ups and attrition.

A narrower range of variables helps explain placement in the formal sector relative to the informal sector. Only years of schooling, work experience in the current job and marital status are significant at the 5 per cent level or higher, among the individual and human capital characteristics. The findings on schooling and work experience are to be expected. Compared to informal sector workers, formal sector workers tend to be selected on the basis of completed schooling, especially in the public sector, and to remain for long periods in the same job.

For formal sector workers, engagement in manufacturing and location in the city of Tangerang are found to be significant (the coefficients for all of the location dummies are significantly negative relative to the omitted category, Tangerang). We suspect both results are influenced by characteristics attrib-

utable to recent migrants. That is, recent migrants tend to be more heavily engaged in manufacturing—over 40 per cent in the total sample, or almost twice the proportion for the other two migration-status groups. And over half of all recent migrants in the sample reside in Tangerang, compared with 25–30 per cent among long-term migrants and non-migrants.

To conclude this section on job placement, insofar as we expect the earnings of non-migrants to be significantly higher than those of recent and long-term migrants, these differences do not appear to be the result of non-migrants' greater representation in sectors where earnings are anticipated to be high—that is, the formal and small business sectors.

5 EARNINGS AND MIGRATION STATUS

What factors influence the earnings of migrant versus non-migrant workers? To examine this, we compute a Mincerian earnings function in which average hourly earnings are related to a range of human capital, labour demand and contextual variables.

The Mincerian earnings function estimated here includes five main sets of variables, estimated separately for migrants and non-migrants working in the formal, small business and informal sectors:

$$W_{im} = f(EMSTS_{im}, INHHD_{im}, OCC_{im}, IND_{im}, R_{im}) \quad (10.1)$$

where the dependent variable W_{im} represents hourly wages for each migration-status group. (In the equations it is estimated in logs.) $EMSTS_{im}$ is a vector of employment status, with the informal sector as the omitted category; $INHHD_{im}$ is a vector of individual and household social and demographic characteristics; OCC_{im} and IND_{im} are vectors of occupation and industry characteristics respectively; and R_{im} is a vector of city dummies (where Tangerang is the control group).

Table 10.2 above provides some descriptive statistics for the three migration-status groups. Recent migrants differ from the other two groups on a number of key variables: their earnings are lower; they are younger and have less experience in the current job; and they are more likely to be single. In addition, a higher proportion of recent migrants are found in the formal sector and in manufacturing; more are unskilled or semi-skilled; and fewer (13 per cent) are engaged in services. However, they have a similar number of years of schooling (10 years, equivalent to passing the first year of senior high school).

Long-term migrants and non-migrants, on the other hand, display similar characteristics, although long-term migrants tend to be older and to have

more work experience. In addition, a higher proportion of long-term migrants are male, and almost all are married, widowed or divorced rather than single. Even though a higher proportion of long-term migrants work in small business, their employment characteristics are quite similar to those of non-migrants in terms of industry and occupation. Both groups are also fairly evenly distributed across the four cities, in contrast to recent migrants, who are more highly concentrated in Tangerang.

Earnings Differentials by Migration Status

The above discussion suggests that a major challenge in computing the earnings functions is to explain why wages are lower among recent migrants, and higher among long-term migrants, than among non-migrants. The Mincerian earnings equation is estimated separately for each migration-status group, with employment in the formal sector, the small business sector or the informal sector included as an explanatory variable, together with other socio-demographic and job characteristics.

Table 10.4 presents the results for the earnings function estimations. First, we should note that, with the exception of non-migrants in the small business sector, employment status is a consistent predictor of earnings among all migration-status groups. This is especially true for long-term migrants. Thus, hourly earnings tend to be higher if migrants, either recent or lifetime, are employed in the formal or small business sectors rather than in the informal sector. The fact that recent migrants tend to be concentrated in the formal sector does not appear to be a factor in their lower average earnings relative to the other two groups. Put differently, even though a high proportion of recent migrants are employed in the formal sector, where they earn lower wages than long-term migrants and non-migrants working in the same sector, it is not simply placement in this sector that contributes to their lower earnings. Rather, it is the jobs that they perform in the formal sector that sets recent migrants apart from long-term migrants and non-migrants.

Thus, the earnings of recent migrants are lower because they work in unskilled occupations or, to a lesser extent, low-wage service industries; for recent migrants, the coefficients for both variables are negative and the unskilled worker dummy is significant. While age and experience are both important predictors of higher earnings among long-term migrants and non-migrants (both significant at the 5 per cent level or higher), this is not the case for recent migrants, most of whom are relatively young and have limited work experience. Nor does the fact that recent migrants are concentrated in manufacturing contribute significantly to their lower earnings.

Among long-term migrants and non-migrants, gender (the male dummy indicating positive effects), years of schooling and the dummies for place-

Table 10.4 Indonesia: Determinants of Hourly Earnings by Migration Status^a

	Recent Migrants		Long-term Migrants		Non-migrants	
	Coef-ficient	P > t	Coef-ficient	P > t	Coef-ficient	P > t
Dummies for sector of employment						
Formal sector	0.174	0.010	0.228	0.003	0.162	0.001
Small business sector	0.214	0.094	0.265	0.007	0.112	0.153
Individual characteristics						
Age	0.020	0.245	0.072	0.001	0.026	0.033
Age ²	-0.000	0.526	-0.001	0.000	-0.000	0.096
Work experience (years)	0.010	0.314	0.018	0.000	0.016	0.000
Years of schooling	0.063	0.000	0.062	0.000	0.084	0.000
Household head	0.307	0.000	-0.127	0.270	0.071	0.280
Marital status	-0.042	0.541	-0.059	0.719	-0.060	0.375
Gender (male)	0.050	0.452	0.381	0.001	0.223	0.000
In good health	0.472	0.003	-0.023	0.855	0.164	0.155
Dummies for occupation						
Professional/manager	-0.067	0.759	0.525	0.000	-0.121	0.235
Clerk	-0.357	0.387	0.490	0.048	-0.048	0.778
Unskilled	-0.367	0.044	-0.040	0.770	-0.439	0.000
Other occupation	-0.323	0.084	0.122	0.362	-0.351	0.000
Dummies for industry						
Manufacturing	0.102	0.261	0.281	0.012	0.076	0.288
Services	-0.082	0.409	0.210	0.032	-0.024	0.701
Transportation	0.266	0.028	0.097	0.445	-0.113	0.177
Construction	0.228	0.078	0.287	0.069	0.168	0.092
Other industry	-0.226	0.168	0.198	0.156	0.107	0.304
Dummies for location						
Medan	-0.228	0.033	-0.229	0.005	-0.095	0.087
Samarinda	0.027	0.703	0.015	0.871	0.159	0.016
Makassar	0.108	0.197	0.001	0.993	-0.053	0.432
Constant	6.871	0.000	6.015	0.000	6.898	0.000
No. of observations	587		853		1,554	
F	8.56		15.73		24.24	
Prob. > F	0		0		0	
R ²	0.2503		0.2943		0.2583	
Adjusted R ²	0.221		0.2756		0.2477	
Root MSE	0.63128		0.87837		0.83099	

a All variables significant at the 5 per cent level or higher are shown in bold. Omitted categories: dummy for marital status = married, widowed or divorced; dummy for gender = female; dummy for in good health = in poor health (subjective appraisal); dummy for occupation = technical; dummy for industries = trade; dummy for location = Tangerang; dummy for migration = non-migrant. Dummy for household head = spouse/other.

Source: Rural-Urban Migration in Indonesia survey, 2008.

ment in certain industries and occupations are all significant in the earnings equation, in addition to age and experience in the current job. For long-term migrants, the coefficients for professional and clerical workers are also positive and significant, as are those for engagement in manufacturing and services compared with the omitted category, trade. Among non-migrants, involvement in unskilled jobs contributes negatively to hourly earnings, while engagement in the construction sector (surprisingly) has a positive and significant coefficient.

Finally, the regional dummies are not significant in most cases, although location in Medan rather than another city produces a negative and significant coefficient for all three migration-status groups, whereas location in the city of Samarinda produces a positive and significant coefficient among non-migrants. The negative coefficients for the city of Medan are a little puzzling given that it has historically attracted migrants from other parts of Indonesia owing to its thriving agricultural and manufacturing sectors.

Earnings Differentials by Gender

Gender is typically an important variable in helping to explain wage differentials, after controlling for a number of other factors. It is pertinent, therefore, to examine whether there are important differences in the level of engagement of male and female migrant and non-migrant workers in the urban economy. First, it is worth noting that female participation rates are quite high among both migrants and non-migrants (see Chapter 8) and that the distribution of females across employment status groups is quite similar to that of males (see Table 10.5). The one notable difference is that, among recent migrants, more females are engaged as formal sector (wage) workers.

Among long-term migrants and non-migrants, the earnings regressions discussed above indicate a positive and significant coefficient for being male. However, unlike in China (see Chapter 3), in the Indonesian case there is no obvious pattern of difference in the age-earnings profiles of migrant versus non-migrant workers, for either males or females. Indeed, the opposite pattern to that observed in China seems to apply in the case of males: in Indonesia, it is the age-earnings curve for migrants rather than non-migrants that rises more steeply at older ages. For both males and females, earnings rise steadily to reach a peak between the ages of 40 and 50, then decline steadily thereafter (see Figure 10.3). However, the earnings of migrants rise more steeply when they are in their forties and fifties whereas the earnings of non-migrants level off. This pattern is not apparent for females, who experience a dip in average earnings in their thirties. The latter may be related to their choice of jobs during the childbearing and early childrearing years.

The education-earnings profiles of migrants and non-migrants are similar for both genders, rising gradually to year 12 (the final year of secondary

Table 10.5 *Indonesia: Distribution of Migrants and Non-migrants by Gender and Sector of Employment*

	Recent Migrants	Long-term Migrants	Non-migrants	Total
Males				
Formal	49	39	41	42
Small business	5	12	8	9
Informal	45	49	51	49
Total	100	100	100	100
Average	20	30	50	100
No.	384	578	964	1,926
Females				
Formal	66	28	37	41
Small business	4	13	9	9
Informal	29	59	54	50
Total	100	100	100	100
Average	21	24	56	100
No.	197	227	535	959

Source: Rural-Urban Migration in Indonesia survey, 2008.

school), and then steeply thereafter. Again, this is in contrast to the situation in China, where migrant workers have a much flatter education-earnings profile than non-migrant workers. In the case of Indonesia, male earnings appear to rise more gradually than female earnings, starting at lower levels of schooling (from lower secondary level) (Figure 10.4). Female earnings per hour are relatively flat and then rise steeply at the upper secondary and tertiary levels.

It is pertinent to ask if the same variables are significant in separate earnings equations for males and females. Table 10.6 shows the results of the earnings regressions for male and female migrant and non-migrant workers. Among migrants, the coefficients for both the formal sector and the small business sector are significant for males only, relative to the omitted value, the informal sector. For women, employment in the formal or small business sectors does not appear to have a significant effect on earnings relative to women working in the informal sector. In other words, females who are engaged in the formal sector or in business do not appear to have an advantage over their counterparts in the informal sector. Either migrant women are relegated to lower-paying jobs in the former two sectors, or they tend to take up better-paying jobs in the informal sector. Table 10.5 suggests that both explanations are probably relevant—although neither explanation entirely suffices, as there is simply

Figure 10.3 Indonesia: Age-Earnings Profiles of Migrant and Non-migrant Workers by Gender^a

^a Data smoothed, five-year moving averages.

Source: Rural-Urban Migration in Indonesia survey, 2008.

Figure 10.4 Indonesia: Education-Earnings Profiles of Migrant and Non-migrant Workers by Gender

Source: Rural-Urban Migration in Indonesia survey, 2008.

Table 10.6 Indonesia: Determinants of Earnings by Migration Status and Gender^a

	Migrants				Non-migrants			
	Males		Females		Males		Females	
	Coefficient	P > t	Coefficient	P > t	Coefficient	P > t	Coefficient	P > t
Individual characteristics								
Age	0.067 ***	0.000	0.053 **	0.021	0.020	0.146	0.042	0.112
Age ²	-0.001 ***	0.000	-0.001 ***	0.005	-0.000	0.351	-0.000	0.167
Years of schooling	0.056 ***	0.000	0.076 ***	0.000	0.082 ***	0.000	0.090 ***	0.000
Household head	0.260 **	0.010	0.095	0.371	0.097	0.232	0.047	0.772
Married	0.109	0.212	-0.047	0.738	-0.060	0.477	-0.058	0.651
In good health	-0.016	0.891	0.275	0.115	0.146	0.279	0.180	0.399
Work experience (years)	0.012 *	0.001	0.032 ***	0.000	0.011 ***	0.001	0.025 ***	0.000
Dummies for sector of employment								
Formal sector	0.260 **	0.000	0.074	0.516	0.080	0.147	0.350 ***	0.001
Small business sector	0.279 ***	0.001	0.152	0.335	0.034	0.705	0.235	0.116
Dummies for occupation								
Professional/manager	0.258 *	0.053	0.864 ***	0.001	-0.183	0.114	-0.016	0.936
Clerk	0.328	0.140	0.703	0.132	-0.288	0.165	0.243	0.428
Unskilled	-0.192	0.106	0.195	0.405	-0.525 ***	0.000	-0.290	0.130
Other occupation	0.036	0.765	0.094	0.672	-0.495 ***	0.000	-0.060	0.738

214

Dummies for industry								
Manufacturing	0.179 **	0.035	0.222	0.153	0.024	0.764	0.187	0.196
Services	0.103	0.236	0.024	0.847	-0.061	0.422	0.025	0.818
Transport	0.123	0.198	0.220	0.650	-0.139	0.106	-0.117	0.634
Construction	0.304 ***	0.005	(dropped)		0.110	0.267	0.650	0.256
Other industry	-0.046	0.688	0.614 **	0.023	0.054	0.616	0.070	0.815
Dummies for location								
Medan ^a	-0.145 **	0.048	-0.376 ***	0.002	-0.122 *	0.054	-0.044	0.687
Samarinda	0.096	0.158	-0.224 *	0.068	0.163 **	0.024	0.150	0.273
Makassar	0.115	0.135	-0.102	0.447	-0.124	0.108	0.115	0.383
Constant	6.306 ***	0.000	6.094 ***	0.000	7.455 ***	0.000	6.146 ***	0.000
No. of observations	1,005		435		1,005		549	
F	13.94		12.08		17.13		7.81	
Prob. > F	0		0		0		0	
R ²	0.2295		0.3684		0.2679		0.2372	
Adjusted R ²	0.213		0.3379		0.2523		0.2069	
Root MSE	0.76612		0.82219		0.75255		0.95767	

* = significant at 10 per cent; ** = significant at 5 per cent; *** = significant at 1 per cent.

^a Omitted categories: dummy for marital status = married, widowed or divorced; dummy for gender = female; dummy for in good health = in poor health (subjective appraisal); dummy for occupation = technical; dummy for industries = trade; dummy for location = Tangerang; dummy for migration = non-migrant; dummy for household head = spouse/other.

Source: Rural-Urban Migration in Indonesia survey, 2008.

215

not enough variation across the three employment sectors to identify a precise parameter estimate.

Among personal characteristics, the coefficients for age, experience and years of schooling are significant at the 1 per cent or 5 per cent level and help to explain the earnings of both male and female migrants. The positive result for work experience among females is noteworthy, suggesting a greater degree of attachment to jobs than is often found for female workers. However, most of the coefficients for the dummy variables for occupation and industry are not significant in the separate regressions for male and female migrants.

The findings for non-migrants are less conclusive. Among females, the coefficient for formal sector workers is significant, relative to informal sector workers as the omitted category. But engagement in neither the formal sector nor the small business sector is significant for male non-migrants, which is a little puzzling given the strong (positive) result for formal sector engagement reported in Table 10.4. The difference becomes less puzzling, however, when one considers the disaggregated results in Table 10.6. It appears that, for both males and females, the small business dummy is still quite imprecisely estimated, while the formal sector dummy is more precisely estimated and strongly positive for the female subsample of non-migrants. The results for the female sample appear to be driving the results in Table 10.4.

For male and female non-migrants, both years of schooling and experience are positively and significantly related to earnings. But, as in the case of migrants, the industry and occupation dummies are not significant in the case of female non-migrants.

6 CONCLUSIONS

The focus of this chapter has been on job allocation and earnings among recent and long-term migrants versus non-migrants. This topic is important given the potential disadvantage that rural-urban migrants suffer in the urban labour market in terms of both jobs and wages. Two important innovations in the analysis have been: (1) the focus on migrants over two periods (before the economic crisis in 1998 when the economy was growing quite rapidly, and since 1998 when it was not); and (2) the differentiation between the small business and informal sectors when comparing the experience of the three migration-status groups in the urban labour market.

The analysis indicates that migrants who entered the labour market after 1998 are likely to be at a disadvantage to longer-term migrants and non-migrants. On the other hand, longer-term migrants compete quite favourably with non-migrants, providing some evidence that this group does tend to 'make it' in the city after a number of years. But we do not know whether this

is because longer-term migrants entered the urban labour market before 1998, when conditions were more conducive, or because they have had longer than recent migrants to adjust to an urban environment. Both factors are probably important.

The earnings of recent migrants are lower either because they are younger and less experienced or because they are engaged in unskilled occupations. Although more research is needed, we suspect that the turnover of unskilled jobs has increased since 1998, and that this may have contributed to the relative disadvantage of recent migrants. Their average years of experience in the current job of just over two years suggests that this may be the case.

The findings with regard to both the job placement and earnings of longer-term migrants are instructive, especially in comparison with the results for China (see Chapter 3 of this book). The raw data suggest that wages are significantly (over 15–30 per cent) higher among longer-term migrants than among non-migrants in all three sectors of employment—the formal sector, the small business sector and the informal sector. Although we have not presented data on occupational mobility, it seems probable that long-term migrants are more likely than non-migrants to change jobs or to adopt strategies to improve their living standards.¹⁵ In this respect, they appear to have fared much better than rural-urban migrants in China, the great majority of whom are unable to settle in the city and become 'long-term migrants'. It is also worth noting that female migrants in Indonesia appear to have done better in the urban labour market than their Chinese counterparts; age, experience and education are the main determinants of earnings for this group.

Standard human capital and labour demand variables help to clarify some of the differences in jobs and earnings between the three migration-status groups. Indeed, the conventional human capital variables that are generally expected to affect job allocation tend to be more significant among long-term migrants than among recent migrants or non-migrants in the case of Indonesia. Our preliminary conclusion from this part of the study is that labour markets have been relatively open over time, especially with regard to the access of migrants to higher-paying formal sector jobs (particularly in manufacturing) and opportunities in small business.

We reiterate that the lower earnings of recent migrants reported in this chapter are not necessarily inconsistent with the findings reported in Chapters 8 and 9 of higher levels of expenditure, lower levels of poverty and comparable health status among recent migrants relative to non-migrants. While earnings from work are the main source of income for most households, the level of individual earnings may not correlate closely with household welfare, especially if the size of the household and the number of dependants differ systematically across migrant groups. We find this to be the case for the migrants and non-migrants studied here. The seeming contradiction appears to be reconciled

by the fact that a higher proportion of both lifetime migrants and non-migrants are married with children, whereas recent migrants, on average, are much younger and mostly single.

We conclude that, as measured by wages, most migrants do as well as non-migrants in the labour market in Indonesia, and long-term migrants do significantly better. But we also note that a clear wage disadvantage is experienced by migrants who entered the labour market after the economic crisis in 1998, even though many are able to get formal sector jobs. Further analysis is needed to determine both the factors that have contributed to higher wages among long-term migrants as well as those that have influenced lower wages among recent migrants. In this context, we suggest that factors such as social networks and job search and occupational mobility would be worthy of closer examination.

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NOTES

- 1 See Chapter 8 of this book for a short overview of the history of migration in Indonesia.
- 2 Nevertheless, as in neighbouring Malaysia and Thailand, a dynamic export-oriented cash crop sector has meant that the agricultural sector continues to play a major role in employment and economic growth—although Indonesia has been a net food importer for several decades (Butzer, Mundlak and Larson 2003).
- 3 In August 2007, 41 per cent of employed persons still worked in agriculture, according to the National Labour Force Survey.
- 4 Some of the difference in rates of urban versus rural employment growth can be attributed to the official reclassification of rural regions as urban areas, as the infrastructure and social services associated with urban areas were extended into the countryside.
- 5 The central statistics agency, Statistics Indonesia, defines the informal sector to cover all casual, self-employed and family workers, excluding self-employed workers who are professionals and managers. See Appendix A10.1 and Figure A10.1 for more details.
- 6 The economy is estimated to have experienced negative economic growth only once (in 1982) during this 30-year period (Hill 2000a).
- 7 Most notably, these included extensions of the Harris–Todaro model of rural–urban migration. See Mazumdar (1994) and Lall, Selod and Shalizi (2006) for a critique of some of the assumptions of the early models of rural–urban migration.
- 8 This subsection draws on Hugo (1978, 2000), Abeyasekera (1987) and Firman, Kombaitan and Pradono (2007).
- 9 See Chapter 11 for details of the sampling procedures adopted to select the sample in each of the four cities.
- 10 Statistics Indonesia distinguishes between small firms (those with 5–19 employees) and cottage establishments (those with less than five employees).

- 11 This finding should be qualified in one important respect. Our definition of migrants excludes people who were raised in an urban environment and subsequently moved to one of the four surveyed cities. It is possible that the inclusion of these urban–urban migrants in the non-migrant group may have contributed to the higher share of informal sector work and lower earnings found among non-migrants compared with long-term migrants.
- 12 Not surprisingly, people working in small business work the longest hours regardless of migration status—close to 60 hours a week (data not shown in Table 10.2).
- 13 Another factor that may have contributed to the contrasting results for individual earnings, as against other indicators of household welfare, is the high proportion of recent migrants who are still at school and have a relatively high socio-economic status (see Chapter 8). For the most part these students are outside the labour force (because they are receiving transfers from their middle-class parents in the home village), and hence are not included in the analysis of job placement and earnings in this chapter.
- 14 The coefficients for the formal sector and business sector groups should be compared with those for the informal sector group. The marginal effects of the regressors on the probabilities are also calculated.
- 15 In both the first and second rounds of the survey (conducted in 2008 and 2009), we collected data on first job in the city and current job, so in subsequent analyses we will be able to test this tentative conclusion more rigorously.

APPENDIX A10.1 DEFINITION OF FORMAL, SMALL BUSINESS AND INFORMAL SECTOR EMPLOYMENT

Formal Sector

- All private sector employees with permanent (*tetap*) employment status, or working on contracts, who are employed in businesses with five employees or more.
- All civil servants (including teachers and health care workers on the government payroll), military personnel and police.
- All employers or self-employed persons with productive assets of at least Rp 100 million (about US\$10,000 at March/April 2008 prices).
- All employers with productive assets of less than Rp 100 million who employ 20 or more non-family workers.

Small Business Sector

- All employers or self-employed persons with productive assets of Rp 5–100 million who employ less than 20 workers.
- All employers with productive assets of less than Rp 5 million who employ 5–19 workers.

Informal Sector

- All employees with casual (*tidak tetap/lepas*) employment status, regardless of the size of the firm.
- All employees in firms with less than five workers, regardless of whether they are casual, permanent or contractual employees.
- All employers or self-employed persons with productive assets of less than Rp 5 million, or who employ less than five workers.
- Others not covered as formal sector or small business sector workers.

Figure A10.1. Indonesia: Definition of Sector of Employment for Employees and Self-employed/Employers