# Women's Migration and Labor Market Incorporation in South Africa

Emmanuel Souza: Department of Demography, University of Pennsylvania

## Abstract

This study explores the labor market incorporation of migrant women in South Africa, investigating the dominant hypotheses on women's labor market incorporation. Using data from the 2011 South African Census, I compare employment rates and income of immigrant women versus their internal migrant peers and examine how these outcomes change with additional years of residence and how they are associated with various forms of human capital. Results show that net of human capital and other demographic characteristics, immigrant women are more likely to be employed than internal migrant women. However, the better immigrant employment outcome does not translate into an earning advantage. Immigrant women earn less compared to their native counterparts even after controlling for class of worker which is a significant determinant of labor market segmentation in South Africa. I also find no evidence of family investment behavior among married women, both internal and international migrants.

**Keywords:** South Africa, labor market, immigrant incorporation, women, family investment.

## Introduction

Since the end of World War II, both the volume and composition of global migration patterns have changed. While migration among women is 4 percentage points shy that of men (52%), the magnitude of women who migrate has grown tremendously around the globe (IOM 2010), and more women continue to join the labor force, aka "feminization" of the labor market. Social scientists have for a long time evaluated the integration of immigrants into the host nations. The majority of this research has focused on migrant flows to the wealthy nations of North America and Europe, and has almost exclusively examined the experience of immigrant men. This research has shown, among other things, that the path of immigrant incorporation is shaped by both immigrant characteristics as well as by structural contexts in the area of reception (Alba & Foner 2014; Alba & Nee 2003).

The labor-market assimilation hypothesis – one of the influential theoretical perspectives on immigrant incorporation – predicts that both immigrant men and women will improve their human capital skills and increase their labor market opportunities with more years in the host country. Although immigrant incorporation of women has received a fair amount of research, theoretical perspectives on immigrant incorporation have generally come from empirical research on men. When applied to women, the labor-market assimilation hypothesis has generated mixed results, leading to other alternative interpretations grounded in the role of women in the family. Similar research on labor market incorporation of women is almost non-existent in developing countries, particularly in Africa, despite experiencing the feminization of migration, especially in the past two decades. From a theoretical perspective, it is imperative to examine how the unique context of reception in developing economies may shape immigrant women's outcomes.

South Africa presents a unique opportunity to assess labor market outcomes of immigrant women in developing countries. According to the WHO (2017) report on migration, South

Africa is the only African nation among the countries that housed 75% of the world's total migrant stock in 2015. At the dawn of the post-Apartheid era, a number of studies have documented the feminization of the labor market in South Africa (Barker 1999; Casale & Posel 2002; Standing, Sender, & Weeks 1996). While we have no knowledge about the labor market performance of immigrant women in south Africa, Casale (2004) shows that the feminization of the labor market in South Africa has negatively affected the outcomes of native-born women. Compared to men, women are over-represented in low-income and low-status jobs.

This study aims at investigating the universal applicability of labor market assimilation among women migrants in developing countries. I ask the question: Do labor market outcomes of immigrant women start lower and then converge towards those of native women? In addition, I also investigate individual characteristics that explain the immigrant-native convergence of labor market outcomes, or lack thereof, paying particular attention to human capital and factors related to women's role in the family. I draw on data from the 2011 South African Census to explore these aims among African immigrants from within the sub-Saharan region. I begin with an analysis of the likelihood of employment, a salient concern given the economic and demographic trends in the global South. I then focus on how income attainment vary between immigrant and internal migrant women, paying particular attention on how foreign human capital is rewarded in the South African labor market.

Results show that, consistent with the labor-market assimilation hypothesis immigrant women exhibit higher rates of employment than their native-born internal-migrant counterparts. However, their employment advantage does not translate into better income attainment gross or net of human capital and other demographic characteristics. In addition, married women do not exhibit signs of family investment behavior in the South African labor

market. The employment probabilities of married women increase with more time of residence in South Africa.

**Theoretical framework**

This study is motivated by incorporation theories relating to the host country's labor market. A copious body of research on immigrant incorporation in the labor market has been conducted in wealthy nations of the global North, particularly the United States. One of the theoretical concepts in this literature is the labor-market assimilation hypothesis. Prior work on this subject exclusively examined the experience of white male immigrants in the US. One of the most influential work on this topic was by Chiswick (1978) where he found that foreign white men in the US earned 10% less than native-born white men but equaled and then exceeded the earnings of the native-born after a number of years of residence in the US. This line of research focused on the characteristics of immigrants themselves, and how their differences from the native mainstream impeded incorporation.

Critiqued for its focus on "core culture", the universal straight-line path of assimilation, and lack of attention to structural forces (Gordon 1964; Shibutani & Kwan 1965; Warner & Srole 1945), a segmented view of assimilation was formulated. Contemporary literature on labor market incorporation is based on the competing visions of the labor-market assimilation and the segmented labor market hypotheses. In one of the influential critique of the straight-line assimilation hypothesis, Portes and Zhou (1993) argued that the universal straight-line immigrant incorporation was far from assured and that many non-white immigrants faced the risk of "downward" assimilation due to different structural forces in the context of reception that shaped outcomes over and above immigrants' characteristics. To date, the concept of segmented assimilation remains a powerful alternative to more optimistic expectations of assimilation among contemporary immigrants. While the initial formulation of these

theoretical perspectives was almost exclusively based on male immigrants, a number of studies have since examined assimilation among immigrant women (Duleep & Sanders 1993; Long 1980; Rendall *et al.* 2010). This line of research has produced mixed results. First, Duleep and Sanders (1993), Schoeni (1998), and Blau *et al.* (2003) show a convergence of immigrant labor market outcomes to that of the native-born population with increased time of residence in the US which is consistent with the labor-market assimilation hypothesis. Second, Long (1980) and Baker and Benjamin (1997) show a non-convergence of labor market outcomes and a negative association with time in the United States and Canada, respectively. Proposed by the latter studies, Duleep (2001) interpreted the negative assimilation findings as consistent with the "family investment" hypothesis in which married immigrant women take up secondary jobs to finance the human capital investment of their husbands in the initial years upon arrival and eventually reduces their labor supply, allocating more time to their family roles. This hypothesis has received a considerable attention in the labor market incorporation literature. In their findings, Blau *et al.* (2003) and Kim and Varanasi (2010) show that the hypothesis is only applicable to immigrant women from earlier cohorts in the United States and those working in low-status jobs, respectively.

Finally, Rendall *et al.* (2010), using data from the European union labor force survey, show that in traditional migrant receiving (Western European) countries, labor market outcomes for immigrant women follow the classical assimilation hypothesis but found no difference between immigrant and native-born women in the new immigrant destination (Southern European) countries, underscoring the "context of reception" view, put forward by Portes and Zhou (1993), that determine assimilation.

In addition, immigrants' national origin has been shown to structure labor market outcomes in the host country. Elo *et al.* (2015) found different country-specific outcomes for African immigrants in the United States net of their sociodemographic characteristics. Blau,

Kahn, and Papps (2011) show that while immigrant women, both from countries with high-female-labor participation and those from low-female-labor participation, work less than comparable native women upon arrival, women from high-female-labor supply countries persistently work more, and eventually close the gap with natives, than their counterparts from low-female-labor supply countries. While my analysis does not take into account source country's characteristics, I differentiate immigrant outcomes by national origin, thereby accounting for such intrinsic differences.

**Context: Women migration within and into South Africa**

South Africa is the economic hub of the sub-Saharan region and a magnet of intra-regional migrants. Therefore, it provides an excellent setting to study immigrant incorporation in the middle-income context. In line with global trends, post-apartheid South Africa has been described as the period of increased feminization of the labor market. A number of studies have documented the rising share of women that are both in the labor force and being employed (Barkers 1999; Burger & Woolard 2005; Casale & Posel 2002; Klasen & Woolard 2000; Posel & Todes 1995; Standing *et al.* 1996). Burger & Woolard (2005) show that three-fifth of the new labor market entrants between 1995 and 2002 were women and that female labor force grew twice as much as the average male labor force of 3.5%. The majority of the new labor market entrants according to Posel (2006) emanate from the surge in female temporary labor internal migration in the post-apartheid era. This feminization of the labor market has been accompanied by increased unemployment rates among female labor force participants. In 2015, unemployment rate was highest among black South Africans (28.5%) compared to other population groups (Statistics SA 2016).

Earlier patterns of regional migration into South Africa fully comprised of men due to the type of labor that was required, i.e. in the diamond and gold mines, which created a contract-

labor system that tapped men from Lesotho, Mozambique, and Malawi. However, the post-Apartheid period has seen a growth of female regional international migration for business, labor, and family reunion. The re-incorporation of South Africa into the global economy accelerated both its economic growth and the demand for more immigrant labor, especially with the out-migration of many skilled South Africans to Europe and north America (Dept. of Home Affairs 2016; Pauw *et al.* 2006). In addition, 2002 Immigration Act facilitated immigration, particularly among skilled workers, and encouraged family reunion which contributed to the accelerated migration of women. The combined effect was that between 2001 and 2011 the stock of female international migrants increased by 108%, roughly reaching 864 thousand women (author's calculation from 2001 and 2011 census data).

While it is difficult to succinctly characterize immigration policy and racial structures across middle-income countries, there is nevertheless some common ground. As relative newcomers to immigration, many nations in the global South lack well-established institutions for regulating population flows. Irregular and unauthorized migrants constitute a relatively large share of immigrant populations, and periods of increased enforcement, including mass deportations, are common. Incidences of racial, ethnic, and religious conflicts between immigrants and natives are also widespread. In South Africa, immigrants are blamed for the increase in crime rate, HIV prevalence, and persistent high unemployment rate among natives (Crush & Ramachandran 2010). So far, evidence to these assertions do not exist.

Although a few studies on immigrant incorporation in South Africa exist, none has looked at labor market incorporation of immigrant women. We only know from Broussard's (2017) study that post-Apartheid immigrant inflows have had a negative effect on the labor market outcomes of the black native-born population and that the negative effect is twice as much for women than it is for men. Casale (2004) shows that the feminization of the labor market in South Africa did not improve the position of women in the labor market but rather worsen it.

Women continue to be over-represented in less-secure and low-income jobs. Given the dramatic differences between patterns of labor force participation between men and women and continued feminization of migration, it is incredibly important to conduct a careful analysis of women's labor market incorporation in sub-Saharan Africa, and how the low-status jobs they are involved in shape other labor market outcomes.

In addition, in accordance with literature from the developed nations, we need to understand how national origin differences shape labor market outcomes among South African immigrants. The analysis is based on the three major female migrant sending countries of Lesotho, Mozambique, and Zimbabwe which, coincidentally, happen to be neighboring countries. South Africa borders Zimbabwe to the north, Mozambique to the East, and surrounds Lesotho. By focusing on these three largest national origin groups and comparing them to black natives, we can better assess differences in trajectories, both overall and net of human capital differences.

**Data and Methods**

Data for this study come from the 10% Integrated Public Use Microdata Series (IPUMS) sample of the 2011 South African census (available at www.international.ipums.org). The use of census data has many advantages including a large and representative sample, rich information on migration, and a host of socioeconomic and demographic data. The sample is restricted to women aged 18 to 50 and whose age at migration was at least 18 to allow for at least secondary school completion (from their areas of origin) at the lower end, and to exclude women not in the reproductive age at the upper end. Individuals still attending school are likewise excluded. The analysis is limited to black women from within the sub-Saharan region, the majority of which come from Lesotho, Mozambique and Zimbabwe. Because the

majority of internal migration is rural-urban and international migrants tend to settle in urban areas, we further restrict our sample to the urban population.

Furthermore, to properly compare the immigrant and native samples, I use internal migrants as the reference category. Immigrants may be selected on a number of unmeasured characteristics related to health or other individual endowments that could shape labor market outcomes. Therefore, internal migrants would be a close match to the immigrants sample as they are also likely to be selected on the same unmeasured endowments. Specifically, South African black women who changed their municipal district of residence between the 2001 and 2011 censuses constitute the native reference group. Similarly, the immigrant sample is restricted to immigrant women who entered South Africa in 2001 or later. This resulted in a women sample of 92467 native South Africans; 2297 Lesotho immigrants (Basotho); 9913 Zimbabweans; and 2451 Mozambicans women.

***Dependent and independent variables***

To aid our understanding of labor market incorporation of immigrant relative to native women are two labor market outcomes: employment and income. Employment is a binary indicator that takes a value of 1 if the respondent was employed at the time of the census and 0 otherwise. Income is recorded in the census as one of 12 annual income categories, ranging from no income to over R 2457600 (340,623 USD). Following Broussard (2017) the income variable was recorded to the midpoints of the intervals as a continuous variable. The two top-most intervals were not used because there are very few native women and zero Basotho and Mozambican women in those categories.

The main explanatory variables to facilitate comparison between natives and immigrants include a measure of education which is defined by three mutually exclusive dummy variables: one indicating that the respondent did not advance beyond primary school, one

indicating that they attended secondary education but did not finish, and the third indicating secondary school completion or higher. We also include an indicator of English language ability as an important form of human capital. Unfortunately, the South African census does not ask directly about English language ability. Rather, it collects information on the two languages spoken most often in the home. I define all those who list English among these two languages as proficient in English. Another main independent variable in relation to women's role in the family is marital status. Marital status is a binary variable which takes a value of 1 for those who are married or living with a romantic partner. The main interest is to see how married women navigate the labor market in South Africa vis-à-vis their family roles. The analyses also control for age and its quadratic form; six mutually exclusive dummy variables indicating district/city of residence (distinguishing between Johannesburg, Pretoria, Cape Town, Durban, East Rand, and other areas) [1]and, finally, a continuous specification of years since migration (for internal and international migrants).

***Analytical strategy***

Labor market researchers argue that participation in the labor market is not a random assignment, particularly for women. To account for the fact that women are selected into the labor market, especially in the sub-Saharan context, I employ a two-stage estimation procedure, for both employment and income models, which first generates an inverse Mill's ratio term that is used to correct for selection bias in the estimated models (Heckman 1980; Stier & Tienda 1992). The assumption, here, is that labor market participation is a function of migrant status, marital status, presence of a young (<2yrs) child(ren), presence of a non-nuclear adult household member, and education. I use binary logistic regression analysis to generate the inverse Mill's ratio from the labor participation model (results not shown) and use logistic and linear regressions for employment and income, respectively. For each

[1] The selection of these districts is based on satisfying the condition that immigrant numbers residing in each are at least 3000 (unweighted).

outcome, I run a series of models. Model 1 includes only the immigrant dummy, to assess gross differences across national origin groups in labor market outcomes. Model 2 adds controls for human capital and demographic characteristics, and thus illustrates the extent to which the disparities evident in Model 1 are a function of differences in composition across groups. Subsequent models add interactions between immigrant variable and years since migration and educational attainment. The analysis of income also include a model that adds class of worker (formal/informal) as a control, as well as a model that tests for an interaction between national origin dummies and formal sector employment. Because of significant number of missing values for sector, I include a missing category for this variable in the analysis (see Table 1). However, I do not present results of the missing category. In addition, the analysis on employment includes an interaction between marital status and years since migration to test for family investment hypothesis. If indeed women work to finance their husbands' human capital investment, then the expectation is that their probability of employment will decrease with more time of residence in South Africa. A deviation from this reasoning violates the hypothesis. Standard errors are adjusted for clustering.

## Preliminary results

### *Descriptive statistics*

Table 1 presents summary statistics for the outcome and explanatory variables by country of origin. The table illustrates important heterogeneity across national origin groups with regard to labor market outcomes. Employment levels are higher for Zimbabwean women (64%) than among native women (59%), Basotho women (55%), and Mozambican women (40%). However, most internal migrant women are employed in the formal sector (62%) compared to 49% for Zimbabwean women and 37% for Basotho and Mozambican women. Mean annual income also shows staggering differences between immigrants and natives. While the mean annual income for native internal migrant women is about 9100 USD, the

corresponding mean income for immigrant women are about half as much showing a clear earning disadvantage for immigrants. Nonetheless, annual income among immigrants differ according to national origin with Zimbabwean women earning higher followed by Basotho and Mozambican women, in that order.

The heterogeneity with regard to labor market outcomes, in part, results from varying stocks of human capital across the groups. Overall, native women migrants average better levels of human capital than immigrant women. Whereas 60% of South African internal migrants have completed secondary education, the comparable figures for immigrants are 38% for Zimbabweans, 18% for Basotho, and 11% for Mozambican women. Zimbabwean women report higher level of English spoken in the home (68%) than South African native women (54%) and the other national groups (37 and 13% for Basotho and Mozambican women, respectively). The low levels of English speaking ability for native women could be due to inability of the Census to capture multi-lingual native English speakers because of the specification of the variable (see variable description section above). Average years since migration (YSM) are relatively similar across national origin groups (between 3 and 4 years)

Additional characteristics that differentiate these national groups include age, marital status, and the presence of extended family members in the household. Zimbabwean and Mozambican women were slightly younger than Basotho and native migrants. On average, immigrant women were more likely to be married than native women with Mozambican women averaging higher marriage rates (61%) followed by Zimbabwean (56%) and Basotho (51%) women. Women from Lesotho had the highest share (26%) of extended family member present in the household than other national groups, with Mozambican women reporting the lowest (11%).

In short, immigrant women evidence signs of labor market and human capital disadvantage relative to native women, particularly with respect to formal employment, income and educational attainment. I begin the analysis by estimating the propensity to find employment and then explore their earning potential. These analyses are preceded by a labor market selection analysis (results not shown here) to generate the inverse Mill's ratio for the second-stage analysis.

***Employment***

Previous studies on labor market incorporation in South Africa have looked at migrant men. These studies have consistently shown that immigrants enjoy employment advantage over natives (Zuberi & Sibanda 2004). I test this hypothesis for women migrants using a series of models that explore overall employment disparities, the extent to which differences across national groups are attributable to human capital characteristics, and whether the returns to education and years since migration are similar across groups. I also test the family investment hypothesis for migrant women in South Africa. The results, shown in Table 2, are consistent with findings for men from previous studies. Although Basotho women are equally likely to be employed as internal migrant women as indicated by the insignificant coefficient in Model 1, they are 27% more likely to be employed compared to native women when differences in socio-demographic characteristics are taken into account (Model 2). While Zimbabwean women's likelihood of employment has improved in Model 2; that for Mozambican women has declined, suggesting that some of their employment advantage is explained by the accounted human capital and demographic factors. Model 2 show important results for human capital. Specifically, relative to women with some secondary education, women who completed secondary or higher education are 2 times (exp .777) more likely to be employed. In addition, women with high levels of English spoken at home are 34% (exp

.293) more likely to be employed than their counterparts with low levels of English spoken at home.

Results also indicate important interactions between human capital and national origin in structuring employment outcomes. First, results indicate that employment opportunities do not tend to increase as migrant women accumulate time in receiving areas. In fact, the odds of employment actually decline slightly, by 3 percentage points, for each year after migration. This is mostly true for native internal migrants and Basotho women than it is for Zimbabwean and Mozambican women whose odds of employment slightly increase by 6 and 7% for each year after migration, respectively (Model 3).

A second interaction is seen with country of origin and education. Although the less educated women enjoy a slight employment advantage over intermediate level educated women in Model 2, Model 3 show that this is not the case for immigrant women from all three countries. This is not surprising because less educated native women are expected to be familiar with the South African labor market than their immigrant counterparts. In addition, the huge advantage enjoyed by women with higher education observed in Model 2 does not equally apply to highly educated immigrants. The employment returns to high educational attainment are significantly weaker for immigrants, evidenced by the negative interaction terms, especially for Basotho women. Probably, this reflects the incompatibility between foreign human capital and the South African labor market. The ability to speak English seems to boost employment opportunities. This is hardly a surprise because evidence from South Africa shows that English language proficiency has a higher economic return than other official languages in South Africa (Casale & Posel 2011a, 2011b).

Another important interaction is between marital status and number of years since migration. While, generally, married women are less likely to be employed than their

unmarried (never and formerly married) counterparts, this is mostly the case in the initial years after arrival (Model 4). In fact, the odds of employment for married women increase by 5%, for each year after migration.

It is also worth noting that the impact on employment of other socio-demographic characteristics is in line with expectations. Older women are more likely to be employed and employment is also higher in Johannesburg – the largest city in South Africa – than in other cities.

***Income***

Table 3 presents results from OLS regression models predicting annual income. While results of some factors are consistent across national immigrant groups, others are not. There is a clear immigrant gross earning disadvantage, especially for Basotho women. On average, Basotho women earn 52% (1-exp -.728) and Zimbabwean women earn 15% (1-exp -.167) less than native internal migrants. Moreover, while some of this disadvantage (and lack of significant result for Mozambican women) is explained by differences in human capital and other demographic characteristics, immigrant women still earn less than their native counterparts. The earning disadvantage is more pronounced for Basotho and Mozambican women than for Zimbabwean women (Model 2).

Results also indicate that human capital characteristics are important determinants of annual income in South Africa. Years since migration show a relatively modest link to earnings, with a substantively small, statistically significant, negative association with income. Education, in contrast, has a large impact on income. Overall, the least educated women earn less, and the best educated women earn more than their counterparts with intermediate education attainment. While the least educated earn 18% (1-exp -.202) less, the best educated earn 2.8 times more than what is earned by their intermediate educated

counterparts (Model 2). However, there are important interactions between country of origin and human capital which strongly suggest diminishing returns to human capital among immigrants. For instance, in Model 6 the highly educated native internal migrants earn 2.5 times (exp 0.936) more than those with intermediate levels of education. The corresponding figures for immigrant women are 1.62 for Basotho women, 1.69 for Zimbabwean women, and 1.27 for Mozambican women. Number of years since migration is negatively associated with annual income (Model 2). However, this is mainly true for native migrant women that it is for immigrant women. While Zimbabwean women experience an income increase by a factor of 0.026 for each year after migration, this is not the case for both Basotho and Mozambican women. Although Zimbabwean women show signs of earning improvement, they still do not catch up to the earnings of native women.

Employment in the formal sector is strongly associated with high income. Those with formal jobs earn 58% more than their counterparts in the informal sector (Model 3). A test for interaction with nativity in Model 4 indicates that this effect is consistent for all immigrant national origins. Plausibly, this reflects the significance of national origin in structuring labor market incorporation. Mozambican women in formal sector are penalized more than Zimbabwean women. While a native formal worker earn 65% (exp .499) more than her informal worker counterpart, a Mozambican formal worker only earn 12% more; and Bosotho and Zimbabwean women earn 16 and 25% more, respectively, than a native informal worker.

Finally, concerning the impact of other socio-demographic characteristics on income, older and married women earn high income, as are those who speak English. Women also earn high in Johannesburg and Pretoria than in other cities.

**Discussion and Conclusions**

This study was motivated by the rare scholarly work on immigrant incorporation in developing countries especially in the sub-Sahara region. While a copious body of research on immigrant assimilation has largely evaluated labor market performance of men, similar research on migrant women remains relatively scant, despite the feminization of both migration and labor markets in Africa and around the globe. This paper contributes to this research by looking at labor market incorporation among women in South Africa, a country that has emerged as a magnet for intra-regional migration in sub-Saharan Africa. In particular, the study investigates employment and income incorporation for three major national origins of immigrant women namely Lesotho, Mozambique, and Zimbabwe relative to black native internal migrants.

The summary statistics in Table 1 show that native migrant women evidence signs of labor market and human capital advantage over immigrant women, especially with regard to formal employment, income and educational attainment. Native women have higher levels of completed secondary education attainment and the remunerative formal employment. Rightly so, native internal migrant women average better annual income compared to all immigrant groups. However, results from logistic regression on employment after accounting for the selective nature of women's labor force participation (Table 2), show that net of human capital and other characteristics, native women are less likely to be employed than immigrant women. These results are consistent with result for men in earlier studies conducted in South Africa (Zuberi and Sibanda 2004, Peters and Sundaram 2015). One plausible reason for this result may relate to immigrant networks. The fact that all three immigrant countries are neighboring to South Africa, strong immigrant networks may play an important role in their high employment rates. In addition, the employment rates of immigrant women increases with number of years in South Africa. This is particularly true for Zimbabwean and Mozambican women and not for Basotho and native women. For Zimbabwean and

Mozambican women, the employment trajectories are largely consistent with the labor-market assimilation hypothesis while Basotho and native migrant women show signs of negative assimilation. If we consider Basotho women as part of the "local" women, because the geographic position of Lesotho, together with South African native women the negative employment assimilation may be interpreted as some form of local-immigrant labor substitution. On the other hand, it may also mean that these 'local' women work towards meeting an income goal after which they quit the labor market and/or return to their rural homes. To test the latter assumption, I run the same analysis using a sub-sample of women with 3 or more years of residence – to exclude those with short-term goals – and found similar results. I tested for the family investment hypothesis on married women with the expectation that the employment rates of married migrant women will decrease with number of years in the host country. Contrary to the family investment hypothesis, I find that the odds of employment for married women increase by 4.7% with additional years of residence. This is consistent with some studies from the United States (Blau *et al.* 2003; Blau *et al.* 2011; Schoeni 1998) but contrary to others (Baker & Benjamin 1997; Duleep 2001). Kim and Varanasi (2010) argue that testing this hypothesis requires sub-setting the sample to married women working in dead-end jobs that demand less skill. I tested this hypothesis by removing all women who worked in medium to high skilled occupations from the sample. Still, the results did not change and married women's odds of employment increased by 5.2% (not shown) with additional years of residence.

Amidst the employment advantage for immigrant women, I still find that immigrant women earn significantly less than native internal migrants, a picture consistent with descriptive statistics (Table 1). Table 1 shows that immigrant women earn on average almost half of what native women get per annum. The results still hold even after controlling for the overrepresentation of immigrant women in low-status jobs of the informal sector. The lower

immigrant earnings are consistent with the immigrant networks assumption mentioned above. Social capital theory states that informal networks tend to steer immigrants towards informal employment, such as domestic work, which are less rewarding (Franzen & Hangartner 2006; Vidal-Coso & Miret-Gamundi 2014). Indeed, Table 1 shows that immigrant women are more likely to work in informal sector and earn significantly less than native–born women.

In addition, results from South Africa show signs of segmented assimilation. This is mostly evident when we consider highly educated women. While high education is advantageous in the labor market, both in terms of securing employment and income, immigrant women with high education, from all three countries, receive less employment and income boost compared to native internal migrants. I may only speculate that the segmented assimilation emanate from the discrimination and hostility that African immigrants experience in South Africa (Crush & Ramachandran 2014) which may have an impact on how immigrants deploy their skills in the labor market (Portes & Rumbaut 2001).

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Table 1: Mean distribution of the variables included in the analyses

| | South African | | Lesotho | | Zimbabwe | | Mozambique | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. |
| *Labor Market variables* | | | | | | | | |
| Employed (N) | 0.59 (92467) | 0.49 | 0.55 (2297) | 0.50 | 0.64 (9913) | 0.48 | 0.40 (2451) | 0.49 |
| Sector | | | | | | | | |
| Informal | 0.23 | 0.42 | 0.50 | 0.50 | 0.41 | 0.49 | 0.47 | 0.50 |
| Formal | 0.62 | 0.49 | 0.37 | 0.48 | 0.49 | 0.50 | 0.37 | 0.48 |
| Missing | 0.15 | 0.36 | 0.12 | 0.33 | 0.10 | 0.31 | 0.17 | 0.37 |
| Annual income (USD) | 9,109 | 14,679 | 3,087 | 8,012 | 4,840 | 9,500 | 2,452 | 7,040 |
| *Human capital variables* | | | | | | | | |
| Education level | | | | | | | | |
| Primary or none | 0.10 | 0.30 | 0.27 | 0.44 | 0.10 | 0.30 | 0.49 | 0.50 |
| Some secondary | 0.30 | 0.46 | 0.56 | 0.50 | 0.52 | 0.50 | 0.40 | 0.49 |
| Completed secondary or higher | 0.60 | 0.49 | 0.18 | 0.38 | 0.38 | 0.48 | 0.11 | 0.31 |
| Speak English | 0.54 | 0.50 | 0.37 | 0.48 | 0.68 | 0.47 | 0.13 | 0.34 |
| Years since migration | 3.13 | 2.74 | 3.21 | 2.97 | 3.36 | 2.47 | 3.85 | 3.00 |
| *Demographic and Family variables* | | | | | | | | |
| Age | 33.1 | 7.6 | 32.4 | 7.7 | 29.6 | 6.57 | 29.3 | 6.55 |
| Married | 0.47 | 0.50 | 0.51 | 0.50 | 0.56 | 0.50 | 0.61 | 0.49 |
| Gave birth past 12 months[b] | 0.07 | 0.26 | 0.03 | 0.17 | 0.07 | 0.26 | 0.08 | 0.27 |
| No. of children ever born[b] | 1.72 | 1.43 | 1.81 | 1.64 | 1.43 | 1.27 | 1.76 | 1.46 |
| Extended family[b] | 0.12 | 0.33 | 0.26 | 0.44 | 0.17 | 0.38 | 0.11 | 0.31 |
| District of residence | | | | | | | | |
| East Rand | 0.10 | 0.31 | 0.11 | 0.31 | 0.10 | 0.30 | 0.19 | 0.39 |
| Johannesburg | 0.18 | 0.39 | 0.23 | 0.42 | 0.41 | 0.49 | 0.25 | 0.44 |
| Pretoria | 0.13 | 0.33 | 0.16 | 0.37 | 0.12 | 0.32 | 0.05 | 0.22 |
| Cape Town | 0.08 | 0.27 | 0.00 | 0.06 | 0.09 | 0.29 | 0.00 | 0.06 |
| Durban | 0.07 | 0.26 | 0.02 | 0.15 | 0.02 | 0.13 | 0.03 | 0.17 |
| Other | 0.43 | 0.50 | 0.47 | 0.50 | 0.27 | 0.44 | 0.47 | 0.50 |
| N[a] | 56,724 | | 1,249 | | 6,085 | | 907 | |

[a] N pertains to those who reported positive annual income

[b] Variables used for labor market selection model only (not presented in the paper)

Table 2: Estimated coefficients for women's employment (Logit model) using Heckman's two-stage procedure

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Country of origin (South Africa) | | | | | | | | | | |
| Lesotho | -0.077 | [0.04] | 0.239*** | [0.05] | 0.426*** | [0.07] | 0.331*** | [0.06] | 0.237*** | [0.05] |
| Zimbabwe | 0.527*** | [0.02] | 0.658*** | [0.03] | 0.480*** | [0.04] | 0.824*** | [0.03] | 0.658*** | [0.03] |
| Mozambique | 0.483*** | [0.05] | 0.217*** | [0.05] | -0.021 | [0.07] | 0.342*** | [0.07] | 0.215*** | [0.05] |
| Education level (Some secondary) | | | | | | | | | | |
| Primary or none | | | 0.107*** | [0.03] | 0.103*** | [0.03] | 0.123*** | [0.03] | 0.110*** | [0.03] |
| Completed secondary or higher | | | 0.777*** | [0.02] | 0.778*** | [0.02] | 0.823*** | [0.02] | 0.776*** | [0.02] |
| Years since migration | | | -0.032*** | [0.00] | -0.036*** | [0.00] | -0.031*** | [0.00] | -0.057*** | [0.00] |
| Speak English | | | 0.293*** | [0.01] | 0.294*** | [0.01] | 0.292*** | [0.01] | 0.291*** | [0.01] |
| Age | | | 0.187*** | [0.01] | 0.187*** | [0.01] | 0.181*** | [0.01] | 0.185*** | [0.01] |
| Age squared | | | -0.002*** | [0.00] | -0.002*** | [0.00] | -0.002*** | [0.00] | -0.002*** | [0.00] |
| Married | | | -0.407*** | [0.02] | -0.410*** | [0.02] | -0.401*** | [0.02] | -0.556*** | [0.02] |
| District of residence (Johannesburg) | | | | | | | | | | |
| East Rand | | | -0.306*** | [0.02] | -0.302*** | [0.02] | -0.300*** | [0.02] | -0.305*** | [0.02] |
| Pretoria | | | 0.012 | [0.02] | 0.018 | [0.02] | 0.009 | [0.02] | 0.013 | [0.02] |
| Cape Town | | | -0.165*** | [0.03] | -0.156*** | [0.03] | -0.150*** | [0.03] | -0.162*** | [0.03] |
| Durban | | | -0.050 | [0.03] | -0.046 | [0.03] | -0.039 | [0.03] | -0.049 | [0.03] |
| Other | | | -0.005 | [0.02] | 0.000 | [0.02] | 0.003 | [0.02] | -0.004 | [0.02] |
| Lesotho x YSM | | | | | -0.051*** | [0.01] | | | | |
| Zimbabwe x YSM | | | | | 0.056*** | [0.01] | | | | |
| Mozambique x YSM | | | | | 0.065*** | [0.01] | | | | |
| Lesotho x Primary or none | | | | | | | 0.048 | [0.11] | | |
| Lesotho x Completed secondary or higher | | | | | | | -0.584*** | [0.12] | | |
| Zimbabwe x Primary or none | | | | | | | -0.041 | [0.08] | | |
| Zimbabwe x Completed secondary or higher | | | | | | | -0.492*** | [0.05] | | |
| Mozambique x Primary or none | | | | | | | -0.076 | [0.10] | | |
| Mozambique x Completed secondary or higher | | | | | | | -0.507*** | [0.15] | | |
| Married x YSM | | | | | | | | | 0.047*** | [0.00] |
| Inverse Mill's Ratio | -5.965*** | [0.09] | -1.179*** | [0.17] | -1.139*** | [0.17] | -1.295*** | [0.17] | -1.198*** | [0.17] |
| N | | | | | 107128 | | | | | |
| Pseudo $R^2$ | 0.046 | | 0.089 | | 0.090 | | 0.090 | | 0.090 | |

Standard errors in brackets; Reference category in parentheses; * p < 0.05, ** p < 0.01, *** p < 0.001

Table 3: Estimated OLS coefficients for Log of women's income using Heckman's two-stage procedure

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country of origin (South Africa) | | | | | | | | | | | | |
| Lesotho | -0.728*** | [0.02] | -0.295*** | [0.02] | -0.266*** | [0.02] | -0.159*** | [0.03] | -0.319*** | [0.03] | -0.185*** | [0.03] |
| Zimbabwe | -0.167*** | [0.01] | -0.154*** | [0.01] | -0.158*** | [0.01] | -0.056** | [0.02] | -0.243*** | [0.02] | 0.019 | [0.02] |
| Mozambique | -0.065 | [0.04] | -0.267*** | [0.03] | -0.289*** | [0.03] | -0.200*** | [0.04] | -0.289*** | [0.05] | -0.176*** | [0.05] |
| Education level (Some secondary) | | | | | | | | | | | | |
| Primary or none | | | -0.202*** | [0.02] | -0.162*** | [0.01] | -0.155*** | [0.01] | -0.163*** | [0.01] | -0.146*** | [0.02] |
| Completed secondary or higher | | | 1.025*** | [0.01] | 0.890*** | [0.01] | 0.882*** | [0.01] | 0.890*** | [0.01] | 0.936*** | [0.01] |
| Years since migration | | | -0.012*** | [0.00] | -0.011*** | [0.00] | -0.011*** | [0.00] | -0.014*** | [0.00] | -0.011*** | [0.00] |
| Speak English | | | 0.296*** | [0.01] | 0.278*** | [0.01] | 0.275*** | [0.01] | 0.278*** | [0.01] | 0.275*** | [0.01] |
| Age | | | 0.109*** | [0.01] | 0.103*** | [0.01] | 0.100*** | [0.01] | 0.102*** | [0.01] | 0.096*** | [0.01] |
| Age squared | | | -0.001*** | [0.00] | -0.001*** | [0.00] | -0.001*** | [0.00] | -0.001*** | [0.00] | -0.001*** | [0.00] |
| Married | | | 0.124*** | [0.01] | 0.106*** | [0.01] | 0.107*** | [0.01] | 0.106*** | [0.01] | 0.112*** | [0.01] |
| District of residence (Johannesburg) | | | | | | | | | | | | |
| East Rand | | | -0.130*** | [0.02] | -0.144*** | [0.02] | -0.147*** | [0.02] | -0.141*** | [0.02] | -0.139*** | [0.02] |
| Pretoria | | | 0.050** | [0.02] | 0.038* | [0.01] | 0.035* | [0.01] | 0.041** | [0.01] | 0.035* | [0.01] |
| Cape Town | | | -0.299*** | [0.02] | -0.285*** | [0.02] | -0.282*** | [0.02] | -0.281*** | [0.02] | -0.273*** | [0.02] |
| Durban | | | -0.336*** | [0.02] | -0.307*** | [0.02] | -0.302*** | [0.02] | -0.304*** | [0.02] | -0.298*** | [0.02] |
| Other | | | -0.187*** | [0.01] | -0.187*** | [0.01] | -0.185*** | [0.01] | -0.184*** | [0.01] | -0.181*** | [0.01] |
| Formal | | | | | 0.457*** | [0.01] | 0.499*** | [0.01] | 0.457*** | [0.01] | 0.453*** | [0.01] |
| Lesotho x Formal | | | | | | | -0.345*** | [0.05] | | | | |
| Zimbabwe x Formal | | | | | | | -0.272*** | [0.02] | | | | |
| Mozambique x Formal | | | | | | | -0.385*** | [0.06] | | | | |
| Lesotho x YSM | | | | | | | | | 0.017 | [0.01] | | |
| Zimbabwe x YSM | | | | | | | | | 0.026*** | [0.00] | | |
| Mozambique x YSM | | | | | | | | | 0.000 | [0.01] | | |
| Lesotho x Primary or none | | | | | | | | | | | 0.065 | [0.05] |
| Lesotho x Completed secondary or higher | | | | | | | | | | | -0.454*** | [0.08] |
| Zimbabwe x Primary or none | | | | | | | | | | | -0.046 | [0.04] |
| Zimbabwe x Completed secondary or higher | | | | | | | | | | | -0.413*** | [0.03] |
| Mozambique x Primary or none | | | | | | | | | | | 0.008 | [0.06] |
| Mozambique x Completed secondary or higher | | | | | | | | | | | -0.699*** | [0.11] |
| Inverse Mill's Ratio | -4.705*** | [0.06] | 0.099 | [0.11] | 0.343*** | [0.10] | 0.297** | [0.10] | 0.352*** | [0.10] | 0.208* | [0.10] |
| N | 64960 | | | | | | | | | | | |
| $R^2$ | 0.107 | | 0.275 | | 0.342 | | 0.345 | | 0.342 | | 0.345 | |

Standard errors in brackets; Reference category in parentheses; * p < 0.05, ** p < 0.01, *** p < 0.001