

MIGRATION AND TRANSITION TO ADULthood: EDUCATION AND
EMPLOYMENT OUTCOMES AMONG YOUNG MIGRANTS IN GREATER
JAKARTA

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Abstract

This paper examines the relative education and employment outcomes among young migrants and non-migrants in Greater Jakarta in 2009/2011. Using data from the 2010 Greater Jakarta Transition to Adulthood Survey that includes 3006 respondents aged 20 to 34 years old, the paper highlights the importance of the age at migration in influencing the patterns of schooling and employment among young people. Patterns of schooling and employment are investigated for four groups of young people: those who migrated to Greater Jakarta between ages 0 and 10, between ages 10 and 17, after age 17, and non-migrants. We found that young people who migrated to Greater Jakarta at 10–17 years of age are over-represented in the lower spectrum of occupational rankings, even though they are more likely to be employed than non-migrants and those who came to Jakarta at other ages.

KEYWORDS:Rural-Urban Migration, Jakarta, Age at Migration, Human Capital of Migrants

Introduction

Several researchers have reviewed the importance of young adult transitions in demographic behaviour. Rindfuss (1991) noted that the period of adolescence and young adulthood is a '*demographically dense*' period of life. In particular, young adults face more demographic choices and consequences than at any other stage in the life course. Completion of schooling, commencing formal work, marriage, first childbearing and residential establishment are more likely to occur in this age group than any other period of the life cycle. While transition to adulthood has been addressed in different ways by demographers and sociologists (Arnett 2003; Jejeebhoy 2006; Lloyd 2005; Lloyd & Grant 2005; White 2003), there has been limited research on how migration and age at migration in particular affect the life outcomes among young adults in developing countries.

When a young person migrates, this has a profound effect on shaping their transition to adulthood. The Scientific Panel on Adolescent Life Course in Developing Countries of the International Union for the Scientific Study of Population (IUSSP) asserts that migration simultaneously exposes young people to 'both empowerment and increased vulnerability' (IUSSP 2010, p. 2). On one hand, migration opens up new windows of opportunity for employment and success for young people. For example, the wealth and resources generated through migration 'enable young people to marry, build new homes, begin new enterprises, as well as fund the migration of other relatives' (IUSSP 2010, p. 2). On the other hand, migration also poses adverse risks for young adults. The loss of social support from parents and kinship networks, the difficulties in securing employment, and the disruption in schooling, are possible outcomes of

migration that would impose further complexities in the transition to adulthood (IUSSP 2010). The potentials for empowerment, but also for increased vulnerability, exist, whether migration takes place across international borders or internally from one part of a country to another.

In developing countries, internal migration typically takes place from rural to urban areas as migrants seek out more favourable employment opportunities in the cities. Building upon the model of labour migration in less developed countries (Harris & Todaro 1970; Todaro 1969), the development literature has long recognised the pool of unemployed and underemployed urban workers in which migrants from rural areas compete to find jobs. Several studies have compared the labour market conditions of migrants relative to non-migrants and the research suggests that, depending on the institutional context and the structure of the labour market in a particular country, the outcomes for migrants in the labour market may be particularly disadvantageous as compared to their non-migrant counterparts. For example, recent research on rural-urban migration in China identified a two-tier urban labour market with migrants attaining lower occupational and wage outcomes than non-migrants (Knight *et al.* 1999; Meng & Zhang 2001). However, the relatively unfavourable labour market outcomes for migrants as compared to their non-migrant counterparts in China may be due to the strong institutional restrictions surrounding such migration in China (Frijters *et al.* 2011). In Indonesia, there are few restrictions regulating rural to urban migration and very little institutional discrimination against migrants in urban areas (Frijters *et al.* 2011).

In terms of the impact that migration has on the life experiences of migrants, a key determining factor is the age at which migration takes place. The importance of age

at migration in affecting later life outcomes has been emphasised in studies looking at international migration to more developed countries. A study among childhood immigrants and children of migrants in Sweden suggested that age at migration is pivotal in influencing the degree of social integration in early adulthood (Åslund *et al.* 2009). Research from the US also suggests that children of immigrants who came into the country in early childhood had better educational outcomes than those who arrived in their teenage years (Gonzalez 2003). Similarly, in Canada, a number of studies have pointed to the negative relationship between age at arrival and educational outcomes (Hou & Balakrishnan 1996; Jones 1987).

Despite the obvious differences in the context in which rural-urban migration and international migration take place, it is likely that age at migration can also be a powerful determinant of young adults' schooling and employment outcomes for internal migrants as well. As in the case of international migration, we hypothesise that there is a certain age window where internal migration can potentially be more disruptive to an individual's schooling than at any other time. Among current young adults who had migrated to Jakarta during the schooling years, it is possible that migration was associated with premature exit from formal schooling. The hypothesis is supported by the literature indicating a two-tier urban labour market in developing countries where child and young migrants often migrate for work-related purposes. A study of 50 child domestic workers in Metro Manila indicated that school non-completion was largely associated with the academic difficulties the respondents were facing due to the incompatibility between their heavy work burden and the need to concentrate in school (Camacho 1999). The combination of low education and/or poor education performance

would set up a path to poor employment trajectories among young adults who migrated to Jakarta during their schooling years.

In this paper, we use data from the 2010 Greater Jakarta Transition to Adulthood Survey, to explore the consequences of migration and its timing on education and employment outcomes among young adults aged 20–34 in Greater Jakarta (Jakarta, Bekasi and Tangerang). The primary aims are to examine differences in past schooling trajectories as well as current employment outcomes between migrants and non-migrants in Greater Jakarta. Do young migrants have poor schooling outcomes relative to non-migrants? Do young migrants end up in the lower end of the occupation distribution? Do schooling and employment outcomes differ among male and female migrants? These questions are addressed using data on migration status and age at migration, and education and employment histories from our survey.

The paper begins by outlining the background to our research, where we frame the importance of transition to adulthood research in the context of Indonesia's current demographic bulge. A section on data and methodology provides further details on our primary data instrument: the 2010 Greater Jakarta Transition to Adulthood Survey and the migration-related questions that were collected in our survey. We have organised our research findings into the following sections. First, we use descriptive statistics to explore the background characteristics of migrants by age at migration relative to the non-migrants in our sample. In our analysis, we group our sample into either three or four distinct groups: non-migrants, those who migrated between ages 0 and 10, those who migrated between ages 10 and 17, and those who migrated after 17. Second, we use survival analysis to compare and contrast the age of leaving school across respondents in

different age-migration categories. To further examine how age at migration may influence school-to-work transition, we map the education and work histories of our respondents using a retrospective schooling and work calendar for every year of their lives from age 12 onwards. We examine current employment by looking into employment status, occupational attainment, the type of organisation in which the individuals are working, hours worked and wages outcomes. We have employed both descriptive statistics and multivariate analyses in our examination of current employment outcomes. Our results indicate that age at migration is significantly associated with the schooling and employment outcomes of young migrants in Greater Jakarta.

Background: Transition to Adulthood and Migration in Greater Jakarta

Researchers have attempted to define the transition to adulthood in a variety of ways. The National Research Council and Institute of Medicine of the National Academies (Lloyd 2005, p. 23) described a four-phase process: *early phase* (between ages 10 and 14); *mid phase* (between ages 15 and 20); *late transition* (21+); and *prolonged transition* that could extend into the third decade of life and sometimes even later (Arnett 2000, 2004; Furstenberg *et al.* 2002). Within the last decade, the early and mid phases of youth and teenage years have been the focus of both documented research, and of recommendations of international and national committees and non-governmental organisations (NGOs). This has been the case with respect to Indonesia (Bennett 2003; Hasmi 2001; Hull *et al.* 2004; Utomo 1998; Utomo 1999; Utomo & McDonald 2009), other developing countries (for example, Jejeebhoy's (2000, 2006) work on adolescents in India; Mench *et al.*'s (1999, 2001), as well as Meekers and Ahmed's (1999) and

Meekers *et al.*'s (1995, 1997) work on African countries; Lloyd's (2005), Singh's (1998), Singh and Samara's (1996), Singh *et al.*'s (2003), Xenos's (1997) and Xenos *et al.*'s (2001) work on several developing countries), and developed countries (for example, see Arnett (1992)). There is no doubt that a recognition of the needs of adolescents is important in social policy and education policy terms, but this still leaves unaddressed important problems of the next older group whom we describe as young adults.

In this paper, young adults are defined as persons aged 20 to 34 years. This age group is of particular significance in the Indonesian demographic context as they make up the large numbers in the current demographic bulge in the country's age structure. According to the 2010 Census of Population, there were 61 million Indonesians in the 20–34 age range. Since this cohort of young adults represents a 'peak' generation in Indonesia's demographic transition, they are faced with strong competition for higher education and job opportunities (Jones 1994; Oey-Gardiner 1997).

For the country as a whole, educational attainment is increasing and the younger generations continue to be more educated than the previous generations. A calculation from the Population Census 2010 showed that the proportion of people aged 25–29 with tertiary qualifications was 10.7 per cent in contrast to 2.7 per cent for people in the 65–69 age group (BPS-Statistics Indonesia 2010a). In coming years, the competition for enrolment in the best national schools and universities where places are limited will remain fierce. While those in the higher income groups can afford to go to private institutions that have mushroomed over the last decade, the tuition and fees are relatively costly and the quality of education is varied.

In the face of the challenges associated with completing quality education, young people in this cohort are also confronted by the harsh reality of the job market. For young people around the world, labour market deregulation has introduced a high degree of risk and uncertainty into their economic lives. This risk and the increased individual risks arising from conflicting value orientations have had a major impact upon family formation behaviour (McDonald 2006). These risks are no less felt by young Indonesians where the unemployment rate for people aged 20–24 is about ‘two and a half times’ that of the general population (World Bank 2010, p. 12). More specifically, over 40 per cent of young people aged 15–24 who had completed senior high school were unemployed (World Bank 2010, p.12).

In Indonesia, the capital, Jakarta, is a *Mecca* for those seeking to improve their education and job opportunities. The Jakarta metropolitan region includes the province of DKI Jakarta and the surrounding regencies of Bogor, Depok, Bekasi and Tangerang. However, the sample area for the 2010 Greater Jakarta Transition to Adulthood Survey is restricted to Jakarta and the neighbouring cities (*kotamadya*) of Bekasi and Tangerang. The two neighbouring cities were added to Jakarta province in order to increase the coverage of workers in manufacturing industry without including large numbers working in primary industry. The resultant sample area that we describe as Greater Jakarta is therefore the hub for secondary and tertiary industry in Indonesia. Bekasi and Tangerang have long been areas of high population growth (Jones & Mamas 1997). With secondary industry growing outside the boundary of Jakarta province (Firman 1997), the focus of industry within Jakarta province itself has shifted strongly towards tertiary industries,

particularly businesses and services. At the 2010 Census of Indonesia, the combined population of our sample area was 13.7 million.¹

Internal migrants have contributed significantly to the population growth in Greater Jakarta. In the province of DKI Jakarta alone, migrants accounted for 42 per cent of the population in 2010 (BPS-Statistics Indonesia 2010b). Furthermore, the proportion of recent migrants (in the last five years) in the population of DKI Jakarta in 2010 was notably higher at 7.3 per cent relative to the national urban average of 3.8 per cent (BPS-Statistics Indonesia 2010c). Reflecting the substantial influence of migration in these areas, 41 per cent of young people in our sample are migrants.

The range of work opportunities available in Greater Jakarta includes public sector jobs, managerial and administrative jobs in private sector enterprises, factory jobs in the very large manufacturing sector, the transport and construction sectors, and a wide array of formal and informal service and sales jobs. The qualifications required for these jobs also range widely from no education to postgraduate degrees. A recent qualitative study by Doyon (2009) in Karawang, a regency just to the east of our sample area, found that migrants employed in industrial estates were aged between 19 and 30 years old and, on average, were more educated than non-migrants. The local people with lower education had difficulty competing with the migrants and thus many worked in unskilled jobs such as being an *ojek* driver (motor bike used as a taxi), selling food in a *warung* (road-side stall) and in boarding houses. In contrast, in the case of Greater Jakarta, the two-tier labour market is less likely to work in favour of migrants. The broader coverage of our representative sample contributes to the understanding of the relationship between

migration and schooling-employment outcomes in the context of transition to adulthood in Greater Jakarta.

The Survey and Methodology

To study the impact of migration on the transition to adulthood, we use data from the 2010 Greater Jakarta Transition to Adulthood Survey. This survey was conducted among a sample of 3006 young adults aged 20–24 living in Greater Jakarta (Jakarta, Tangerang and Bekasi). The questionnaire collected wide ranging information relating to respondents' demographic characteristics, their current and past education and work experiences, migration, gender roles, health and well-being, and attitudes and values. A rigorous sampling process was used to ensure that the young adults participating in the study were as representative as possible.

The sampling process involved a two-stage cluster sample using the probability proportional to size (PPS) method. In the first stage, 60 *Kelurahan* (Districts) were selected using PPS. In the second stage, five neighbourhoods (*Rukun Tetangga*, RT) were chosen within each selected *Kelurahan* by systematic random sampling. The 300 selected RT were then censused and mapped by trained interviewers. From the census, a listing of all eligible respondents (aged 20–34) living in the RT was compiled. Eleven eligible persons were then selected by simple random sampling from the eligible RT population.

The survey collected an education and occupation history for all respondents by single years of age from age 12 until their current age. Much more detail is obtained about their current employment. The survey also collected data on economic contributions to and from the respondents' parents to determine whether respondents are

still economically dependent or whether respondents contribute to their parents' household. These data enable an analysis of the equity of human capital outcomes for migrants and non-migrants. Gender equity of outcomes can also be examined among migrants. Where differences are observed, more nuanced explanations for the differences will be sought

One year after the survey, a qualitative data collection was carried out with the primary objective to obtain further insights into the dynamics and life patterns of young adults. The underlying research themes in this data collection revolved around challenges that young adults face in their life experiences relating to education, employment, social relations, marriage, sexuality, religion, politics, digital technologies and migration. A sample of 81 respondents was obtained for the in-depth interviews, consisting of 41 female and 40 male respondents.

Questions on Migration

In our analysis, we group the sample into either three or four distinct groups: non-migrants, those who migrated between ages 0 and 10, those who migrated between ages 10 and 17, and those who migrated after 17. The overlap in our grouping is related to the original questions in the questionnaire used to derive migration status. Respondents were asked to report where they were living at six different time points in their life:

- At time of birth
- At age 10
- At age 17
- Five years ago

- One year ago
- At the time of the interview

In addition to their current location, we therefore have five different possible locations from which we are able to get a picture of each person's migration history. While the age at which three of the locations are defined will be the same for all respondents (at birth, at age 10, at age 17), the remaining three ages will depend on the person's current age.

The complete migration histories for all respondents, including all six time points were examined. Fourteen different transitions describe the experience of around 90 per cent of the population. Overall, 59 per cent of the sample was classified as being non-migrant, in that they had been born in Jakarta, Tangerang or Bekasi and had not been living outside of these areas at any of the six time points examined. The remaining 41 per cent of the sample was classified as migrants as they had either been born outside of the survey site and moved there at some point in their lives or they had been born in the survey sites but had moved to other areas before returning again later on. Of these migrants, 37 per cent had been born in Central Java, 26 per cent in West Java and 29 per cent in other provinces of Indonesia. The remaining eight per cent of migrants consisted of those born in the survey sites but that had migrated to other areas of Java or to other provinces before returning again.

Of the full sample including those that had not moved, four per cent had arrived between the ages of 0 and 10, eight per cent between the ages of 10 and 17, and another 24 per cent after age 17. Respondents in the 'other' category were those who had made

multiple moves into and out of the survey sites. In addition to questions regarding migration in the questionnaire, insights into the actual motivation and experience of migration gathered from the in-depth interviews proved to be valuable in informing our data analysis.

Research Findings

Background Characteristics of Migrants

A higher percentage of the male respondents (64 per cent) were born in the three survey sites compared to females (56 per cent). In Table 1, basic demographic and family background characteristics of those who migrated to the survey sites are compared with those who were born there. When tested using a chi-square test, all the variables were significant at the five per cent level. Migrants aged 10–17 were more likely to be female than other groups. Younger people were more likely to have been born in the survey sites. For example, 68 per cent of those aged 20–24 were born there compared to only just over half of those aged 30–35. This is likely to be the result of both a cohort effect and a selection effect due to the fact that the older respondents would have had more time to have experienced migration particularly after age 17 compared to those who were still in their early 20s. Tao Kong and Effendi (2010) note that over time, there has been an increase in the age at first migration in Indonesia.

[INSERT TABLE 1 HERE]

People who migrated when they were aged between 0 and 10 most likely did so with their parents or other family members, while those who migrated from age 17 onwards are likely to have moved to Jakarta/Bekasi/Tangerang independently as young adults. For those who moved when they were aged between 10 and 17, it is harder to predict if they were accompanied by their parents or not.

Some insight into this matter can be found by looking at whether or not respondents were currently living with one or both of their parents at the time of the survey. Among those who had lived in Greater Jakarta since birth, the percentage living with one or both of their parents was 68 per cent, and among those who had migrated as young children, the equivalent figure was 60 per cent. However, for those who had arrived between the ages of 10 and 17, only 13 per cent lived with one or both of their parents. This suggests that most that moved in this age range had migrated without their parents.

[INSERT FIGURE 1 HERE]

Figure 1 provides a further examination of the age at leaving the parental home among those who migrated between the ages of 10 and 17 and were not currently living with a parent(s). Just over half had left the parental home at age 16 or under. Another 20 per cent left home at age 17, in which case the age of leaving home may have coincided with a migration move to Greater Jakarta.

Age at migration was also highly associated with the education of the parents. In Table 1, we show only the education level of the father as this provides a better measure

of the economic background of the respondent. The education level of the father was much higher for those that moved when the child was aged less than 10 years or for those that had multiple moves in and out of the survey site than for those who moved from age 10 onwards. For those that moved at a young age or had multiple moves, the education of their fathers was a little higher on average than for those that had been born in and never left the survey sites. Thus, in broad terms, two groups of migrants can be distinguished: those moving at an early age mainly with their parents and their parents were relatively highly educated; and those that moved mainly on their own from age 10 onwards whose parents were lowly educated.

Table 1 further illustrates the highest level of education achieved by migration status. Those who had been born in Greater Jakarta had the highest percentage that had completed senior high school, certificate level or university level education. The distribution of those who had come to the survey sites when they were aged between 0 and 10 was very similar compared to those who had been born there. However, education was considerably lower among those who had arrived between ages 10 and 17 or after 17. Those that moved at ages 10–17 show particularly low education outcomes.

Migration and Survival Function of Leaving Education

Because we do not know the exact age at which migration took place, it is not possible to tell whether a respondent's education was continued after the move to the survey sites, or whether it was discontinued prior to moving. However, from the education history, we can tell at what age respondents stopped full-time education and can compare this age across the different migration statuses.

[INSERT FIGURES 2 & 3 HERE]

The time to leaving full-time education is shown for males and females in Figures 2 and 3. For both men and women, those who had been in Jakarta, Tangerang or Bekasi since birth and those who had moved to these areas between the ages of 0 and 10 had very similar trajectories. However, those who moved between the ages of 10 and 17 left education at much younger ages than others. It seems reasonable to assume that most had left school before they migrated to Greater Jakarta and this tends to be confirmed by our qualitative interviews. Here, it is important to note that the decision to migrate and to leave school may have been jointly determined. On one hand, it is possible that an individual left school in order to migrate. On the other hand, it is also possible that the decision to migrate was affected by an individual's poor performance in school or lack of resources to continue schooling. While we cannot pinpoint what are the driving factors behind the relatively faster progression to leaving school amongst young adults who migrated in their teens, it is clear that their survival curve is distinct from the others.

Education and Work Histories

In order to understand young adults' schooling and employment outcomes at the time of the survey, it is important to understand how their education and work histories progressed from the time they were adolescents. By using the education and work history calendars, respondents were classified as being engaged in four different activities for every year from age 12 to their current age:

1. Only studying
2. Only working
3. Working and studying
4. Not working or studying

The distributions of activities at three key ages 15, 17 and 20 are shown in Table 2, by migration status. At the time they were aged 15, over 80 per cent of respondents were studying as their sole activity. However, among those who had migrated between the ages of 10 and 17, only 54 per cent were studying, around one quarter were only working and a further 19 per cent were neither working nor studying. Among those who migrated after age 17, the proportion studying when they were aged 15 was lower than for those who had lived in Jakarta, Tangerang or Bekasi since birth or who had migrated there before the age of 10.

[INSERT TABLE 2 HERE]

When they were aged 17, the differentiation in activities by migration status continued. Again those who migrated between ages 10 and 17 stand out in terms of their activities. Just over half were only working at age 17, and only 28 per cent were only studying. In contrast, around three quarters of those born in the three survey sites or who had migrated there between ages 0 and 10 were still studying.

By age 20, those who had migrated after age 17 started resembling more those who had migrated between ages 10 and 17, with similar proportions working (53 per cent

and 55 per cent, respectively) or not working and not studying (36 per cent and 31 per cent).

Current Employment

Studies suggest that migration within Indonesia can be explained by three main factors. The first is the over-supply of labour in rural areas, the second is the improvement in transportation and networks, and the third is the opening up of economic activities particularly with respect to the informal sector in the urban areas (Tirtosudarmo 1997, c.f. Muhidin 2002, p. 1). Thus, migrants may be attracted to Greater Jakarta because of the job opportunities. One solution for migrants who are unable to find work in the formal market is effectively to 'create' their own jobs in the informal sector (Pasay 1992, p. 47). Creating a job in the informal sector requires little education and only a relatively small initial endowment of capital, and the income earned can be comparable to what is earned in blue collar work such as construction (Pasay 1992).

Figure 4 shows the current employment status of men and women by migration status and current age. Due to the small number of cases of migration at ages 0 to 10 when separated by sex, migration status was collapsed into two categories. Those who had been born in the survey sites and those who had arrived there before the age of 10 made up one group as they appeared to be very similar in the earlier analysis. The other category consisted of those who had migrated after age 10. Those in the 'other' category (72 males and 62 females) were excluded from this analysis.

Nearly 80 per cent of men were working, but those who had migrated after age 10 were more likely to be currently working (91 per cent working) compared to those who

had lived there since birth or moved before age 10 (74 per cent working). At younger ages, this was due in part to the non-migrants and early movers being more likely to be still studying but migrant men were more likely to be working than their counterparts in all age groups. This may be because (as described above) migrants may create their own jobs in the informal market rather than be unemployed in the formal sector. This would be true especially if the reason they migrated in the first place was to find a job. The migrants are also much less likely to have parents living in the survey site and able to provide support while they were looking for work.

In the qualitative investigation following our survey, job opportunities in the city resonated as the primary reason for young people in our sample to migrate to Greater Jakarta:

About four years ago, I moved to Jakarta since there were no jobs available in my village... I stayed in Jakarta with one of my relatives from the village. I was asked to work as a fruit vendor before I became a building labourer like now. (Harun, male, 27, construction worker)

I came from Lampung to Jakarta in 1992 to look for work. I came with a relative. I forget how old I was but it was not long after I graduated from primary school. (Tati, female, 33, housewife)

I came in 1990, and a friend of mine had come and been working here earlier. I then looked for work and managed to get my first job as a waiter in Pasar Baru for three years. After that I worked in an ointment factory in Teluk Gong... Now I

work in Pusdiklat KBN, Thank God, I am now a paid employee. (Yoyok, male, 34, working as a driver)

I used to wish for nice clothes like the ones my friends were wearing. My clothes were rather plain, just what one would find in villages, hand-me-downs from relatives. I wanted to go to Jakarta, I said I would like to wear nice clothes... I wanted to work. (Siti, female, 32, housewife)

While men who had migrated after the age of 10 were more likely to be currently working than their counterparts who had not migrated or had migrated before age 10, the opposite relationship was true for women. Half of the women who had been born or had moved to the survey sites before age 10 were working compared to 40 per cent of those who had migrated after age 10. For women in the youngest age group, 20–24, there was no real difference in the percentage working by migration status (around half in each group). The major difference observed was among women aged 25–29, where 52 per cent of those born in Greater Jakarta or who migrated before age 10 were working compared to only 36 per cent of those who migrated after age 10. As migrant women tend to start their family formation earlier, this would explain much of this divergence.

The determinants of being employed were explored further in a series of step-wise logistic regressions performed for males and females separately. The dependent variable in each case was defined as equal to 0 if the person was not employed and equal to 1 if employed.

The resulting odds ratios for males and females are shown in Table 3. For males, the odds ratios confirm the results from the bivariate analysis that men who had migrated after the age of 10 were more likely to be working than those who had either been born in the survey sites or had migrated before the age of 10. The effect of migration status remains significant even when controlling for marital status, parenthood and highest education level.

For females, the picture is different. In the first model, which only controls for age, the odds of working for those who had migrated after age 10 were significantly lower (as shown in the bivariate analysis). However, after controlling for additional variables including marital status (Model 2), the effect of migration age is no longer significant. This indicates that the reason why women who had migrated after age 10 were less likely to be currently employed at the time of the survey was because they were more likely to be married and to have children. Men on the other hand were significantly more likely to be employed if they were married.

The issue arises as to whether migration to Greater Jakarta is partly a marriage strategy for poorer women, that is, they move there in search of a husband who may have higher prospects than the village men at their place of origin. A closer examination of the proportions of men and women who had married by migration status reveals that persons who migrated to the survey sites after age 10 were more likely to be married than other survey respondents. This relationship was evident for both males and females, and for all age groups.

The difference in the time to marriage for women is shown in the survival functions shown in Figure 5 using the detailed migration categories. Women who

migrated in the 10–17 age group and at ages 17 and over married much earlier than the other categories of women. These migrants may have moved to improve their marriage prospects or they may have married to get away from the low level jobs that they were in, or both.

Occupation and Type of Organisation

For the employed respondents, the distributions of occupation groups were examined according to migration category. Table 4 shows for males and females, the percentage within each migration group that were in particular occupation groups. For males, the main difference appears to be that a smaller percentage of those who migrated after age 10 were senior government officials, professionals or managers, administrative staff and support services workers while a higher percentage were process workers and members of the armed forces. For women, those who migrated after age 10 were more likely to be process workers and to be in other elementary occupations. For example, only 10 per cent of working women who were born in or migrated to the survey sites before age 10 were in elementary occupations compared to 30 per cent of those who arrived after age 10.

The type of organisation that respondents worked for was also examined. In many ways, this is even more informative than looking at the occupations because some of the occupations, e.g. ‘business and sales workers’, could include a range of occupations from higher level sales people to cashiers to street vendors. Those migrating after age 10 (both men and women) were more likely to be self-employed and to be working as domestic helpers in households and less likely to be working for a private company.

Number of Hours Worked

Table 5 shows the mean number of hours worked by sex, current age and migration group. For both men and women, those who migrated after the age of 10 on average worked longer hours. However the difference in average number of hours worked by age at migration was not significant for men aged 25–29 and 30–34. For women on the other hand, differences in average hours worked were significant at all ages, with migrant women working substantially longer hours than non-migrant women.

Logistic regression was used to see if migration group had an effect on the likelihood of working very long hours after controlling for other variables. We defined long work hours as working 60 hours or more per week as this described the experience of a quarter of the sample. The dependent variable was equal to 1 if the respondent worked between 60 to 105 hours a week, and equal to zero if they worked less than 60 hours a week. The results, presented in Table 6, indicate that, for women, migration group had a significant effect on the odds of working very long hours even when the type of employer was controlled. The regression shows that those working in family businesses, as domestic workers or those self-employed were much more likely than standard public or private employees to work very long hours.

Wages

Finally, we examine whether migration group affects the level of wages of workers in Greater Jakarta. To do this, we first calculated the hourly wage rate of workers using the reported monthly income from employment and the reported weekly hours of

work. The impact of migration status on the log of the hourly wage rate was then examined separately for males and females controlling for their age, marital status, the nature of the organisation for which they worked (or being self-employed) and their education level.

The results of the regressions are shown in Table 7. For both men and women, the three control variables show the expected results with wages rising with age and with education level and being low for domestic and family workers.

For men, hourly wages for those that migrated at ages 10 to 17 and at ages 17 and over were significantly *higher* compared to the reference category born in Greater Jakarta, after controlling for education. This is counter to the picture of disadvantage for migrants arriving after the age of 10 that is evident in the other analyses in this paper. Two conclusions can be drawn from this result. First, the result suggests that migrant disadvantage is not a matter of negative discrimination but is explained by the low human capital levels of the migrants. Second, migrants seem to have an unmeasured positive advantage. There are many possibilities here. It could be that migrants are more highly motivated than non-migrants and this is recognised through higher wages. It may be that the alternative means of support through family and social networks are lower for migrants meaning that migrants have to work harder. For example, they may have no possibility to share a household with parents. Migrants may also have higher obligations in terms of remittances to family members remaining in the village.

For women, a different result is obtained. A higher percentage of variance is explained by the models, however, after controlling for education, migration group does not have a significant effect upon the wage rate (except for those that had multiple

moves). As observed earlier in the paper, many migrant mothers are not working at all and, in other work from the same survey (McDonald 2010), we have observed that the low employment rate of migrant women is due to early marriage and childbearing and to the fact that many do not have anyone to care for their children while they work. If this is an expected outcome for migrant women now working, they may have a lower level of dedication to work than their male counterparts. It may also be the case that women are 'secondary' earners in couple relationships and the level of the wage may be compromised in order to better balance work and family.

While we suggest that selectivity of migrants may offer explanations of their higher hourly wages, it is important to highlight that due to the limitations of our dataset, we are unable to directly measure the potential effects of selectivity of migrants on our earnings regression. In their large-scale study of rural-urban migrants in China and Indonesia, Frijters *et al.* (2011, p. 269) found positive selection effects for migrants on their hourly earnings in both Indonesia and China, but these effects were insignificant for their Indonesian sample. Future research into the migrant wage differential would benefit from having a longitudinal sample to counter issues associated with unobserved heterogeneity and we plan to re-interview our respondents in 2013.

Conclusion

The paper has set out to examine the relative economic outcomes for young adults who had migrated to Greater Jakarta compared to those who were born there using the 2010 Greater Jakarta Transition to Adulthood Survey. About two out of five young adults surveyed had migrated into the survey site. Given the differential patterns of occupational

and wage outcomes among migrants and non-migrants in the urban labour markets in developing countries, adding migration as another dimension to the already complex maze of transition to adulthood in developing countries is an important research exercise.

The study has shown that the outcomes for migrants depend crucially upon their age at migration and, indirectly, upon whether they moved to Greater Jakarta with their parents or not. Education and employment outcomes for those who had migrated before age 10 were very similar to those for persons that had been born in Greater Jakarta and had never left. The low education and occupational outcomes for those migrating after age 10 were a result of the comparatively early termination of their education. Here, our findings resonate with the idea that migration is most ‘disruptive’ when young people are developing agency and peer networks (IUSSP 2010). Presumably with very few economic opportunities available in the village of origin, these early school leavers set out for Greater Jakarta on their own, that is, not with their parents. Most then established themselves in jobs in Greater Jakarta, men often as street sellers and women often as domestic servants. Over time, some were able to move into the formal sector especially into factory work. However, in general, many remain self-employed or as casual workers working very long hours at low wage rates. They had little to no opportunity to continue their education after their move to the city. Without education, they are unable to compete for office, formal sales or government jobs.

However, when education characteristics are controlled, men that had migrated to Greater Jakarta at ages 10 and over had higher wage rates than those that had been born in the survey sites or migrated before age 10. This suggests that the disadvantage of later age migrants was due to their low human capital levels and not to discrimination or any

aspect of the migration process itself. It is speculated that migrants may be prepared to work harder and that this may be recognised by employers. Migrants may work harder because they are selective of persons wanting to get ahead, or they may be forced to work harder because of their lack of family support in Jakarta, or because they have demands upon them to provide remittances to family members still in the village. Migrant women, controlling for human capital characteristics, have the same wage rates as non-migrants. They may differ from their male counterparts because those with partners may consider themselves to be secondary earners.

Along this line, noting that our results indicate the over-representation of later age female migrants working in elementary occupations, future work on the impact of migration on the transition to adulthood among young women should be encouraged. In particular, apart from focusing on the gender dimension of migration on school-to-work transition, future research should examine how migration may affect marriage and fertility patterns among young adults in urban Indonesia.

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NOTES

1. Our sample is likely to under-represent itinerant workers, e.g. construction workers who sleep on the site, and those ‘living rough’ or in mass accommodation facilities (barracks) in Greater Jakarta. Most of these people will be migrants from outside of Jakarta. It was also difficult sometimes to interview those working in households as domestic servants due to opposition from the household head. Domestic servants are also likely to be mainly migrants. Many people in these categories were interviewed but, in sum, the migrant sample in the survey is likely to somewhat under-represent those working in less regular occupations.

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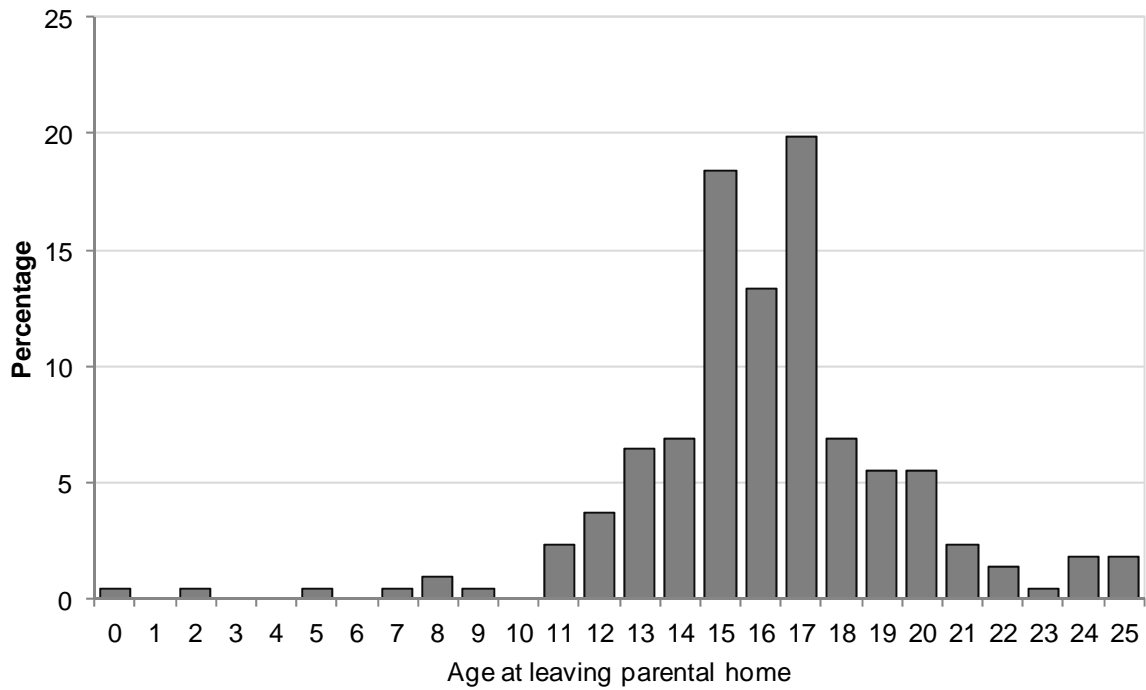
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TABLE 1

Summary statistics of human capital endowments and personal characteristics by migration status (column percentages).

	Since birth	Between ages 0–10	Between ages 10–17	After age 17	Others	Total N
	%	%	%	%	%	
<i>Sex</i>						
Male	45	40	25	38	46	1246
Female	55	60	75	62	54	1760
<i>Age group</i>						
20–24	39	44	24	21	37	1001
25–29	31	28	30	34	36	962
30–35	30	28	46	45	27	1042
<i>Father's education level</i>						
Primary or less	36	33	66	54	28	1272
Junior high school	16	12	11	13	9	428
Senior high school+	42	50	11	22	54	1075
NA/don't know	6	5	12	11	9	231
<i>Respondent education level</i>						
Primary or less	10	11	32	17	12	407
Junior high school	12	12	37	23	17	510
Senior high school	55	53	23	45	40	1471
Certificate	10	11	4	6	8	259
Bachelors	14	13	3	8	23	354
<i>Living arrangement</i>						
Living with one or both parents	68	60	13	5	43	1408
Not living with parents	32	40	87	95	57	1593
<i>Origin</i>						
West Java and Bantam		29	27	27	40	29
Central Java Provinces		38	44	35	29	37
Multiple		33	27	33	24	31
			1	5	7	4
Total %	100	100	100	100	100	100
Total N	1778	128	252	713	134	3005

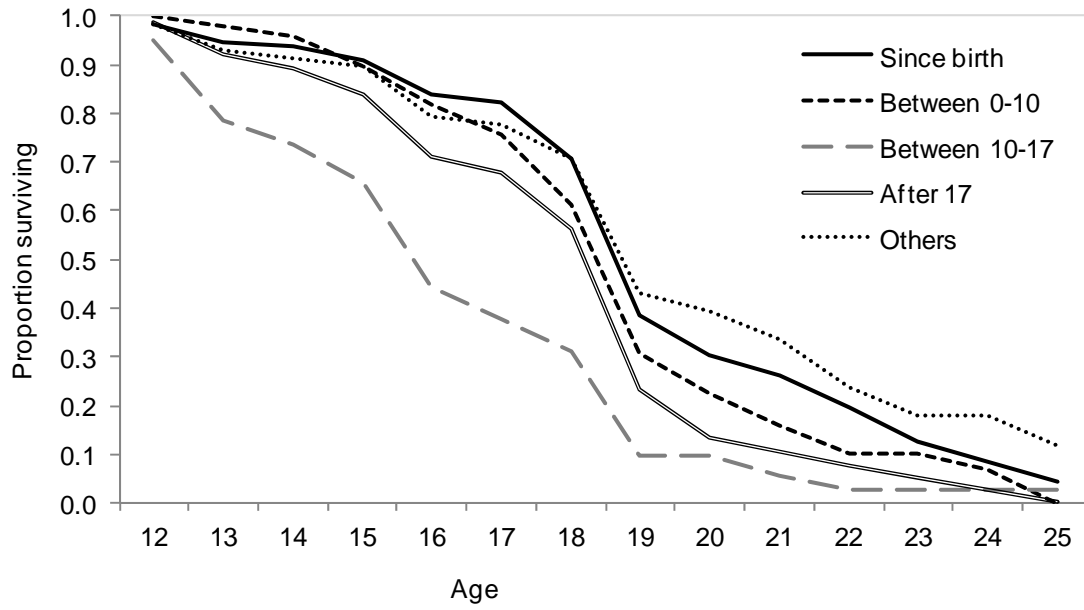
Source: The 2010 Greater Jakarta Transition to Adulthood Survey.



Source: The 2010 Greater Jakarta Transition to Adulthood Survey.

FIGURE 1

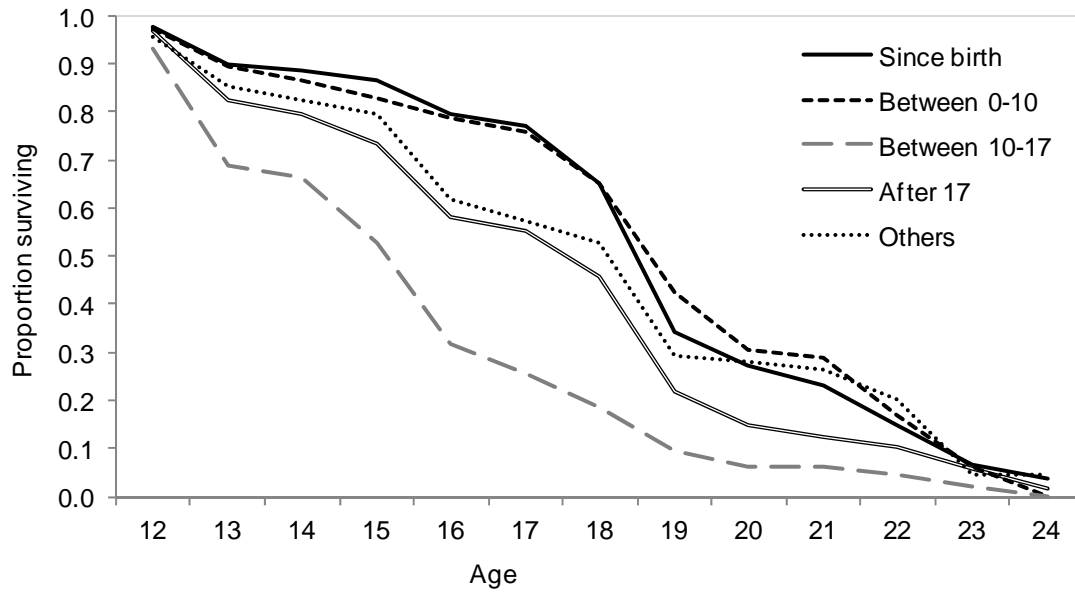
Age at leaving parental home among those who were not currently living with their parents and who migrated to Jakarta, Bekasi and Tangerang at ages 10–17.



Source: The 2010 Greater Jakarta Transition to Adulthood Survey.

FIGURE 2

Survival function of leaving education, males (by migration status).



Source: The 2010 Greater Jakarta Transition to Adulthood Survey.

FIGURE 3
Survival function of leaving education, females (by migration status).

TABLE 2

Activities at different ages, by migration status (column percentages).

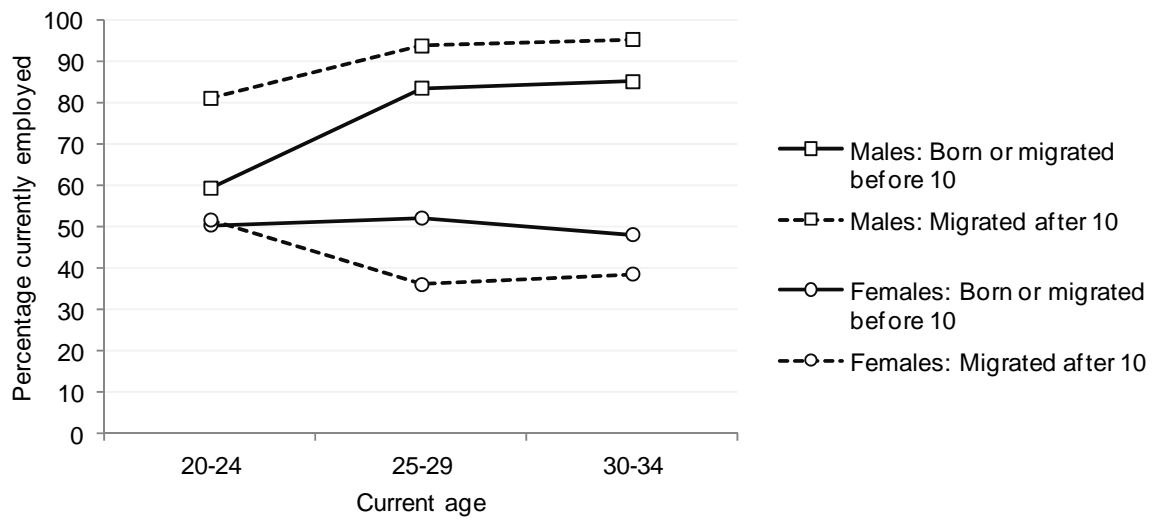
Age 15							
	Since birth	B/n 0–10	B/n 10–17	After 17	Others	Total	
	%	%	%	%	%	%	<i>N</i>
Only studying	88	83	54	76	86	82	2421
Only working	4	6	25	5	6	7	192
Working and studying	1	2	2	2	2	1	39
Not working or studying	7	9	19	17	7	10	300
Total <i>N</i>	1744	126	248	703	131	2952	
Total %	100	100	100	100	100	100	

Age 17							
	Since birth	B/n 0–10	B/n 10–17	After 17	Others	Total	
	%	%	%	%	%	%	<i>N</i>
Only studying	79	75	28	60	70	69	2043
Only working	9	11	51	16	15	14	427
Working and studying	2	2	1	1	2	2	45
Not working or studying	11	12	20	23	13	15	432
Total <i>N</i>	1743	126	248	700	130	2947	
Total %	100	100	100	100	100	100	

Age 20							
	Since birth	B/n 0–10	B/n 10–17	After 17	Others	Total	
	%	%	%	%	%	%	<i>N</i>
Only studying	27	29	7	14	35	23	665
Only working	44	44	55	53	42	47	1372
Working and studying	5	1	2	2	5	4	113
Not working or studying	24	26	36	31	19	27	786
Total <i>N</i>	1737	126	246	698	129	2936	
Total %	100	100	100	100	100	100	

Source: The 2010 Greater Jakarta Transition to Adulthood Survey.

Note: Differences in activity by age at migration is significant for ages 15, 17 and 20 at $p < 0.05$ using a Chi-square test.



Source: The 2010 Greater Jakarta Transition to Adulthood Survey.

FIGURE 4

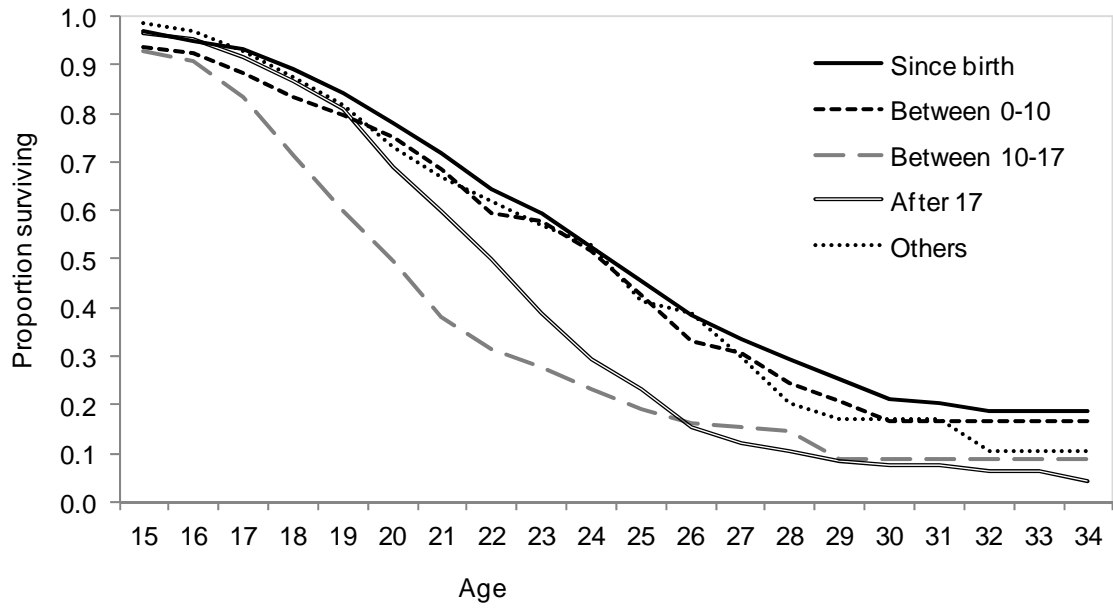
Percentage of respondents currently working, by sex, current age and migration status.

TABLE 3

Logistic regression of current employment, by sex (odds ratios).

	Males			Females		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
<i>Migration to Jak/Tang./Bekasi</i>						
Born or migrated before the age of 10 (ref)	--	--	--	--	--	--
Migrated after age 10	3.04***	2.34***	2.40***	0.69***	0.91	1.02
<i>Age group</i>						
20–24 (ref)	--	--	--	--	--	--
25–29	3.45***	2.19***	2.04***	0.87	1.89***	1.58***
30–34	4.00***	1.60**	1.52*	0.82*	2.55***	2.11***
<i>Currently studying</i>						
No (ref)		--	--		--	--
Yes		0.25***	0.25***		0.40***	0.40***
<i>Married</i>						
No (ref)		--	--		--	--
Yes		3.65***	3.68***		0.37***	0.38***
<i>Has children</i>						
No (ref)		--	--		--	--
Yes		1.07	1.11		0.30***	0.34***
<i>Highest education</i>						
Primary school or less			--			--
Junior high school			1.19			0.75
Senior high school			0.99			0.88
Certificate			1.57			2.10***
Bachelors+			1.99*			3.38***
Number of observations	1,183	1,175	1,175	1,688	1,671	1,671
Log-likelihood	-552.51	-499.45	-494.98	-1158.10	-1043.65	-1022.18
Prob > chi2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Source: The 2010 Greater Jakarta Transition to Adulthood Survey.*Note:* * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.



Source: The 2010 Greater Jakarta Transition to Adulthood Survey.

FIGURE 5

Survival function of time to marriage, women by migration status.

TABLE 4

Occupations of employed men and women, by migration status (column percentages).

Occupation	Males			Females	
	Since birth or before age 10	After age 10	Total	Since birth or before age 10	After age 10
	%	%	<i>N</i>	%	%
Armed forces	1	5	20	0	0
Legislative and senior government officials; professionals and managers	10	5	78	16	11
Technicians and assistant professionals	8	9	72	6	4
Administrative staff and support services	21	14	167	32	16
Business and sales workers (e.g. cashiers)	23	25	213	26	26
Agriculture/animal husbandry	1	1	9	0	0
Process workers, crafters	11	16	114	7	12
Operators and machinery assembly	9	8	76	3	1
Other elementary occupations (maid/cleaners)	17	18	158	10	30
Total %	100	100		100	100
Total <i>N</i>	609	298	907	517	248

Source: The 2010 Greater Jakarta Transition to Adulthood Survey.

Note: Differences in occupation by age at migration is significant for both males and females at $p < 0.05$ using a Chi-square test.

TABLE 5

Mean number of hours worked by sex, current age and migration status.

		Males			Females		
		<i>N</i>	Mean	Std. dev.	<i>N</i>	Mean	Std. dev.
			***			***	
Age 20–24	Since birth, or migrated	192	49.4	17.5	185	48.1	14.5
	Migrated after 10	60	60.6	18.3	60	56.6	22.3

Age 25–29	Since birth, or migrated	198	50.6	16.8	162	47.4	15.2
	Migrated after 10	97	53.0	16.9	63	57.8	22.9

Age 30–34	Since birth, or migrated	169	51.8	17.3	153	44.7	19.6
	Migrated after 10	118	53.0	18.8	103	53.9	22.1

Source: The 2010 Greater Jakarta Transition to Adulthood Survey.*NB:* Excludes those who worked more than 105 hours a week.*Note:* * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$ when mean hours worked by migration status is tested using a t-test.

TABLE 6

Logistic regression of working 60 hours or more a week (odds ratios).

	Males	Females
<i>Migration</i>		
Since birth (ref)	--	--
Between ages 0–10	0.67	1.13
Between ages 10–17	1.44	2.13**
After age 17	1.01	1.66**
Others	1.37	0.95
<i>Age group</i>		
20–24 (ref)	--	--
25–29	0.97	1.28
30–35	0.97	0.74
<i>Marital status</i>		
Married (ref)	--	--
Not married	0.95	0.56**
<i>Highest education</i>		
Primary school or less	0.75	1.37
Junior high school	1.44	1.56
Senior high school (ref)	--	--
Certificate	0.64	0.50*
Bachelors+	0.60*	0.62
<i>Type of organisation worked for</i>		
Private company/NGO (ref)	--	--
Family business	2.77***	6.20***
Government	0.6	0.56
Self-employed	3.66***	5.80***
Domestic worker	2.92***	4.28***
<i>Has a second job</i>		
Yes (ref)	--	--
No	0.46***	0.58
Number of observations	866	758
Log-likelihood	-468.46	-325.015
Prob > chi2	< 0.001	< 0.001

Source: The 2010 Greater Jakarta Transition to Adulthood Survey.*Note:* * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

TABLE 7

Determinants of hourly wage, males (regression coefficients).

	Males			Females		
<i>Migration</i>						
Since birth	--	--	--	--	--	--
Between ages 0–10	-0.07	-0.03	0.02	-0.20	-0.13	-0.18
Between ages 10–17	-0.11	0.04	0.24**	-0.55***	-0.27**	-0.01
After age 17	-0.07	-0.01	0.09	-0.25***	-0.02	0.04
Other	-0.11	-0.08	-0.17	0.17	0.35**	0.22*
<i>Age group</i>						
20–24 (ref)	--	--	--	--	--	--
25–29	0.28***	0.25***	0.14***	0.19**	0.22***	0.09
30–35	0.36***	0.34***	0.23***	0.23***	0.31***	0.21***
<i>Marital status</i>						
Married (ref)	--	--	--	--	--	--
Not married	0.00	0.01	0.13**	-0.18**	-0.14**	0.02
<i>Type of organisation worked for</i>						
Private company/NGO (ref)		--	--		--	--
Family business		-0.57***	-0.25*		-0.85***	-0.59***
Government		0.20**	0.04		0.29**	0.02
Self-employed		-0.32***	-0.11		-0.41***	-0.03
Domestic worker		-0.53***	-0.22**		-1.04	-0.42***
<i>Highest education</i>						
Primary school or less			-0.46***			-0.71***
Junior high school			-0.41***			-0.48***
Senior high school (ref)			--			--
Certificate			0.51***			0.50***
Bachelors+			0.76***			0.72***
<i>Constant</i>	8.62***	8.71***	8.61***	8.67***	8.76***	8.63***
Number of observations	902	901	901	770	770	770
Prob > F	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Adjusted R-squared	0.02	0.08	0.24	0.04	0.21	0.39

Source: The 2010 Greater Jakarta Transition to Adulthood Survey.

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.