



Migration and Human Development in Kalimantan¹

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Abstraksi

Kajian ini ditujukan untuk mencermati peran migrasi dalam pertumbuhan populasi secara keseluruhan dan bagaimana hal tersebut berkaitan dengan perubahan ekonomi dan sosial, bahkan peningkatan sumberdaya manusia di Kalimantan, baik secara historis maupun dalam perkembangannya saat ini. Hal tersebut memiliki implikasi penting dan bervariasi bagi pembangunan ekonomi dan sosial, serta lingkungan hidup, khususnya sebagai dampak yang memiliki perbedaan di setiap tingkat lokal dan distrik. Selain memfokuskan secara khusus pada satu aspek perubahan wilayah, kajian ini juga menjelaskan konteks atas pembangunan sosial secara keseluruhan di Kalimantan. Kajian ini mengindikasikan bahwa migrasi yang berlangsung di Kalimantan secara signifikan berkontribusi pada perbaikan standar kehidupan dan pengurangan angka kemiskinan, meskipun kompetisi yang ketat dan tingginya angka pertumbuhan populasi di wilayah-wilayah yang dikaji. Analisis ini menunjukkan adanya kebenaran dalam perspektif regional, meskipun masyarakat lokal menanggung ongkos sosial akibat dari aliran migrasi yang cukup besar. Oleh karena itu, analisis mengenai perubahan sosial dan lingkungan hidup juga perlu dikaji secara serius sehingga manfaat yang dikenali bukan hanya dapat dinikmati oleh para migran tetapi juga oleh masyarakat lokal, dan khususnya bagi generasi saat ini dan di masa depan.

Kata kunci: migrasi, sumberdaya manusia, pembangunan regional dan sosial.

Abstract

This study examines the role of migration in overall population growth and how it has interacted with economic and social change, and boosted human resources in Kalimantan, both in its history and in recent times. It has had important and varied implications for social-economic development and the environment, especially as the impacts have differed across localities and districts. Besides concentrating on this one key aspect of change in the region, it also provides a context for the some of the other social developments in the Kalimantan. The study indicates that migration in Kalimantan has contributed significantly to improved living standards and reduction in the rates of poverty, despite fierce competition and high rates of population growth in destination areas. This is also probably true from a regional perspective, although local people bear some significant costs from large in-migration flows. It seems imperative, therefore, to address social and environmental concerns more seriously so that these benefits can be enjoyed not only by migrants but also by the local people, by the future and present generations.

Keywords: migration, human resources, regional and social development.

A. Introduction

Indonesia is endowed with two of the main requirements for rapid economic development, rich natural resources and an abundant work force. Among the islands, Kalimantan is best known as an increasingly accessible frontier for exploitation of oil, gas, coal and other minerals, as well as a land and

timber abundant region. It is probably best known internationally for its rich but scarce fauna and flora (especially due to the growing extinction of rain forest and orang hutan). One challenge for successive Indonesian governments has been to marry the natural resources in outer Island regions like Kalimantan with abundant manpower from Java

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to promote exports and industrialization in both regions. This process has been hampered by shortages of technology and capital, often combined in the form of foreign direct investment, and highly skilled manpower. Nonetheless, workers from heavily populated Java and eastern Indonesia have flocked to Kalimantan in search of work and a better life. While migration has opened up new economic opportunities for the local population, absorption of the migrants has by no means been smooth as they often compete with the locals for jobs and livelihoods, both in the cities and in villages. Deep conflicts that erupted into violent clashes in several regions in 1996-2001 are a reminder of the danger of a large scale migration into regions where the local people have depended on local resources for their social and economic well being for centuries (Casson, 2001; ICG, 2001). Besides people from the Java heartlands that have fed population growth in many outer Island provinces for years, many migrants to Kalimantan come from Madura, South Sulawesi and more recently as far afield as East Nusa Tenggara. In addition, there has also been a mobility of the Banjarese from South Kalimantan, in particular, to other places on the island.

With regard to migration patterns in Kalimantan key questions of this study arise as follows; (1) the factors behind high rates of recent migration, (2) the impact of this migration on the rate of population increase (3) the implication on the ethnic mix of people in Kalimantan, (4) the implication on human capital development. The conjecture of these impacts may have influenced economic development, the environment and social cohesion. The processes of population mobility and their implications for the economy and the environment

in Kalimantan are by no means unique in the Indonesian context. The focus is on patterns of in-migration, which have been overwhelmingly positive in net terms, although it also refers to rates and patterns of out-migration as well.

In addition, the study also focuses on the role of migration in overall population growth and how it has interacted with economic and social change, and boosted human resources in Kalimantan, both in its history and in recent times. Migration into and within Kalimantan has had a remarkable impact on demographic profile of the island over the past 40 years. As in other outer Island regions of Indonesia, it has had important and varied implications for social-economic development and the environment, especially as the impacts have differed across localities and districts.

B. The Scope of the Research: General Features of Migration in Kalimantan

Globally, migration across countries and regions has played an important part in population growth, social change and improved living standards, as well as having important implications of the environment. Population mobility has supported economic development in places of migrant destination, as well as higher incomes for people in less advanced places of origin (Martin and Zurcher, 2008; Ratha, D. et al., 2011; United Nations, 2013). Globally, labour scarcity in land abundant and resource-rich countries and regions has been a magnet for migrants from densely settled places. Economic research suggests that higher concentrations of people promotes information

flows, labour exchange and investment, especially in urban areas (World Bank, 2009).

But at the same time, high rates of in-migration globally, both between and within countries, have also been associated with poorly managed and sometimes excessive exploitation of land and natural resources (Marcoux, 2000). Although migration has not necessarily been the prime culprit, deforestation in Kalimantan is held up as one prime example of such processes (Sunderlin and Resosudarmo, 1999). The inter mingling of migrants and local populations has often created tensions, especially if newcomers seek to dominate economics and politics in their new places of residence. Regions are particularly conflict-prone where there is competition between locals and newcomers for control over indigenous land and resources, including where economic activities associated with migrants threaten jobs and the environment, including fragile ecosystems (ICG, 2001; Bertrand, 2004; De Jonge and Nooteboom, 2006; van Klinken, 2007).

Features of these global patterns of migration are observed in the case of Kalimantan. It is a relatively under-populated region by international and national standards, with abundant natural resources and an extensive (though increasingly depleted) forest area that has been the source of livelihood for local peoples for centuries. From the latter part of the 20th century and the first decade of this century, Kalimantan lured in investors and speculators eager to exploit its valuable natural resources. With this came a large inflow of migrants which boosted population numbers and density.

Tables 1 shows broad demographic patterns in 2010. Even though Kalimantan has experienced significantly higher rates of population growth than for the country as a whole, the island still accounted for a small share (six percent) of the Indonesian population in 2010. Population density was still low by national standards: just over 25 persons per square kilometre. It was thus in-between Sumatera and Papua, but a tiny fraction of average density on Java, even after several decades of accelerated population growth. It is not hard to imagine why land and resource abundant Kalimantan has attracted people from the densely population regions of Java and Eastern Indonesia once national and international capital began to flow into the region.

Island/Provinces	Population numbers (000)	% of Indonesia population	Population density (Person/Km ²)	Level of Urbanization (%)
Java	136.563	57.5	1055	58.4
Sumatera	50.613	21.3	105	39.3
Papua	2.851	1.2	8	26.7
Kalimantan	13.772	5.8	25	42.1
West Kalimantan	4.393	1.8	30	30.4
Central Kalimantan	2.202	0.9	14	33.5
South Kalimantan	3.626	1.5	94	42.0
East Kalimantan	3.550	1.5	17	62.1
Indonesia	237.556		124	45.1

Table 1. Population Size, Density and Urbanization Selected Island and Provinces, Indonesia 2010 (Source: BPS, 2010)

Despite the relative abundance of agricultural land and forest areas, the share of the population living in urban areas in Kalimantan was surprisingly high at over 40 %, and more or less comparable with that in the rest of Indonesia in 2010. In East Kalimantan the level of urbanization was very much higher (62%) than the national average. In short, a significant

proportion of the population live in quite different circumstances to the majority of rural people, although much of the discussion of the impact of migration and population growth in Kalimantan has been about forest conversion and expansion of palm oil plantations, and the effect on households who depend mostly on the products of the forests, the rivers and the sea.

What is the best way to conceptualize the changing population-resource balance in Kalimantan from a national and international perspective? One characteristic of economic development in Indonesia has been the mobility of labour out of the densely populated 'centre' (Java-Bali) to less inhabited areas where labour is in short supply. Although still apparent, the sharp contrast in the population-resource balance between Java and the Outer Islands that prevailed at the beginning of the New Order period under Soeharto changed quite dramatically in the half century from the 1960s. Large numbers of Javanese first began to populate areas in Sumatra like Lampung, and then later parts of Kalimantan, Papua and Sulawesi. The term Papua used here is in a generic sense denoting the western part of the much larger island of Papua (and smaller islands) that embraces the two provinces of Papua and West Papua. The former has been internationally recognized as part of Indonesia since 1969 and has gone through numerous name changes before it was split into two provinces (Papua and West Papua) in 2003. Increasingly from the 1970s, the resource rich areas of Kalimantan and to a less extent Papua joined Sumatra as a major destination region for migrants not only from Java but also several other regions, including South Sulawesi.

The four provinces that make up the Indonesian part of the island of Kalimantan resemble both the islands of Sumatra and Papua in their relative abundance of land and natural resources and low densities of population. Government-assisted transmigration of land-scarce farmers mainly from Java also played a role in new settlements established in the 1970s and 1980s, and the legacy of these programs, both positive and negative, is still felt today. The earlier prominent role of transmigration in population mobility was subsequently swamped by migration for work in logging and timber mills, on private plantations, and in new mining ventures. All of these activities spread well beyond a small number of foreign dominated enclaves in the early years. However, Kalimantan differs from much of Sumatra and Papua in several important respects. Generally, population densities are much lower and large-scale in-migration is more recent than in Sumatra. Population movements have been more driven by a series of resource booms in timber, oil and minerals since the 1970s. On the other hand, population density has been higher in most regions of Kalimantan compared with Papua, tree crop exports have been of greater significance and the main established urban centres are larger. Urban centres offer a greater role for the local people, many of whom have been part of urban society for at least several decades (Resosudarmo et al., 2009).

This study further compares and contrasts the role of migration, its determinants and potential impacts within the four provinces of Kalimantan prior to 2013 before a fifth province, North Kalimantan or Kalimantan Utara (KALTARA) was created in the northern part East Kalimantan, the largest of the

four provinces as the result of 'pemekaran' (the division for a new province). All differ in a number of key respects, as might be expected. Some of these special features led Hal Hill (1989) to categorize the four provinces in different ways in his classic book on the regional economies of Indonesia: South Kalimantan was described as a "settled outer Island Province" ("the Banjarese Heartland") in contrast to what he termed "Sparsely Populated" Central and West Kalimantan, and the "Resource Rich" province of East Kalimantan.

The most obvious contrast in population dynamics and development is between East Kalimantan and West Kalimantan. East Kalimantan stands out in terms of the high rate of economic and demographic change, and shares more in common with resource rich Central Kalimantan than the other two provinces. West Kalimantan, once the most developed province on the island from a number of perspectives, has lagged behind the other three provinces. Finally, South Kalimantan is less dependent on natural resources and has experienced more 'balance' between various industries and in regard to diversity of employment opportunities. A few of other contrasts are worth mentioning. East Kalimantan is geographically much closer to both Mindanao and eastern Indonesia, whereas West Kalimantan's borders Sarawak and has had more intensive ties historically with Singapore and Malaysia than with Indonesia's islands to the east. Among the four provinces, East Kalimantan stands out in terms of high rates of population growth, in-migration and urbanization rates, which are partly associated with long historical ties with Sulawesi, also shaped by geographical proximity (Tirtosudarmo, 2008). It has

by far the highest per capita income and the highest rates of growth of output. In contrast to the situation in East Kalimantan, population growth in West Kalimantan has been much slower in recent years, as it has in the capital city, Pontianak, once the second most populous city in Kalimantan. West Kalimantan now has the lowest level of per capita income and the highest poverty rates among the four provinces, after once having the highest per capita income among the four provinces in the early 1970s (Siahaan and Daroesman, 1989).

The other two provinces also have special features. Central Kalimantan is a comparatively isolated, under-populated but rapidly growing frontier region. Like East Kalimantan it is rich in natural resources. In many ways, Central Kalimantan's development in relation to migration mirrors that of East Kalimantan but the intensity of external impacts have been less pronounced.

South Kalimantan on the other hand has a much smaller land area than the other three provinces and is the most densely populated province of Kalimantan. It has a more 'balanced' economy structure than the other provinces, with a moderately large area of established agriculture (rice and rubber) and several large industrial firms processing timber and other products. The south of the province has an extensive network of roads linking the northern inland areas to the Banjarmasin, the capital city of the province.

C. Population Growth, Migration and Human Development in Kalimantan

The populations of the Kalimantan provinces grew fastest in the 1970s and 1980s, partly related to high levels of fertility but more importantly associated with high rates of net in-migration. However, total fertility rates (TFR) are estimated by BPS to have been higher than national rates in all the Kalimantan provinces except South Kalimantan from 1971. The influence of migration is clearly visible in the case of East and to a lesser extent Central Kalimantan in the 1970s and 1980s. Overall population growth rates were just under six percent per annum in East Kalimantan in the 1970s and in excess of four percent in the 1980s; in the first case this was well over twice the national rates of growth (2.1% per annum) and in the second around almost double the national average (Figure 1). As rates of migration slowed, population growth in East Kalimantan fell back to rates more comparable with other more rapidly growing Indonesian provinces (2-3%) in the next two decades, 1990-2010.

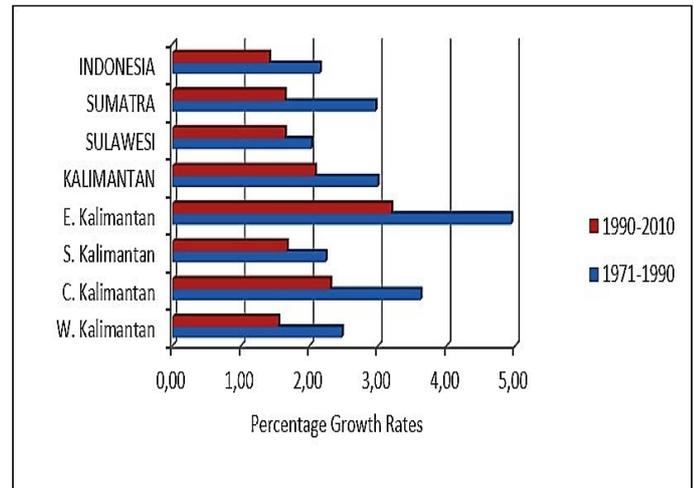


Figure 1. Population Growth in Kalimantan and other Islands of Indonesia 1971-2010

(Source: BPS, Population Census 1971, 1980, 1990, 2000 and 2010 (BPS, Population Indonesia by Province 1971-2010))

In contrast, population growth rates in South and West Kalimantan were much closer to the national average of around two percent in the 1970s and 1980s, which then fell to around 1.5% in subsequent decades. Population growth rates slowed most sharply in West Kalimantan in the 2000s, where net (recent) migration turned negative in the 2000s: the number of people leaving West Kalimantan exceeded the number entering the province in the five years prior to the census in 2010. One important factor contributing to rapid population growth in the early years was transmigration. This was a government financed scheme offered families a plot of land (usually two hectares), transport and initial cost of living support to induce them to migrate to the more land abundant regions outside Java-Bali (Hardjono, 1982). It is estimated that around 150,000 mainly Javanese participated in the program for South Kalimantan and closer to 100,000 in Central and East Kalimantan over the period 1969 to 1986. It is likely that this directly augmented the size of the population by around 10-15% over and

above its level in 1971 in these three provinces in the period 1971-1990. By the time the program was abandoned at end of the 1990s, it is estimated that 21 percent of the region's population were transmigrants, rising from some 3-5% two decades earlier (estimates of the numbers involved are cited in the ICG (2001) report on the conflicts in Central Kalimantan. Following the downfall of Soeharto, the new government abandoned the most ambitious and bizarre of the agricultural settlement schemes to resettle over a million households on one million hectares of newly cleared agricultural land in Central Kalimantan, over a six year period (ICW, 2001: 15-16).

The numbers accelerated to the least populated province in the island, Central Kalimantan, in particular in the 1980s and 1990s. The slowdown in population growth rates during the 1990s can be partly attributed to the all but ending of officially sponsored migration under the transmigration program by the mid to late 1980s (Hardjono, 1986; World Bank, 1988).

Note that migrants are defined as all persons crossing provincial boundaries, so Banjarese who have moved to Central or East Kalimantan are defined as migrants. Life-time migrants are all the people born in another province and have been resident in a given province for at least six months. Recent migrants are all people aged over five years who are resident in a province other than their place of residence in the past five years. Gross and net-migration rates are usually expressed per 1000population at the time of the census. Tables 2 and Table 3 present data on in- and out-migration to the four provinces, defined both according to place of birth (lifetime migration) and place of residence,

five years prior to the census (recent migration). In Tables 2 and Table 3 the rate of migration is expressed as a percentage of the total population of each of the provinces in Kalimantan at the time of the census.

Provinces	In lifetime migrant (%)				Out lifetime migrant (%)			
	1980 ¹	1990 ¹	2000 ¹	2010 ²	1980 ¹	1990 ¹	2000 ¹	2010 ²
WKalimantan	4.3	6.1	7.2	6.7	3.0	3.6	4.1	5.2
CKalimantan	16.7	17.2	23.5	23.8	3.0	3.4	3.0	4.2
SKalimantan	6.8	10.5	12.1	13.4	8.1	7.8	8.6	8.6
E Kalimantan	30.0	32.0	35.0	36.8	3.5	3.4	3.7	4.2

Table 2: Percentage of Lifetime Migrants In and Out of Kalimantan In 1980-2010 (Source:¹BPS, 2006, *Fertilitas, Mortalitas, dan Migrasi: Hasil Survei Penduduk Antar Sensus 2005*, Seri S2, Jakarta, p. 109. Tabel 12.3; ²BPS, 2011, *Migrasi Internal Penduduk Indonesia: Hasil Sensus Penduduk 2010*, Jakarta, p.41. Table L1)

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Three patterns stand out quite clearly. First, as implied by population growth rates, rates of lifetime and recent migration (both gross and net) were very

much higher in East and Central Kalimantan than in South and West Kalimantan.

As with population growth rates, the two extreme cases were East Kalimantan and West Kalimantan. In the former province, from 1980 onwards over one-third of the total population was born elsewhere; this share is only rivalled by the Riau Islands (including Batam) among Indonesian provinces. In West Kalimantan on the other hand, the percentage of migrants was a small percentage of the total population, around 4-7% of lifetime migrants and around one percent or less among recent migrants from 1990 onwards. Second, migration rates have declined quite steeply over time, particularly in East Kalimantan. This can be seen most clearly from data on recent migration rates in Table 3. Whereas recent migrants accounted for 13% of the population in East Kalimantan in 1980, this proportion had more than halved by 2010. In other regions too, the share declined and the proportion of lifetime migrants hardly rose after the year 2000. The absolute number of people from elsewhere in Indonesia continued to increase. But as a share of the population in Kalimantan it did not rise much after 1980. In other words, the migrant population increased at about the same rate as the local born population. The employment effects from the boom in palm oil and coal production were most likely offset by a declining share of workers in the timber industry in the 2000s, and the cut-backs in sponsored migration compared with earlier periods. Third, net migration rates are almost universally positive in Kalimantan. Migration into the province exceeded out-migration, mostly by a significant margin. The example of East Kalimantan is again very clear. The percentage of in-migrants was almost

10 times higher among lifetime migrants compared with out-migrants (ie. those people born in East Kalimantan who were residing outside the province). A partial exception to this pattern was South Kalimantan where significant numbers of people born and recently residing in the province had moved to other provinces in Indonesia. In this case the movements were either to other Kalimantan provinces or to Java, and made by former transmigrants, farmers or officials.

How do these rates of migration compare with those in other Islands and provinces in Indonesia? In an Indonesian context, it would seem Kalimantan is by no means exceptional in regard to the percentage of the population from outside the island. Table 4 shows data for provinces in Sumatra, and Sulawesi and for Papua in 2000 and 2010. On average, provinces in Papua and Sumatra recorded a higher proportion of lifetime migrants than those in Kalimantan, whereas the percentage was smaller for Sulawesi. On the other hand, Kalimantan provinces do stand out for the relatively high percentage of recent migrants that came from other regions in the periods 1995-2000 and 2005-2010, or five years before the population censuses in 2000 and 2010.

Island Group	Millions					Proportion of the population		
	Population		Lifetime	Recent migrants		Lifetime Migrants	Recent migrants	
	2000	2010	Migrants	2000	2010		2000	2010
Sumatra	42.48	50.63	7.57	1.36	1.25	0.15	0.03	0.02
Kalimantan	11.31	13.79	1.91	0.42	0.48	0.14	0.04	0.04
Papua	2.21	3.59	0.69	0.08	0.12	0.19	0.03	0.03
Sulawesi	14.88	17.38	1.71	0.36	0.36	0.10	0.02	0.02

Table 4: Lifetime and Recent Migration Moving to Major Island Groups in Indonesia, 2000, 2010
 (Source: ¹BPS, 2000, *Penduduk Indonesia: Hasil Sensus Penduduk 2000*, Jakarta; ²BPS, 2010, *Penduduk Indonesia Menurut Propinsi/Kota Hasil Sensus Penduduk 2010*, Jakarta)

In order to better comprehend the significance of these migration patterns for the society and economy in Kalimantan, we need to understand where most of the migrants came from, which in turn gives us a clue as to their main motive for moving to Kalimantan. The 2010 Population Census collected data on the ethnicity of the resident population in each province. The data are incomplete and illustrative only of the background of migrants and their likely motives from moving to the island. Figure 2 suggests that three ethnic groups dominated the migration streams in 2010: Javanese (27%) – not including the Madurese – Banjar and other Kalimantan peoples (21%) and Bugis and other Sulawesi peoples (18%). All three of these groups are prominent across the provinces of Kalimantan, especially the Javanese.

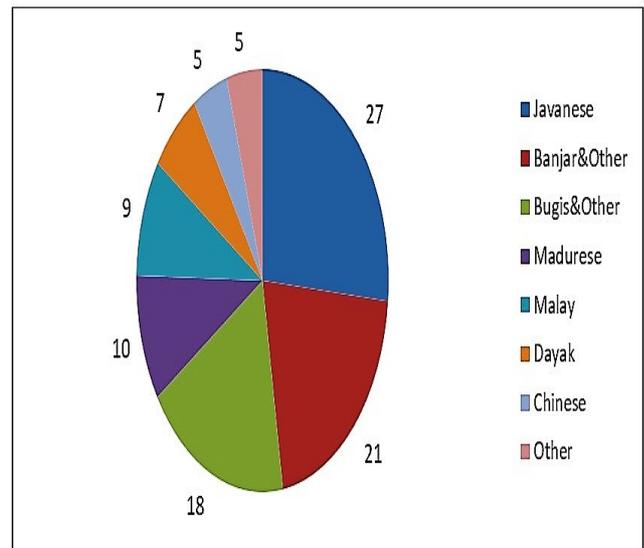


Figure 2: Distribution of the Population by Main Ethnic Group, Kalimantan 2010 (estimates)
 (Source: BPS, 2011, *The Indonesian Population, Results of the 2010 Census*, Table 12.9)

Some ethnic groups among migrants are specific to certain regions however. For example Malays, Chinese and Madurese are all commonly found in West Kalimantan, mostly as farmers and traders, but not in other parts of the island (Figure 3). Figure 3 shows data just for West and East Kalimantan, the two provinces that have contrasting patterns of in-migration. Both Central and South Kalimantan have a more even spread of migrants from other parts of Indonesia. Proximity to West and East Malaysia and the Asian mainland has contributed to a large Malay and Chinese population since colonial times; tin mining attracted Chinese and the presence of Malay sultanates in West Kalimantan a sizable Malay population. Similarly, East Kalimantan has been especially favoured by Bugis over many decades related to proximity and the engagement of the very mobile Bugis people in fishing and farming activities in East Kalimantan (Tirtosudarmo, 2008).

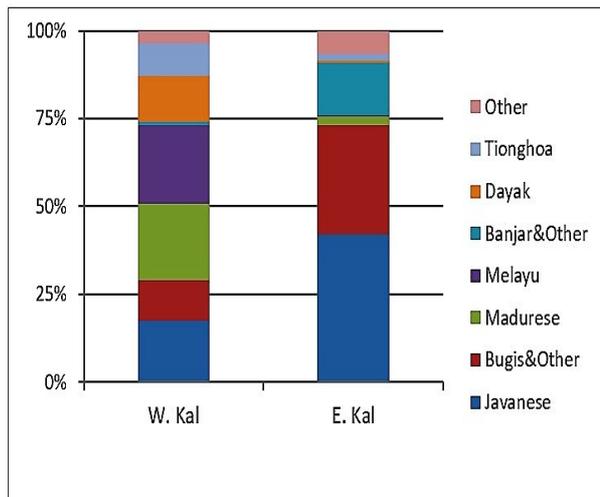


Figure 3: Distribution of Migrants by Ethnicity, West and East Kalimantan, 2010
 (Source: BPS, 2011. The Indonesian Population, Results of the 2010 Census, Table 12.9)

Figure 4 shows that migrants from the Java provinces dominate. Migrants from East Java, many of them reportedly Madurese, are particularly prominent among people moving from Java to all the Kalimantan provinces and especially to South and East Kalimantan. Surprisingly, East Java migrants do not predominate among migrants to West Kalimantan, given the history of Madurese migration to the region. The data also confirm the high proportion of Bugis from South Sulawesi that have migrated to East Kalimantan.

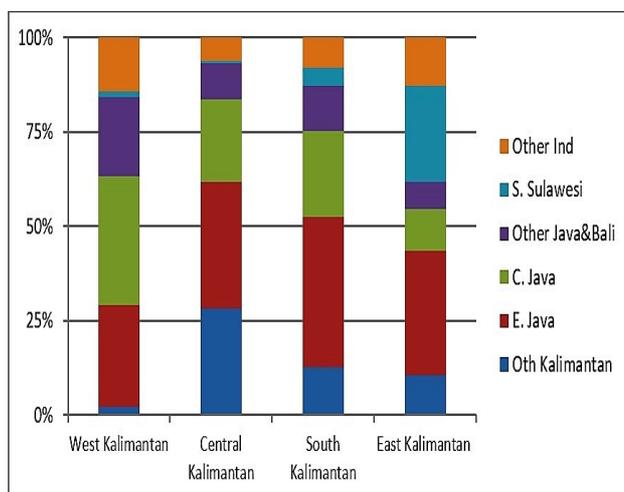


Figure 4: Distribution of Migrants in Kalimantan Provinces by Place of Birth, in 2000 (%)
 (Source: BPS, 2011. The Indonesian Population, Results of the 2000 Census)

It is useful to supplement the incomplete information on ethnicity with data showing the province of birth among migrants to the Kalimantan provinces. Figure 4 shows these data by province for the year 2000 and whereas Figure 5 compares data for all for provinces together with information on migration by birthplace of migrants for the year 1971 (Figure 5).

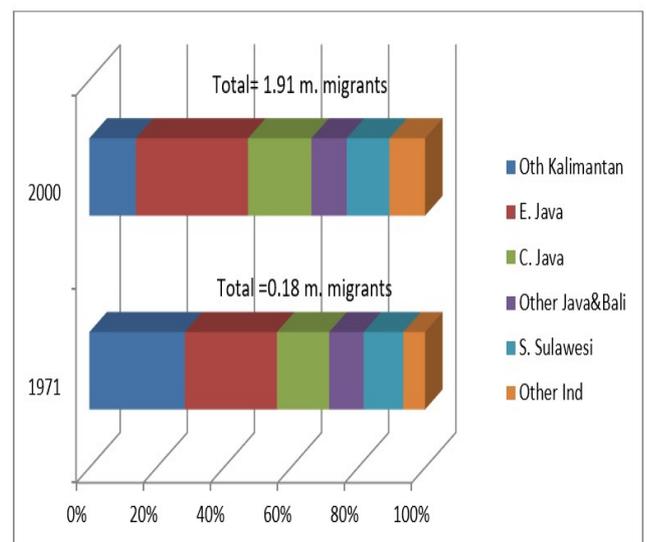


Figure 5: Distribution of Migrants in Kalimantan by Place of Birth, 1971 and 2000
 (Source: BPS. Results of the 1971 and 2000 Censuses)

Two notable changes in the migration composition occurred over the 30 year period 1971-2000. First, the proportion of local Kalimantan migrants, mainly Banjar moving from South to Central and East Kalimantan declined. Second, the proportion from East Java increased, although not it appears to West Kalimantan, where Madurese were well known for the conflicts which occurred with the local Dayak population in 1996-1999. After conflicts with the local Dayak population many Madurese fled West Kalimantan; by the year 2000, the number of Central Javanese in the province already outnumbered lifetime migrants from East Java. After conflicts with the local Dayak population many Madurese fled

West Kalimantan; by the year 2000, the number of Central Javanese in the province already outnumbered lifetime migrants from East Java. East Kalimantan has clearly been the main target of migrants to Kalimantan over the past 30-40 years. Successive 'booms', timber, oil and gas and then coal fuelled the movement of mainly Javanese and to a lesser extent Bugis to the region, as well as movements of Banjarese between provinces in Kalimantan. These migrations were also associated with high rates of urbanization, as the provincial and district governments spent newly gained revenues on urban development and services. Central Kalimantan showed a similar pattern of in-migration to East Kalimantan, though at a lower level of intensity. Natural resources booms were less of a lure in West and South Kalimantan; more migrants appear to have moved into agriculture, initially as transmigrants working on small farms and later to work on palm oil plantations.

At the same time, some remarkably high population growth rates were experienced in initially relatively sparsely populated regions, implying much greater pressure on local resources. This happened mainly due to the expansion of industries such as palm oil and coal. These industries attracted mostly Javanese migrants as blue collar workers. Two examples are Kabupaten Kotawaringin Barat, about 20 km from the coast in Central Kalimantan and Kabupaten Kotawaringin Timur in the same province. The population in these two kabupaten grew in a range of 4-6% per annum in the 1980s and 1990s, largely due to migration for work in palm oil plantations in the region. These are very high rates of population growth for mainly rural communities. It is perhaps

no accident that Sampit, the capital of Kotawaringin Timur, the population of which is estimated to consist of 60% Madurese, was the center of violent clashes between Madurese and Dayaks in 2001 (ICG, 2001).

However, the study of provincial patterns of migration disregards some major differences in migration rates at district and sub-district levels in the four Kalimantan provinces. Rates of migration were very high in some districts when there were high levels of transmigration and during the resource booms in the 1980s and 1990s. Alternatively, rates of population growth and in-migration fell in selected districts as a result of major ethnic conflicts during the early years of reformasi. For example, in the Kabupaten Sambas in West Kalimantan many Madurese moved into agriculture and trade in the 1970s and 1980s, and then moved back to Madura or to less threatening environments in Central, East and South Kalimantan around 1998-1999 and into the 2000s. The slowdown in population growth in Central Kalimantan in 2000-2010 has also been viewed as partly a consequence of out-migration associated with ethnic conflict. One study estimates that as many as 150,000 people, mainly Madurese, moved out of Central Kalimantan during this period (Jonge and Nootenboom, 2006: 457). This is most likely an overestimate but clearly tens of thousands were affected. The exodus was mainly from Kabupaten Kapuas (Sampit region) where population growth rates fell from a high 3.4% in 1980-1990 to 1.6% in the subsequent decade and then the population actually fell absolutely (by -0.3% per annum) in 2000-2010.

Population growth rates were also particularly high in several East Kalimantan kabupaten owing to

migration for work in agricultural and mineral projects. For example, in Kabupaten Pasir across the Mahakam river from the main city of Samarinda, the population grew at a remarkable 10% per annum in 1980-1990, related to transmigration and palm oil developments. Kabupaten Berau on the coast (located not far from Muara Tidung and Tanjung Bay) grew at just under seven percent in the subsequent decade 1990-2000. Several of the mostly resource-rich and newly formed districts located close to the coast in East Kalimantan, such as Kutai Timur (where KPC, Kaltim Prima Coal is located), Malinau, Nunukan and Tona Tidung, All these districts recorded population growth rates of over five percent per annum in the period 2000-2010. Many migrants to recently established districts and districts with resource-based industries in the general vicinity of the capital city of Samarinda settled with their families in the provincial capital, and commuted to work on a weekly or even a monthly basis. It is not surprising then that population growth rates (3.4% per annum) were higher in Samarinda than in the other provincial capitals in Kalimantan, save the much smaller city of Palangkaraya in Central Kalimantan, in the period 2000-2010.

D. The Impacts of Migration on Human Development, Rural-Urban Migration, Urbanization, and Environment in Kalimantan

Migration has the potential to transform the skill and human capital landscape of receiving regions and countries. While the data do not allow us to examine this relationship directly, it seems clear that this has been happening in Kalimantan over the past several

decades. At the same time, greater regional autonomy and more funds available for governments in the resource rich areas have made possible expansion of schooling among the local-born population at high school and universities. This includes scholarship programs to study at home, in Java and even abroad. Table 5 provides data on the schooling achievements of the labour force in the provinces of Kalimantan, compared with Sumatra and all of Indonesia. While the share of the population in Kalimantan with primary or less than primary schooling (50% in 2012) was above Sumatra and Indonesia, the upper secondary and tertiary educated population was growing at roughly the same pace.

	W. Kal	C. Kal	S. Kal	E. Kal	KAL	SUM	IND
<i>Distribution of schooling (%)</i>							
<=Primary	63	49	65	53	50	41	47
Junior high	19	25	18	19	18	21	19
Senior high	15	21	13	21	24	29	25
Diploma	0	2	1	1	1	1	1
University	3	3	3	7	7	8	8
Total	100	100	100	100	100	100	100
N (million)	2.1	0.9	1.6	1.9	7.0	24.0	118.1
<i>Growth of the labour force by level of schooling (% p.a.)</i>							
<=Primary	-0.1	2.4	-0.3	3.2	0.7	-0.7	-0.5
Junior high	-1.2	-0.3	2.5	3.8	1.1	1.3	2.3
Senior high	2.9	1.9	6.8	5.3	4.5	4.6	4.3
Diploma&univ.	8.3	7.7	7.1	6.2	7.2	8.8	7.7
All Levels	0.6	2.0	1.9	4.4	2.0	1.7	1.6

Table 5: Educational Achievements of the Labour Force and Growth, Kalimantan Provinces Sumatra and Indonesian, 2012, and 2002-2013.

(Source: National Labour Force Survey (SAKERNAS) 2002, 2012. August rounds)

The educational achievement of the work force was significantly better in the two more rapidly growing provinces of East Kalimantan and (to a lesser extent) Central Kalimantan. This is demonstrated by the

lower percentage of less educated persons and higher percentage of secondary graduates compared with South and West Kalimantan. Indirectly, the data suggests that migration may have contributed to a richer human resource base in the former two provinces that have experienced higher rates of in-migration in the past several decades. This is confirmed by census data (Vidyattama, 2014: 8). The 1990 and 2000 censuses indicate that average years of schooling were significantly higher among the in migrant population in each of the Kalimantan provinces than among the total population of the province (including migrants), although the gap had narrowed in the ten year period between the censuses. East Kalimantan, in particular, appears to be a melting pot for growth of the labour force with different levels of completed schooling. The proportion of less educated persons was expanding quite rapidly, most likely for employment in rapidly expanding palm oil, coal mining businesses and urban informal activities. But equally, the more educated work force had also grown quickly, probably involving appointment of professionals from within and outside the province in the new resource-based industries as well as civil servants, teachers and health care workers in the expanding cities of Samarinda and Balikpapan.

How is this human resource base reflected in the changing industrial composition of the work force? Growth of the labour force in Kalimantan is above the national average and this was associated with a significant expansion of the agricultural workforce in the decade 2002-2012 (Table 6). In this period, agriculture accounted for around 40% of total employment, at a time when employment in this industry was declining in many provinces and

nationally. Looking at the distribution of employment in agriculture in 2012, it seems likely that the plantation sector (especially palm oil in all provinces) mainly employing migrant labour has probably driven this employment expansion.

	W. Kal	C. Kal	S. Kal	E. Kal	KAL	IND
Agriculture	0.5	1.8	1.1	6.6	1.6	-0.4
Non-agriculture						
Mining	6.5	14.8	11.5	15.4	11.9	9.3
Manufacturing	-6.1	-6.3	-2.3	-4.6	-4.3	2.4
Construction	3.9	5.3	15.3	4.6	6.4	4.6
Trade	2.1	1.8	4.0	5.4	3.6	2.6
Services	4.1	4.4	1.0	3.5	3.0	5.0
Other sectors	3.0	0.7	4.1	3.3	3.2	3.0
<i>Sub-Total</i>	2.1	3.1	3.2	4.0	3.2	3.4
<i>Formal Sector</i>	3.0	6.5	5.3	4.6	4.6	4.8
<i>Informal sector*</i>	0.7	-0.7	1.3	2.7	1.2	2.0
ALL SECTORS	1.1	2.4	2.3	4.7	2.4	1.9

Table 6. Annual Growth of Employment in Major Sectors, Kalimantan Provinces, and Indonesia, 2002-2012 (% p.a.) Notes: Informal includes all casual wage workers, self-employed and family workers. Formal includes all regular wage workers and employers with wage employees.

(Source: SAKERNAS 2002, 2012)

An appraisal of the characteristics of the agricultural work force provides some indication of the different ways in which agricultural expansion has interacted with human resources in various parts of the island. Here we compare the two extreme cases, East and West Kalimantan. In East Kalimantan, the agricultural workforce grew much faster than elsewhere in Kalimantan in the first decade of this century, a higher percentage of those employed were male (60%), they were more likely to be regular wage employees (24%) and have at least a primary education (75%) compared with elsewhere in Kalimantan (Figure 6). The pattern was very different in West Kalimantan. A much higher proportion of the agricultural work force were

female, had not achieved a primary education and a much smaller proportion were regular wage workers. In West Kalimantan, older-aged employees on family farms predominate, in contrast to the more varied pattern of deployment of younger and more educated males in East Kalimantan.

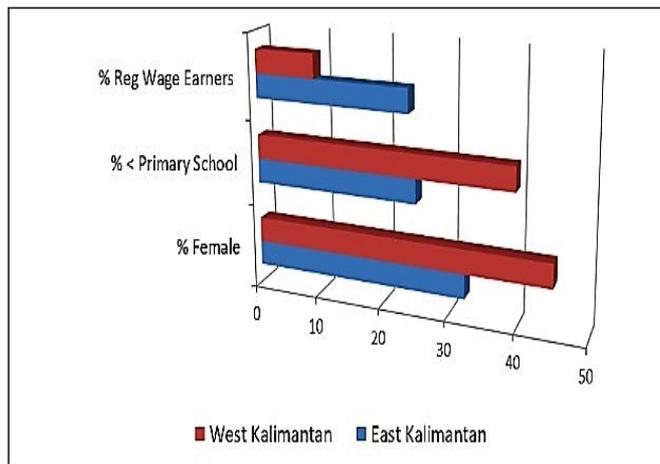


Figure 6. Contrasting Characteristics of Agricultural Workers in West and East Kalimantan, Indonesia 2012

(Source: Department of Agriculture, Indonesia. *Characteristics of Agricultural Employment in Indonesia, 2012*, Jakarta based on analysis of data from the August round of the National Labor Force Survey, 2012).

The formal sector, especially mining and construction jobs, were grown quickly but not the informal sector among non-agricultural industries in Kalimantan in the decade 2002-12. Remarkably, manufacturing employment declined in every province in Kalimantan in this period (and sharply in Central and East Kalimantan), going against the national trend and perhaps reflecting difficulties faced by timber firms in the 2000s. On job creation, migration appears to have contributed to more job opportunities in both less and more skilled jobs in Kalimantan in the recent decade. Agriculture and some mining activities such as coal that utilize unskilled workers have probably absorbed most of

the less educated, migrant workforce. At the same time, larger and more capital and skill intensive firms and the service sector seems to have been offering new jobs to more educated migrants, as well as to the local population. While educational achievements of the employed population are still below those in the rest of the country, the more rapidly growing provinces such as East Kalimantan have been catching up. However, West Kalimantan seems to have been left behind.

The changes in employment highlighted in the previous section are partly related to a dramatic transformation of the urban landscape in many parts of Kalimantan over the past several decades. While the main environmental threats (especially deforestation) are rural, it is important to bear in mind that the urban population growth has been equally important in population dynamics from the 1970s into the 1990s and continuing on into the 2000s. Table 7 shows the main changes in the spatial distribution of population between rural and urban areas from the 1970s in Kalimantan compared with Sumatra, Java and the rest of Indonesia. Kalimantan did not urbanize much faster than the rest of Indonesia over the period 1971-2010. Nevertheless, the urban landscape was transformed, and the share of the urban population in towns of cities rose from just over 15% in 1971 to over 30% in 1990 and then just above 40% of the total population by 2010.

	Urban Population (000)		Rural Population (000)		Level of Urbanization (%)		Population Growth % per annum 1971-2020	
	1971 ¹	2010 ²	1971 ¹	2010 ²	1971 ¹	2010 ²	Urban	Rural
Kalimantan	280	1079	1740	2471	13.9	30.4	3.5	0.9
C. Kalimantan	37	1215	663	2411	5.3	33.5	9.0	3.3
S. Kalimantan	306	925	1393	1277	18.0	42.0	2.8	-0.2
E. Kalimantan	236	2728	498	1665	32.2	62.1	6.3	3.1
KALIMANTAN	859	5798	4293	7974	16.7	42.1	4.9	1.6
SUMATRA	3620	19891	17192	30722	17.4	39.3	4.4	1.5
JAVA	16588	79753	59514	56810	21.8	58.4	4.0	-0.1
INDONESIA	23095	107138	96137	130418	19.4	45.1	3.9	0.8

Table 7: Urban and Rural Population and Population Growth and Urbanization, Kalimantan Provinces and Other Islands, Indonesia 1971-2020

(Source: ¹BPS, 2000, Penduduk Indonesia: Hasil Sensus Penduduk 2000, Jakarta, p.161: Table 2.3; ²BPS, 2010, Penduduk Indonesia Menurut Propinsi/Kota Hasil Sensus Penduduk 2010, Jakarta, p. 10-11)

While urban growth in West and South Kalimantan was steady, one remarkable development has the transformation of Palangkaraya and other fledgling towns in Central Kalimantan. From a tiny urban population of less than 50,000 in 1971, the province now has several large urban centres, with a combined total of over one million inhabitants in 2010 when urban dwellers accounted one-third of the provincial population. Urban growth rates (9% per annum) were unusually high. Besides in the capital of Palangkaraya, growth was especially marked in port city of Pelabuhan Kumai that links Central and parts of West Kalimantan to Java (through the port of Semarang), and Pangkalan Embun (capital of Kabupaten Kotawaringin Barat) one the main centres of the palm oil industry in Central Kalimantan. Urbanization was also rapid in East Kalimantan where, as noted, nearly two thirds of the population lived towns and cities, mostly in the two major cities of Samarinda and Balikpapan in 2010. It should be noted, however, that one-third of the population of East Kalimantan was already

urban in 1971, well above the national average. Balikpapan had already become a centre of oil and gas exploration and refining. Samarinda, the capital of the province, is strategically located at the mouth of the Mahakam river, a major transport hub for the province. This port city which oversaw the international trade in logs and other primary products that had begun to flourish from the mid to late 1960s (Manning, 1971). Curiously, going against the national trend, the share of urban population is reported as having declined in Kalimantan in 2010 compared with 2000. The booming palm oil and coal industries may have contributed to the slowing of urban growth. The flip side of this rapid urban development was much slower population growth in rural areas. It was not negative as on Java, however, and rural population growth was still quite high by international standards (above three per cent) in both Central and East Kalimantan.

Clearly these figures support the picture of a growing rural population which may threaten some potentially fragile rural environments in these provinces (Effendi et al., 2010:153-177). While Samarinda is by no means representative of towns and cities in East Kalimantan, it does provide some insights into the processes of rural-urban migration in a resource rich and labour scarce part of Kalimantan. Comparable with Pekanbaru in Riau, Samarinda has been one of the most rapidly growing provincial capital cities in Indonesia for several decades. This growth has been associated with its role as a provincial capital, its proximity to the source of natural resources, as well as its function as a trading port for the shipment of commodities from inland centres along the Mahakam river for export overseas. Historically, it has been the centre of two

booms. First, the timber boom of the 1970s-1990s, first consisting mainly log exports in the early period and then plywood and processed timber later. In the 1990s and 2000s, coal and some copper and gold exploitation, as well as palm oil have been the main sources of exports from the region, providing an injection of cash for the development of services industries in the city.

The environmental impacts of these activities have been widely documented. It has remained a serious problem even after decentralization, despite the passing of many regulations and efforts to limit the spread of illegal logging and the environmental impacts of unsupervised mining. While the movement of less educated Bugis and Javanese to rural areas has been extensively documented in the case of East Kalimantan, the migration of less educated Indonesians into and on the periphery of major cities is less understood. In the case of Samarinda, there have been several streams. Less skilled but still quite well educated Javanese, Bugis and East Indonesians (especially from Flores), as well as Banjarese from South Kalimantan, all attracted to construction, trade and service job opportunities in the city.

Figure 7 and Table 8 show that most rural-urban migrants worked in blue collar, 'menial' jobs, even though the large majority of were secondary and tertiary educated. Recent migrants in particular were more heavily represented in menial work. In contrast, a higher proportion on non-migrants held professional and other white collar jobs.

Main occupation of household heads	Migration status (%)			All migrant
	Recent migrants	Life time- migrants	Non-	
Professional	13.3	12.6	17.9	14.7
White collar	13.3	13.8	26.2	18.7
Blue collar	20.0	25.2	14.9	20.4
Craft	4.5	7.5	8.9	7.7
Menial	48.9	40.9	32.1	38.5
Total %	100	100	100	100
N	45	159	134	338

Table 8. Main Occupation of Household Head by Migration Status in Samarinda.

Description of categories: (1) **Professional** includes professionals, managers and upper and executive level civil servants; (2) **White collar** includes semi-skilled white collar, low or middle-level civil servants; (3) **Craft** includes foreman, self-employed, farmer or master craftsman; (4) **Blue collar** includes skilled or semi-skilled blue collar workers; (5) **Menial** includes unskilled workers

(Source: the RUMiI survey, Samarinda, 2010)

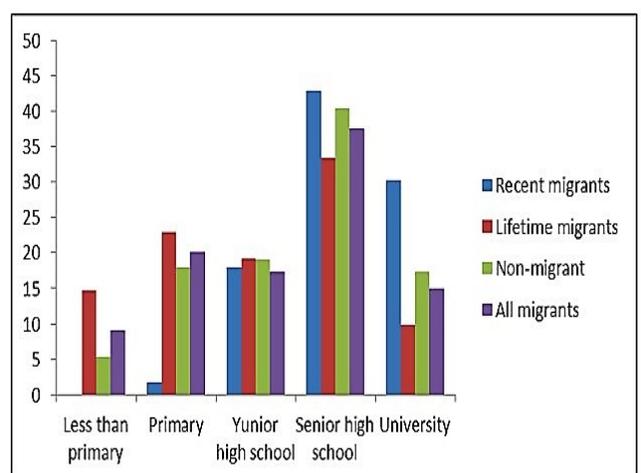


Figure 7: The Migration Status and Level of Schooling of Household Heads in Samarinda, 2009.

(Source: The RUMiCI - Rural-Urban Migration Study of China and Indonesia survey, Samarinda, 2010)

In Samarinda, there has developed a marked pattern of occupational segregation based on region of origin and ethnicity. Migrant workers tended to live in certain areas of the city and cluster around specific occupations and industries (Izzah et al, 2011: 79-102). Thus, for example, Javanese tended to work in food stalls and as hawkers and lived in the northern part of the city, whereas those from East Nusa Tenggara were mainly employed in timber businesses, at least until many timber firms closed down around the mid to late 2000s. Unlike the Javanese, most lived across the river from the main part of the city in closer proximity to the main timber firms. Banjarese were engaged in trading in a different part of the city. This spaghetti bowl of ethnic groups makes Samarinda a truly Indonesian city, perhaps more so than any other in Kalimantan. While the interaction of different ethnic groups has raised the possibility of ethnic conflict, Samarinda has remained a relatively conflict-free and open city and open labour market for outsiders, despite some calls for restricting migration from other islands to the city. Migrants are not only differentiated by their place of origin and occupation but also in regard to their permanency. Thus for example Nooteboom (2008: 9-11) distinguished four categories of Madurese migrants to Samarinda in the early 2000s: temporary migrants, semi-permanent migrants, semi-permanent settlers and settlers. The large majority of Madurese were in the first two categories and working in mostly unskilled labouring jobs in the city (the three activities studied intensively were stone-cutting, brick making and vegetable farming). It seems likely that a high proportion of migrants never become permanent settlers but rather there is a continual churning with

some moving up the occupational scale and transitioning from temporary to more permanent migrants and then settlers. It is also clear that among the occupational groups studied, conflict in West and Central Kalimantan made their lives and livelihoods less secure and reduced the likelihood of establishing a permanent base in Samarinda (Nooteboom, 2008: 27-28).

Many of these Madurese migrants had relatively little schooling. People in the two migrant streams (recent and lifetime) and non-migrants covered in the RumiCI survey seem to be much more differentiated in terms of educational achievement, although this was not entirely reflected in the composition of jobs. A much higher share of recent migrants than lifetime migrants and non-migrants were tertiary educated. There was also a significantly larger share of secondary educated people among recent migrants (see Figure 1). Besides working as professional and white collar workers, many of these better educated migrants also took blue collar jobs. Nevertheless, as noted above, more established non-migrants tended to dominate professional and white collar work in Samarinda. Much of this was government services and the civil service, where contacts are likely to play an important role in recruitment. (De Jonge and Nooteboom, 2006).

E. Conclusion

Like large parts of relatively under-developed Sumatra and Papua, Kalimantan has been a region of substantial net in-migration over the past four decades. It has been a major attraction point for job-seekers and poorer people from Java and other heavily populated regions for work in agriculture

and resource-based industries. In general, it has been a region of rapid economic growth, where exploitation of forests, abundant land and natural resources has enabled significant numbers of local people and Indonesians from other regions to benefit economically from new employment opportunities. This has created linkages to other sectors of the economy; many of the new jobs have been in services as Kalimantan has become much more urbanized. While uneven in its impact across provinces and districts, the process has encouraged the improvement in human resources and the skill levels of the resident population, both among migrants and non-migrants. Benefits appear to have spread widely to the local population in many parts of Kalimantan. We provide some specific examples from a survey of rural-urban migration to Samarinda.

Nevertheless, there have also been social as well as physical costs from sometime uncontrolled or too heavy government support for migration of outsiders to the region. We have drawn attention to the interaction between high rates of migration and social conflict in some regions and to the potential harmful impact on the environment from deforestation and mainly rural-based settlement in areas with fragile ecosystems. From a national perspective, it seems likely that this movement of people into Kalimantan has contributed significantly to improved living standards and reduction in the rates of poverty, despite fierce competition and high rates of population growth in destination areas. This is also probably true from a regional perspective, although local people bear some significant costs from large in-migration flows. Therefore, it seems imperative to address social and environmental

concerns more seriously so that these benefits can be enjoyed not only by migrants but also by local the people, and by the future as well as present generations.

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