ABSTRACT

Title of Document:	MARGINALIZED BY RACE AND PLACE: OCCUPATIONAL SEX SEGREGATION IN POST-*APARTHEID* SOUTH AFRICA
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Racial and gender disparities found in most other societies are particularly magnified in South Africa where the marginalized social group constitutes a numerical majority of the population. These factors, along with region, are dominant axes of inequality in the country. However, empirical knowledge of the interplay between these systems of social inequality in determining employment outcomes remains somewhat scant. This dissertation addresses that gap by studying occupational sex segregation across various racial groups using multilevel modeling techniques. Individual-level data from the 2001 Census and magisterial-level data from survey data aggregations and published sources are used.

I first study the influence of (1) individual (education and migration), (2) household characteristics (family status), and (3) contextual factors (urbanization, former homeland residence, industrial composition, and culture) on women's likelihood of being in white- and blue-collar male-dominated occupations. I then

investigate whether the effects of these individual and contextual characteristics on occupational placement vary across the four main racial groups (i.e., black African, Coloureds, Asian-Indians, and Whites)? That is, do these factors interact differently for different racial groups?

Results from the analyses indicate that high concentrations of service industries tend increased women's opportunities for holding white-collar male-dominated occupations. On the other hand, while black African women's placement in male-dominated jobs is not influenced by urbanization, women of other races, particularly Coloureds and Whites, fare better in urban districts. In fact, residence in and around homelands was particularly significant for black Africans who are still trying to gain a foothold in mainstream South African society. In the unique case of Indian women, labor supply factors such as education, have greater predictive power than macro-level demand factors.

In terms of human supply variables, educational attainment improves women's chances of holding male-dominated occupations among white collar workers across all racial groups; the effect is not as strong among blue-collar workers. However, returns to education are not as high as expected. Migration is significant for only black Africans, highlighting the legacy of *apartheid*. Finally, women's marital status and associated short-term child bearing obligations do not act as impediments to their occupational choices.

MARGINALIZED BY RACE AND PLACE: OCCUPATIONAL SEX
SEGREGATION IN POST-*APARTHEID* SOUTH AFRICA.

By

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Dedication

To my husband, Giri, for his curiosity

My parents, Vatsala and Satish Parashar, for their vision

And my advisor, Harriet B. Presser, for her self-determination

Much love and appreciation

Acknowledgements

I recently joked with a friend at a community baby shower that completing a Ph.D. is like having a baby: you lose hair, gain weight, and spend money on a gown, all for the "wrong" reasons. However, as I type this final section of my dissertation, the unparalleled sense of accomplishment and relief that I am experiencing has *almost* started to convince me that it may not be the "wrong" reason after all!

I could not have come this far, but for the following people who have made my life richer in some many ways:

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And finally, my husband, Giri, whose unconditional love, selflessness, and passion for knowledge inspires me to *do* and *be* my best, always. He has become an astute astrophysicist-sociologist during this long journey together and takes an active interest in my research, often discussing various hypotheses and statistical snafu over extended meals. Giri's unquestioned support of my protean dreams, coupled with hot cups of coffee, has kept the child in me happy, alive, and still dreaming. You are indeed my hero and my best friend!

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Chapter 1: Introduction

> "[D]iscrimination includes (a) any distinction, exclusion or preference made on the basis of race, color, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation."
> (ILO Convention No. 11)

Despite steady increases in women's labor force participation, the narrowing of gender wage gaps, or the diffusion of egalitarian views on gender roles, almost all societies, whether developing or developed, exhibit a persistent form of gender stratification within the workplace: occupational sex segregation, or the employment of men and women in different occupations from each other (Charles and Grusky, 2005; Anker, 1998; Reskin, 1993). This complex phenomenon has remained an enduring aspect of labor markets globally, existing under "diverse stages of economic development, political systems as well as varied religious, social and cultural settings" (Anker, 1998: 3). Motivating the interest in occupational sex segregation is a longstanding commitment to improving women's status, coupled with increasing evidence that sex-typed employment often has deleterious economic consequences for women (Charles, 2003: 267). Because it often intersects with other sources of discrimination such as race, class, age, or even region, understanding the mechanisms that drive the process has become a key focus of enquiry and a vital public policy issue that warrants careful scrutiny (Browne and Misra, 2003). This is particularly the case in developing countries that are undergoing sweeping macro-economic changes and are often characterized by a pervasive climate of gender inequality.

1.1 Occupational Sex Segregation: A Macro-Micro Approach

If gender division of occupations is indeed a primary basis of gender stratification in employment, then one would expect extensive attention to the *social conditions* that generate or sustain the process. Theoretically, explanations of occupational sex segregation lie either at the macro or the micro level. Macro-level studies, on the one hand, focus on the institutional framework related to women's work, namely structural demand factors such as level of economic development and placement in the world economy, and non-economic factors such as gender norms and state maternal leave policies (Chang, 2004; Cotter et al., 1997; Anker, 1998; Charles, 1992; Clark, 1991; Lim, 1990). Methodologically, comparative analyses often employ one-dimensional summary indices (e.g. the index of dissimilarity) that have been critiqued in recent years for providing an *overall* measure of segregation (Charles and Grusky, 2005; Charles, 2003; Blackburn et al., 2000), but not of *inequality* or *patterns* of occupational distribution (e.g. women's over-representation in non-manual jobs or status differentials between manual and non-manual jobs). Moreover, due to data aggregation, the occupational choices that *individual* women make or the effect of crucial characteristics such as race and educational attainment that are important in contexts where social structures create and sustain inequality among social groups remain unexamined (van der Lippe and van Dijk, 2002: 228).

At the other end of the theoretical spectrum lie micro-level rational choice econometric or sociological explanations that may not explicitly be *about* segregation, but rather about the *effects* of segregation on pay differentials (England, 1982; Blackburn, 2002; Anker, 1998; Becker, 1957). In fact, as mentioned earlier,

extensive research indicates that sex segregation is one of the most important

determinants of male-female wage differentials, with "female" occupations being

relatively low paid compared to "male" occupations.[1] However, while not

discounting the importance of *proximate* determinants such as gender socialization or

human capital on women's placement in typically "genderized" jobs, one could argue

that these are factors whose effect is constrained or enhanced by the *context* within

which they function (Cotter, Hermsen, and Vanneman, 1999). That is, such models

do not take into account the nested nature of populations—i.e. areas as aggregates of

households, and households as aggregates of individuals and various processes within

them. Thus, the *effect* of structural contexts (e.g. urbanization, industrial

composition, or gender egalitarian contexts) within which an individual acts or

experiences differential levels or types of labor force outcomes is often overlooked.

It is at this juncture that we must reorient our "micro *or* macro" lens to

acknowledge the fact that factors influencing occupational outcomes lie

simultaneously at several social levels and may reflect variations in individual

characteristics as well as features of the institutional context (Cohen, 1998; Cotter et

al., 1997). For example, the same context may have a different impact on women

with different characteristics such as their race, an ascriptive attribute that often has

different economic and demographic histories. Or, labor-supply factors of women

such as education or work experiences may differentially help them in gaining access

to different occupations under different contexts (e.g., urbanization). Thus, studies of

occupational segregation must look beyond the boundaries of the individual in order

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[1] Anker points out that "many theories and explanations treat the determinants of occupational
segregation by sex and male-female pay inequality as if they are synonymous, (which) is unfortunate,"
because segregation is only one cause among many of pay differentials (1998: 14).

to capture the complex interactions between personal characteristics, household circumstances, and attributes of the larger milieu. Indeed, it is surprising that till date, little effort has been made to link these divergent, yet complementary, approaches.

1.2   The Unique Case of South Africa

In light of the discussion above, the key objective of this dissertation is to address the theoretical and methodological gaps in the gender-work literature by examining the role of various factors in understanding occupational sex segregation in South Africa—a country that is in the midst of immense social change. Using a multi-level framework and nationally representative data from the decennial 2001 South African Census, the study focuses on the simultaneous intersections of both context (socio-economic, cultural, and institutional) and composition. Besides addressing overall extent, this study also incorporates two (orthogonal) dimensions of segregation (i.e. vertical and horizontal), thereby addressing *patterns* of occupational distribution between women and men of different races (Blackburn and Jarman, 2006). To my knowledge, such a systematic quantitative assessment of this phenomenon has not been done till date in the specific case of South Africa.

South Africa is an interesting example to study occupational gender segregation using an integrated macro-micro approach in light of the country's uniquely checkered history. Segregationist and *apartheid* policies through most part of the 20th century have exacerbated inequities in labor force outcomes, not just between the various racial groups, but also between the sexes as well as regionally

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through distorted "regional planning" strategies that attempted to restrict non-White urbanization (Standing, Sender, and Weeks, 1996; Crankshaw, 1994).

The fundamental aim of "Grand *Apartheid*" was the separation of races, not only of Whites from non-Whites (i.e., black Africans, Coloureds, and Asian-Indians), but also of non-Whites from each other, and, among black Africans, of one ethnic group from another (Xhosa, Zulu, etc). Manifested through the strict division and hierarchy of labor, residences, and governments, this discriminatory program of social engineering created patterns of rigid geographic segregation within the South African landscape, particularly for black Africans (Tomlinson, 1988). Thus, racial disparities found in most other societies are particularly magnified in South Africa where the marginalized social group constitutes a numerical majority of the population. While Whites (9.6 percent in 2001) maintain control of the economy, Coloureds (8.9 percent) and Asian-Indians (2.5 percent) continue to be more privileged than black Africans (79.0 percent) in almost all facets of life (Mickelson, Nkomo, and Smith, 2001).

Over the past decade, the South African labor market's failure to provide employment to disadvantaged groups has been a major topic of discussion among both researchers and policy-makers, especially since poverty and racial/gender inequality is so deeply intertwined and regionally distributed (Standing, Sender and Weeks, 1996). An extensive number of econometric studies have highlighted returns to education and employment, and racial (and sometimes, gender) discrimination in employment, earnings, and occupational status (Kingdom and Knight, 2002; Mwabu and Schultz, 2000; Treiman et al, 1996). However, given the history of South Africa,

most studies have made *racial* comparisons, particularly between White and black African men, and sometimes women. Although this is reasonable given the country's history, studies have not focused adequately on women's labor market position across the four racial groups and its concomitant implications (Bozzoli, 1983).

Moreover, rates aggregated *across* races, often mask some important gender differences *within* races. For example, if one sought to undo all occupational sex segregation in South Africa by reallocating men and women to less gender-segregated occupations, 51 percent of employed women or men between ages 25 to 54 would have to be shifted out of their current occupational category to be equally distributed (author's calculations using 2001 Census data). Statistics are much higher when disaggregated by race. Thus, an analysis of both race and gender effects in the South African labor market is important because women, especially among races traditionally subject to discrimination, do not enjoy the same access, opportunities, and rewards as men *within* and women *across* racial groups. For example, black African women who have been particularly marginalized because of their mandatory residence within former "homelands" are severely restricted in their opportunities for educational advancement and employment (Posel and Casale, 2003).

1.3   Statement of the Problem: Questions Asked

South Africa's unique history of coerced population movement within the *apartheid* landscape, uneven urbanization, and resulting patterns of circulatory labor migration has had far-reaching effects on various institutions such as the economy and family. This demands closer attention to regional differences in occupational

distribution, *particularly* across the rural/urban and former homeland/non-homeland divide, because both have been socially engineered under *apartheid* (Board et al, 1970). Hence, a consideration of context as a dimension of stratification, in addition to the interaction of race and gender on occupational segregation is warranted.

By using multiple levels of data, I will build on previous research to formulate hypotheses regarding ways by which direct measures of macro-level demand factors and micro-level supply characteristics influence women's placement in white- and blue-collar male-dominated occupations.[2] The following questions will be answered:

(1) Using descriptive analyses, can we observe distinct patterns of occupational distribution by gender, race, and region in South Africa?

(2) Disaggregating the picture further, what are the roles of gender and race (that are separate, and yet continually interacting, categories) in determining *vertical* segregation (gender-dominated or gender-segregated occupations reflecting status differentials) as well as *horizontal* segregation (distinction between blue- and white-collar occupations)?

(3) Net of contextual factors, how do various individual and household level characteristics (measuring human capital and family status) influence women's placement in white- and blue-collar male-dominated occupations?

(4) After accounting for these compositional characteristics, how do contextual factors such as urbanization, industrial composition, former homeland residence (reflecting *apartheid*-based segregation), and gender egalitarianism shape women's occupational placement?

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[2] Women's likelihood of being in a male-dominated occupation is often used as a micro-level measure of occupational sex segregation.

(5) Finally, do the effects of these individual and contextual characteristics on

women's occupational placement vary across the four main racial groups

(i.e., black African, Coloureds, Asian-Indians, and Whites)? That is, do these

factors interact differently for different racial groups?

By employing a macro-micro theoretical perspective and by operationalizing sex

segregation two-dimensionally, I seek to extend our understanding of occupational

sex segregation. Detailed 3-digit data (approximately 134 occupations that allow for

greater disaggregation compared to crude 1-digit data consisting of about nine

occupational groupings) as well as various statistics will be used to provide a more

comprehensive picture of occupational sex segregation in South Africa. In addition

to the index of dissimilarity (ID), other descriptive measures discussed in this study

include the extent to which women are concentrated in an occupation (percent of all

women workers in an occupation), the extent to which an occupation is female

(percent female share in an occupation), representation ratios, and the division of the

labor force into white or blue-collar gender-dominated or integrated occupations.

Multivariate analyses will include multilevel multinomial models where the

dependent variable incorporates gender composition and the blue/white collar

dichotomy. Racial and regional differences in labor force outcomes will be especially

emphasized to highlight interactions of gender, race, and region.

1.4   Importance and Organization of the Dissertation

Although occupational sex segregation in South Africa will require a longer

timeline to evince definitive change, the critical issues raised in this dissertation are

an appropriate starting point, especially in regards to public policy. Indeed, the emphasis on regional characteristics is an important focus of this analysis because they may reveal spatial patterns that are informative both in terms of the underlying causes of the issue and for targeting policy efforts to combat it.

This dissertation makes four important contributions to the field of gender and work. The first contribution is in the field of area studies: to my knowledge, no quantitative study has explicitly examined occupational sex segregation in depth in South Africa, especially across the four racial groups and regionally. The second contribution is in its use of detailed 3-digit occupational data that provides a more comprehensive picture of segregation, especially in the context of South Africa, a developing country. With some exceptions (Presser and Yi, 2008; Chang, 2004; Anker, 1998; Presser and Kishor, 1991), most research on occupational sex segregation is limited to developed countries and the broad 1 or 2-digit occupational categories. The third contribution is theoretical: the dissertation examines the effect of migration, at the individual level, on occupational segregation in South Africa. The final contribution is methodological: I move away from econometric or aggregate models and use multi-level modeling that allow us to study simultaneously the effects of macro- and micro-level factors. Besides incorporating simple summary measures of *overall* levels of segregation, the analyses also include *patterns* of sex segregation, i.e. both vertical and horizontal dimensions. Studying determinants of these two distinct and varied components in a single model is not only of theoretical significance for a general understanding of the phenomenon, but also of practical importance towards understanding South African women's status in society.

The dissertation is organized into the following chapters. Chapter 2 describes the South African background with an emphasis on economic, demographic, social, and regional differences in the country so as to contextualize women's employment across all racial groups. The third chapter reviews current literature on demand and supply theories of occupational sex segregation. Using the background on South Africa, Chapter 4 outlines the conceptual framework of this study, beginning with hypotheses demonstrating the role of individual and household characteristics in their impact on occupational sex segregation. One could argue that these hypotheses *may be* equally applicable across other contexts. The latter section of Chapter 4 delves into the role of macro-level characteristics such as urbanization, industrial composition, historical divisions, as well as cultural context that may reveal patterns unique to the case of South Africa.

Chapter 5 provides a description of the data, sample, and variables used in the study, followed by the methodology for the statistical analysis. Subsequent chapters provide descriptive analyses of employment and unemployment (Chapter 6) as well as patterns of occupational sex segregation in South Africa (Chapter 7), followed by multivariate analyses using hierarchical linear modeling techniques in Chapters 8 (all women) and 9 (women by racial group). Finally, Chapter 10 reviews the issues raised in this dissertation, important policy implications, methodological limitations of the study, and avenues for future research.

In conclusion, this study will attempt to add to the ongoing debate by answering the question: "does the context *in addition* to the individual matter in shaping patterns of occupational sex segregation in South Africa?"

Chapter 2: The Legacy of *Apartheid* in South Africa

> "There must be no illusions about this, because if our policy is taken to its full logical conclusion as far as the Black people are concerned, there will not be one Black man with South African citizenship. I say this sincerely, because this is the idea behind it. Why should I try to hide it?...[E]very Black man in South Africa will eventually be accommodated politically in some independent new state in this honourable way and there will no longer be a moral obligation on [the South African] parliament to accommodate these people politically. "
> (Dr. Connie Mulder, Minister of Plural Relations and Development, House of Assembly, 7 February 1978.)

Located at the southernmost tip of Africa, the Republic of South Africa (formerly known as the Union of South Africa; Figure 2.1) occupies a geographical position that made it vulnerable to imperialistic expansionism between the 17th and 19th centuries. The Dutch East India Company initially colonized the area surrounding the Cape of Good Hope in 1652, which was later seized by the British in 1806. The Boers or Afrikaners (or "farmer," another name for Dutch settlers who speak a dialect called Afrikaans) were forced to move north and east into African tribal territory where they established the Orange Free State and the Transvaal. The discovery of diamonds in 1867 and gold in 1886 expanded the South African economy and served as an impetus for further immigration of white Europeans (e.g. the French and Germans) as well as an influx of "outlanders" (the Boers), subsequently leading to the Boer War of 1899-1902. The defeat of the Boers and the annexation of their land led to the creation of the British-ruled Union of South Africa in 1910, until the Afrikaner Nationalist Party won the election of 1948.

Because of its unique colonial history, South Africa is a multi-racial, deeply divided, and unequal "rainbow state" with 79.0 percent black Africans, 9.6 percent

Whites (primarily British), 8.9 percent Coloureds (people of mixed ancestry from unions between Whites and other groups including black Africans, East Indians, and the KhoiKhoi/San tribes), and 2.5 percent Asians (a Chinese minority and primarily East-Indians brought to serve as indentured laborers on sugar plantations during British imperialism in India).[3] Racial disparities—political, economic and social— found in most other societies are particularly magnified here because of the country's tumultuous history of restrictive segregationist and *apartheid* laws. Consequently, a study of occupational sex segregation in South Africa is complete when read against this historical backdrop. A brief demographic profile is included below.

2.1   A Brief Demographic Profile

Post-enumeration data indicates that on Census night October 2001, the South African population was 44.8 million, after an official adjustment for a 6.8 percent under-enumeration; about half a million are primarily laboring immigrants from surrounding countries such as Lesotho and Mozambique. The average growth rate has declined from about 2.4 percent (1970 - 80) to 2.2 percent (1980 - 1990), 1.4 percent (1995 - 1996) and about -0.3 percent per annum (est. 2004) because of the HIV/AIDS epidemic and emigration (net migration was -0.3 migrant(s) per 1,000 people in 2004.[4]

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[3] Under *apartheid*, all South Africans were officially categorized into one of four racial groups: White, black African (the term "African" is often used by those on the political left to designate the Bantu-speaking majority), "Coloured" (it was considered politically correct to put the word in quotation marks, but is not done so now) and Indian/Asians. Although such categories have been abolished, government reports and Censuses still use them extensively.
[4] The South Africa's 2001 Census did not include any questions on HIV/AIDS, as the topic was "too sensitive" to be discussed.

The crude birth rate (CBR) has declined from 48.4 births per 1000 population in 1951 to 24.1 in 1996, reaching 21.12 births per 1000 people in 2001. The total fertility rate is below replacement (2.2 children per woman), although substantial racial differences exist (lowest among the Whites and highest among the black Africans). 29.5 percent of the population was aged 14 years and under in 2001, while 5.2 percent were 65 years old and older, with more conspicuous aging trends among the Whites, followed by Coloureds, Indians, and then black Africans.

In 2003, the HIV/AIDS prevalence rate was estimated to be 21.5 percent with approximately 5.3 million individuals living with AIDS and 370,000 deaths recorded that year (UNAID 2005). This obviously has ramifications on related demographic events and even one's ability to participate in the labor force. Like fertility, the mortality rate for South Africa had been declining over time although recent population trends indicate to the contrary. Because of high HIV/AIDS-related mortality, the crude death rate (CDR) increased to 20.5 deaths per 1000 persons in 2004, up from 10.07 in 1996 and 10.6 in 1980. Although the infant mortality rate (IMR) has declined to less than half the rate of 118 deaths per 1000 live births in 1970, it increased to 62.8 deaths per 1000 live births in 2001, up from 51.4 in 1996. Despite improvements in healthcare provision, the IMR for the black African population (49 live births per 1000 in 1996), is six times the rates of 8.3 and 9.0 for the White and Asian-Indian populations respectively, and double the rate for Coloureds. The effect of HIV/AIDS is also evident in the reduced life expectancy at birth, which is down to 44.2 years in 2004 from 59.6 years in 1996 and 53.6 years in 1970—a very low figure when compared to other developed or developing countries.

In terms of socio-demographic trends, marriage rates have declined, especially among the black African population, and as a result, divorce rates are also declining. There has been an increase in the proportion of both single and extended households in urban and rural areas, with a concomitant decline in the nuclear-type households. In extended household families, there is a higher dependency ratio, with more of such households having more young children and elderly women.

2.2   Segregationist and *Apartheid* Policies and the Creation of "Bantustans"

> "That is, in fact, the entire basis of our policy as far as the white
> economy is concerned, namely a system of migratory labour."
> (G. F. van L. Froneman, Deputy Minister of Justice, Mines,
> and Planning, House of Assembly, 6 February, 1968.)

The single most significant factor distinguishing South Africa from other countries is its peculiar experience of segregationist followed by institutionalized *apartheid* policies through most of the 19th and 20th centuries (Aliber, 2003). Although underpinnings of *apartheid* (which means "separateness" or "apart-ness" in Afrikaans) were first laid under the British rule, the formal system of "separate development for separate groups" was established after the Afrikaners' Nationalist Party gained control of the government in 1948. The fundamental aim of "Grand *Apartheid*" was the separation of the races: not only of minority Whites from the majority non-Whites (i.e., black Africans, Coloureds, and Asian-Indians), but also of non-Whites from each other, and, among black Africans, of one ethnic group from another (Xhosa, Zulu, etc) in order to create tribal identities instead of a broad African nationalism (Worden, 1994). Manifested through the strict division and hierarchy of labor, residences, and governments, this program socially engineered the

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creation of black African "homelands" to generate patterns of rigid geographic segregation and concomitant labor mobility.

The migrant labor system, maintained by harsh legislation and administrative procedures, fundamentally shaped the employment structure of South Africa and of its non-White residents, particularly black Africans, from the 19th century to the present. The economy, anchored on the growing domination of the capitalist mode, was based first on mineral exploitation, a phase succeeded by burgeoning industrialization and the subsequent expansion of the tertiary sector (Wolpe, 1972). The discovery of gold and diamonds in the 19th century led to a growing demand for cheap wage labor that was artificially fulfilled by the White government through stringent laws and policies aimed towards the creation and sustenance of (black African) circulatory migration (Tomlinson, 1988; Bundy, 1972). The Natives Land Act (1913) demarcated the South African landscape into the "common area" (87 percent) and the "reserves" (8 percent, later increased to 13 percent in 1936), and prohibited black Africans from acquiring, owning, or renting land in White (farming) areas. The Native Urban Areas Act (1923) which deemed urban areas as "white," and the Native Act of 1936 that created "influx controls" to regulate urban in-migration of black Africans further limited their economic options so as to compel them to sell their labor to mines and white farms (Davenport, 1987).[5]

A structural imbalance between the geographical location of job opportunities and the settlement pattern of the black population created a situation whereby rapid

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[5] The initial emphasis was on separating the various races *within* the urban landscape. A large segment of the Asian/Indian and Coloured populations were forced to relocate out of designated "white" areas. Black African townships that had been overtaken by (white) urban sprawl were demolished and their occupants removed to new townships well beyond city limits.

migration of black Africans to white areas was inevitable (Natrass, 1976).[6] Driven by

the belief that the presence of a black underclass will create racial conflict and be

disadvantageous to capital, the National Party implemented its *apartheid* program in

1948 that focused on "regional planning" through policies that controlled permanent

black African urbanization, resettlement programs, economic decentralization, and

associated strategies for "development" of black areas. Thus, *apartheid* policy

planners attempted to create two distinctive geographical spaces: a racially-integrated

economic space and a racially segregated socio-political space that were connected by

high rates of male (and sometimes, female) labor migration.

As a first step, people were categorized into racial and ethnic types

(Population Registration Act, 1950) and segregated into urban residential townships

and business areas based on these established social categories (Group Areas Act,

1950 and 1986). In 1951, black African reserves were consolidated into ten distinct

"homelands" or "Bantustans" of specific ethnicities and languages. These

"Bantustans" (Figure 2.2; abolished in 1994), containing about 13 percent of the

South African land, were made up of broken tracts of poor quality economically non-

viable land riddled with erosion and incapable of supporting their large designated

residents: about 75 percent of the South African population (Davenport, 1987). By

granting them nominal autonomy through the Bantu Authorities Act (1951), the

government endeavored to disentangle itself from the responsibility of sustaining

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[6] All economic progress was geographically concentrated on the white metropolitan or core areas and
by contrast, the black reserves were relegated to the outer peripheries of national economic space.

these poor economies.[7] Black Africans were only allowed to vote in their separate

homelands even though many of them did not actually live there.[8]

Indians and Coloureds were not consigned to "homelands," but in accordance

with the Group Areas Act, were required to live in urban peripheral townships with

long commutes to centers of work. Although both groups were politically

disenfranchised and often faced ceilings on job promotions and advancement, they

nonetheless enjoyed preferential access to employment and educational opportunities

relative to black Africans (Worden, 1995).[9] On the other hand, to live in urban

townships, black Africans had to prove that they either worked in a white home or

business. With a few exceptions, they could not own and operate their own

businesses; instead, they were required to transact all purchases from White or

Indian-owned shops. Under several "pass" laws (rescinded in 1986), black Africans

had to carry permits at all times; anyone found without one was arrested immediately

and sent to a rural area.[10] Women were singled out as pass offenders because they

were perceived as a sign for the establishment of black African families. Between

1960 and 1983, an estimated 3.5 million black Africans were forcibly removed and

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[7] The first of the Bantustans, the Transkei, which was the homeland of the Xhosa people, was granted limited self-government in 1963. Bophuthatswana, Ciskei, and Venda (TBVC) were also granted "independence," but no country in the world other than South Africa recognized them as independent states. Lebowa, Kangwane, Gazankulu, Qwaqwa, KwaZulu, and KwaNdebele were declared "self-governing" in the 1970s.

[8] In 1936, black Africans were also prohibited from voting in South Africa: a political disenfranchisement that further relegated them to the bottom of the economy (Tomlinson 1988).

[9] For example, the Coloured Labour Preference Policy sought to make the Western Cape the preserve of white and Coloured people, and constrained job prospects of black Africans and, to some extent, Indians (Crankshaw, 1997). Indians and Coloureds were also allowed limited participation in separate and subordinate Houses of a tricameral Parliament, with the understanding that both minority groups could be allowed limited rights. However, the black African majority was to become citizens of independent homelands.

[10] "Pass laws," a system of documentation and registration regulated mobility and labor of men, making it illegal for them to be in a city for more than 72 hours without a job in a white home or business.

"relocated" from either towns or "black spots" in white rural areas into Bantustans, "closer settlements," peripheral urban townships, and "betterment" villages where they lived in abject poverty (Maylam, 1990).

Addressing labor demands stemming from rapid industrialization in the rest of South Africa and the growth of a strong tertiary sector, labor bureaus were given the task of securing work contracts of six months to two years duration with black Africans (predominantly men) living in the homeland "nations." With no industry and a decaying rural economy, opportunities for employment there were few, leading to the establishment of a steady channel of cheap circulatory migration to cities, white agricultural farms, or mining and or industrial interests. According to Bundy (1972):

> "The embedding of migrant labour in the economic structure conferred benefits upon all major interests which possessed a political voice in the State. For urban employers it meant that labour was kept cheap, unorganized and rightless, that overhead costs were kept to a minimum, and the formation of an urban proletariat was restricted. For White workers it provided the security of membership of a labour elite. For White farmers it meant that low wages and the impermanence of compound life kept the labour force close at hand."

Wolpe's structuralist perspective posits that extended separation (and often, family disruption) ensued with black African men migrating to capital-intensive areas and "superfluous appendages," i.e. women, children, and the aged and infirm (according to a Government Minister), staying behind to reproduce labor.[11]

Starting in the late 1950s and 1960s, the government also initiated a plan of "industrial deindustrialization" to further restrict the rate of growth of the large industrial centers (i.e. the Pretoria-Witwatersrand-Pereenignig region, Durban-

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[11] In fact, because stable relationships as well as marriages were prevented or destroyed by the system, births to unmarried women were increasingly common. For instance, in Durban in the 1970s, between 59 and 64 of every 100 black African babies were born to unmarried women; in East London, between 50 and 68 (Bernstein, 1978).

Pinetown, the Western Cape, and Port-Elizabeth-Uitenhage) through migration. A number of state incentives and subsidies were allocated to industries (mainly multinational corporations from Taiwan and Israel) that relocated or were constructed close to certain "growth points" near border areas of the homelands or townships (van der Berg, 1985). In order to attract potential businesses to the barren conditions and poor infrastructure of the homelands, stringent legislations were put in motion: unions were prohibited, few benefits were provided, and no legislation for minimum wages was put into force (Cobbett and Nakei, 1987). State incentives included subsidies for wages, training, rentals, electricity, housing, technology imports, relocation and taxes. These predominantly textile and clothing industries hired a disproportionate number of black African women for the labor-intensive jobs because of the type of work involved as well as men's migratory status (Berger, 1992; Budlender, 1991). According to the *apartheid* government, while the terms of employment often meant low pay and degrading working conditions, the income women earned from these jobs was supposedly greater than what could be procured from homelands or irregular remittance wages from husbands, partners, or fathers.

Ironically, workers were more exploited on the homelands than in the "common" areas for equivalent jobs. For example, several firms in Babelegi, Bophutatswana, were reported to be paying women workers rates between R 7.50 and R 10 a week in 1980, at a time when the Poverty Datum Line was around R 40 a week (1980: 14).[12] The South African Government's own Corporation for Economic Development admitted that creation of jobs in and around the homelands was

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[12] Labor legislations of South Africa were not automatically applicable to most of the homelands because they were supposedly "independent" or "self-governing."

completely inadequate for meeting the increase in unemployment inside the homelands (Budlender, 1991). Currently, because of the implementation of WHO tariffs by South Africa, black African women (along with Indians and Coloureds) have lost this important source of employment as textile and other globally "uncompetitive" sectors have transmigrated to other East Asian countries.

Wolpe (1972) argues that Bantustans led to the creation and sustenance of two distinct modes of production: the white capitalist mode and the black redistributive mode. Although migrant wage earners attempted to contribute towards the support of their families in the reserves, the low level of black African wages made it barely feasible (Crankshaw, 1992). Employers justified paying these wages on several grounds: first, in theory, migrant families were able to live off the proceeds of subsistence agriculture at "home." Second, by returning to the homelands between periods of employment, migrants retained a means of subsistence in the redistributive economies of the black areas that also created a geographical separation of the two-pronged process of labor force maintenance and renewal. Consequently, the burden of labor renewal (e.g. costs of welfare facilities, education, or social security) was transferred from the employers to the subsistence economy (Magubane, 1975).

Although much is debated in the literature, some historical evidence suggests that the development of the homelands benefited *some* black Africans, if not the majority. Self-governance, along with funds from the *apartheid* government that attempted to legitimate its policy of "separate development" by investing in and encouraging entrepreneurship in homelands, enabled black Africans to expand the public sector, bringing with it a growth in associated jobs, especially in health and

educational services (van der Berg, 1985). For example, the public sector in Transkei grew from 2,446 to 19,800 posts between 1963 and 1979, with the explicit goal of replacing white officials with local black Africans (Southall, 1983: 177). Public sector growth, in conjunction with the development of a small number of universities and technical institutes located in the homelands, provided opportunities for black Africans to improve their educational and technical qualifications that would not have been case elsewhere (Southall, 1983: 178).

Furthermore, the Bantu Investment Corporation (BIC) facilitated the devolution of white-owned homeland enterprises to black Africans and provided entrepreneurs with business training and loans. This served to develop a stratum of petty capitalists, though most of them remained in commercial and service sector enterprises that required low levels of finance and technology (Southall, 1983: 188). However, a small number of Whites continued to fill administrative roles in these homelands, serving as intermediaries between the new Bantu governments and the Republic of South Africa (Butler, Rotberg, and Adams, 1977).

2.3   Post-*Apartheid* South Africa: Poverty within Affluence

> "At the heart of the Government of National Unity is a commitment to effectively address the problems of poverty and the gross inequality evident in all aspects of South African society"
> (White Paper on Reconstruction and Development, The Government of South Africa, 1994)

The *apartheid* vision of "separate development for separate groups" began to crumble when F. W. de Klerk replaced P. W. Botha as the president in 1989. De Klerk removed the ban on the ANC and released its leader, Nelson Mandela, after 27

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years of imprisonment. Mandela became the President of the Republic of South Africa after the country's first multiracial democratic elections in 1994.

Despite a stock exchange that ranks among the ten largest in the world, high economic growth, and the infusion of foreign investments, South Africa is still struggling with extreme income inequality by international standards, a high poverty rate, and chronically high unemployment (Standing, Sender and Weeks, 1996).[13] Table 2.1 indicates that among comparable high middle-income countries, South Africa ranks low on several social development indicators (life expectancy, under-5 mortality, primary school enrollment, fertility, HIV prevalence, and improved access to water)—a grim reflection of the legacy of *apartheid.* Indeed, on some measures, South Africa is not very different from other low income sub-Saharan countries, including its neighbors (lower panel, Table 2.1). In fact, the overall picture would be bleaker if the data were disaggregated by race, with black Africans faring even worse than Africans in other countries. In terms of income, compared to other upper middle-income countries and globally, South Africa has one of the most unequal distributions (as measured by the Gini index; Table 2.1).[14] In 2001, the lowest 10 percent of the population accounted for only 1.1 percent of the country's income whereas the top 10 percent accounted for about 46 percent, a situation that is comparable to that of Brazil, Chile and Mexico (World Bank, 2001). The income gap in the country has further widened between 1996 and 2001 with those already poor, approximately 57 percent individuals in 1996, sinking deeper into poverty by 2001.

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[13] The extant situation is further compounded by the IMF's enforced fiscal discipline on government spending that put further pressure on the already precarious conditions of the majority of black African population (Mazur, 1998).
[14] According to South African labor force surveys, the Gini index is much higher than what is reported in the UNDP database: it actually increased from 0.69 in 1996 to 0.77 in 2001 (Simkins, 2004).

While measures such as industrial restructuring, labor legislation, Black Economic Empowerment (BEE) and small, medium, and micro enterprises' (SMME) support, human resource development, and changes in the taxation structure have somewhat impacted on economic relations, exclusion of the black African majority from the economic mainstream manifests itself in the existence of "two economies" in one country. Such exclusion finds expression starkly in the high rate of unemployment (PCAS, 2006). Despite the creation of new work opportunities in the formal and informal sectors to accommodate many historically excluded South Africans in the labor market, unemployment has soared from 29.2 percent in 1995 to 39.5 percent in 2002 measured in terms of the expanded definition of unemployment, which includes disillusioned work seekers (October Household Survey 1995; Labour Force Survey, February 2002). In fact, the South African Reserve Bank estimates that total unemployment is increasing by almost 2 percent a year (Klasen and Woolard, 1999).[15]

2.4   Interlocking Systems of Inequality: Region, Race, and Gender

> "The *apartheid* labor market was a paranoid labour market—built on fear and based on fear—which would have been worthy of caricature were it not for the terrible suffering and human degradation it entailed."
> (Standing, Sender, and Weeks, 1996)

As evident from the historical background presented earlier, race, gender, and region are dominant axes of inequality in South Africa, and within a multilayered

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[15] According to an ILO report (1999), sustained unemployment is the result of shifts into more capital-intensive export industries due to trade liberalization and relatively low levels of capital investment.

labor market, they interlock to concentrate women and people of color in occupations that are lower paying and of lower status. A fuller examination follows.

2.3.1   Region: Distorted Regional Planning and Urbanization

In order to understand the nature of the post-*apartheid* labor market, one must focus on the rural economy that was built on labor migration and the suppression of indigenous economic activity, resulting in impeded industrial and economic growth (Standing, Sender, and Weeks, 1996). While large commercial farms took much of the productive land, a majority of the (black African) population was crowded into broken tracts of poor-quality land with insecure tenure. Hence, rural poverty in South Africa is endemic: almost 75 percent of the poor live there and are in fact concentrated in the former homelands and TBVC (Transkei, Venda, Bophuthatswana and Ciskei) states. Compared to the urban poor, they experience lower levels of educational attainment, limited occupational choices, higher unemployment rates, and lower access to infrastructural services such as water, electricity, and housing quality.

Table 2.2 highlights regional socioeconomic differences across the nine South Africans. Eastern Cape (24 percent of all poor), KwaZulu/Natal (21 percent) and Limpopo (18 percent) contain nearly two thirds of South Africa's poor; they also include a significant proportion of the former homelands (Crankshaw, 1997). In fact, almost 77 percent and 72 percent of Limpopo and Eastern Cape's population live below the poverty income line; these provinces have also experienced maximum out-migration since the dismantling of *apartheid*. On the other hand, the non-homeland provinces of Western Cape, Gauteng, and the Northern Cape have the lowest

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proportion of poor: the combined poverty share of Gauteng and Western Cape add up to only 10 percent even though their population share is 26 percent (HSRC, 2002).

Finally, although women approximate almost half of the population, a glance at the regional sex composition of South Africa (particularly within economically disadvantaged rural/urban areas and the former homelands/non homelands) indicates that the proportion of men and women is unequal (Posel and Casale, 2003). This is particularly the case for black African men and women because of the male-dominated migrant labor system and women's forced residence in the rural homelands, a pattern that has continued even after *apartheid* (Budlender, 1991). Apart from the obvious social implications such as family disintegration, these female-headed household are particularly prone to poverty, trapped in the deepest mire of the second economy.

2.3.2 The Complexities of Race

Inequality in South Africa has largely defined along race lines: nearly 95 percent of South Africa's poor are black African, 5 percent are Coloured, and less than 1 percent are Indian or White. The percentage poor of each racial group are 64.9 percent for black Africans, 32.6 percent for Coloureds, 2.5 percent for Indians, and only 0.7 percent for Whites. In 2001, black Africans had nearly twice the unemployment rate (38 percent) of Coloureds (21 percent), more than three times the unemployment rate of Indians (11 percent), and nearly ten times the unemployment rate of Whites (4 percent).

Table 2.3 highlights labor force participation rates across race and gender from 1981 to 2001: while those for black African men have decreased significantly during that time period, they have increased or decreased very slightly for all other men. The declining rates for the former can be partly explained by retrenchment trends in the mining and manufacturing industry. Between 1981 and the 1990s, the nature of the job requirement in both areas stitched from a labor force characterized by high turnover and a relative absence of skills to one more committed, skilled, and experienced. Moreover, the labor force was "trimmed" in response to changing economic conditions such as a declining international gold price and deepening recession, creating a labor pool of unemployed, and often discouraged, laborers (Murray, 1995). Rates for all women have increased consistently.

Critics of the "Bantu education" policy often blame the situation of black Africans to the racially polarized and highly fragmented school system that increased spending on mass education but deliberately aimed to constrain the skill levels of black Africans so as to fit them better for their designated roles within the *apartheid* economy. Under *apartheid*, "own affairs" departments managed Indian and Coloured education, while each of the homelands had its own department of education. Only in 1996 were 19 departments rationalized into a single education system. While Whites were heavily resourced at tertiary level, with English- and Afrikaans-medium universities striving to secure "European" educational content and standards, non-White, and especially black African, schools and colleges were starved of resources. Moreover, black Africans were rarely able to complete school because of economic

pressure. Hence, one would expect educational attainment to play an important role in occupational segregation by race as well as sex.

Sectoral breakdown by race in Table 2.4 indicate that according to the 2001 Census, black Africans still comprise the overwhelming majority of workers in mining and domestics in private households, but a small minority of the lucrative financial services. On the other hand, Coloureds have remained concentrated in agriculture, with an above average share in manufacturing as well. Finally, Whites and Asian-Indians are disproportionately employed in financial services and manufacturing sectors respectively. The service (excluding domestics in private households) and wholesale/retail sector employ a significant percent of workers from all racial groups. Thus, a distinctive pattern of sectoral segregation has persisted into the post-*apartheid* era.

In recent years, inequality *within* population groups—i.e., the gap between rich and poor within each racial group—has increased substantially. The Gini coefficient for the black African population has risen from 0.62 in 1991 to 0.72 in 2001, which is comparable with the most unequal societies in the world (refer to Table 2.2). Interestingly, the white population has a Gini coefficient of 0.60 that is also extremely high for a group whose education and occupational profile matches that of highly industrialized countries.

2.3.3   Gender: Patriarchy and Women's Work During and After Apartheid

Rejecting prescriptive, Eurocentric, middle-class White feminism, Mohanty (1991:12), reflecting on post-colonial feminisms, writes that:

"To define feminism purely in gendered terms assumes our consciousness (or identity) of being 'women' has nothing to do with race, class, nation, or sexuality, just gender. Ideologies of womanhood have as much to do with class and race as they have to do with sex."

In the same vein, rejecting a simplistic and monolithic conception of patriarchy in southern Africa, Bozzoli (1983) uses the phrase "patchwork quilt of patriarchies" to describe the heterogeneous status of women that has been mediated by circumstance and historical experiences. Colonialism, followed by *apartheid*, did not have the same impact on all women; instead, women of different races were subject to different social and economic processes. Bozzoli argues that the effects of colonial capitalism and the domestic struggles waged within it has resulted in a "system in which forms of patriarchy are sustained, modified and even entrenched in a variety of ways depending on the internal character of the system in the first place" (1983: 145). Thus, there are important contrasts in the operation of gender between different social systems, which give rise to diverse and complex hierarchies of privilege and oppression based on race *and* class between South African women (Walker, 1990: 1).

However, Walker (1990: 2) posits that there still remains "considerable disagreement, not to mention confusion, about how to explain women's oppression in South Africa, as well as how to analyse the intricate interrelationships of gender, race, and class and their differential impact on women." While the "patchwork quilt" analogy highlights the diversity in the South African female experience, Walker argues that it may also be useful to reduce the various forms of patriarchies to two dominant systems. One is characteristic of the pre-capitalist Bantu-speaking societies of the region, while the other of the colonial states established by the European settlers—i.e., the "indigenous and the settler sex-gender systems," comprising of

Whites and Boers or Afrikaans (Walker (1990: 1).[16] Black African women suffered

(and still suffer) a triple oppression of gender, race, and class, and were subject to

customary laws that did not allow them to own or inherit property.[17] Conversely,

White women were subject only to South African law that gave them significant legal

benefits over women of other races, such as the right to vote, but which also

discriminated against them in comparison to white men, e.g., in property and tax.

Historically, the right-wing White supremacist ideology, espousing a

conservative vision of gender relations, viewed White women primarily as mothers

within traditional families, but divided black African mothers and their children

(Bozzoli, 1983). White women lived under cultural expectations that dictated that a

woman's place was in the home and that her participation in the workplace was

merely to support men's agendas. Hilda Bernstein notes that after childbirth, "the

primary role of a white woman becomes that of consumer and a living display,

through leisure and adornment, of her husband's wealth" (1978: 61). While some

White women were prepared to transcend this role (e.g. members of the Black Sash

who demonstrated against *apartheid* and tried to help victims of the pass laws), they

were few in number. Culturally specific construction of gender, which by and large

related to what men and women can or cannot do, also reinforced the work (or

employment) they were expected to do. According to Bozzoli, "White women's

employment of black servants frees them from domestic drudgery and is a form of

racial privilege [thus alleviating some of their own gender burden]; but it does not

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[16] However, the "patchwork" theory does not discuss the unique case of Asian-Indians who were
forcibly brought to South Africa as indentured workers on sugar plantations.
[17] As mentioned earlier, black African men and women were also subject to different regimes under the
migratory labor system and movement restrictions imposed on the non-White majority.

necessarily grant them class mobility; while it has been suggested that it reinforces their exclusion from the system of male upper/middle class occupational privilege" (1983: 169). Thus, in 1980, 88.3 percent of employed White women were in sales, clerical, and professional positions, employed in educational institutions, in hotels and clubs, and as nurses and nurse-aids in hospitals.

Neither White nor Coloured women were substantially involved in agriculture; the move from agriculture to industry occurred earlier in the case of the Coloured women because of their apparent biological affinity to the White race. As industries expanded, more specifically after World War II, the vertical movement of White men and women into skilled, supervisory, and managerial positions, and the horizontal movement of black African men into more "masculine" industrial sectors created job opportunities for Indian and Coloured women to move out of agriculture and domestic service into the more "feminine" industrial sector—spinning and weaving of yarn, stitching of cloth, or clerical white collar jobs (Meer, 1991). Today, they, along with black African women, constitute the mass of garment and textile workers, and predominate in the food, canning and footwear industries.

On the other hand, black African women encountered the triple interlocking themes of domination, namely gender, race, and class, in almost every sphere of their daily lives. With few exceptions, they were either domestic servants or agricultural workers. While the domestic servant in the 1920s was overwhelmingly a black African male, by 1980, he was safely ensconced in industry, and the black African female was the most ubiquitous domestic servant in South Africa. By 1970, very few black African women had managed to reach the professional, or even the white collar

level of work: of the total number of black African employed women, professional, administrative, clerical, and sales workers combined totaled only 4.4 percent. Most of these jobs were in nursing or teaching, the only two professions that have traditionally been open to them. Even today, among "Professional," black African women are represented in higher numbers than black African men, but primarily due to their disproportionate representation in nursing and teaching (Standing, Sender and Weeks, 1996).[18] In recent years, both the health and education systems have undergone tremendous financial and organizational strain, with many women losing jobs or experiencing real cuts in income (Posel and Todes, 1995). Thus, before and during *apartheid*, women were concentrated in segments of the labor market where incomes, opportunities, and working conditions are relatively unfavorable—often classified as the "secondary labor market" (especially in agriculture, domestic service, and informal sectors) that are often "traditionally female."

Not much has changed since the 1980s: while women continue to dominate in community and personal services, clothing and personal services, and the textiles and shoe industry, men dominate in mining, construction and electricity as well as heavy industries such as metal and transport. Using the Census 2001, Table 2.5 shows that 50.1 percent of women (compared to 20.7 percent men) are disproportionately concentrated in two major service (or tertiary) industries: Community, social and personal services (28.9 percent) and Private household services (21.1 percent). On the other hand, 50.2 percent of men are distributed in various primary and secondary industries such Agriculture, Mining, Manufacturing, Construction, and

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[18] Moreover, although the formal labor market is stagnating, government affirmative action policies have increased the proportion of Black African women working in the public sector.

Transportation, compared to 21.3 percent women. The percent female share of employment reflects the observed industrial difference by gender, e.g. Private household services (84.2 percent female), Mining (5.3 percent female), or Construction (8.7 percent female). Finally, the financial sector has approximately equal numbers of men and women.

In 1994, 26 percent of employed women were working in the informal sector and by 1997 that number had increased to over 33 percent, probably due to a lack of alternatives (Stats SA, 1998; Budlender, 1991). High unemployment rates also limit entry into regular employment, and as a result, women who with economic needs are increasingly entering into self-employment (Budlender, 1997).[19] Moreover, for most women in all disadvantaged racial groups, entering the market is an economic necessity, but the forms of racial discrimination faced by them are also acute by international standards.[20] 82 percent of service employees and 85 percent of those in agriculture tend to be black Africans, who also comprise a high proportion of domestics and farm-workers (Makgetla, 1995).[21] While Coloured women encompass 35 percent of women in production and 31 percent of unskilled workers, Indian women, are most visible in the manufacturing sector, although in general, they have the lowest labor force participation rates. Finally, except for agriculture, mining, manufacturing, and community and personal services, White women account for

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[19] Gender discrimination and segregation is also evident in self-employment. A study conducted in Soweto around 1980 demonstrated that while a majority of *shebeen* operators were poor single women, men congregated in more well-paying jobs such as driving taxis or operating larger informal businesses that "employed" unpaid women family members.

[20] White women are disproportionately represented in the formal sector: in 1989, they were 12 percent of formal employment though only about 7 percent of the population, while black women comprised 30 percent of the population but only about 10 percent of formal employment (Makgetla, 1995).

[21] Farm-owners (who often tend to be Coloured) residing in the Western Cape have started recruiting black African women after experiencing acute labor shortage following the rural-urban migration of young black African men (Budlender, 1984).

approximately half of all women workers across the nine officially defined sectors (Standing, Sender and Weeks, 1996). Thus, while black African women are most visible in low paid and low status occupations, White women occupy well-paid jobs.

When the data is disaggregated by race and gender in Table 2.6, we observe that employment in the service sector is high for all women (highest for Whites at 35.6 percent). However, the combined effects of institutionalized race and sex discrimination become evident when, compared to 30.1 percent of black African women, less than 1 percent White and Asian-Indian women each work in private households. In fact, significant percent of non black-African women are employed in sectors *other than* the two mentioned above for women: Indians and Coloureds in Manufacturing (17.6 and 23.7 percent respectively) and Wholesale and Retail Trades (20.6 and 24.9 percent respectively), which may result in lower within-race occupational gender segregation indices for them, and White women in the high status white-collar Financial sector (25.9 percent). Thus, significant racial segregation by industry seems to exist among women.

Patterns by race for men are not *as* dramatic as that for women. Black African and Coloured men are less likely to be employed in the financial sector (which is dominated by Whites) and more likely to be in agriculture and construction than White and Indian men. Indian-Asian men are disproportionately employed in manufacturing (26.5 percent) and wholesale and retail trade (28.7 percent) compared to men of other races. The most extreme sector of female exclusion, and black African male concentration (10.1 percent), is in mining, where, according to the 2001 Census, women comprised 0.6 of total employment. Reasons include legal barriers to

women working underground in a mine, traditional conventions about women's work, and the gendered migrant labor system perpetuated by *apartheid*. Finally, among all races except for black Africans, women out-proportion men in the financial sector. This is not surprising given that industries have different propensities to employ workers in particular occupations that are known to be sex-segregated. For example, financial firms employ many clerical workers, most of whom are women.

2.5   Conclusion`

In conclusion, gender (and race) related labor market fragmentation is pervasive in South Africa, and while there may be reservations about the *extent* of the differential, the female unemployment rate, irrespective of race, is invariably higher than the male (Standing, Sender, and Weeks, 1996). For instance, women comprise slightly more than half (53 percent) of the working age population but only account for 45 percent of the measured employed labor force. Another form of labor market disadvantage is industrial concentration whereby particular groups (such as women or specific racial groups) are crowded in a few sectors. For example, women are more likely to be employed in the public sector than men, which may be in part due to the *type* of jobs in the public sector. Thus, they remain concentrated in labor market "segments" or a restricted range of occupations where incomes, opportunities, and working conditions are relatively unfavorable. It is this important phenomenon of occupational sex segregation that this dissertation will analyze. The next chapter (Chapter 3) will provide an overview of the theoretical literature surrounding occupational sex segregation.

Chapter 3: Literature Review

Theories pertaining to occupational sex segregation tend to fall into two major frameworks: labor *supply* and labor *demand*. Supply-side theories are based on the assumption that differences in labor market outcomes are the result of education, skills, abilities, and choices of workers themselves (Becker, 1975; Mincer and Polachek, 1974). On the other hand, structural demand-side theories focus on organizational discrimination in hiring/promotion and gender stereotyping as well as a market demand for female labor (Cotter et al, 1997). This dissertation seeks to understand occupational sex segregation in South Africa by combining both theoretical approaches in order to examine the importance of context in addition to individual and household characteristics. Before discussing the conceptual framework and hypotheses, I will provide an overview of the theoretical literature surrounding occupational sex segregation in this chapter.

3.1   Micro-level (Labor Supply) Factors

In explaining employment outcomes for women and men, neoclassical models often address the types and levels of marketable qualifications that they acquire as well as women's balancing of their productive and reproductive roles.

3.1.1   Human Capital—Education, Skills, and Training

Human capital is the personal, unique, and non-transferable investments (such as formal education, skills, job training and experience, government and private training programs, health expenditures, and migration) that individuals invest in to

increase their productivity (Schultz, 1961). Microeconomic neoclassical rational

choice models suggest that human capital, rather than the characteristics of the labor

market, holds the key to an individual's ability to secure good jobs in the modern

labor market (Becker, 1975). Especially emphasizing the role of education as an

important form of human capital, Becker noted that "[p]robably the most important

piece of evidence is that more highly educated and skilled persons almost always tend

to earn more that others" (1975: 2). Hence, other things being equal, the more

education one has invested in, the more marketable skills and labor force experience

one has obtained, the better job and earnings one can expect (Mincer and Polachek,

1974). The expectation is that social groups (e.g. by gender and race) can become

perfect substitutes for each other as they converge in the kind *and* amount of human

capital they possess.

Several aspects of the human capital theory are used to explain gender (or

race) based divisions in the labor market, e.g. occupational segregation or earning

inequality, whereby women (and minorities) often occupy less advantageous

positions with lower wages levels (Reskin and Padavic, 1994; Charles and

Buchmann, 1994; England, 1982). The basic premise is that rational individuals

make human capital (and occupational choices) as part of their utility maximizing

decisions stemming from their productive and/or reproductive roles, an issue that is

often also discussed under the "maternal incompatibility thesis" (England, 1992;

Mason and Palan, 1981). Compared to men, women have less of an incentive to

invest in their human capital because of anticipated career interruptions due to

marriage, unpaid household labor, childbearing, and subsequent childrearing. Or,

conversely, disproportionate time and energy spent on domestic work prevents them

from advancing their careers or garnering work experience, leading to poor job

outcomes. (The underlying assumption here is the voluntary nature of the decision,

although this issue can be debated in the context of developing countries where

women may not have the opportunity, freedom, or resources to attend school or

work.) At the other side of the table, segregation may be attributed to a demand-side

perspective (or statistical discrimination): employers may be less willing to provide

firm-specific training and knowledge to women attempting to procure full-time or

high status jobs because they may view women as investment risks with low returns

and high turnover rates (England, 1982).

While very few studies have examined gender and racial/ethnic stratification

in labor markets (e.g. labor force participation or occupational status) in developing

countries, there is a well-developed literature on this issue in industrialized countries.

Interestingly, results are varying between developing and industrialized nations,

highlighting the importance of the development context. Empirical studies from the

former have consistently shown that women's educational attainment is positively

related to their occupational placement, while results are less consistent for those

from developed countries (Presser and Yi, 2008; Anker, 1998; Charles, 1992; Anker

and Hein, 1986). In the United States, occupational segregation has persisted despite

women's increasing levels of education that have converged and even overtaken that

of men (Cotter et. al 2005; Bianchi and Rytina, 1986). Educational attainment does

not particularly facilitate women's movement from female- to male-dominated

occupations (Okamoto and England, 1999; Spenner and Rosenfeld, 1990), although

studies from Europe find positive support for the human capital model because of the emphasis on vocational training that is often gender-specific (Charles and Grusky, 2005; Charles and Buchmann, 1992 for Switzerland).

On the other hand, because gender gaps in education are still quite wide in developing countries, a women's level of educational attainment is crucial for her to compete with men for skilled white-collar occupations or the small number of male-dominated jobs in the modern sector. In fact, while basic literacy is required for almost all modern sector jobs, secondary school and higher is often necessary for entry into white collar occupations (Chang, 2000; Charles, 1998; Jacobs and Lim, 1992; Anker and Hein, 1986; Pampel and Tanaka, 1986). Researchers have even highlighted reverse causality: using the case study of Kenya and Thailand, Buchmann and Brakewood (2000) argue that gender differences in labor market opportunities (or labor structures) *influence* male and female school enrollment rates. In Thailand, a "feminization" of the manufacturing sector was related to a demand for female secondary education. In Kenya, on the other hand, the size of the local manufacturing sectors, which were highly masculinized, had no impact on female secondary school enrollment rates (Buchmann and Brakewood, 2000). In South Africa, Treiman et al (1996) found that educational disparities played an important role in maintaining race-based differences in occupational status, but explained a much smaller fraction of race-based income inequalities. Similarly, Hannum and Xie (1998) found that over an eight-year period in Northwest China, increased ethnic inequality in occupational status could be explained by increased ethnic differences in education.

Several studies have challenged the human capital model and its explanation of the concentration of women in (female-dominated) low-status and low-paying jobs on both normative and empirical grounds. For example, the postulation that similar levels of human capital would lead to similar occupations and earnings (or the expectation that sex-typed occupations will become less prevalent) has been invalidated by the observation that returns on investment in education vary widely across social groups, particularly gender and ethnicity.[22] Women and minorities generally hit the glass ceiling at senior positions that possess adequate decision-making power and remuneration even though they may have expanded their level and range of qualifications and gained experience at the lower levels of management. Although studies are conflicting, gender differences in job tenure disappear when age is controlled for; thus, both younger and older women have turnover rates that are lower than men of the same age.

3.1.2   Gender, Migration, and Work

According to Masey et al (1993: 431), "social scientists do not approach immigration from a shared paradigm, but from a variety of competing theoretical viewpoints fragmented across disciplines, regions, and ideologies." The modernization theory, a bipolar framework couched in neoclassical rationalistic terms, approaches migration as a process stemming from push forces at the origin (e.g. famine, war, or poverty) and pull forces at the destination (e.g. employment, peace, or wealth). Consequently, migrants or immigrants either possess desirable

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[22] Several studies estimate that as much as half the difference between male and female hourly earnings could be explained by male-female differences in education and training (Polachek, 1975).

skills, labor or capital which they can bring to a community (or country), or are

undesirable unskilled victims of underdevelopment and poverty (Lee, 1966). An

underlying assumption of this theory is that the movement of people from areas of

low capital and high labor supply to areas of high capital and low labor supply will

foster economic development in both sending and receiving communities. This will

result in an equitable balance between resources and population pressure, and the

ultimate elimination of differences between rural-agrarian and urban-industrial areas

(Todaro, 1976).[23] However, closed or semi-open national borders will generate

distortions in economic decision-making and impose welfare costs globally in terms

of foregone production and unrealized utility gains.[24]

The simplistic "push-pull" assumptions of the modernization theory has been

challenged on both empirical[25] and theoretical grounds, namely its ahistoricity

(Crush, 1996), portrayal of migrants as "atomistic" and unattached individuals (Stark,

1991), and lack of focus on gender, among other issues (Chant, 1992; Bozzoli, 1983).

At the macro-level, scholars have argued for greater emphasis on a historical-

structural perspective that is grounded in a broader theory of political economy and

which incorporates the impact of global capitalism (Crush, 1996; Massey, 1996).

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[23] Empirical findings from countries such as South Africa, however, reveal contrary patterns: a massive and growing trade imbalance with the source countries of migrant workers impedes development and reduces job opportunities in those countries, thus driving migration into South Africa (Crush, 1996).

[24] An oversimplified push-pull model of immigration asserts that receiving countries are powerless to affect push factors and must therefore concentrate on *reducing* pull factors such as not hiring immigrants or not allowing companies to hire them for depressed wages. However, in the interest of capital, such pull factors are not pursued, thus sustaining the flow of migrants or immigrants.

[25] According to the International Organization for Migration (IOM), income disparity is the most obvious reason of migration, although no direct relationship between poverty, demography, and emigration is evident in empirical studies. Specifically, (poorest) countries with the highest level of unemployment or underemployment do not necessarily supply most of the potential emigrants. For example, from 1970 to 1995, Mexico, Philippines, and Colombia were listed among the top ten emigration nations. While not wealthy, these nations certainly fit the demographic and poverty profile for emigration less well than, for instance, nearly any sub-Saharan African nation (Massey, 1996).

Such a perspective views migration and social groups' (immigrants, internal migrants, or even non-movers) disparate access to differential employment outcomes or privileges (often construed as "push" factors) as inextricably linked to past and present domestic political-economic histories and international relations. Such an approach would, for example, aptly explain the high levels of circulatory internal migration *within*, or even the steady stream of Mozambican migration *into*, South Africa. As discussed in Chapter 2, a growing demand for cheap wage labor (during the 18th and 19th centuries) was artificially fulfilled by the White *apartheid* government through stringent laws and policies aimed towards the creation and sustenance of (black African) circulatory migration and homelands. Similarly, during the 1970s and 1980s, the South African *apartheid* government helped destroy the Mozambican economy during the latter's liberation struggle, resulting in high rates of poverty, unemployment, and migration (Crush, 1996). Thus, South African internal migrants or Mozambican immigrants are not just detached individuals making rational economic decisions; their actions should also be juxtaposed against the southern African historical context to highlight *why* they move and why others do not.

On the other hand, the micro-level new home economics model deviates from the (bipolar) neoclassical modernization model in terms of the ultimate function of utility maximization: i.e., household risk reduction instead of income.[26] Stark (1991) suggests that migration (or geographic diversification) plays an economic function through remittances (and subsequent migration) if the sending economy deteriorates, and a non-economic function in the case of political turmoil and instability. Even

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[26] A social capital explanation for migration, not discussed here, relies on networks created by waves of migrants to facilitate access to preferred jobs and wages to points of destinations (Massey, 1987).

when economically motivated, migration is practiced as a "household strategy" or even "survival strategy" rather than atomistic individual behavior carried out by genderless "persons" or (more often, male) "entrepreneurs." In fact, the issue of gender is specifically raised by feminists who also place the household at the center of analysis within a social context, but simultaneously deconstruct it to expose gendered power relations that influence migration behavior and experiences (Chant 1992; Silvey and Lawson, 1999). Thus, migrants are not only (male) "labor units," but husbands, wives, partners; parents, sons, or daughters who may or may not move for reasons beyond just associational.

However, to gain a deeper understanding of gender, migration, and work, and to avoid falling into wholly deterministic objectivism or humanistic subjectivity, household strategies should be located and examined *within* context-specific structural opportunities and constraints, with a specific focus on gender relations and issues. That is, structure and agency must be melded in a single framework, highlighting the need for a multilevel approach to the study of migration (or immigration). Such an approach, for example, would be especially useful in contexts where state programs provide weak indemnity against economic downturns, thus shifting insurance costs increasingly onto the familial network. In several developing countries, reducing opportunities for labor or labor migration in male-dominated sectors (such as mining), has affected the livelihoods of the households of retrenched and repatriated workers. This has risked forcing female household members into (possibly unauthorized) migration and related exploitation. Evidence from Lesotho suggests that many contract workers on eastern Free State farms of South Africa are

now women, including a large proportion of unauthorized migrants enduring grossly

inadequate working and living conditions and no union protection (Crush *et al*. 2000).

Thus, feminist theories in conjunction with the new home economics theories have

made a crucial contribution to understanding the institutions that structure migration

processes. There is now more emphasis on differential migration responses by men

and women (themselves context dependent), gender discrimination in returns to

migration, and the gendered nature of motives for remitting.[27]

When we turn our lens from a postulated multilevel framework of the *causes*

of migration (or immigration) to the *consequences*, the picture is equally complicated.

According to restrictionists and anti-immigration lobbyists, besides replacing natives

from high status jobs, immigrants with low skill and education levels depress wages

because, as a survival strategy, they are prepared to work for less (Massey, 1996;

Crush, 1996).[28] Moreover, they argue that immigrants' domination of a particular

occupation creates exclusionary ethnic enclaves, often resulting in unemployment

(and feelings of xenophobia) among non-immigrants (Martin and Midgely, 2003).

While there may be some weight to the arguments above, empirical results

prove otherwise. Pro-immigration arguments posit that because rich countries require

workers to fill various types of high- as well as low-status jobs, states relax borders

when required. Thus, immigrants are clustered at both extremes of the occupational

and educational spectrum, leading to inequality between immigrant groups

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[27] Migration policy, therefore, should be conceptualized and applied in household strategy terms, with due attention to social, economic, and biological relationships. That is, attention should be paid to the gender of individual migrants as well as to their household position and family status.
[28] In the United States, while immigrants might depress wages, they also contribute $1 billion to $10 billion per year to the national GDP (Martin and Midgely, 1999). Thus, the overall contribution of immigrants is higher than their receipts in the form of welfare, education and other services. Simon (1996) asserts that welfare and social security receipts of natives are *higher* than that of immigrants.

themselves and the native population. Moreover, the depressing of wages, a micro

level reproduction of competition in a deregulated market, is a structural issue that

reflects the strong nexus between capital and politics. The profit-driven capitalist

system in most counties lowers production costs by investing in labor-saving devices,

moving production from high-wage to low-wage zones, or hiring people who *will*

work for lower wages. Such measures are common in agriculture, textile,

automobile, or silicon chip manufacturing companies highlighting the fact that

migrants do not augment the labor supply but augment the supply of *low wage labor*.

In addition, economic restructuring has reduced the demand for workers in

manufacturing, while concurrently increasing it in the service sector. In such a

situation, owners of capital *prefer* to hire non-unionized (and more tractable) migrants

or immigrants who, because of existing competition, may be easily exploited in terms

of occupation or income (Crush, 1996). Studies in Australia and Canada found that

immigrants from southern Europe or of Mediterranean origin had poorer

socioeconomic outcomes compared to other immigrants or non-immigrants (Evans

and Kelley, 1991). Similarly, Caribbean Blacks and Bangladeshi or Pakistani

immigrants in the United Kingdom have higher rates of unemployment than similarly

qualified UK-born Whites (Modood, 1997). Or, migrants, particularly women, may

be stepping into jobs forgone by native workers (who often anticipate employment

difficulties due to competition or higher expectations) (Waldinger, 1997).

On the other hand, lack of relevant qualifications due to historically structural

inequalities prevents domestic minorities (e.g. African Americans in the United States

or black Africans in southern Africa) from entering (white-collar) high status

occupations.[29] For example, even during times of high domestic unemployment, the

United States recruits highly skilled (and unskilled) workers annually, i.e. 300,000

non-immigration visas are issued to highly skilled workers who stay for indefinite

periods of time (Keely, 1993). In the case of South Africa (whose immigration policy

is closely based on that of the United States), current immigration laws are designed

to ease the country's chronic shortage of skilled labor by making it easier to attract

skilled foreign workers (*The Economist*, 2002).

Finally and importantly, because immigration policies are driven by labor

demand and skills criteria in both skilled and unskilled categories, potential migrants

are far more likely to be male than female. Discrimination against women in the

acquisition of skills and access to certain types of employment implies that the very

criteria proposed as the basis for selecting immigrants and admitting migrant labor

mean *de facto* gender discrimination, whether it is in the process of immigration or

the type of (low status) occupations that female immigrants are in, an issue that has

been discussed earlier (Crush , 2002).

3.1.3   Family Status: The Maternal Incompatibility Hypothesis Revisited

In addition to gender-based differences in human capital such as education

and migration, occupational sex segregation may also stem from individual

socialization (life-style choices and dominant social values) as well as the gendered

nature of domestic labor. Inextricably linked to the micro-level neoclassical

perspective as well as macro-level modernization theories of the late 1960s are

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[29] For example, in light of the nurses and Math/Science teacher shortage in the United States, the
government has come up with a unique solution: instead of investing time and capital in training
domestic minorities, school teachers and nurses from other countries are hired to teach in the US.

constructs such as "role conflict" and "role incompatibility." Exploring the

interrelationship between women's fertility (an assumed consequence of marital

status) and labor force participation, these theories posit that high levels of fertility

(individual and aggregate) are obstacles to women's economic participation and

occupational status, which in turn, impede economic growth and modernization.

Thus, whether women "choose" to be in the labor force or the kind of work they

"prefer" to do is more often than not conditioned by their family obligations, namely,

marital status, unpaid household labor, childbearing, and subsequent childrearing.

Because childcare standards are invariant, an economically rational household

decision would be for the individual with the higher human capital—which is usually

the man—to be the principal earner, while the woman takes key responsibility for

domestic work.[30] Or, men select into jobs on the basis of income maximization and

women select into part-time "women's" jobs that give them the flexibility to cope

with potential conflicts between job and family responsibilities. These jobs often

require less on-the-job training and work experience requirements, which, again

highlights the relevance of sex differences in human capital in sustaining both

horizontal and vertical segregation (Trappe and Rosenfeld, 2004; Reskin and Padavic,

1999).[31] In postindustrial societies, these kinds of jobs are often in the service sector

where reentry and depreciation of skills is not penalized, and wages may not improve

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[30] One could also argue that the situation is "self-reproducing," because men are generally paid more than women (whatever the reason), their work is prioritized, leading to greater accumulation of experience, and hence, the perpetuation of the cycle.

[31] Anker (1998) identifies the difficulty of predicting how increases in part-time employment affect or sustain occupational sex segregation. On the one hand, part-time jobs are often clustered in specific (and few) occupations, which may increase overall segregation. But, one could also argue that the increased presence of women in the labor force, albeit part time, even during times of family formation, will allow them to garner human capital (such as labor force experience) and stay or move into non-traditional occupations, resulting in greater gender integration.

with training and experience (Reskin and Padavic, 1994). In response to these labor supply preferences, employers create a segregated male and female employment structure that supposedly fulfills the needs of women and men, especially those with family obligations (Mincer and Polachek, 1974).

The problem with these (cookie-cutter) neoclassical theories is the simplistic assumption of easy spatial and temporal transferability. What does not enter the fertility-employment/occupation equation is that in order to ensure their families' survival in the face of economic adversity, mothers could effectively intermesh certain types of work and childcare (through alternative forms of widely and cheaply available childcare) with little role conflict work, thus maintaining their high fertility in the process (Stycos and Weller, 1967 for Turkey; Jaffe and Azumi, 1960 for Puerto Rico and Japan).[32] Analyzing ethnic (Malay, Chinese, and Indian), residential (rural and urban), and class differences in working women's childcare arrangements in Peninsular Malaysia in the 1970s, Mason and Palan (1981) critiqued the conceptual shortcomings of the maternal incompatibility hypothesis and argued that "what constitutes child care in fact varies considerably by country, community, and household" (1981: 669). Importantly their conceptualization of childcare arrangements as flexible and endogenous in relationship to household opportunity structure suggested that in certain cultural and economic contexts, employment takes precedence over childcare in dictating women's joint performance of roles (1981). Moreover, especially since the 1990s, forces of globalization and attendant economic

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[32] However, the so-called "conflict" among roles does not vanish as a result of convenience or compatibility, but is often resolved when mothers frequently sacrifice their rest and leisure time to undertake multiple burdens of labor and contribute much-needed monetary resources (Chant, 2002; Desai and Jain, 1994; Isvan 1991; Folbre, 1984).

restructuring have resulted in the feminization, informalization, and casualization of the workforce in poor countries. The traditional "male breadwinner" ideology has become passé as dependence upon men's income has declined and women have often become the primary or sole income earners in their households (Chant, 1995). In such a situation of responsibility, women may be more motivated to challenge the dominant occupational structure and compete with men to enter high income/high status jobs that have been traditionally male-dominated.

Research studies (an overwhelming majority of which are focused exclusively on the United States) have somewhat corroborated these findings. Thus, the presence of children appears to increase rather than decrease the movement of women into male-dominated occupations (Rosenfeld and Spenner, 1992; Beller, 1982) and marriage seems to have little relationship to the sex-type of a woman's occupation (Beller, 1982). However, differences in social beliefs and norms among various races suggest divergent ideas concerning gender roles which may have varied implications for female employment and occupations. In the US, Okamoto and England (1999) found that for White and Latina (but not African-American) women, motherhood was associated with female jobs, but investigations by Jacobs (1989), Glass and Camarigg (1992), and Tomaskovic-Devy (1993) did not produce such findings. Women with or without family obligations do not differ much in their occupational distributions (Roos, 1985). Or, occupations dominated by women are often less flexible regarding their working hours than other occupations (Glass and Camarigg, 1992). Finally; consequences of employment interruptions do not vary depending on the gender type of occupations (England, 1982).

3.2 Macro-level Labor Demand Factors

Most explanations of occupational sex segregation focus on women's characteristics or their immediate families as the source of their decision to participate in certain types of jobs. Until recently, changes in opportunity structures, or macro-structural demand factors such as urbanization, level of economic development, unemployment rate, and state policies pertaining to maternity leave have received less attention in the research literature (Bloomquist 1990).

3.2.1 Urbanization and Economic Development

How do urbanization and economic development influence women's role in society, in general, and occupational sex segregation, in particular? Post-World War II, development theories (shaped primarily by the experiences of the United States and Great Britain) focused on the power of "modernization" or "industrialization" to correct various political, social, and economic problems of the developing world. This (pro-capitalist) vision of society promised universally desired end-products: the emancipation of women, rising standards of living, and democracy.[33] Like that of neoclassical theories (since both originate from the same school), the argument is fairly simple and linear: economic development, in conjunction with urbanization and industrial expansion, will generate more employment opportunities for women, thereby increasing employers' acceptance of them in jobs held traditionally by men (Ramirez and Weiss, 1979). Concomitantly, women's increased access to diverse

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[33] In sociology, the functionalist approach of Parsons (1942) dominated these explanations while the demographic transition theory (Notestein, 1931; Davis, 1963) gave demographic collaboration.

educational, economical, and political institutions (supported by labor/gender equity laws) coupled with declining fertility and reduced childcare responsibilities will allow them to participate more extensively in the formal sector as well as more prestigious job (Ramirez and Weiss, 1979). Organizational hiring practices will become more rational, while the economic ideology of efficiency will make it increasingly necessary for the most meritorious worker to be chosen for each job, regardless of (possibly discriminatory) ascriptive criteria such as gender, race, or ethnicity (Goldin, 1990; Smelser, 1968).[34] These positive changes at both micro and macro levels could prove instrumental in allowing women to enter traditionally male-dominated occupations (e.g. skilled white-collar professional, managerial, and administrative as well as blue-collar manufacturing jobs) or even occupations that were earlier considered non-traditional for women (Anker, 1998). Thus, women's increased economic parity with men will reduce gender segregation of occupations. Likewise, racial groups will move towards uniformity in their own economic distributions, leading to reduced occupational racial segregation.

Much of the earlier enthusiasm about modernization theory waned as the negative effects of development on women—and women's occupational status— become increasingly evident (Ward, 1985; Durand, 1975; Boserup, 1970).[35] Extensive literature on gender and development originating in developing countries highlighted women's segregation into less desirable "female-dominated" occupations

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[34] Increases in the supply of educated women on the one hand *and* technological advances and automation that remove barriers associated with physical strength on the other will allow women to move into white- and blue-collar male-dominated occupations respectively (Singelmann, 1978).
[35] A similar disillusionment with the modernization perspective occurred in racial theories (economic and social) that had predicted the decline in the ascriptive characteristics and the erosion of racial group identification in the modern world. The persistence of labor market inequalities and racial/ethnic conflicts globally resulted in a barrage of scholarly work on the subject of race.

due to economic development. For example, in *Women's Role in Economic Development*, Boserup (1970) rejects the linear relationship between economic growth and women's labor force participation and argued that the effects of Western style development in fact lead to displacement of women from sources of power and influence in developing societies:

> economic and social development unavoidably entails the disintegration of the division of labour among the two sexes traditionally established in the village. With modernisation of agriculture and with migration to the towns, a new sex pattern of productive work must emerge, for better or worse. The obvious danger is, however, that in the course of this transition women will be deprived of their productive functions, and the whole process of growth will thereby be retarded (1989: 5).

In a later work (1989), Boserup discusses how foreign investments weaken the agrarian base of societies, especially subsistence production (including handiworks). The growth of small family enterprises is eventually replaced by that of large modern enterprises, thus displacing women from traditional paid work into female-dominated formal and informal work in the service sector, informal sector, and unpaid labor within the home (Boserup, 1990).[36] Scholars have found support for Boserup's theory in other geographic areas (Buvinic et. al 1989; Chandler et al., 1988) and her work became the basis for alternative approaches to understanding women's role in economic development.

Boserup's theory echoed an idea put forward by Sinha in 1965: the U-shaped curve in women's labor force participation (Presser and Kishor, 1992; Lim, 1988) and occupational placement (Pampel and Tanaka, 1986) during economic development.

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[36] The informal sector in developing economies comprises of home-based production (such as handicrafts and piece work), small-scale retail trade (such as street vending), petty food production, other services for urban workers, and domestic service. Pay and working conditions in this sector are often poor, because they are not regulated by labor legislation (Ward, 1988).

What Sinha essentially argued is that during the early stages of urbanization and economic development, women workers will lose out in terms of labor force participation and occupational attainment. As the economy undergoes industrial restructuring towards manufacturing, traditional jobs are squeezed out. Because there is a lag between getting rid of old jobs (mainly agricultural) and creating new industrial ones, expendable workers are dropped from the production line. Women, who are often considered supplemental earners (even if they may be the main earners), lose out in employment and jobs. With further development, women's employment—particularly in modern service sectors—will increase, leading to the U-shaped curve in women's labor force participation. In terms of occupations, women's share of traditional work (i.e. usually agricultural) should decrease proportionally as they get the leftovers of the job market, with the more desirable (and usually skilled and better paying) going to men. So, another U-shaped curve emerges: women's share of traditional work increases and then decreases with industrialization and their movement into modern jobs. Thus, in a way, despite the difference in the trajectory path of the position of women in developing societies, the end result of Sinha's theory is similar to that propounded by the modernization theory: the emancipation of women in the work place. In fact, his hypothesis is a refinement of the modernization theory, albeit going through a bumpier U-shaped ride.

As mentioned earlier, concomitant with development is urbanization and its positive effects on occupational sex segregation. However, the relationship between these three concepts is more complex than it appears. Jacobs and Lim (1992), who studied change over time (1960-1980) in the level of occupational sex segregation for

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56 industrialized and less developed nations, demonstrated that industrial development in less developed nations was accompanied by the stagnation or loss of women's status. Thus, they propose that sex segregation may increase in developing societies because of rigid labor market structures (Reskin and Roos, 1990), patriarchal institutions and ideologies or other gender differences in status or labor market position. Conversely, Clark (1991) found a positive "modest" relationship between level of economic development and women's movement into higher status, traditionally male (managerial and professional) occupations (with conjunctures regarding gender integration, in the long run).

Using household labor force survey data for Southeast and East Asia (excluding China), Latin America, and North Africa/Middle East, Horton (1999) also argues that although there may be anecdotal evidence of women being ``marginalized'' by economic development and technological change, the aggregate evidence for middle-income developing countries does not support the marginalization hypothesis. Finally, in their 1990 study, Goldstein and Goldstein used the eight broad occupational categories from the Chinese Census data to demonstrate that urbanization has positive effects in reducing gender differences in labor force distribution. Although sex segregation is high in China, gender disparities reduce in urban areas, thus highlighting the importance of the development process.

3.2.2 Industrial Composition

An important aspect of the "economic development" thesis is the recognition that the type of industrial structure—reflecting development strategies—may be

crucial in determining occupational type. Durand (1975) argues that women's

employment often "depends on a great extent on the relative proportions of female

workers employed in sectors that expand and in those that contract" (124). Economic

restructuring is accompanied by the expansion of the service sector, whose presence

and size in an economy, has often been highlighted as an important determinant of

occupational sex segregation—especially horizontal segregation (the manual and non-

manual divide). A similar argument is made for light (textiles, food processing,

leather) and heavy industries (machinery, sugar refining) that disproportionately hire

women and men respectively, resulting in higher levels of segregation within the

same broad occupational category (Anker and Hein, 1986).

The service sector, an industrial classification, encompasses more than merely

service occupations. It broadly includes wholesale and retail trade, entertainment and

recreation, as well as educational, health and other services to businesses and

individuals, thus including both professional, managerial, sales, and service

occupations. A large service sector (relative to manufacturing) in less developed

countries indicates a higher degree of dependent development, an increased

likelihood of women's displacement into low-status service and sales, informal sector

jobs, and piecework production, their decreased representation in professional and

managerial occupations, and hence, greater occupational segregation (Ward, 1988).

In postindustrial economies, the size of the service sector tends to counteract

the integrative tendencies of modernization, resulting in the expected segregative

effect of women's jobs (Charles, 1992; Oppenheimer, 1970). The argument is that

the growth of the service sector reflects changes in the industrial composition of

occupations in favor of industries with functional or symbolic similarities to traditionally female domestic activities. This process incorporates many of women's traditional domestic tasks into the economy, which tend to get gender-typed as women's work (Charles and Grusky, 2005; Charles, 1992). Women are actively recruited to enter the labor market to fill these occupations, and service sector jobs are sometimes restructured so as to be more appealing to women. Organizational adaptations (e.g. part-time, flexible scheduling) in the lower non-manual sector make such work increasingly attractive to women with substantial domestic activities, while increased bureaucratization creates new opportunities for women at the bottom and top of the white-collar hierarchy (Oppenheimer, 1970; Charles and Grusky, 2005).

3.3   Cultural Forces

Gender Egalitarianism, Gender Essentialism, and Male Primacy

Because economic theories are often inadequate when explaining occupational sex segregation, researchers often retrain their lenses to the cultural, institutional, and political context within a society to explain the phenomenon (Anker, 1998). Indeed, recognizing this gap, Anker (1998) asserts that, "social, cultural, and historical forces are of paramount importance in determining the extent to which occupations are segmented based on the sex of the worker." Such non-economic changes have facilitated women's placement in certain job types, although it is difficult to sort cause and effect in the association. Possible cultural impediments to women's occupational marginalization into "female jobs" are traditions that may restrict women's mobility or reinforce sex discrimination in the hiring phase.

According to Charles (2003), horizontal and vertical occupational segregation are best understood as "principally cultural phenomena reflecting the influence of two deep-rooted ideological tenets" (203). The first, *gender essentialism*, represents women as more competent than men in service, nurturance, and social interaction, while the second, *male primacy*, represents men as more status worthy than women and accordingly more appropriate for positions of authority and domination. Thus, horizontal segregation is maintained in large part because non-manual occupations involve tasks (e.g. personal services, nurturance, interpersonal interaction) that are widely regarded as prototypically female, while manual occupations embody characteristics (e.g. strenuousness, physicality, interaction with things) regarded as prototypically male (Anker, 1998). Although biological differences between the sexes (e.g. women's reproductive role, men's physical strength) may have contributed to the initial development of these principles, they have subsequently become ideologically and institutionally entrenched (Reskin and Roos, 1990; Kanter, 1977).

On the other hand, emancipation of women, often measured through increased participation by women in the labor force, juvenile sex ratios, gender ideology, differential values with respect to equality, differential values with respect to the position of men and women, and government policies, contributes to a general shift in cultural norms and to a relaxation of restrictions on women's behavior. Changes in female roles and a general liberalization of norms concerning women's behavior result in decreasing occupational sex segregation; however, these changes are likely to spread more rapidly in areas which are both culturally and socially receptive to such changes. Moreover, different social and cultural norms of various racial groups

would produce different patterns of employment behavior reflecting the fact that all racial groups share a patriarchal tradition, a social structure in which the two sexes are not treated equally.

3.4   Conclusion

Women's employment in gender-dominated or gender-integrated occupations is usually explained by several well-known determinants, notably the lack of formal education or the skill mismatch between labor supply and labor demand. Alternative theories discussed in this chapter suggest that occupational sex segregation may also be influenced by several macro-level factors (Cohen, 2001; Anker, 1998; Presser and Kishor, 1992). Using the particular context of South Africa, a country that has experienced uneven development through *apartheid* and the spatial marginalization of non-whites, the effect of such factors needs to be examined simultaneously. Thus, in Chapter 4, I will formulate hypotheses regarding ways in which urbanization (proxied through economic development), industrial composition, and culture interact with micro-level characteristics to influence the occupation patterns of South African women by race.

Chapter 4: Conceptual Model and Hypotheses

This dissertation intends to study occupational sex segregation in South Africa in general as well as within the four main racial groups: black Africans, Coloureds, Asian-Indians, and Whites. Based on the literature review presented in Chapter 3, the following conceptual discussion points to the operation of vertical and horizontal dynamics within this phenomenon, with the former reflected in the tendency for men to dominate in higher-status occupations, and the latter reflected in women's overrepresentation in non-manual white-collar occupations.

4.1   Horizontal and Vertical Segregation

Segregation is measured as the extent to which men and women work in different occupations from each other. Conventional methods of conceptualization and measurement limit our understanding of the multi-dimensional structure of occupational sex segregation (Charles and Grusky, 2005). As previously noted, scholars tend to focus on the *overall extent* of segregation, rather than on its varied components and their differential response to institutional factors and changes, with segregation (and not the vertical aspect of segregation) often connoting gender inequality (Blackburn et al., 2002, 2001). This "evolutionary" conceptualization runs the risk of being viewed as a "quantity that rises or falls depending upon the level of social or cultural modernity in any given national or historical context" (Charles, 2003: 267). For example, although the United States and Japan have comparative sex segregation indices, occupational patterns are widely divergent. In Japan, women and men are evenly distributed in low pay and status productions occupations, but highly

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segregated in high status occupations; the converse is true for the US where managerial occupations tend to be more integrated (Chang, 2000).

Fundamentally, several scholars now recognize two distinct and orthogonal aspects of occupational sex segregation—vertical and horizontal (Blackburn and Jarman, 2006; Charles and Grusky, 2005; Semyonov and Yehouda, 1988; Hakim, 1996). *Horizontal segregation* refers to segregation across the manual–non-manual divide, specifically women's under-representation in manual occupations (e.g. craft, manufacturing) and their overrepresentation in non-manual occupations (e.g. semi-professional, clerical, and sales). *Vertical segregation* refers to hierarchical inequality, specifically men's domination of the higher status occupations *within* the manual and non-manual sectors of the economy, reflecting gender inequality (Blackburn and Jarman, 2006; Grusky and Charles, 1998). The monetary remuneration for those in traditionally female occupations is less than those in male occupations due of the cultural devaluation of the former relative to the latter, making sex-type occupations a good proxy for vertical segregation (Gatta and Roos, 2005). A diagrammatic conceptualization is presented in Figure 4.1.

Figure 4.1 around here

4.2   Key Objectives of Study

I will build on previous research to formulate hypotheses in order to answer the following questions, as previously specified in Chapter 1:

(1) Using descriptive analyses, can we observe distinct patterns of occupational distribution by gender, race, and region in South Africa?

(2) Disaggregating the picture further, what are the roles of gender and race (that are separate and yet continually interacting categories) in determining *vertical* (gender-dominated or gender-segregated occupations reflecting status and inequality differentials) as well as *horizontal* (blue- and white-collar occupations) segregation?

(3) Net of contextual factors, how do various individual and household level characteristics (measuring human capital and family status) impact women's placement in white- and blue-collar male-dominated occupations?

(4) After accounting for these compositional characteristics, how do contextual factors such as urbanization, industrial composition, former homeland residence (reflecting *apartheid*-based segregation), and gender egalitarianism influence women's occupational placement?

(5) Finally, do the effects of these individual and contextual characteristics on women's occupational placement vary across the four main racial groups (i.e., black African, Coloureds, Asian-Indians, and Whites)? That is, do these factors interact differently for different racial groups?

The object of the analyses is to model the effects of theoretically relevant explanatory variables on the horizontal and vertical dimensions of sex segregation, i.e. women's access to the traditionally male-dominated blue- and white-collar occupations. By employing a multilevel theoretical perspective and by operationalizing sex segregation two-dimensionally, I seek to extend our understanding of occupational

sex segregation in a meaningful manner. The heuristic model used in this study is presented in Figure 4.2.

Figure 4.2 around here

4.3 Individual-level Hypotheses

Human capital: Educational Attainment

Does education mitigate the effect of social inequality in occupational placement? Do returns to education—proxied here by occupational type instead of income—vary by gender and race, i.e. are they higher for one social group compared to another at the same level of educational attainment? As noted earlier, human capital theories generally highlight gender (and racial) differences in education (and accrued skills and labor force experience) as an important criterion for occupational segregation. Education, at especially advanced levels (or equivalent to that of men), can provide women and minorities with the requisite skills and credentials to be employed in higher status occupations (e.g. professional and managerial), thus resulting in higher returns to investment in terms of income (Clark, 1991; Anker and Hein, 1986).[37] Moreover, in modern sectors of both developed and developing countries, the effect of education on reducing occupational sex segregation may be stronger in white-collar occupations (and specifically white-collar male-dominated occupations) where upward mobility may be contingent on the amount of formal

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[37] In the long run, different educational backgrounds of different women would result in redistribution and integration of the occupational structure.

schooling or credentials acquired. On the other hand, because of the type of

vocational training required for blue-collar occupations and the pattern of sex

segregation inherent in the enrollment selection of such training, length of education

may not have a significant effect on women's access to blue-collar occupations

traditionally dominated by men (Charles and Buchmann, 1992).

In the case of South Africa, *apartheid* policies, particularly the Bantu

Education Act (1953), the Coloured Person's Education Act (1963), and the Indian

Education Act (1965) enforced separation of races in all educational institutions,

resulting in a skewed distribution across racial groups.[38] Hence, educational

attainment by race varies from an average of under six years for black Africans and

Coloureds to eight years for Indians and almost ten years for Whites (author's

calculation using Census 2001). But surprisingly, within each racial group

(particularly for black Africans and Coloureds), educational levels are quite

comparable for men and women, with overall levels, in fact, being slightly higher for

women (in contrast to many countries where men have more schooling than women).

However, because of the fragmented and racially charged school system, quantity

does not often connote quality. Consequently, we would expect educational

attainment to increase women's odds of being in white- compared to blue-collar

occupations, and male-dominated occupation in particular, although with returns to

human capital being lower for non-white women (black Africans, Coloureds, and

Indians) than White women.

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[38] While Whites had access to high levels of "private" education that emphasized skills and training, a majority of black Africans received poor quality "Bantu" education that initially focused more on agriculture than science and mathematics (Maylam).

Hypothesis 1a: Educational attainment increases women's likelihood of being employed in white collar occupations compared to blue-collar occupations, across all racial groups.

Hypothesis 1b: Educational attainment increases women's likelihood of being employed in male-dominated occupations, i.e. it reduces overall vertical segregation, particularly in white collar occupations, across all racial groups.

Hypothesis 1c: Returns to education are lower for non-White (black African, Coloured, and Indian) than White women, in terms of employment in white- and blue-collar male-dominated occupations.

Migration Status

According to neoclassical migration theory, migrants (both internal and international) are rational actors who move as a result of differences in location-specific employment opportunities in jobs and wages in order to improve their socioeconomic status (Massey et al, 1998). A more structural explanation posits that migration flows are constrained by migration (and immigration) policy, with the direction and form of flows conditioned by contemporary and historical relationships between source and destination areas or countries. At an international level, emigration pressures are primarily the result of increasing inequalities between countries which, in turn, are the result of factors internal to less developed countries and their relations with more developed countries.

In South Africa, as noted earlier, the collapse of *apartheid* in 1994 ended the formal restrictions on non-White (especially black African) mobility and urbanization. As a result, internal female migration from rural to urban communities has sharply increased, although migration patterns still tend to be circulatory or oscillating rather than permanent (Posel and Casale, 2003). Because of lack of skill, training, or education, most of these migrant women work at the bottom rung of the occupational hierarchy (e.g. housemaids, entertainers, nurses, and factory workers). Internationally, because of continued regional disparities in incomes, employment, and other related opportunities in southern Africa, the South African economy continues to be a magnetic force to a wide array of skilled and unskilled immigrants. In fact, current immigration laws are designed to ease the country's chronic shortage of skilled labor by making it easier to attract skilled foreign workers (e.g. from neighboring countries, Europe, or India) (*The Economist*, 2002).[39]

Because of the lingering effect of a range of institutional measures such as the Group Areas Act and Influx Control legislation promulgated during *apartheid* as well as the restriction of black (particularly female) rural to urban migration due to pass laws prior to 1984, nativity and migration status emerge as important determinants of black African women's occupational placement. It is equally important for Asian (or Indian) women who may select into immigration because of their high human capital stemming from societal expectations in their home country. Hence, I hypothesize:

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[39] Prior to South Africa adopting new immigration laws in 1994, migration policies for most part of the 20th century were designed to attract Whites. People of African descent (primarily from Lesotho, Mozambique, and Malawi) were only permitted to enter the country under stringent conditions, often to work as contract workers in the mining and agricultural sectors of the apartheid economy. At its peak, the Employment Bureau of Africa (TEBA) operated in ten countries, and in the 1970s, it supplied over 500,000 contract workers annually to the South African mining industry (Massey, 1983).

Hypothesis 2a: South African non-movers, particularly black Africans, are less likely to be employed in blue-collar occupations than white collar occupations, compared to South African migrant women. Among white-collar occupations, they are less likely to be employed in female-dominated occupations, compared to South African migrant women.

Hypothesis 2b: Immigrant women, particularly black Africans, are more likely to be employed in (white- and blue-collar) male-dominated occupations, than South African migrants.

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Family Status: Marital Status and Childbearing

As previously noted, life cycle factors such as marital status and long-term as well as short-term child-bearing and rearing responsibilities (parity and presence of young children age 5) are likely to constrain or support women's occupational placement (Brewster and Rindfuss, 2000; Mason and Palan, 1999). Although research indicates that family obligations often restrict married women from participating in the labor force, the effect on occupational placement for those employed is still unclear (Presser and Yi, 2008). One could argue both ways: job absenteeism due to pregnancy, childcare, and domestic tasks may reduce women's overall work performance or influence their potential "choice" of occupation (with many gravitating towards traditionally female jobs). Because their incomes may not be the primary one in the household, i.e., their employment is not economic necessity-based, they may also be less likely to compete for male-dominated jobs that

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are often associated with higher incomes. On the other hand, because of a feminization of the workforce in developing economies, decline in dependence upon men's income, or economic constraints, employed married women may be more motivated to compete with men and hence, more likely to be in male-dominated occupations than single women (Presser and Yi, 2008: 97). Or, in light of delayed marriage, could it also be an effect of age and seniority?

Regarding childbearing, in South Africa, women across all racial groups may combine employment, childcare, and domestic work by either "buying" low cost help (e.g. White women who live in predominantly nuclear households) or through multigenerational household structure where economically not active or elderly women may take care of the domestic realm (more common among black Africans and Asian-Indians). Or, women in rural areas may combine agricultural work with childcare, while those in the urban informal economy may bring their children with them to work. Hence, the "incompatible" relationship between employment and childrearing may not be so distinct because of the possible availability of low-cost or free child care arrangements (Mason and Palan, 1981). Consequently:

> *Hypothesis 3a:* Currently married women across all racial groups are more
> likely to be employed in both white- and blue-collar male-dominated
> occupations than single women.

> *Hypothesis 3b:* Women with fewer children ever born, across all racial
> groups, reflecting long term child bearing and rearing, are more likely to be

employed in white-collar, particularly white-collar male-dominated

occupations, than blue-collar occupations, more so than women with children.

Hypothesis 3c: Women with children below age 5, across all racial groups,

reflecting short term child bearing and rearing, are less likely to be employed

in blue-collar and white-collar male-dominated occupations than women with

older or no children.

4.4   Macro-level hypotheses

With some exceptions (Chang, 2004; Presser and Kishor, 1991), most

research on occupational sex segregation is cross-national, limited to industrialized

countries, or tends to focus on individual-level characteristics rather than macro-

structural features (or both). However, studying this issue in South Africa requires

attention to the ways in which occupational outcomes are influenced by prevailing

structural and institutional factors that reflect the legacy of *apartheid*. This is

especially in light of the "socially engineered" process of urbanization and the

creation of homelands in the South African landscape.

Economic structure

Urbanization

Urbanization is an influential explanation for differences in the structure of

the economy and economic stratification generally. Modernization theories and other

structural-functional arguments posit that occupational sex segregation should decline

with urbanization and industrialization because of various processes that create a demand for female labor at the macro level and integrate women into all segments of the labor force at the micro level. Urbanization, which is concomitant with economic development and industrial expansion, creates more employment opportunities for women in white collar occupations in general, and in the female-dominated service sector as well as in traditionally male-dominated occupations (e.g. highly skilled white-collar professional, managerial, and administrative as well as blue-collar manufacturing jobs) more specifically. Hiring and promotion of individuals across modern labor markets is expected to shift towards more rationalistic, universalistic, and meritocratic criteria, thereby removing some of the obstacles based on ascriptive gender or racial stereotyping and discrimination (Inkeles and Smith, 1974). For example, increases in the supply of educated women on the one hand *and* technological advances and automation that remove barriers associated with physical strength on the other may result in women moving into white- and blue-collar male-dominated occupations respectively.

In South Africa, urbanization is especially relevant to labor-demand and employment opportunities because of the *apartheid* tenet of "separate development for separate groups" and the forced displacement of non-Whites into remote undeveloped homelands and peripheral townships. Absence of investment (both socially and economically) in these areas (especially black African ex-homelands) has created a strong geographic divide in the country, with the latter areas being disproportionately poor. Thus, women, and especially non-white women, residing in

urbanized areas have more occupation types available to them and hence, are more likely to be in white-collar as well as male-dominated occupations. Hence:

> *Hypothesis 4a:* Residing in an urban magisterial district increases women's likelihood of being employed in white-collar occupations compared to blue-collar occupations (i.e. stronger horizontal sex segregation), relative to rural districts.

> *Hypothesis 4b:* Residing in an urban magisterial district increases women's likelihood of being employed in male-dominated occupations (i.e. reduced vertical sex segregation) in both blue- and white-collar occupations, compared to rural districts.

> *Hypothesis 4c:* Residing in an urban magisterial district increases non-white, particularly black African and Coloured, women's likelihood of being employed in male-dominated occupations, i.e. it reduces racial discrimination in occupational typing.

Historical Factors

Historically Defined Homelands

Despite being a middle-income country, South Africa has one of the most unequal income distributions in the world with a Gini coefficient of 0.77 (HSRC, 2002). Its geographic landscape reflects the racial and gender divide in the country,

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with large pockets of black African poverty in ex-homelands widely separated from small white suburban affluence (Maylam, 1990). Moreover, due to high levels of circulatory (male) labor migration, the sex ratio in rural areas is highly skewed with more females than males who live in poverty.

As mentioned in Chapter 2, the *kind* of employment opportunities available to women residing in and around ex-homelands remains somewhat limited. Self-governance, along with funds from the *apartheid* government, enabled black Africans residing in Bantustans to expand the public sector, bringing with it a growth in associated jobs, especially in health and educational services (van der Berg, 1985). For example, the public sector grew from 2,446 to 19,800 posts in Transkei between 1963 and 1979, with the explicit goal of replacing white officials with local black Africans (Southall, 1983: 177). Today, most of the women residing in and around those areas are involved in few relatively female-dominated occupations such as subsistence farming, export processing textile industries set up during the 1950s and 1960s, tourism, nursing, or teaching, among others. However, the effect of this political spatial segregation on women's occupational placement has not been extensively studied or clearly understood. Hence,

> *Hypothesis 5a:* Residence in and around homelands increases women's, particularly black African women's, likelihood of being employed in blue-collar occupations compared to white-collar occupations, compared to non-homeland districts.

Hypothesis 5b: Residence in and around homelands reduces women's, particularly black African women's, likelihood of being employed in male-dominated occupations (i.e. increased vertical sex segregation), irrespective of the blue- or white-collar typology, but especially within the latter, compared to non-homeland districts.

<u>Industrial Composition</u>

Size of service sector

Studies indicate that post-industrialization is accompanied by an expansion of the service sector which is predominantly composed of a small number of high-skill, high-income jobs that demand educated workers and a larger number of low-skill, low-pay jobs filled by periphery workers who are frequently classified as part-time, temporary, contract, casual, or contingent (Macdonald and Sirianni, 1996). Although a large service sector in both developed and developing countries increases women's overall labor force participation, as discussed earlier, it also increase sex segregation by displacing them into female-dominated (or "female-demanding") occupations or the informal economy, relative to manufacturing or agriculture (Ward, 1988; Charles, 1992). Importantly, the service sector is also stratified by race, especially at the bottom because minority women move into jobs previously occupied by White women, but still remain at the lowest rung of the ladder.

Approximately 65 percent of the South African GDP comes from the service (or tertiary) sector, which covers a wide variety of high and low status occupations including "large modern sector enterprises" such as hotels, restaurants and recreation

activities catering to tourists," one-to-one personal health and education services as well as services to organizations; directly traded activities … for purely local consumption; [and] national scale traders, including wholesalers and neighborhood suppliers such as … itinerant street hawkers" (Joekes, 1987: 106). While some of these activities overlap with women's traditional domestic work, many others do not. Moreover, the increase in service sector jobs has meant greater opportunities for White and Indian/Asian women to move into traditionally male-dominated occupations (which may, however, lack internal career ladders), and their jobs, in turn, are being filled by black African and Coloured women who may shift out of domestic service into the formal economy. Thus, the *size* of the service sector is expected to have a segregative effect on women's occupational placement in general, but with varying effects for women of different races.

> *Hypothesis 6a*: Women's specialization in service industries increases their likelihood of being in white-collar occupations compared to blue-collar occupations (increased horizontal sex segregation).

> *Hypothesis 6b:* Women's specialization in service industries reduces their likelihood of being employed in male-dominated occupations (i.e. increased vertical sex segregation).

Hypothesis 6c: Women's specialization in service industries increases White

women's likelihood but reduces non-white women's likelihood of holding

male-dominated occupations, particularly those that are white-collar.

Cultural Factors

Gender Egalitarianism

According to Charles (1995, 2003, 2005), "sociological arguments and

common wisdom suggest that sex occupational segregation should be less

pronounced in countries [or contexts, author's words] characterized by ideologies that

emphasize gender equality." Although empirical studies fail to provide firm support

for this expectation (Charles, 1992; Jacobs and Lim, 1995; Semyonov and Yelounda,

1988), it cannot be easily dismissed.

South Africa is a country in transition because of its emergence from a system

that institutionalized racial discrimination overtly and gender discrimination covertly.

Budlender (1991) summarizes the current state of women in the annual report of the

Secretary-General of the United Nations on Women under *Apartheid*.

> "…South Africa is still a racist society and will suffer the consequences of
> apartheid for many decades to come. The position of women in South Africa
> parallels this. …Laws have been liberalized. Sex discrimination has in some
> cases been removed. Yet the current situation of women, particularly black
> women, and the opportunities open to them reflect their years of living in a
> racist and sexist society."

Moreover, one must underscore the heterogeneity of South African women,

especially in light of the different privileges accorded to each racial group, with the

greatest disadvantages suffered by black African women. While non-White women

has always worked because of economic necessity, till recently, White women faced

cultural restrictions on the kinds of jobs they could take. Although the South African government has initiated policies to increase women's representation in higher status jobs, socially determined gender essentialist ideas and practices that define what roles and activities are deemed appropriate for women and men still exist. Such deeply entrenched patriarchal ideologies can lead to a sex-segregated labor market where men are recruited into certain types of jobs (e.g. manual and high status) and women into others (non-manual and nurturing). Thus, changes in female roles and a general liberalization of norms concerning women's behavior can result in women's likelihood of entering traditionally male-dominated occupations (Rau, 1999).

> *Hypothesis 7a*: Women residing in more gender-egalitarian contexts are more likely than other women to hold male-dominated occupations (reflecting weaker vertical sex segregation), particularly in the white-collar (or non-manual) sector.

> *Hypothesis 7b:* The hypothesized effect of gender egalitarianism is applicable to women of all racial groups.

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Women's Share of the Labor Force

Since labor markets are inherently segmented along gender lines, some scholars argue that occupational sex segregation increases with women's increasing share of the economically active labor force because of their influx into "female-type" low-status, and low-paying jobs (Lewin-Epstein and Semyonov, 1992; Oppenheimer,

1970). (One could also argue that these occupations *become* sex-typed because of

women's entry into previously male-dominated or gender-integrated occupations.)

Although this finding has not been consistently proved in empirical analyses, I will

include it in the models as a control variable. This would be particularly relevant in

the South Africa context where women's labor force participation has increased post-

apartheid due to the removal of migration restrictions, expanded employment

opportunities, and government legislations and policies that eliminate bans on hiring

women in certain occupations such as mining (Budlender, 1997).

Chapter 5: Data and Methodology

In light of the conceptual framework presented earlier, this chapter will describe the dataset, sample, variables, and methodology used in the analysis, besides highlighting methodological problems in the study. Because this dissertation intends to study macro- and micro-level determinants of occupational sex segregation in South Africa, multilevel models are particularly appropriate. Such models have become increasingly common in sociology because they allow researchers to estimate the way in which properties of the larger collective influence individual outcomes.

5.1   Choice of Data: 2001 South African Census

Population censuses and labor force surveys (LFS) are key sources of information pertaining to labor force participation and outcomes, although both have well recognized advantages and disadvantages. The quality of employment information collected in massive undertakings such as the Census particularly for those working only a few hours per week or in the informal and subsistence agriculture sectors, tend to produce lower estimates than those gathered in smaller and more focused Labor Force Surveys (LFS) that include more prompts to clarify such issues (Statistics South Africa, 2002; Anker, 1998). However, for the purpose of this study on occupational sex segregation that requires wide geographic coverage as well as a large sample size for small occupational groups, I will use the 2001 South African Population Census, collected by the Central Statistical Organization, Pretoria. The Census has detailed occupational coding at the 1-, 2-, and 3-digit levels, making

it particularly useful for computing measures such as the index of dissimilarity that are sensitive to higher levels of disaggregation.

Table 5.1 around here

Using the example of "Professionals," Table 5.1 presents the hierarchical system of data collection. In an extensive cross-national analysis, Anker (1998) demonstrates that considerable segregation is hidden within the 1-digit as compared to the 2- or 3-digit classification (refer to Chapter 7 for an example) in developing, compared to industrialized, countries. In the case of the South African Census, the 1-digit occupational level has 9, the second level has 27, and the 3-digit level has 136 groupings (excluding the 998: "Not Determined" category). Such detailed information and the large sampling fraction (10 percent of the total population) provide enough number of cases per occupation to warrant using the Census compared to the Labor Force Surveys.

5.2   Limitations of the Current Analyses

Because of data availability and design, a primary limitation of the study is its cross-sectional analysis that only provides a snapshot of segregation and patterns of occupational distribution in South Africa; no assumptions of causality can be made. Although a longitudinal or trend analysis would have been appropriate (and decennial censuses have indeed been carried out since 1911 in South Africa), the racial politics

of *apartheid* has greatly compromised the quality of data available, rendering such a task difficult (Caldwell and Caldwell, 1993). [40]

However, one could also argue that spatial variations within the country (rural-urban areas, provinces, and former homelands) that partially reflect the historical tenets of "separate development for separate groups" can be effectively used to approximate urbanization, industrial composition, and geographical segregation across the country. For example, although their Gini coefficients are comparatively similar, Limpopo (comprised entirely of ex-homelands) has the highest proportion of poor with 77 percent of its population living below the poverty income line, while the Western Cape (no former homelands) has the lowest proportion (32 percent); levels of economic development and urbanization vary vastly in both provinces (HSRC, 2002). On a similar plane, the industrial composition contrasts geographically with the North West having a large mining base and financial services being concentrated in Gauteng. Spatial variations in levels of women's share of the labor force, reflecting socio- demographic and cultural factors, are also evident. Hence, some of the shortcomings of the cross-sectional Census design can be addressed through this analytic strategy.

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[40] Until recently, South Africa remained invisible on the demographic map of Africa, due to inaccessibility of data as well as intellectual sanctions against its *apartheid* policies. Official population figures prior to the 1996 Census (initiated under a democratically elected ANC-headed black African government) often excluded the poor and densely populated regions of the supposedly independent and self-governing "Bantu homelands." Predominantly White statistical organizations maintained their distance from non-White racial groups and did not routinely collect data from them, while black Africans were not sufficiently integrated into the social fabric to feel an obligation to register births and deaths (Caldwell and Caldwell, 1993). For example, in 1974, the South African Human Science Research Council, carried out a fertility survey, followed by a survey modeled on the World Fertility Survey in 1981-82 and the South African Demographic and Health Survey in 1987-89. However, the survey results became confidential government material rather than a resource open to researchers and the general public. Caldwell and Caldwell (1993) argue that such secrecy was "evidence that racial numbers and demographic trends are politically highly sensitive matters."

Importantly, the analyses will not be run separately by rural and urban areas as is often done in analyses pertaining to other developing countries. Attempts to clearly define and classify both types of area in South Africa have been problematic in data collection efforts because of historically blurred regional distinctions stemming from an "integrated" economic landscape and high rates of labor migration between homelands and capital-intensive areas (Maylam, 1990). Predictions of *apartheid* patterns of circulatory migration being replaced by permanent urbanization have not been ratified by empirical studies as yet (Posel and Casale, 2003). Moreover, urbanization patterns of the various racial groups are extremely distorted due to *apartheid* era "regional planning": while Asian-Indians are highly urbanized, black-Africans tend to be concentrated in rural areas. Disaggregating the analyses into these geographic components runs the risk of including one group at the cost of the other. Hence, almost all analyses of labor force outcomes in South Africa introduce urbanization as an independent variable in the analysis.

5.3   Two Levels of Data: Individual and Magisterial district

5.3.1   Individual Level

The individual-level data is from the 10 percent unit level sample of all households (excluding special institutions and hostels) and persons as enumerated in the 2001 South African Population Census on October 10, 2001; the data are publicly accessible for a fee. The survey is a nationally representative sample of 3,725,655 respondents of four main racial groups residing in 948,592 households across nine provinces. Both the 10 percent person and household sample files contain weight

adjustment factors for undercount (households or persons as appropriate), which, when multiplied by 10, inflate the sample to reflect the South African population (Statistics South Africa, 2002). According to Statistics South Africa, the 2001 census resulted in an underestimate of the White population, an overestimate of the extent of unemployment, an underestimate of those who were employed for only a few hours per week, and an underestimate of household income. Standard information pertaining to age, sex, relationship with household head, marital status, education, employment, migration, number of children ever born to women aged 12-50, and other demographic events are asked of all members in the household.

5.3.2   *Magisterial District Level*

Previous research employing multi-level models have used a range of geographic units such as metropolitan areas, districts, counties, and states to define labor markets (Dreze and Murthi, 2001; Cotter et al., 1999). For this study, I use magisterial districts as the macro-level units. Magisterial districts are roughly equivalent to counties in the United States, and although they vary in geographic size, on average they contain about 100,000 individuals each (Statistics South Africa, 2002). The choice of magisterial districts for defining labor markets in South Africa is reasonable because they are the smallest geographic (and administrative) unit for which data are available. They approximate the concept of a local labor market as defined by journey-to-work boundaries and information exchange (as opposed to a national labor market). One can also argue that for an effective contextual study, it would be ideal to use a geographical area that is small enough to encompass the

immediate environment of an individual, but large enough to approximate a local labor market.

South Africa comprises of 354 urban and rural magisterial districts. Besides supplementing information from other official published data sources and secondary datasets, I aggregate Census data to the magisterial district level to construct several contextual indicators of labor market, cultural, and demographic characteristics. Unique identifier codes are created to merge individual and magisterial district-level data so that individuals are nested within magisterial districts.

5.4   Sample Selection

As mentioned earlier, the South African Census is a nationally representative 10 percent sample of 3,725,655 respondents residing in 948,592 households across nine provinces. Employment questions were asked of individuals 10 years and older of which 778,098 respondents reported an occupation (the type of work the person performed) seven days prior to 10 October 2001, the Census initiation date. They were then asked to describe their occupation in two or more words, for example, street trader, cattle farmer, primary school teacher, domestic worker, fruit vendor, truck driver, warehouse manager, filling clerk, and so on. 3-digit occupations are coded according to the South African Standard Classification of Occupations (SASCO), which, in turn, is based on the United Nations' International Standard Classification of Occupations (ISCO–1988).

Because analyses of employment (e.g. likelihood of employment, wages, and occupational placement) tend to include individuals in their prime working years, I

have restricted the sample to employed individuals between ages 25-54. By age 25, one would expect the majority to complete their basic secondary schooling although racial differences exist (Lam, 2001). At the other end of the spectrum, 54 years is an appropriate age for sample restriction reflecting pension issues: the government has not established a retirement age primarily because the country does not have a state-sponsored retirement scheme. Men qualify for a social old age pension at age 65, while women are eligible at age 60.

As a second step, clearly unclassifiable occupations included in the broad 1-digit occupational category 998 "Undetermined" (refer to Table 5.1) are excluded from the analyses. This 1-digit "Undetermined" main occupational category is different from the 3-digit level "not elsewhere classified" (NEC) sub-categories that lie *within* clearly-defined broad occupational groups: e.g. "Physical, mathematical and engineering science professionals NEC (code 219; 3-digit)" lie within the "Physical, mathematical and engineering science professionals" (code 21; 2-digit) or "Professionals" (code 2; 1-digit) group. Another example is "Other office clerks and clerks NEC (code 419)" within the "Office clerks" (code 41; 2-digit) and "Clerks" (code 4; 1-digit) group. Although these sub-occupational "not elsewhere classified" groups are often used as "dump" categories for unreasonably large number of occupations, they are nonetheless included in our analysis because of the similarity of occupations being dumped together (Anker, 1998).

Finally, I include employment in agricultural occupations (2.3 percent of sample) in my study in light of the peculiarities of occupational segregation and privileges accorded to various groups under *apartheid*. (*Note:* Results excluding non-

agricultural occupations from the analyses were not significantly different from the ones including them.) From an analytical perspective, gender and development studies usually argue that in developing countries, a large proportion of family labor, particularly women who may not enter the formal labor market, are employed in agriculture. In predominantly agrarian countries such as India, the overall level of occupational segregation would virtually be determined by the percent female in agriculture (Anker, 1998: 59). However, in South Africa, under sexually discriminatory *apartheid* laws, government-appointed chiefs refused any land allocation to black African women residing in homelands. Moreover, a large percent of black African were prohibited from acquiring, owning, or renting land in White (farming) areas and hence, along with Coloureds, worked on White-owned farms. Under the "Coloured Labour Act," Coloureds were also given agriculturally viable land in the Western Cape. Finally, retrenchments on mines have now forced a high proportion of rural black African and Coloured women to work as agricultural laborers. Because excluding agricultural occupations runs the risk of excluding these groups, occupations with the 3-digit classification code of 6—representing skilled agricultural and fishery occupations—are included in the analysis.

I do not distinguish between full- and part-time workers because of the nature of the employment outcome being studied: female-dominated occupations are more likely to offer part-time work and greater flexibility compared to male-dominated occupations. However, it is an interesting topic for future research.

5.5   Individual-level Dependent Variable

Employed in a white- or blue-collar gender-dominated or gender-integrated occupation

The variable of interest is an individual's employment in a *white-collar* (or non-manual) or *blue-collar* (manual) gender-dominated (male as well as female) or gender-integrated occupation. As mentioned earlier, I distinguish between two forms of distributional inequality: *horizontal segregation* (i.e. differences in distribution across the blue and white-collar divide) and *vertical segregation* (i.e. differences in the social status associated with men's and women's occupations *within* the blue and white-collar occupations) (Blackburn and Jarman, 2006; Charles and Grusky, 2005).

The first step towards constructing the dependent variable is to create the blue and white collar dichotomy in order to proxy horizontal segregation. I use the ILO's 1988 United Nations' International Standard Classification of Occupations categorization, which by design prominently differentiates the major occupational groups into these two categories (Ganzeboom and Treiman, 1996; Charles, 2003). The following groups: Legislative and Managerial (code 1), Professionals (code 2), Technicians and Related Support (code 3), Clerical (code 4), and *some* Services/Sales (code 5; Fashion and Other Models and Shop Salespersons and Demonstrators) are classified as *white-collar* occupations. *Blue-collar* occupations comprise of: some Services/Sales (code 5; Travel attendants and related, House-keeping and restaurant services, Protective services, and Personal care and other/related), Skilled Agriculture and Fishery (code 6), Precision, Production and Craft Repair (code 7), Operators, Fabricators, and Laborers (code 8), Elementary (code 9). While service and

elementary occupations are not typically categorized as blue-collar occupations, such classification has been done so because these are more similar to blue- rather than white-collar occupations in terms of job content, skill levels, educational requirements, and wages, especially within the context of South Africa (see Treiman, 2005 for a similar categorization). For example, an overwhelming majority of construction and manufacturing laborers as well as domestics perform tasks that require substantial manual labor, with little remuneration.[41]

Based on the well-researched hypothesis that a strong negative association exists between an occupation's percentage female and women's and men's labor market rewards, particularly earnings, a second step is to decide which occupations are *gender-dominated* (female and male) and which are *gender-integrated* in order to proxy vertical segregation. Literature indicates that some arbitrary, yet meaningful, decision has to be made regarding the dividing lines. For example, Jacob (1989), Anker (1998) and Oppenheimer (1990) argue that a dividing line drawn at 60 percent or 70 percent is common to create gender-dominated categories in industrialized countries, i.e. when the employment share of either sex is more than either 60 percent or 70 percent within a sub-occupational group (preferably at the 3-digit level). Similarly, gender-integrated occupation are those where men and women are somewhat equally represented, i.e. approximately 50 percent.[42] Because of the high level of occupational segregation (by race and gender) in South Africa, a female-

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[41] The U.S. Bureau of Labor Statistics' definition of blue-collar occupations had included precision production, craft and repair workers; machine operators and inspectors; transportation and moving employees; handlers, equipment cleaners and helpers; and service workers.
[42] Because labor participation rates vary cross-nationally, sex-typed occupations are often defined in relation to the average percentage female in the non-agricultural labor force in such analyses (Anker, 1998).

dominated occupation is defined as one that is more than 66 percent female while a male-dominated occupation is less than 33 percent female. By extension, an occupation is defined as gender-integrated where the percent female in the occupation is between 33 to 66 percent.

I distinguish between female-dominated and gender-integrated occupations rather than lump them together as one (female/integrated) category when studying them in relation to male-dominated occupations in order to address an important question in the literature, namely: "is occupational sex segregation a 'working class phenomenon' or not" (Cotter et al., 2004). Studies in the United States and elsewhere have demonstrated that the phenomenon is more strongly evident among the working class as opposed to the middle class because of different mechanisms of occupational placement (Chang, 2000). In fact, occupations *tend to* become more gender-integrated in the middle class, although this is best studied in trend analysis rather than a cross-sectional one. Thus, the issue of concern is not just employment; the *quality* of the occupation is also critical.

Finally, the gender-composition and the collar-type occupation variables are merged to create the following categories of the dependent variable:

- 0 = Blue-collar female-dominated occupation
- 1 = Blue-collar gender-integrated occupation
- 2 = Blue-collar male-dominated occupation
- 3 = White-collar female-dominated occupation
- 4 = White-collar gender-integrated occupation
- 5 = White-collar male-dominated occupation

While several studies disaggregate blue and white-collar occupations and run separate analyses for them, I have combined both with the justification that such an analytic (and methodological) strategy will allow us to explore the effects of the various covariates across the typological spectrum, thereby highlighting *patterns* of occupational placement. I use this coding scheme in Chapter 8 (all women).

In Chapter 9, I combine the blue-collar female-dominated and gender-integrated occupational categories when running the multivariate analyses by race because of the small sample size for Whites and Indians. However, I do not do the same for corresponding white-collar categories because, in addition to their large sample sizes, it also reflects racial distribution in occupational placement with White and Indian women being disproportionately hired in white-collar gender-integrated occupations and black African and Coloureds in female-dominated.

Some large representative occupations within this typology are listed in Table 5.2 to support the coding decision. In Table 5.3, I present data for the mean income for all individuals ages 25-54 and by gender across the dependent variable to justify the use of percent female in an occupation as a measure of vertical segregation.[43]

Tables 5.2, 5.3, and 5.4 around here

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[43] The income question on the Census form has categorical variables. Respondents were asked to report into what category their current weekly or annual income fell, with the correspondence between the two based on the assumption of year-round employment. I used midpoints of each category to get a number value (in South African Rand); hence, the results should be approached with caution (although the overall patterns have been reconfirmed in other literature.

The much-confirmed finding in previous research is evident: increasing percentage female in an occupation negatively influences earnings, with surprising differences between blue- and white-collar jobs. Covariates are presented in Table 5.4.

Because occupations are "the main dimension of social stratification," I also recoded or collapsed the detailed ISCO-88 occupations into Erikson and Goldthorpe's class categories (EGP) to see if the occupational sex segregation variable approximated the status measures of the EGP (Ganzeboom and Treiman, 1996: 201). The correlation coefficient between both occupation variables ranged from 0.86 to 0.89 for various racial groups, indicating that the dependent variable used in this analysis did indeed tap into vertical status differentials between the occupations.

5.6   Individual-level Compositional (or Supply) Variables

<u>Sex</u>

In models that include both men and women, women (43.0 percent) are coded 0 and men (57.0 percent) as 1 to indicate male advantage. Models will also be run separately by sex in order to study gender interactions.

<u>Race</u>

The South African Census recognizes four main racial groups: (1) black African, (2) Coloured, (3) Asian-Indian, and (4) White. Dummies are created for these categories, with the reference group being "black Africans." Besides being the largest group, the relative advantage accorded to other groups will be measured

against black Africans. Models will be run separately by race and sex in order to study possible interactions.

Human capital variables

Level of educational attainment

South Africa has twelve years of formal schooling: seven years of primary school (encompassing grades 1-2 and standards 1-5) and five years of secondary school (standards 6 through 10). Information on the highest level of education *completed* by the respondent— ranging from 0 (no schooling) to 19 (doctoral degree)—is available. I have coded the variable "educational attainment" into the following six categories: (1) No schooling, (2) In or completed primary school, (3) In secondary, (4) Completed secondary, (5) Diploma/Certificate and (6) College or higher. I make a distinction between "in secondary" and "completed secondary" because while individuals may be *enrolled* in secondary school, they may not *complete* it (Lam, 2007). Plus, I distinguish between Diploma/Certificate and College education because the former can be obtained in or right after secondary school. In recent years, women are enrolling in these courses without going to college.

One should note that this variable only reflects the *quantity* of education; thus it can be a poor indicator of the real *quality* of education, especially for black Africans who have suffered inferior levels of schooling. Although money was pumped into the "Bantu" school system in the latter years of *apartheid*, schooling standards were generally lowered for black Africans so as to give the appearance that more people were receiving good secondary schooling than was the reality (Standing,

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Sender, and Weeks, 1996). Moreover, because of their physical isolation in the homelands as well as low graduation rates, very small percentages of black Africans completed secondary school and even fewer attained post-secondary degrees, although differences exist by gender.

Nativity and migration status

Selective migration constitutes an important link between the individual and the community, with some individuals migrating to a particular community because of particular positive characteristics of the individual as well as the community.

I include a variable for an individual's combined nativity and migration status with three categories: (1) South African non-migrant (currently residing in the province of birth, 1996, and enumeration), (2) South African migrant (currently not residing in the province of birth and the 1996 province of residence) and (3) Immigrant. The "immigrant" category has not been created for Coloureds and Indians because of their low levels of immigration. Instead, they have two categories: (1) South African non-migrant and (2) South African migrant. Among all four groups, South African migrant is the reference category because it is the largest category. Because of data limitations, this variable does not tap into circulatory migration, numbers of past moves, etc, which makes it somewhat problematic.

Family status variables

Marital status

Marital status is a categorical dummy variable with (1) currently married (including a small percent of polygamous unions) and (0) All others (cohabiting, never married, and widowed, separated, or divorced).

Number of children ever born *and* Presence of children below age 5

The question "number of children *ever* born" was asked only of females between ages 12-50 and is included in the analysis to tap into the *long-term* effects of pregnancy and childcare responsibilities on women's labor force outcomes (i.e., the segregative or integrative nature of their occupational choices). It is a continuous variable ranging from 0 to 22. On the other hand, the "presence of children below 5" (a dummy variable) is included as a proxy for the *short-term* effects of childcare responsibilities that may influence women's occupational options. For example, women with young children may opt for more flexible part-time jobs, which often tend to be female-dominated. Although one could argue for the exclusion of one of the variables above—due to concerns of multicollinearity—both variables tap into two different and important aspects of childbearing and child rearing that are necessary when studying occupational sex segregation. Hence, both have been included in the models for women only because the data are not collected for men. (*Note*: a variable measuring the presence of children of various age groups: 0 - 3, 3 - 7, and 7+ years, did not yield interesting results.)

<u>Potential child care help: Presence of economically not active women above age 15</u>

The dummy variable "presence of economically not active women above age 15 in the household" is included to act as a proxy for childcare avalability that may have an effect on employment opportunities of women with children. Non-White women are more likely to reside in a household with unemployed adults compared to White women due to differences in family structure, household size, and fertility.

Compositional control variables

<u>Age and age-squared (in years)</u>

The analysis is restricted to those between 25-54 years. Age (in years) is a continuous variable and a squared term is introduced in the models to test for a nonlinear effect across the lifespan. The assumption is that entry into male-dominated occupations (particularly white collar) is likely to increase with age, which could also be a proxy for seniority and experience. [44]

5.7   Magisterial District-level (Demand) Variables

Literature on occupational sex segregation has suggested that the context within which individuals operate can constrain or enhance their placement in typically "genderized" or integrated jobs. To examine the effects of urbanization,

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[44] Because the census data do not contain a direct measure of skills or *labor force experience*, Zuberi and Sibanda (2005) argue that the highest level of education completed can be used as a reasonable proxy for both characteristics. Moreover, although scholars sometimes calculate potential labor force proxy by the formula (LFE = age - years of education - 6), given low levels of education for Africans, this variable runs the risk of overstating their potential labor force experience. One could also argue that age could also be a good proxy, especially in the case of South Africa.

industrial composition, historical factors, and culture on an individual's labor force outcomes, I will include the following contextual variables in the analysis:

Economic development and restructuring

Urban Magisterial District

A dummy for an urban magisterial district will be introduced, with 1 if urban and 0 if rural. It would have been more appropriate if more information, such as levels of urbanization, was available to tap into peri-urban townships that were created near cities, but such data is not readily available.

Historical apartheid policies

Homeland status

In South Africa, former homeland districts comprise of geographically segregated and highly concentrated black African populations. Although homelands were abolished in 1994, individuals residing in those areas continue to be disadvantaged in terms of their socioeconomic status as well as access to employment, health amenities, and infrastructure. The "homeland status" variable indicates whether a current magisterial district is comprised predominately of former homelands and is coded 1 = all or the majority of the district's geographic area falls within the boundaries of a former homeland, else 0. One could argue that homeland status proxies urbanization to some extent because almost all homelands were situated in rural areas, but such an interpretation should be approached with caution because several rural areas were also "White" farms.

Industrial Composition

Proportion in service industry

This variable measures the percent of the employed population in the service sector (i.e. wholesale and retail trade; transportation, storage, and communication; financial and banking services; and community, social, and personal services) as a share of the total employed population in an individual's magisterial district (Charles, 2003). I use total employment rather than just female employment because we want a measure of the overall occupational structure of the labor market. Past research suggests that this structural feature is associated with substantial changes in the sexual division of labor in the (formal) economy (Charles, 2003).

Cultural factors

Gender egalitarianism

Gender egalitarianism (or the propensity for individuals to apply normative standards of "equal opportunity" in evaluating the fairness of gender distinctions) is estimated by the ratio of boys to girls aged 13-18 who *complete* their primary level education (as opposed to *being enrolled*). While primary school enrollment rates are near universal across both sexes, girls are more likely to drop out of school or repeat classes because of several reasons such as pregnancy or household work (Hyde, 1993). The male-female *completion ratio* gives us an idea of the magnitude of the gender difference in the outcome: a ratio of 1.0 indicates parity between the male and female graduation rates, values higher than 1.0 indicate male advantage or unequal gender contexts. I chose primary rather than secondary schooling in order to capture

current (or post-*apartheid*) conditions in the magisterial district and have kept a broad

age range (13-18 years) to capture children and young adults who may have delayed

enrolling or completing their schooling due to personal or structural factors.

Macro-level Controls

Female labor force participation

      Female labor force participation is measured by women's share of the

economically active labor force (i.e. men and women who are either employed or

seeking employment). Since labor markets are segmented along gender lines due to

"sex-typed" occupations, an increasing share of women in the labor force is likely to

increase occupational inequality because low-status and low-paying jobs may become

more feminized (Oppenheimer, 1970).

5.8   Analytic Strategy: Descriptive and Multilevel Analyses

Tables 5.4 to 5.8 around here

      As a first step, univariate descriptives by race and gender are included in

Tables 5.4 to 5.8. In addition, frequencies are also included in Tables 5.9 to 5.13.

      Second, in Chapter 6, I will present a brief descriptive analysis of the

distribution of key independent variables such as race, educational attainment, age,

migration status, and place across various dimensions of the employment status of

women—particularly employment and unemployment—seven days prior to the 2001 Census. Such an exercise will highlight who has been selected into employment.

Third, several descriptive measures such as the Duncan and Duncan's index of dissimilarity, the extent to which women are concentrated in an occupation, the extent to which an occupation is female, and the division of the labor force into white or blue-collar gender-dominated or integrated occupations will be discussed in Chapter 7 in order to present an overview of occupational sex segregation in South Africa. Racial and regional differences will also be presented to highlight interactions of gender, race, and region.

Duncan and Duncan's (1955) Index of Dissimilarity or ID is a relatively straightforward technique that condenses between-group occupational variation into a summary segregation index. It assesses the *magnitude* of difference in the distribution of two groups (gender, race, etc) across specific categories (geographic areas, occupations, etc). For example, in the case of occupational sex segregation, the ID coefficient can be interpreted as percent of employed women or men who would have to change occupations in order for each occupation to be evenly distributed, regardless of occupational ranking.[45] The formula is as follows:

[5.1] $\quad D = \sum_{j=1}^{J} |(M_j / \sum_{j=1}^{J} M_j) - \sum_{j=1}^{J} |(F_j / \sum_{j=1}^{J} F_j)| * \frac{1}{2}$

where:

M_j = number of males in occupation *j*

F_j = number of females in occupation *j*

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[45] The Index of Dissimilarity (ID) is also defined as "one-half of the summation over all occupations of the absolute differences between the proportion of all females (F_i/F) and the proportion of all males (M_i/M) in each occupation i" (Anker, 1998: 75).

A (minimum) value of zero indicates no segregation or identical distribution of men and women across occupational categories, whereas a (maximum) value of 100 or 1.0 implies complete segregation, with all occupations being either completely male or completely female. While a greater level of data disaggregation (i.e. at the 1, 2, or 3 digit occupational classification level) yields higher values for the index, the same is also true when a few large, highly segregated occupations dominate a sizeable number of small, integrated occupations, making the singular use of ID somewhat problematic for in-depth analyses. Moreover, the index of dissimilarity measures nominal or overall extent of gender *segregation*, irrespective of (vertical) occupational ranking that reflects gender *inequality*.

The size standardized index (DS), on the other hand, accounts for variations in occupational structure regionally or temporally by treating each category as if it is the same size (Gibbs, 1965l).[46] The formula is as follows:

$$[5.2] \quad \text{DS} = \sum_{j=1}^{J} |[(M_j/T_j)/\sum_{j=1}^{J}(M_j/T_j)] - [(F_j/T_j)/\sum_{j=1}^{J}F_j/T_j)]| * \frac{1}{2}$$

where:

M_j = number of males in occupation *j*

F_j = number of females in occupation *j*

T_j = Total number of men and women in occupation *j*

Results for the size standardized index are presented in Table 7.2, but those for the index of dissimilarity will be discussed.

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[46] However, by treating all categories equally in terms of size, the size standardized index runs the risk of inflating the impact of small occupational categories and devaluing the impact of large occupational categories (Semyonov. Haberfeld, Cohen, and Lewin Epstein, 2000).

As a fourth step, multivariate analyses will be conducted with results presented in Chapters 8 and 9. A multilevel approach is necessary for this analysis because it permits simultaneous estimation of full micro- (individual-level) and macro- (magisterial district-level) models. A common concern with other techniques is the extent to which large sample sizes result in very small effects being statistically significant, leading to possible Type I error. By using maximum likelihood estimation, hierarchical linear modeling adjusts correlation as well as standard errors among individuals nested within the same geographical areas and uses the appropriate degrees of freedom for higher-level hypotheses, making it an ideal technique to answer the questions posed here. Thus, methodological problems such as heterogeneity of regression, aggregation bias, and misestimated standard errors that often emerge in single-level equations using variables measured at multiple levels are corrected (Raudenbusch & Bryk, 2002).

Because the dependent variable has six (technically) unordered categories (white-collar male-dominated, white-collar gender-integrated, white-collar female-dominated, blue-collar male-dominated, blue-collar gender-integrated, and blue-collar female-dominated), a multilevel multinomial logistic regression model will be used. [47] I use multinomial models (or the simultaneous fitting approach) instead of

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[47] There were several limitations to using a multilevel, multinomial logistic regression analysis. First, because the outcome variable is categorical, there is no variance at level 1. Hence, descriptive statistics relying on level-1 variability (e.g. the intraclass correlation, i.e., ratio of between-group to within-group variance or effect sizes), cannot be reported for this analysis (Luke, 2005). Moreover, there is no way to discuss the extent to which adding variables into the model "reduces variability" in the outcome. Although it is possible to calculate "pseudo r-squares" to approximate these statistics (Pedhazur, 1997), there is disagreement in the field about the effectiveness of these approximations. This is especially true for analyses involving multiple levels and outcomes with more than two categories. A second technique typically used for determining the effectiveness of a model, a "classification table" comparing actual and expected group membership, is more often recommended for predictive models than it is for descriptive models (Long, 1997). The purpose of this analysis is to

dichotomizing the categories of the outcome variable and running individual logistic models (baseline logit or separate fitting approach) in order to make comparisons across categories based on a single reference category.

The analysis is conducted using Hierarchical Generalized Linear Modeling (HGLM), a module available in HLM 6.04 software (Raudenbush, Bryk, Cheong, & Congdon, 2004) for analyzing non-linear models. The HGLM module calculates expected occupational placement by considering the likelihood of belonging to each occupational group given responses to a series of individual- and magisterial district-level predictors. When the level-1 sampling model is multinomial, HGLM uses the logit link function η which is expressed as:

[5.1] $\qquad \eta_{mij} = \log\left(\dfrac{\varphi_{mij}}{\varphi_{Mij}}\right)$

where φ_{mij} is the probability that a person i in district j belongs to response category m relative to the probability of being in reference category M. Thus, η_{mij} is the log odds of being in m^{th} category relative to the Mth category. The probability of being in reference category M is:

[5.2] $\qquad \varphi_{Mij} \text{ (or } \varphi_{ij\,(6)}) = 1 - \displaystyle\sum_{m-1}^{M-1} \varphi_{mij} = 1 - \varphi_{ij\,(1)} - \varphi_{ij\,(2)} - \varphi_{ij\,(3)} - \varphi_{ij\,(4)} - \varphi_{ij\,(5)}$

or 1 minus the probability of belonging to each other group.

The full model is as follows:

[5.3] $\qquad \eta_{mij} = \beta_{0j(m)} + \Sigma\beta_{qj(m)}(X_{qij} - X_{k..})$

[5.4] $\qquad \beta_{qj(m)} = \gamma_{q0(m)} + \Sigma\gamma_{qs} * Z_{sj} + \Sigma\gamma_{qt} * (Z_{tj} - Z_t) + u_{qj}$

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identify factors associated with identification rather than to predict identification; therefore, a classification table is not as useful here.

where

- η_{mij} = log odds of individual i in magisterial district j in category m compared to employment in reference category M

- $\beta_{0j(m)}$ = intercept for magisterial district j or the average log odds of membership in category m for magisterial district j

- $\beta_{qj(m)}$ = vector of q individual-level coefficients for variables X_{qij} (e.g. individual and household) in magisterial district j

- X_{qij} = vector of q individual-level variables for individual i in magisterial district j

- $X_{k...}$ = vector of q grand means on individual-level variables

- $\gamma_{q0(m)}$ = level 2 (grand mean) intercept for magisterial district j for category m

- γ_{qs} = vector for s magisterial level coefficients for the effects of Z_{sj} on the micro-level coefficients β_{qj}

- Z_{sj} = vector of s macro-level variables for magisterial district j

- γ_{qt} = vector for t magisterial level coefficients for the effects of Z_{tj} on the micro-level coefficients β_{qj}

- Z_{tj} = vector of t macro-level variables describing magisterial district j

- Z_t = vector of t grand means of macro-level variables for magisterial district j

- u_{0j} = macro-level error term for coefficient $\beta_{qj(m)}$ in magisterial district j for category m

The intercept is predicted by several variables at the magisterial district-level with some individual-level variables acting as controls and some as predictors themselves.

Because gender and race differences dominate labor force activity, models will be run separately by gender (Chapter 8) and then by gender within the four main racial groups: black Africans, Coloureds, Asian-Indians, and Whites (Chapter 9). This will allow us to explore gender and race interactions in determining the likelihood of a women's occupational type, rather than including gender, race, and gender-race interactions in a single cumbersome model.

Stepwise models will be conducted with predictors entered in blocks: first individual-level controls, followed by human capital and family status variables, and then contextual magisterial-level variables (Raudenbush and Bryk, 2002). Analysis steps are summarized in Table 5.9.

Chapter 6: Who Are the Employed: A Descriptive Analysis

As discussed earlier, I study the effect of macro-level demand factors and micro-level supply characteristics on women's placement in white- and blue-collar male-dominated occupations in South Africa in this dissertation. However, before highlighting the factors influencing occupational placement, it is important to understand *who* is "selected" into employment and who is not. That is, in light of the high unemployment rate in South Africa, particularly among black Africans, this chapter will present a brief descriptive analysis of the distribution of key independent variables such as race, educational attainment, age, migration status, and place across various dimensions of the employment status of women—particularly employment and unemployment—seven days prior to the 2001 Census. Results for all women are included in Table 6.1 and by race in Tables 6.2 (black Africans), Table 6.3 (Coloureds), Table 6.4 (Indians), and Table 6.5 (Whites).

6.1   Definition of Terms

In the South African 2001 Census, respondents were first asked: "In the SEVEN DAYS before 10 October did (the person) do any work for PAY (in cash or in kind) PROFIT or FAMILY GAIN, for one hour or more?" Based on this and additional questions, a variable for employment status (employed, unemployed, and not economically active) was created. The "official" (or strict) definition (used in South Africa) classifies as "unemployed" those people within the economically active population who: (1) did not work during the seven days prior to census night, (2) wanted to work and were available to start work within a week of census night, and

(3) had taken active steps to look for work or to start some form of self-employment in the four weeks prior to census night. (Conversely, the "not economically active" group includes scholar or student, home-maker or housewife, pensioner or retired person/too old to work, seasonal worker not working presently, and those who are unable to work due to illness or disability, and those who choose not to work, i.e. "discouraged workers.")

Four main categories have been created for the analyses on "employment status" in this chapter (with an age selection of 25-54 to reflect the main analyses): (1) employed, (2) unemployed, (3) economically not active, and (4) employed, but occupation not reported. The last category (employed, but occupation not reported) is extracted from the "employed," but both are mutually exclusive (as is evident in the row percentages in Tables 6.1 to 6.5). The distinction was made in order to emphasize compositional differences, if any, between those individuals who are employed and in a clearly reported 3-digit occupation *and* those who are employed, but have not clearly specified their occupation (and hence dumped in the broad "998" occupational category; refer to Table 5.1). Consequently, the former group is included in the main analysis on occupational sex segregation, while the latter is dropped (refer to Chapter 5 for an extensive discussion). Although the two categories could have been combined into one for the current analysis, the distinction was maintained so that the "employed" (and in a clearly reported 3-digit occupation) is the same sample used in further analyses (Chapters 7, 8, and 9). Finally, around 43% of respondents between ages 25-54 are employed, while 35% is unemployed, 18% are

not economically active, and slightly less than 3% are employed but have not reported an occupation or occupation cannot be determined.

6.2   All Women

Table 6.1 around here

According to Table 6.1, among all racial groups, black African women are the least likely to be employed (29.26 percent), while almost 61 percent of White women are employed, with Coloured (47.39 percent) and Indian women (42.44 percent) falling in the middle. Conversely, the rate of unemployment (i.e., those seeking employment) is highest among black Africans (45.90 percent) and reduces as we go up the racial hierarchy, i.e. Coloureds, Indians, and Whites. (The relatively low percent of employed Indian women is explained by the fact that 45.66 percent report being economically not active—of which significant proportions are housewives— reflecting cultural views towards women and work.)

In terms of educational attainment, Table 6.1 indicates that those with higher levels of education are more likely to be employed, with the converse being true for the unemployed and, to some extent, those who are economically not active. For example, 74.77 percent of college educated women between the ages of 25 to 54 are employed, and only 7.26 percent are unemployed. Interestingly, while the pattern for employed women is positive and straightforward (i.e. increases with increasing educational level), the pattern for the unemployed is not clear-cut. In fact,

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approximately 40.60 percent of women with no schooling, 41.63 percent with primary school education, and 43.13 percent women in secondary school are likely to be unemployed, with the percent decreasing with increasing education thereafter. Could we make some tentative observations that besides reflecting lower returns to education, secondary school education and higher are more helpful for getting employment, compared to lower levels of education?

No clear pattern is observed in terms of migration status or even marital status. Slightly less than half of all South African non-movers (46.36 percent) and immigrants (45.71 percent) are likely to be employed compared to almost 34 percent of internal migrants. Among all three groups, immigrants are the least, while South Africans migrants are the most likely to be unemployed, reflecting employment patterns observed in existing research studies. Finally, among the economically not active, immigrants are the largest group, possibly reflecting associational migration.

Although fertility is often highlighted as being endogenous to employment and occupational attainment models, I have included it in the analyses to highlight long-term childbearing. Results in Table 6.1 are somewhat expected, with number of children ever born being the lowest for employed women (2.26), followed by unemployed (2.46) and highest for the economically not active (3.04). Finally, among the individual-level factors, age is introduced as a control variable in the multivariate analysis. Descriptive analyses of age in Table 6.1 are interesting: while the distribution for employed women increases across the 25-29, 30-39, and 40-49 years categories, it decreases for the 50-54 years category, highlighting a nonlinear pattern. However, distributional patterns for unemployed women are linear and

negative, i.e. the percent of unemployed women decreases with increasing age group, although one can speculate that patterns may reverse at older ages.

So far, we have discussed micro-level variables pertaining to individual supply characteristics. Two macro-level structural variables that highlight the social engineering of the South African landscape perpetuated under *apartheid* will also be considered: (1) residence in urban magisterial district and (2) residence in former homeland. For the first variable, frequency distributions are in the expected direction: 41.36 percent of women residing in urban magisterial districts are employed compared to 23.61 percent in rural districts. Conversely, percent unemployed (42.21 percent) and economically not active (32.60 percent) are higher in rural districts than in urban (35.31 and 20.53 percent respectively). Similarly, the percent of employed women residing in former homelands is lower (20.93 percent) than non-homeland residence (41.36 percent). Expectedly, the converse pattern is observed for 45.94 percent of former homeland residents being unemployed (45.94 percent) compared to 34.01 on non-homelands. In the next section (Section 6.2), I will examine the data to see whether employment status patterns diverge by race.

6.3   Women by Race

Tables 6.2, 6.3, 6.4, and 6.5 around here

For women of all four races, patterns of employment status by educational attainment are similar to the patterns observed for all women in general; refer to

Table 6.2 (black Africans), Table 6.3 (Coloureds), Table 6.4 (Indians), and Table 6.5 (Whites). Irrespective of race, the percent of women employed increases with increasing levels of education, with the effect especially strong for Coloured women, i.e. the bivariate relationship is linear and positive. For example, among college educated women, 74.42 percent of black Africans, 80.38 percent of Coloured, 73.80 percent Indians, and 74.68 percent White women are employed. The converse is true for unemployed women or those who are economically active, although strong racial differences are evident. 41.83 percent of black African women with no schooling are unemployed, while the corresponding percentages for Coloured, Indians, and Whites are 21.72, 10.28, and 9.66.

Moreover, and importantly, unemployment patterns highlight the fact that returns to education are lower for black African women compared to non- black African women. While the relationship between unemployment and educational attainment for the latter group is somewhat linear and negative (i.e. higher percent unemployed among those with no schooling and so on), patterns are somewhat striking and somber for black African women. Table 6.2 demonstrates that increasing educational attainment, to some extent, does not mitigate unemployment. In fact, the percent unemployed increases with increasing educational level: 41.83 percent (no schooling), 45.56 percent (in or completed primary), 52.03 (in secondary), and 50.04 (completed secondary) and then declines, 28.56 percent for diploma holders and 14.69 percent college educated. Patterns for the economically not active, across all racial groups, are in the expected negative direction.

As discussed earlier, no clear pattern is observed in terms of migration status or marital status. Irrespective of racial group, a higher percent of non-movers, followed by immigrants (for black Africans and Whites) are employed compared to internal migrants. On the other hand, with the exception of White women, South Africans migrants are more likely to be unemployed, while among the economically not active, immigrants are the largest group, possibly reflecting associational migration. Patterns are consistent across racial groups. Across marital status, a lower percent of currently married women, irrespective of race, are employed or even unemployed, compared to single women; in fact, a higher percent are economically not active.

Interestingly, patterns diverge by race when we examine the number of children ever born as well as age. While employed black African women have slightly higher fertility than their unemployed counterparts (Table 6.2), the contrary pattern is observed for non black African women (Tables 6.3 to 6.5): the number of children ever born is the lowest for employed women, followed by unemployed and then highest for the economically not active. Regarding age, the distributional pattern for employed black African and Coloured women is negative and nonlinear, i.e. it increases with age and then decreases (although the latter "peak" earlier than the former), while that for Indian and White women is positive and linear. Patterns for unemployment are linear and negative for all women of all racial groups.

Finally, in terms of place, frequency distributions for employment in urban areas as well as former residence reflect patterns observed in the previous section. Irrespective of race, a higher percent of women residing in urban magisterial districts

are employed compared to those in rural districts; the opposite pattern is observed for residence in former homelands (except, surprisingly, in the case of Indian women, which is quite unexplainable). However, the percentage difference in employment between urban and rural districts is larger for black African and White women than Coloured and Indian women, highlighting possible factors that may drive occupational access and segregation.

6.4   Implications for Current Study

As mentioned in Chapter 5, population censuses and labor force surveys (LFS) are key sources of information pertaining to labor force participation and occupational outcomes, with both having well recognized advantages and disadvantages. Importantly, the South African LFS questionnaire includes more prompts to clarify and tap into labor market issues such as multiple job holdings, income from various sources, informal sector activity, and so on, compared to massive undertakings such as the Census (that are relatively "shallow" in terms of the depth of questions asked). Hence, the 2001 Census has lower estimates of reported labor force participation (and conversely, high rates of unemployment), than the LFS.

When we consider various responses (and response rates) to the Census employment questions, an issue that naturally emerges is: "who is in jeopardy of inaccurately declaring themselves unemployed or not in the labor force?" Post enumeration checks underline the fact that those in the informal (as opposed to formal) and subsistence agriculture sectors as well as multiple (informal sector) job holders, particularly among those working only a few hours per week run the risk of

underreporting their employment status (and being classified as unemployed or not in the labor force, high rates of which have been highlighted in previous sections of this chapter). Other groups include "discouraged workers," illegal immigrants, part-time workers in the underground economy (e.g. housewives or students who might be temporary childcare workers at home), those working for kind rather than cash, or unpaid family business employees who may not consider such work "conventional" employment.[48] For example, only 25 out of almost a quarter million employed women between the ages of 25-54 years categorized themselves as subsistence farmers, while the percent in the informal economy is also extremely small, which is surprising because of the sheer prevalence of both employment types in the global South. Moreover, because employed respondents are required to report or describe their *main* occupation (rather than all occupations), the occupational data quality gets compromised because a respondent's multiple job holdings cannot reported.

Such issues of data reporting (and concomitant data quality) in the Census may have implications for further analyses on occupational placement and segregation, particularly in terms of gender and race. Women, especially among races traditionally subject to discrimination, do not enjoy the same access to employment as well as occupational opportunities and rewards as men *within* and women *across* racial groups. While a significant number of women may be unemployed due to various factors, the higher proportion (relative to men) reported may include part-time working women (who may report themselves as housewives or

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[48] Critics of the LFS often argue that in line with ILO conventions, such surveys classify a great deal of "sheer survival activity" (or *underemployment*) as "employment." In fact, according to them, the reality of people's perceptions of their "underemployment" status in informal jobs and subsistence agriculture—classified as unemployment (or extremely low figures for employment)—may be reflected in the South African 2001 Census.

temporarily unemployed) or those working in the informal economy for a few hours, as mentioned earlier. Because such (under-reported) jobs tend to require lower levels of education, and because there is a higher likelihood of more high status occupations (dominated by the highly educated) being reported, occupational data and patterns of occupational segregation can be upwardly biased.

To elucidate, as a first step in the analyses, occupations have been classified as "female," "gender-integrated," and "male," based on the percent female (irrespective of race) in the *employed* labor force. The under-reporting of women's employment and their over-reporting of high-status jobs compared to low-status create three situations that may differentially influence our overall results. First, there may be higher levels of overall observed sex segregation because the absolute number of women in various occupational categories may be much lower than men. Second, the threshold for being in a male-dominated occupation compared to gender-integrated (or female-dominated) may be lower, resulting in more women reporting being in the former job type than might necessarily be the case. Finally, because more educated women tend to report their employment status correctly, the percent in white-collar rather than blue-collar occupations may be much higher.

Moreover, race and gender interact to influence (or bias) patterns of employment and occupational placement. For example, in South Africa, black African women who have been particularly marginalized under *apartheid* are severely restricted in their opportunities for educational advancement, employment, and occupational placement, an issue that is clearly evident in their high rates of unemployment (discussed in section 6.3) and occupational placement (in Chapters 8

and 9). Because of the types of jobs or locations that they may be in, minorities (and particularly minority women) are more likely to report themselves as unemployed (or underemployed in the informal economy). Reflecting patterns described earlier, there may be an over-reporting of high status white-collar full time jobs in the formal sector. Thus, more White and Indian women (who tend to have higher levels of education) may report being in white-collar (male-dominated) occupations than Coloureds and black Africans. Such a situation invariably creates a methodological concern that educational as well as race effects (among other factors) may be inflated in occupational analyses because of who has erroneously been left out of the labor.

6.5   Conclusions

Section 6.2 indicates that individual human capital factors such as education and age as well as location (e.g. urbanization) are important factors that aid in the employment of South African women. When disaggregated by race in Section 6.3, education and age retain their importance in determining selection into employment, although returns to education are not high for black African women compared to women of other racial groups. In fact, their disadvantage regarding age as well as childbearing age is also evident in their employment status. Similarly, urbanization is strongly correlated with all women's employment, although one could expect a somewhat stronger effect for black African and White women. Thus, the importance of race and place is highlighted in this descriptive analysis of women's selection into employment. In the next chapter, I will provide a descriptive overview of occupational sex segregation in post-*apartheid* South Africa using the 2001 Census.

Chapter 7: Occupational Sex Segregation in South Africa: An Overview

Using the 2001 Census, this chapter provides a descriptive overview of occupational sex segregation in post-*apartheid* South Africa. The analyses are based on employed individuals aged 25-54 who reported an occupation for the 7 days prior to the Census. In addition to the index of dissimilarity (minimum percent of employed women or men who would have to change occupations in order for each occupation to be evenly distributed), other measures discussed include the extent to which women are concentrated in an occupation (percent of all women in an occupation), the extent to which an occupation is female (percent female share in an occupation), and the division of the labor force into gender-dominated occupations. Racial and regional differences will be presented to highlight interactions of gender, race, and region. Such diverse measures present a more complete picture of occupational sex segregation in South Africa than is possible to obtain from a single statistic such as the ID.

7.1   Overall Occupational Distribution

Table 7.1 around here

In terms of weighted occupational breakdown, according to Table 7.1, the skilled agriculture/fishery is the smallest (2.7 percent) followed by legislative or managerial occupations (5.9 percent), while elementary occupations—a collection of

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sundry low-paying manual jobs—is the largest (27.5 percent) employment category.

Production occupations (comprising of crafts workers and plant/machine operators)

are relatively small (23.1 percent) compared to other developed (e.g. 37 percent in

Japan) or developing (e.g. 57 percent in China) countries (Anker, 1998). Besides

reflecting, in part, the restructuring of the economy, the small percent of production

works also highlights a weakness in the training of craft/related trades artisans,

especially black Africans, during *apartheid* and even now (Standing, Sender, and

Weeks, 1996). Each of the remaining major groups—professional, technical, clerical,

and sales/services—generally represent between 7 to 15 percent of all employment,

although regional variations exist. Thus, to *some* extent, the occupational distribution

of workers is a combination of patterns found in both developing (small professional

and large elementary categories) and industrialized (large production category)

countries.

7.2   Measuring Occupational Segregation: Index of Dissimilarity

The index of dissimilarity, in the case of occupational sex segregation, can be

interpreted as the percent of employed women or men who would have to change

occupations in order for each occupation to be evenly distributed, regardless of

occupational ranking. A (minimum) value of zero indicates no segregation or

identical distribution of men and women across occupational categories, whereas a

(maximum) value of 100 or 1.0 implies complete segregation, with all occupations

being either completely male or completely female.

The last three rows of Table 7.1 present the ID coefficients by sex for the nine major occupational categories included in the study. Irrespective of race or region, a high degree of sex segregation exists in South Africa as reflected by the values: 34.5 percent (using 1-digit classification), 43.7 percent (2-digit), and 51.0 percent (3-digit). Thus, a minimum of 51.0 percent of employed men or women would have to switch occupations in order for all occupations to be evenly distributed. This high level of segregation would seem even more striking if we account for the fact that significant segregation exists at the job (or establishment) level (Tomaskovic-Devey, 1993) and that the 136 occupations detailed by the South African Census further subsume sundry jobs for which information is not collected.

Table 7.2 around here

In order to highlight sex segregation at the regional level, Table 7.2 presents indices of dissimilarity (ID) across the nine South African provinces in descending order as well as size standardized indices of dissimilarity (DS). As mentioned earlier, the ID coefficient at the 2-digit level for the whole country is 43.7.[49] Surprisingly, unlike the case in other developing countries, the urban-rural difference in South Africa is not very pronounced. The value for rural areas (44.5 percent) is almost comparable to that for urban (43.6 percent), raising interesting questions about whether factors affecting occupational placement vary between these geographic regions. The *slightly* higher ID value for rural areas may stem from the *type* of

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[49] The ID would have been higher for all the provinces if computed at the 3-digit (or the job level), but data issues and small number of cases in some occupations prevent us from calculating values at these levels.

occupations present there (e.g. more men reporting agricultural work than women).

Or, the somewhat similar values might stem from recent retrenchments on mines that

have now forced a high proportion of rural black African women to work in order to

support their families. Their increasing presence in some occupations (e.g.

agricultural or mining laborers) may lead to greater occupational integration and

consequently, more benign ID values.

Table 7.2 also presents indices of dissimilarity (using the 2-digit

classification) for the nine South African provinces, which range from a low of 37.2

percent for the Western Cape to a high of 53.9 percent for Free State province. Such

divergent values indicate that occupations are indeed sex segregated at the regional

level, further highlighting the importance of a contextual analysis incorporating labor

demand factors. Only three provinces—Western Cape (37.2 percent), KwaZulu-

Natal (40.2 percent), and Limpopo (42.6 percent)—have ID values below the overall

value for South Africa (as well as for urban areas of the country). Among all

provinces, the first two are the most urbanized with Western Cape being

economically well-developed, having the highest level of education, and one of the

lowest unemployment rates in the country. Although KwaZulu-Natal has a high

poverty rating (partly because of the KwaZulu homeland), it has several textile,

rubber, food processing, and sugar refining industries that hire substantial number of

(Asian-Indian) men and women in and around Durban, one of the busiest seaports in

the continent. Limpopo, on the other hand, is the poorest provinces in South Africa

and is composed entirely of ex-homelands; hence, its population is predominantly

black African (97.3 percent). "Self governance" during *apartheid* facilitated the

development of the public sector in these homelands, resulting in the growth of jobs, especially in health and educational services that hired men and women alike (van der Berg, 1985). Interestingly, the percent female share of employed individuals 25-54 in these provinces (Western Cape, 45.0 percent; KwaZulu Natal, 45.1 percent; Limpopo, 45.1 percent) is higher than the national average of 43 percent, raising the question whether women's increasing labor force participation increases or decreases occupational sex segregation (Semyonov, 1989).

On the other hand, Free State and North West have the highest 2-digit ID coefficients—comparable at 53.9 percent and 53.5 percent respectively—indicating that a striking level of occupational segregation exists between employed men and women in these provinces (especially since the ID value will further increase when calculated at the 3-digit level). Much of this may stem from the fact that both states have industrial sectors that disproportionately hire men (resulting in a skewed sex ratio *and* population composition). While commercial agriculture is central to the economy of Free State, gold mines are the largest employer.[50] Similarly, the North West is a part of the "Platinum Corridor" (extending from Pretoria to east Botswana); mining (platinum, gold, diamonds, and granite) contributes around 23 percent to its economy and accounts for nearly one-third of all employment in the province.

Table 7.3 around here

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[50] With more than thirty thousand farms producing over 70% of the country's grain (particularly maize), Free State is locally known as South Africa's "bread basket."

Finally, because this study analyzes sex *and* race segregation rather than just sex segregation, separate gender indices have been calculated within each racial group and vice versa. Table 7.3 indicates that the level of occupational sex segregation (again using 2-digit classification) varies across racial groups, being highest among black Africans (48.5 percent), followed by Whites (41.7 percent), then Coloureds (37.6 percent), with Asian-Indians having the lowest (31.0 percent). Black Africans are most segregated among themselves and from all other racial groups because of their forced absence from the labor force during *apartheid* and continued discrimination in comparison to women of other races. On the other hand, the high ID value for White women could be ascribed to a combination of cultural constructions regarding womanhood, norms about women's work, and the lack of necessity for them to work (Bernstein, 1978). In Table 7.3 (column 2), race-gender coefficients, with white men as the comparison group, increase in an expected manner: lowest among White and highest among black African women. In fact, black African women are so concentrated in certain jobs than women of other races that the greatest levels of occupational differentiation by sex-race are between them and white men (a striking 66.2 percent at the 2-digit level).[51]

Expected (and yet unusual) patterns emerge when gender and race coefficients are compared. Indices of racial dissimilarity for black Africans and Coloureds with Whites of the same gender (Table 7.3, column 3 and 4) are *higher* than within-race gender segregation indices (column 1), reflecting *apartheid* tenets of occupational racial "separateness." More specifically, black African and Coloured women are far more segregated from White women (58.0 and 47.0 percent respectively) than from

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[51] A similar trend for White men and black African women is also found in the United States.

men of their own race (48.5 percent and 37.6 percent respectively). This is contrary to patterns observed in multi-racial countries such as the United States where sex segregation is higher than race segregation. Thus, 48.5 percent of black African men or women would have to switch occupations with each other for all occupations to be evenly distributed compared to 58 percent for black African and White women. A similar pattern is observed for Coloured and black African men with respect to White men (Table 7.3, columns 3 and 4). Interestingly, with the exception of black African men, the racial ID is slightly higher among men (column 4) than among women (column 3), which could be ascribed to men's less privileged position *relative to White men* rather than non-White women's more privileged position in general. The pattern above is not observed for Asian-Indians: their race segregation coefficients (i.e. from Whites of same gender) are much lower than the within race gender ID, reflecting cultural views on women's work and status: e.g., within manufacturing, while Indian women are concentrated in feminized jobs (e.g. textiles and leather), Indian men predominate in male-type jobs.

Table 7.4 around here

In Table 7.4, an examination of the ID statistic for sex *within* racial groups across selected provinces—Free State, Gauteng, and Western Cape—which have the highest, intermediate, and lowest values among all nine provinces (refer to Table 7.2) indicates that the overall pattern observed so far still persists: black Africans

experience the highest overall sex segregation followed by Whites, Coloureds, and then Asian-Indians.

7.3   From Index to Occupations

Although the index of dissimilarity has the advantage of condensing into a single digit all the gender or race difference in occupational distribution, its simplicity sometimes becomes its greatest drawback (Anker, 1998). It does not indicate which (broad or) specific occupations contribute to the observed segregation and also tends to be a measure of the overall segregation; thus, the ID indicates nominal gender *difference* (overall segregation) but not gender *inequality* (vertical segregation) in occupations. Hence, we particularize our picture of occupational segregation by moving our lens to more detailed gender- and race-disaggregated occupations.

Figure 7.1 around here

Table 7.1 and Figure 7.1 reconfirm my hypothesis about basic horizontal sex segregation pattern: men and women (all races combined) are differentially distributed across the nine major occupational groups, with women clustered in a narrower range of non-manual (or white-collar) occupations than men. 69.5 percent of all women, compared to approximately 35.6 percent of men, are employed in three groups: white-collar Clerical and Technicians/Associate professionals and blue-collar

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Elementary, holding 3 out of 5 such jobs in 2001.[52] Reflecting a pattern found in

several other countries (Anker, 1998), women (14.6 percent) are more highly

represented in Technical and associate professional occupations than men (8.2

percent). Moreover, the percent female share of these three major categories—

Technical and associate Professionals (56.4 percent), Elementary (57.4 percent) and

Clerks (63.8 percent)—is significantly higher than the female share of the labor force

(43.0 percent), indicating the extent to which these broad occupational groups are

feminized, although interesting racial and regional differences exist, which will be

discussed later.

On the other hand, 34.2 percent of employed men (compared to 7.9 percent

women) are engaged in manual blue-collar occupations, primarily Craft and related

trades (19.5 percent) and Plant and machine operation and assembly (14.7 percent),

holding 4 out of 5 such jobs in 2001.[53] They are also more highly represented than

women in high status occupations that are associated with power, prestige, and high

incomes such as Legislators and managers (7.2 percent for men and 4.1 percent for

women). This observation is also supported by various Labor Force Surveys and the

1993 SALDRU (Southern Africa Labour and Development Research Unit) survey

that indicated the presence of very few women—especially black African and

Coloured women— in senior or middle-management positions (Standing, Sender, and

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[52] As mentioned earlier, these categories compress different jobs with widely different incomes and status. Clerical occupations include jobs such as office clerks, secretaries and keyboard-operating clerks, cashiers, tellers, and client information clerks, etc., while elementary occupations include domestic cleaners and launderers, messengers, garbage collectors, street vendors, and agricultural/fishery or mining laborers.
[53] These broad occupations include semi-skilled and unskilled operator and laborer occupations such as typesetters and compositors; assemblers, truck, taxicab, and bus drivers; and construction helpers as well as precision production, craft, and repair jobs, which are the strongholds of skilled blue-collar workers, like automobile mechanics, data processing equipment repairers, and electricians, carpenters, and plumbers.

Weeks, 1996). As expected, the percent female share in these occupational groups is considerably lower than the percent female (43.0 percent) in the labor force: 13.2 percent in Plant and Machine Operation, 15.3 percent in Crafts and Related Trades, and 29.5 percent in Legislators.

Table 7.5 around here

Table 7.5 presents data separately for the four racial groups, providing us with an opportunity to examine broad occupational differences by race and gender. *Within each racial group, patterns of occupational differences by gender show similarities found globally*: women are disproportionately present in non-manual clerical, technical and associate professionals, and sales jobs. At the same time, they are underrepresented in manual occupations related to plant operation and crafts as well as managerial positions.

However, Table 7.5 reinforces a point mentioned earlier, gender differences in occupations within racial groups seem to be slightly smaller than occupational differences by race, which is not that surprising in the case of South Africa. Compared to Whites and Indians, the *crowding* of black African and Coloured women (48.9 and 35.5 percent respectively) and men (24.2 and 29.2 percent) into blue-collar elementary occupations (laborers, domestic helpers, cleaners, hawkers, and so on) reinforces the fact that gender and racial discrimination strongly intersect in the South African labor market. Men of these racial groups are also crowded into

plant/craft occupations. Indeed, a disproportionately large percentage of elementary workers are made up of black African women who tend to be domestics.

In contrast, Whites and Asian-Indians of both sexes are employed in higher paying white collar managerial and professional positions. In fact, it is not surprising that post-*apartheid* South Africa still reflects a status-quo in the economic, if not political, domination of Whites who are concentrated in occupations where income and employment security are relatively favorable, and where long term employment growth is most likely. Finally, somewhat comparable proportions of women of all races are engaged in technical and associate professional occupation, although White (34.6 percent), Asian-Indian (34.4 percent), and Coloured (21.5 percent) women are overrepresented in clerical positions. These patterns reinforce an important historical fact: during most of the 20th century, employers have traditionally segregated White and Indian-Asian women into different lines of work from men of their own ethnic background and from Africans and Coloureds in general.

Table 7.6 around here

Finally, Table 7.6 presents the representation ratio for women in an occupation across the nine provinces (as well as between women of different races in two provinces, Free State and Western Cape) to highlight regional (and racial) variations in occupational segregation. The representation ratio is the extent to which women are overrepresented (values > 1.0) or underrepresented (values < 1.0) in an occupation relative to women's share of that occupation in general (Anker, 1998).

The provinces are ordered according to the ID ordering in Table 7.2 and patterns observed across both statistics remain relatively stable. In the Western Cape (which has the lowest ID value; Table 7.2), the percent of women in traditionally male-dominated occupations such as "Legislators and managers" (1.25) and "Plant and machine operators" (1.56) is significantly higher than the national average; in fact, they are under-represented in the large and highly feminized "Elementary" (0.91) category. (Interestingly, patterns diverge when gender is further disaggregated by race.) While a somewhat similar pattern is observed for KwaZulu-Natal: "Crafts and Related Trades Workers" (1.34) and "Plant and machine operators" (1.90) and "Elementary" (0.93), the converse is evident for Free State, which has the highest ID among all provinces (Table 7.2). Compared to the national average, women in Free State are significantly under-represented in "Legislators and managers" (0.60) and "Professionals" (0.67), but over-represented in "Elementary" (1.26); again, patterns diverge by race. These interactions of gender, race, and region on occupational placement justify studying the differential effects of contextual and individual-level characteristics in multivariate regression models.

7.4   Gender-Based Hierarchies within Occupations

Although some broad occupational categories, e.g. "Professionals," employs a comparable percent of men and women (around 7.8 percent), further disaggregation dispels the image of gender equality. Using the example of Professionals (female share: 43.2 percent) and detailed coding systems, Table 7.7 illustrates that even *within*

broad groups that have similar gender distributions, men and women's work is segregated.

Tables 7.7 and 7.8 around here

Table 7.7 indicates that women are 61.0 percent of all 2-digit "Teaching Professionals," but when disaggregated further (3-digit system), more women than men are assigned to positions accorded with lower remuneration. Specifically, 49.2 percent of College; University and Higher Education Professionals; 61.9 percent of Secondary School Professionals; and 65.9 percent of Primary and Pre-Primary School Professionals are women. A similar pattern can also be observed among Health Professionals (Table 7.7).

Table 7.8 indicates that the gender-based hierarchy within occupations persists across all four racial groups, with the strongest effect for Whites. In fact, while women (particularly White women) were primarily concentrated in teaching and nursing during *apartheid*, men are employed in a wider range of "Professional" occupations such as doctors, engineers, lawyers, and architects. However, women's concentration in relatively few occupations (especially teaching and healthcare) is not just characteristic of professionals or all employed South African women, but is a persistent global pattern.

7.5   Ten Top Occupations by Gender and Race

One way to look at the difference between occupational employment patterns
of women and men is to analyze the extent to which women and men are
concentrated in some occupations. Based on detailed occupational data, Tables 7.9
and 7.10 present the 10 largest occupations for women and men, and their percentage
female in 2001, which might explain the high ID value (51.0) calculated earlier.

Tables 7.9 and 7.10 around here

The largest 10 occupations for women (Table 7.9) employ almost 59 percent
of all women workers, with domestic helpers (26.7 percent) comprising the largest
occupation. Importantly, almost all occupations are Elementary, Clerical, or
Sales/Services in nature with the exception of two white-collar but "low-status"
Associate Professional occupations. Indeed, no Managerial or Professional
occupations are among the top ten female occupations. Moreover, 7 of the 10
occupations are more than 60 percent female while 3 were more than 70 percent
female. This occupational distribution reflects the high black African composition of
the labor force and their restriction to Elementary occupations. Despite economic and
social progress over the past ten years, these observations are similar to those from a
survey of major companies in 1990-91 which found that women were grossly under-
represented among management jobs, and noted that there was "some admitted
prejudice when it came to promoting women" (Standing, Sender, and Weeks, 1996).

The 10 largest occupations for men listed in Table 7.10 employ approximately

48 percent workers of which 7 occupations were at least 70 percent male and 5 were

more than 80 percent male. As mentioned earlier, men's occupations tend to be more

wide-ranging than women's—both in terms of work type and income—and, in this

case, comprise of white-collar Managerial and Sales/Services or blue-collar

Plant/Machine, Craft and Elementary occupations. Finally, two low status and low

paying elementary occupations—Domestics and Related Helpers and Agricultural,

Fishery and Related Laborers—are common to both men and women's lists—

employing significant numbers of black Africans and Coloureds.

Table 7.11 around here

The gender-race variation in occupational placement is evident in Table 7.11

which lists the top ten occupations for each race and gender group.[54] Although black

African and Coloured women are disproportionately employed as domestic helpers

(highly feminized occupations) and agricultural, manufacturing, or mining laborers

(gender-integrated occupations), they do have significant work opportunities in other

feminized low-status white-collar clerical and associate occupations. In fact, a

significant number of black African women are teaching associates (primary and

n.e.c.) and nurses/midwives, which might vary regionally (i.e. higher on ex-

homelands because of the large public sectors developed during *apartheid*). On the

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[54] This reflects a 1993 study which reported that in three metropolitan cities, most black African women who were employed were on a casual or temporary basis, white women were concentrated in administrative and clerical positions, black African men were concentrated in unskilled, manual labor, and white men occupied the executive positions (Mckenna, 1993).

other hand, Asian-Indian and White women are more privileged than the other two racial groups because three high status white collar, gender-integrated managerial or professional are among their top ten positions; no elementary occupations are listed. This pattern also highlights the similarity in their occupational tracking as well as their social distance from women of other races. Secretary or key-board operating clerks (as well as numerical and client information clerks) is one of the top three (top five for Coloured women) occupations among non-black African women, indicating patterns of racial segregation within the "pink collar" category.

An important generalization here is the striking pattern of under-representation of black African and Coloured males and black African females—and over-representation of White and Asian-Indian men and women—in white collar occupations. In fact, an overwhelming majority of black African men and women are employed in manual occupations. Thus, groups that were especially discriminated against during *apartheid*, i.e. black Africans and Coloureds, still tend to work in less desirable occupations than Whites and Indians do. Indeed, the occupations with the greatest concentrations of men and women of color are the ones paying the lowest average earnings of all occupations.

7.6   Conclusion`

The descriptive overview presented above indicates that substantial occupational sex segregation exists in South Africa. Furthermore, gender and race (that are separate and yet continually interacting categories) play important roles in determining *vertical* (gender-dominated or gender-segregated occupations) as well as

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horizontal (manual and non-manual occupations) segregation. Subsequent chapters present multivariate regression analyses that will answer the rest of the questions posed in earlier chapters:

(1) Net of contextual factors, how do various individual and household level characteristics (measuring human capital and family status) impact women's placement in white- and blue-collar male-dominated occupations?

(2) After accounting for these compositional characteristics, how do contextual factors such as urbanization, industrial composition, former homeland residence (reflecting *apartheid*-based segregation), and gender egalitarianism influence women's occupational placement?

(3) Finally, do the effects of these individual and contextual characteristics on women's occupational placement vary across the four main racial groups (i.e., black African, Coloureds, Asian-Indians, and Whites)? That is, do these factors interact differently for different racial groups?

Results by gender are presented in Chapter 7, and by gender within the four main racial groups: black Africans, Coloureds, Asian-Indians, and Whites in Chapter 8.

Chapter 8: Multivariate Results for Occupational Sex Segregation among Women by Racial Groups

As highlighted in Chapter 7, according to the index of dissimilarity, regardless of occupational ranking, 51 percent of men and women in South Africa would have to shift across occupations in order to even the distribution. A question that emerges as a consequence is: what are the various factors influencing their segregation into various white- and blue-collar occupations? Or conversely, what individual or macro-level factors *increase* women's likelihood of accessing male-dominated occupations so as to reduce overall occupational sex segregation? Is it, for example, their education or is it the effect of "place" such as urban residence or industry? To answer these questions, I will present findings from multivariate analyses that examine the effects of individual and structural characteristics influencing women's placement in white- or blue-collar male-dominated occupations in this chapter.[55]

To reiterate, the analyses are based on employed women aged 25-54 who reported an occupation for the 7 days prior to the Census. Multilevel multinomial models between some key independent variables and a six-category dependent outcome will be used. The reference category is blue-collar female-dominated occupations. Hence, five pairs of outcomes: (1) white-collar male-dominated, (2) white-collar gender-integrated, (3) white-collar female-dominated, (4) blue-collar male-dominated and finally (5) blue-collar gender-integrated *versus* blue-collar female-dominated are displayed in Table 8.2 (both men and women) and Table 8.3 (all women). Since I am primarily interested in women's allocation into *white collar*

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[55] Similar analyses were also conducted for men, but results have not been included in the dissertation.

male- and *blue-collar male-dominated* jobs, the discussion will focus on these comparisons only. However, I will examine other comparisons incase another dependent variable category yields interesting results.

As mentioned in the conceptual framework, I will focus on two distinct and orthogonal aspects of sex segregation while discussing the results: *horizontal segregation* refers to women's under-representation in blue-collar occupations (e.g. craft, manufacturing) and their overrepresentation in white-collar occupations (e.g. semi-professional, clerical, and sales). On the other hand, *vertical segregation* refers to hierarchical inequality, specifically one's domination of the higher status and income occupations *within* the manual and non-manual sectors of the economy, reflecting gender inequality (Grusky and Charles, 1998). The effects of race, human capital, family status, and labor demand factors will be examined.

Table 8.1 includes cross tabulations for major independent individual-level variables and the dependent variable. Multivariate analyses for both men and women (Table 8.2) and for only women (Table 8.3) are presented. As HLM uses the log-odds metric to calculate and report the results of logistic regression analyses, the log of the odds ratio and the log-odds standard error are presented in these tables. In most cases, besides evaluating the size of the multinomial coefficients themselves, I also present the odds ratio and log odds. In terms of chapter organization, I first state the hypotheses and then discuss findings for women for each of the independent variables. A short summary at the end will highlight main factors that influence women's likelihood of being in white- and blue-collar male-dominated occupations.

8.1   Gender Inequality in Occupational Opportunity

General trends described in Chapter 7 indicate high levels of *horizontal* (between the blue- and white-collar dichotomies) and *vertical* (occupational status differentials) segregation between men and women. Table 8.1, which includes cross tabulations for major independent individual-level variables and the dependent variable, reconfirms this observation. Approximately 50.5 percent of women are employed in white-collar occupations compared to 38.8 percent men. Expectedly, only 4.9 percent are in white-collar and 9.0 percent in blue-collar male-dominated occupations compared to 12.3 percent and 48.7 percent respectively for men.

Tables 8.1 and 8.2 around here

Reflecting the descriptive tables, multivariate analysis results in Table 8.2 (model with men and women combined) highlight large log odds for the "male" variable indicating the presence of a considerable amount of gender inequality in holding male-type (and all other) occupations even after controlling for various labor-demand and labor-supply factors.[56] The strong positive coefficient demonstrates that on average, men are more likely to be employed in such occupations across the board (reflecting some sort of labor queuing whereby they are given preference in the labor market for almost all jobs). Indeed, the coefficient for blue-collar male-dominated occupation (logit = 3.515) is much larger than that for white collar male-dominated (logit = 2.689); in fact, both are the largest among all "male" coefficients. This

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[56] In results not included, in stepwise models, the size of the gender coefficient decreased after controlling for individual and macro-level characteristics, thus explaining some of the gender effect.

difference in coefficient size indicates possible gender essentialism and the preference

for men in such prototypically "male" jobs embodying characteristics such as

strenuousness and physicality (Anker, 1998). Although biological differences

between the sexes (e.g. women's reproductive roles, men's greater physical strength)

may have contributed to the initial development of these principles, they have

subsequently become ideologically and institutionally entrenched (Charles and

Grusky, 2005; Reskin and Roos, 1990).

8.2   Conditional Effects of Individual-level Supply Factors

Marginalized by Race

> ***Hypothesis:*** White and Asian-Indian women are more likely to be employed
> in white collar occupations compared to blue-collar occupations than
> Coloured and black-African women.

> ***Hypothesis:*** White women are more likely to be employed in white- and blue-
> collar male-dominated occupations than Asian-Indian, Coloured and black-
> African women.

Multivariate analyses presented in Table 8.3 highlight strong patterns of

vertical and horizontal segregation between women of the four racial groups. With a

few exceptions, Whites, followed by Asian-Indians and Coloureds have higher

coefficients across the range of blue and white-collar occupations, reflecting the

relative advantage they all have over black Africans.

Tables 8.3 around here

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Net of human capital and other relevant factors, logit coefficients in Table 8.3 indicate that White women are more likely to be in male-dominated occupations in both the blue- and white-collar dichotomy, compared to other groups, thus highlighting the importance of race in sustaining vertical segregation (i.e., status differentials between blue- and white-collar occupations). The odds of holding white-collar male-dominated occupations relative to blue-collar female-dominated occupations are 25 times ($e^{3.235} = 25.0$) greater for Whites, almost 13 times ($e^{2.536} = 12.6$) greater for Asian-Indian women, and over three times as likely ($e^{1.295} = 3.6$) for Coloured women than for black African women. A similar pattern emerges when we turn to blue-collar male-dominated occupations. Although racial differences in odds ratios are not as dramatic as those for white-collar occupations, White women still have a slight edge over others and are 5.5 times as likely ($e^{1.705} = 5.5$), Asian-Indian women are three times ($e^{1.111} = 3.0$), and Coloured women slightly more than twice as likely ($e^{0.925} = 2.5$) to be in such occupations than are black African women.

In terms of horizontal segregation (i.e., placement across blue- and white-collar occupations), the change in coefficients across the dependent variable indicates that White and Indian women dominate white-collar occupations; values are relatively lower for Coloureds and black Africans. Taking the case of White women, for example, logit coefficients increase in a linear fashion from 0.620 (blue-collar gender-integrated), 1.705 (blue-collar male-dominated), 2.299 (white-collar female-dominated), 2.937 (white-collar gender-integrated), and 3.235 (white-collar male-dominated). A similar pattern is observed for Asian-Indian women. On the other hand, for Coloured women, the change in coefficient size is not linear but slightly

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bumpy: values are larger for white-collar female dominated occupations (logit = 1.273) relative to gender-integrated (logit = 1.191), reinforcing the process of vertical segregation between the races. In fact, this pattern may partly explain the high index of dissimilarity observed *between* White and Coloured women (47 percent) or White and black African women (58 percent) in Table 7.3 of Chapter 7.

Educational Attainment: A Mixed Bag

> ***Hypothesis 1a:*** Educational attainment increases women's likelihood of being employed in white collar occupations compared to blue-collar occupations.

> ***Hypothesis 1b:*** Educational attainment increases women's likelihood of being employed in male-dominated occupations, i.e. it reduces overall vertical segregation, particularly in white collar occupations.

According to human capital theories, educational attainment increases women's placement in white-collar compared to blue-collar occupations (sustaining horizontal segregation). It also augments their opportunity of holding male-dominated occupations (thus reducing vertical segregation), with the effect being stronger among white-collar (or non-manual) occupations.

Table 8.3 ratifies the first hypothesis: positive and significant coefficients indicate that educational attainment indeed has a strong effect on women's placement in white collar occupations. The table demonstrates that the effect of *higher levels of education*—particularly secondary school completion and above—gradually increase *across* the five categories of the dependent variable (evident through the size of the coefficients). However, the change in logit size is dramatic across the blue- and white-collar dichotomy. For example, in the case of college educated women,

coefficients increase from -0.225 (gender-integrated) to 1.355 (male-dominated) in blue-collar occupations. They then jump significantly when we move to white-collar occupations: 3.794 (female-dominated), 4.681 (gender-integrated), and 4.605 (male-dominated), although the pattern is not linear, but slightly bumpy, which will be discussed later. In terms of log odds, compared to women who are not educated, those with a college degree are 3.8 times more likely ($e^{1.355} = 3.8$) to be employed in a blue-collar male-dominated occupation and more than 99 times more likely ($e^{4.605} = 99.9$) to be employed in white-collar male-dominated occupations relative to blue-collar female-dominated occupations.[57] Thus, high educational attainment is important for employment in white-collar jobs, reflecting a process of horizontal segregation.

Although the educational divide across the blue- and white-collar dichotomy is clearly evident, what about women's access to *male-dominated jobs*, as put forward in hypothesis 1b? Again, positive and increasing coefficient sizes *within* each category of the dependent variable in Table 8.3 implies that higher education does give women the foothold to be employed in white- as well as blue-collar male-dominated occupations, thus supporting the second hypothesis to some extent. For women in white-collar male-dominated occupations, logits for educational categories increase in a predictable manner: -0.280 (primary school), 0.783 (in secondary school), 2.238 (secondary school completion), 3.459 (diploma/certificate), and 4.605 (college education). Coefficients for the blue-collar male-dominated category are

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[57] Coefficients are negative for blue-collar gender-integrated occupations because the kinds of jobs subsumed within this category—agricultural, mining, and construction laborers as well as vendors—have lower educational requirements than those required for the reference category, blue-collar female-dominated, comprising of primarily of textile factory workers and domestics.

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similar to those for white-collar, although smaller in size because it is not educational attainment, but the type of vocational training that is important in order to access these jobs. Unfortunately, Census data is not available to further explore this issue.

Although education gives women the ability to move into male-dominated occupations, are returns to education concomitant with educational attainment? That is, do patterns of occupational placement reflect one's educational level? Table 8.3 indicates that for college educated women, coefficients for the dependent variable systematically increase when we move from blue- to white-collar female-, gender-integrated to male-dominated occupations, highlighting adequate returns to education. However, the story changes when we examine diploma/certificate *and* secondary school education: for women with *either* qualification, coefficients for white-collar female-dominated occupation are larger (logits = 4.345 for diploma/certificate and 2.841 for secondary school) than those for white-collar male-dominated (logits = 3.459 and 2.238 respectively) *and* white-collar gender-integrated (logits = 3.117 and 2.090 respectively), highlighting lower returns to education. Even at these levels of education, women have a higher probability of being placed in female occupations than male; in the case of diploma/certificate holders, the coefficients possibly highlight requirements of jobs such as teaching or nursing.[58]

In conclusion, human capital theories that posit women's movement into male-dominated occupations (especially white-collar) with increasing education are partially supported by the data. However, there is a caveat: returns to education are

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[58] In analyses not included, educational returns for men were far greater than those for women (despite the higher level of education for the latter), indicating the gender disadvantage and discrimination that women suffer in the South African labor market (and elsewhere).

not as high as expected. Although higher education may provide women with the

skills and training to work in such occupations, it does not provide them with the

momentum to *instantly* springboard into male-type jobs because of the effect of race

and gender, among other factors.

The Disadvantage of being an Immigrant

> **Hypothesis 2a:** South African non-mover women are less likely to be
> employed in blue-collar occupations than white collar occupations, compared
> to South African migrant women. Among white-collar occupations, they are
> less likely to be employed in female-dominated occupations.

> **Hypothesis 2b:** Immigrant women are more likely to be employed in (white-
> and blue-collar) male-dominated occupations, than South African migrants.

The combined effects of nativity and migration status reveal occupational

patterns that are possibly the result of stringent *apartheid*-era laws controlling non-

White mobility within the country and encouraging legal immigration of skilled

individuals. Because illegal immigration from neighboring countries like Lesotho,

Zimbabwe, and Mozambique into South Africa is difficult to measure in national-

level surveys, we may have a somewhat skewed picture of immigration below.

Keeping the above facts in mind, a divergent picture emerges regarding the

occupational placement of South African non-mover and immigrant women, relative

to internal migrant women. Tables 8.3 indicate that South African non movers are

less likely to be in blue-collar rather than white-collar occupations than South African

internal migrants, reflecting migratory patterns and occupational options for the latter

group that are a legacy of *apartheid*. For non movers, the logits for the high status

white collar (male-dominated and gender-integrated) occupations are not significant,

although they are also less likely to be in low-paying, routine white-collar female-dominated occupations (logit = -0.069) than internal migrants as well as blue-collar male-dominated (logit = -0.072) and gender-integrated (logit = -0.127) occupations. The size of the coefficients indicates that likelihood of women being in blue-collar occupations is much lower than white collar, supporting the first hypothesis, to some extent. If we interpret the blue-collar results in terms of the reference group, internal migrants, then we can argue that the implications for gendered employment are serious considering that while much of textile manufacturing (hiring a large number of migrant women) is moving overseas and agriculture is mechanizing, heavy manufacturing (e.g. cars) that disproportionately hire men are moving in.

On the other hand, in terms of vertical segregation within the blue- and white-collar dichotomy, immigrant women are more likely to be in white-collar male-dominated occupations (logit = 0.451) and gender-integrated (logit = 0.283) occupations than are internal migrants, supporting the second hypothesis. This may reflect the highly selective nature of the South African immigration policy that continues to legally "pull" in individuals with valued skills and high educational attainment as well as the lack of human capital among, and labor market discrimination against, internal migrants. The coefficient for employment in blue-collar male-dominated occupations is also positive and significant (logit = 0.195), again highlighting the in-migration of skilled African women from (possibly) neighboring SADC countries.

Although immigrants may differentially have access to male-dominated occupations compared to internal migrants, their occupational experiences in the

South African labor market are *diverse* and straddle skilled and high status as well as unskilled laborers jobs. That is, among immigrants as a subgroup, women are distributed across the blue- and white-collar dichotomy. However, coefficient sizes indicate that they are more likely to be at *either end* of the occupational spectrum: i.e., blue-dominated gender-integrated (logit = 0.835) reflecting unskilled (possibly illegal) agricultural laborers, followed by white-collar male-dominated occupations (logit = 0.451) that encompass skilled (possibly legal) workers. The former fact— immigrant predominance in laborer jobs—often ignites xenophobic feelings among disadvantaged South African citizens.[59] In May 2008, a large number of African immigrants (particularly from Zimbabwe, Malwai, and Mozambique) were attacked and killed by poor South Africans for taking away their jobs in a country experiencing 40 percent unemployment rate. South Africans were reacting to the fact that, "White people hire the foreigners because they work hard and they do it for less money…A South African demands his rights and will go on strike. Foreigners are afraid." (*New York Times*, May 20, 2008).

Maternal Incompatibility Thesis Reexamined

> ***Hypothesis 3a:*** Currently married women are more likely to be employed in both white- and blue-collar male-dominated occupations than single women.

Coefficients for marital status (in Tables 8.3) are positive across the spectrum of white and blue-collar occupations indicating that currently married women are more likely to be in these occupations *relative to* those who are single (unmarried and

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[59] As mentioned earlier, these results should be approached with caution because of data quality regarding unreported or under-reported illegal immigration.

formerly married).[60]   However, if we examine coefficient sizes *among* currently

married women, then two issues stand out: first, among all occupations, currently

married women are more likely to be in white-collar followed by blue-collar

occupations. Logits in the first category range from 0.439 for female-dominated,

followed by gender-integrated (logit = 0.321) and then male-dominated (logit =

0.313). Although statistically significant, coefficients for blue-collar jobs are

relatively smaller (male-dominated) and even negative (gender-integrated). Second,

logit sizes mentioned earlier indicate that among white-collar occupations, currently

married women have a higher chance of being in female- rather than male-type jobs.

One could also argue that this variable (and the underlying concept) tends to

be "problematic" because marriage may be endogenous to occupational placement—

people (e.g. men) marry when they secure employment and good jobs. Or, the

positive effect could even reflect the complexities of *measuring* union status among

the black African population where "marriage is a process." In either case, marital

status does not contribute much to the models in terms of explaining occupational sex

segregation and women's differential concentration in female-type jobs.

<p align="center">**********</p>

> ***Hypothesis 3b:*** Women with fewer number of children ever born, reflecting
> long term child bearing and rearing, are more likely to be employed in white-
> collar (particularly white-collar male-dominated occupations) than blue-collar
> occupations, more so than women with children.

In terms of long term child bearing and rearing, results from Table 8.3

indicate that in general, women with fewer children ever born are more likely to be

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[60] I also regressed a disaggregated version of the "marital status" variable with the categories: single, married, cohabiting, and formerly married, but results did not yield any interesting patterns.

employed in white-collar rather than blue-collar occupations, *compared to* women

with higher number of children. Interestingly, coefficients are negative and

significant for women in white-collar male-dominated occupations (logits = -0.065),

but not significant for blue-collar male-dominated. White collar jobs often have

physical constraints that may not be compatible with child-rearing activities, e.g. a

requirement to be in a formal establishment or office environment where children

may be disallowed and where childcare may not be readily available. Hence, women

with fewer children may be in a better position (in terms of time availability and

family obligations) to apply for these positions.

The observed effect could also be that of reverse causality—women in white

collar male-dominated occupations may restrict their fertility to stay competitive and

avoid discrimination in hiring and promotion. A more macro-level explanation of the

negative fertility effect is that it could be an indirect result of economic restructuring

and the growth of white collar jobs that often require higher education and training

than blue-collar occupations. In post-*apartheid* South Africa, such criteria are met by

younger cohorts who may select into these jobs despite high rates of unemployment.

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> ***Hypothesis 3c:*** Women with children below age 5, reflecting short term child
> bearing and rearing, are less likely to be employed in (blue-collar and white-
> collar) male-dominated occupations than women with older or no children.

Results in Table 8.3 indicate that women with children below age 5, reflecting

short term child bearing and rearing, have a higher likelihood of being employed in

all white- and blue-collar occupations compared to women with older or no children.

However, the coefficient for being in white-collar male-dominated occupations is

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significant at a much lower threshold (p < 0.05) compared to other occupational

types. One way to explain this result is that women who compete with men in male-

dominated occupations may delay their marriage and childbearing than their

counterparts in non-male type jobs. Plus, the wide availability of childcare facilities

(within the home or market-based) in South Africa and elsewhere may reduce the

pressure of taking care of a young child and enable mothers to join the work force or

be more competitive when employed (Mason and Palan, 1981). However, reflecting

a pattern observed for "marital status" earlier, *among* women with children under 5,

the coefficient for white-collar female-dominated occupations is the highest (logits =

0.117), with the smallest being for white-collar male-dominated occupations (logits =

0.056), indicating the relatively negative effect of the presence of young children on

women's occupational placement.

Finally, the availability of childcare facilities (proxied by the presence of an

economically not active woman about age 15 in the household, which may be a

somewhat cruse proxy) plays a positive and significant role in influencing women's

employment outcomes.[61] Interestingly, the coefficient for white-collar male-

dominated occupations is negative and not significant. This raises a question

whether, by measuring possible childcare availability in the household we may

actually be tapping into household size, composition, or structure and its effect on

women's occupational choice.

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[61] In order to capture possible childcare availability, I had created several variables based on those used by Mason and Palan (1981): married women 50+ in household, unmarried women 50+ in household, unmarried women ages 15-49 in household and so on, but results were not significantly different from the ones mentioned in the text.

In conclusion, these results—whether for marital status, childbearing and childrearing—disprove "maternal incompatibility" theories that posit women's occupational compromise due to domestic activities, relative to the reference groups.

The Possible Cohort Effect of Age (control variable)

According to Tables 8.3, women's odds of employment in all white-collar occupations (across all sex-types) relative to blue-collar female-dominated occupations increases with age, level off, and then reverses, i.e. coefficients for age are positive, while those for the squared term are negative for all three categories. Although the *nonlinear* effect is somewhat expected, its negative *direction* is surprising, especially with regard to white-collar male-dominated occupations. What has been observed in other studies (and contexts) is that higher age, which may often connote seniority or work experience, in fact *increases* one's likelihood of holding high status white-collar male-dominated occupations in general. Moreover, the coefficient size for white-collar female-dominated occupations is largest among all three job types (logit = 0.155) indicating that the age of "peaking" in such occupations is higher than the other, i.e. women stay longer in such female-type jobs compared to male-dominated and gender-integrated occupations.

One possible explanation for the "white-collar" age effect is that it may reflect cohort differences in educational (or training) opportunities as well as the *kinds* of occupations available as South Africa undergoes economic restructuring and deindustrialization. To some extent, both issues are intertwined: during the 1970s and 1980s, a majority of South Africans, with the exception of Whites, were educationally

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disadvantaged because of a highly fragmented school system that especially constrained the skill levels of black Africans. In recent years, younger cohorts have greater access to education because the government has made it an important development goal. Moreover, with the end of influx control, individuals, particularly young women, are migrating to urban centers where they have access to training courses that better prepare them for white collar occupations, particularly those that are more "feminized" (e.g. teaching and nursing, an effect that was visible for results regarding diploma/certificate tertiary education in the earlier section of the chapter). Finally, urbanization and the growth of the service sector have created more employment opportunities for individuals in white-collar compared to blue-collar occupations. This will be further evident in the macro-level section of the chapter, which explores this issue further.

On the other hand, patterns reverse when we move to women's placement in blue-collar occupations in general, i.e. negative coefficients for age followed by positive ones for the quadratic term. However, the effect of being in blue-collar male-dominated occupations for women is not significant, which can be explained by the fact that such occupations often lack mobility that is age or experience dependent. Finally, older women are more likely to be in blue-collar gender-integrated occupations than younger ones. This is not surprising considering that the bulk of such occupations include agricultural and manufacturing laborers and street vendors—casualized and informal activities that have become livelihood options for long term workers facing retrenchments.

8.3   The Importance of Context: Macro-level Factors

How are occupational outcomes influenced by structural and institutional

factors that may reflect the legacy of *apartheid*? The following section will examine

the importance of macro-level factors and their differential effects on women's

likelihood of being in white- and blue-collar male-dominated occupations.

Residing in an Urban Magisterial District

> ***Hypothesis 4a:*** Residing in an urban magisterial district increases women's
> likelihood of being employed in white-collar occupations compared to blue-
> collar occupations (i.e. stronger horizontal sex segregation).

> ***Hypothesis 4b:*** Residing in an urban magisterial district increases women's
> likelihood of being employed in male-dominated occupations (i.e. reduced
> vertical sex segregation) in both blue- and white-collar occupations.

Concomitant with economic development, urbanization is often associated

with a structural shift from agrarian to non-agrarian labor market activity. This leads

to an increase in the relative size of white collar as well as male-dominated

occupations, making it relatively easier for individuals, particularly women, to move

into them. In the case of South Africa, one would also expect the hypothesis to be

supported in light of the distorted urbanization policies of the *apartheid* government

pre-1994. There still continues to be a structural imbalance between the geographical

location of jobs, with most economic progress concentrated in core metropolitan areas

in the provinces of Gauteng, Western Cape, and KwaZulu-Natal. Hence, women

residing in urban magisterial districts would have greater access to employment and

male-dominated occupations (both blue- and white-collar) than those in rural areas

because of the availability of more job opportunities in the former region.

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Contrary to expectations, Table 8.3 indicates that residence in an urban magisterial district does not have any effect on women's likelihood of holding any white- or blue-collar male-dominated occupations, compared to residence in rural districts. Although the coefficients are in the theoretically correct (positive) direction, they are surprisingly not significant. However, residence in an urban reduces (logit = -0.126) women's odds of holding white-collar female-dominated occupations (such as teaching and clerical work) relative to a blue-collar female-dominated occupation (e.g. domestics and textile factory workers).[62]

The results are surprising because they do not corroborate with theory or other empirical studies. Maybe this is a "combined" effect of the occupational patterns of *all* women and results may be different once we disaggregate the analyses by race in Chapter 9. For example, as pointed out in Chapter 7, an overwhelmingly large number of black African women are domestics and may have migrated to urban areas for better pay or living conditions (even if they remain constrained in their jobs because of occupational immobility). The non significant results could also be indicative of the distorted *apartheid*-era urbanization in South Africa. It could reflect a tight urban labor market for women where they are in competition for scare white-collar or white/blue-collar male-dominated jobs with men *and* with each other. After all, the unemployment rate in South Africa in September 2000 was 36.9 percent

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[62] In analyses not included, results for men are positive and significant. Compared to those in rural districts, men residing in urban districts are 1.30 times more likely and 1.19 times more likely to hold white-collar male-dominated and white-collar gender-integrated occupations respectively. The difference between both odds ratios indicates the relative occupational advantage that men have in urban residence, both among themselves and over women.

(broad definition) and 25.8 percent (narrow definition). Or, maybe other aspects of

economic development may better explain the phenomenon.[63]

Residence in Former Homelands

> ***Hypothesis 5a:*** Residence in and around homelands increases women's
> likelihood of being employed in blue-collar occupations compared to white-
> collar occupations, than in non homeland areas.

> ***Hypothesis 5b:*** Residence in and around homelands reduces women's
> likelihood of being employed in male-dominated occupations (i.e. increased
> vertical sex segregation), irrespective of the blue- or white-collar typology,
> but especially within the latter, than in non homeland areas.

Both the hypotheses above are based on assumptions regarding the kinds of

labor markets present in and around former homelands that reflect historical policies,

e.g. textile mills, public sector, mining, and agriculture.

Surprisingly, residing in or near former homelands has a positive effect on

women's occupational placement *compared to* residence in non homelands, which, at

first blush, defies all logic. In terms of odds ratios, women residing in former

homeland districts are 1.52 times more likely ($e^{0.423} = 1.52$) to hold white-collar male-

dominated occupations than those residing in non-homeland districts. Odds ratios for

white-collar gender-integrated occupations and female-dominated occupations

(relative to blue-collar female-dominated occupations) increase gradually to 1.69

($e^{0.530} = 1.69$) and 1.89 ($e^{0.639} = 1.89$) respectively, indicating the higher probability of

being in female-type jobs relative to male-type in these areas. Among blue-collar

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[63] Results were significant and positive for women's likelihood of holding white-collar male-
dominated occupation when a wealth term (with a quadratic transformation) was introduced into the
model. However, the variable was highly correlated with urbanization and I chose the latter in light of
the distorted urbanization policies of the *apartheid* government and the greater applicability of this
concept when considering policy decisions.

occupations, women are 1.71 times more likely ($e^{0.537} = 1.71$) to hold male-dominated

occupations than those residing in non-homeland districts. Finally, odds ratios for

gender-integrated occupations, which includes a high proportion of agricultural and

mining laborers and vendors, is highest among all occupations at 2.71 ($e^{0.701} = 2.71$).

Thus, my first hypothesis about women's predominance in blue-collar occupations in

former homelands is supported because coefficients for *both* types of blue-collar

occupations are higher than those for corresponding white-collar ones. Moreover,

among white-collar occupations, women residing in former homelands are more

likely to be in female-dominated (logits = 0.639) than male-dominated occupations

(logits = 0.423), thus supporting my second hypothesis; in fact, logits for the latter

(i.e. male-dominated) are somewhat lowest among all occupation types.

How does one explain these results, i.e. women's positive occupational

outcomes in former homelands *compared to non-homelands*? A caveat (which was

mentioned in the earlier section) is that this observed effect might be a *combined*

effect for all women and may in fact be different once the analyses are run by race.

But, even despite that, one would expect women residing in and around former

homelands to have poorer occupational outcomes when juxtaposed against the history

of *apartheid* described in Chapter 2. If one has to speculate, then some possible and

plausible explanations include (1) the "regional planning" and "industrial

deconcentration" policies of the *apartheid* government and (2) post-*apartheid*

development of former homelands.

During the 1950s and 1960s, in order to legitimize the existence of homelands

as a separate nation, the *apartheid* government invested in and encouraged

entrepreneurship in those areas. This enabled black Africans to expand the public

sector and bring in associated white-collar jobs, especially in health and educational

services. The government also moved industries close to certain "growth points" near

border areas of the homelands or townships to contain any further in-migration of

black-Africans into "white" urban centers. Such a strategy created employment

opportunities for men and women (of different races) in blue-collar factory jobs,

mining, or agriculture (which fall under the rubric of male-dominated and gender-

integrated occupations). For example, industrial cities such as Durban-Pinetown and

Port Elizabeth in KwaZulu-Natal, which are the textile and sugar manufacturing hubs

of South Africa, are close to a number of ex-homelands such as the KwZulu as well

as townships such as Chatsworth (which house a high proportion of Indians). Several

diamond, gold, and platinum mines (e.g. Kimberley, Ba-Phalaborwa) are again

situated close to former homelands).

Now, several of the former homelands or areas nearby are being developed as

tourist spots, e.g. wildlife parks such as Kruger National Park, entertainment spots

(such as Sun City) and casinos, which have increased the number of service and

associated managerial jobs. Growth of the public sector and tourism may explain the

higher coefficients for white-collar female-dominated jobs, especially among women.

Hence, some of the observed effect might be spillover effects from residence close to

these areas, although again, results might vary when disaggregated by race.

Percent in Service Sector

> ***Hypothesis 6a*:** Women's specialization in service industries increases their likelihood of being in white-collar occupations compared to blue-collar occupations (i.e. increased horizontal sex segregation).

> ***Hypothesis 6b:*** Women's specialization in service industries reduces their likelihood of being employed in male-dominated occupations (i.e. increased vertical sex segregation).

Results empirically prove my first hypothesis about the "gendered" generation of horizontal segregation (i.e. white collar as opposed to blue-collar) due to an increasing proportion of service industries in an area. When we eyeball Table 8.3, we observe a distinct change in the sign of the coefficients from positive to negative as we move from white-collar to blue-collar occupations. Coefficients are significant for all occupations within the dependent variable and are as follows: 0.008 (white collar male-dominated), 0.007 (white collar gender-integrated), 0.002 (white collar female-dominated), -0.017 (blue collar male-dominated), and -0.032 (blue collar gender-integrated) relative to blue-collar female-dominated occupations. Thus, women are more likely to be employed in white collar occupations in areas with a higher proportion of service industries, which might be an effect of the kinds of jobs being created and the concomitant demand for female labor. (In analyses not included here, women's chance of employment also increases in such areas).

However, my second hypothesis about women's reduced likelihood of being in white-collar male-dominated occupations in areas specializing in service industries is not supported. In fact, results are from the contrary. For example, a standard deviation increase in the percent of service sector output in a magisterial district *increases* the log odds of a woman being in a white collar male dominated occupation

(relative to a blue collar female dominated occupation) by a factor of 1.13.

Importantly, we do observe that women's representation in female-dominated occupations *increases* with increases in service sector specialization, albeit to a small extent (logit = 0.002). In fact, among all three white-collar jobs, the coefficient is the largest for male-dominated and smallest for female-dominated occupations. Conversely, and expectedly, women's odds of being in a blue-collar male-dominated occupation *reduce* by a factor of 0.77, for the same standard deviation increase.

Results, to some extent, do not corroborate with those put forward by researchers who argue that industrial restructuring creates "feminized" jobs that cater to women's "skills," thus increasing overall occupational sex segregation (Charles and Grusky, 2005; Oppenheimer, 1990). While we do observe that women have an increased likelihood of being in white collar female-type jobs, they are also more represented in male-type jobs. Further analysis is required to explain these divergent results. In analyses not included here, different *aspects* of the service industry (public sector, finance, trade, etc) were regressed on the dependent variable to see whether specific sub-sectors are more genderized in their composition than the entirety of the service sector. Surprisingly, results indicated that while the presence of a strong public sector in an area increases women's opportunity of entering white collar male-dominated occupations, the presence of a strong financial sector had the opposite effect. However, these industry types were strongly correlated with urbanization (because of which the effect of all three variables was washed out) and could even be endogenous to the model. Hence, they were not included in the models.

A further question that emerges from these results is: at what level of economic development within a country do sections of service jobs feminize? If most analyses on this issue (Charles and Grusky, 2005; Charles, 2003; Oppenheimer, 1990) are conducted in industrialized countries, then can we really assume the same transferability of results for South Africa, which is in the midst of economic restructuring but has not reached the level of economic development as developed countries? Or, as per our results, will male-dominated jobs that women are moving into right now "integrate" or "feminize" over time as the size of the service sector increases? Although Ward (1988) argues that a large service sector (relative to manufacturing) in less developed countries indicates dependent development and women's decreased representation in high status white-collar occupations, we do not observe this in our results. These speculations can only be ratified in a trend analysis, which unfortunately is not possible here.

Gender Egalitarianism

> ***Hypothesis 7a***: Women residing in more gender-egalitarian contexts are more likely than other women to hold male-dominated occupations, particularly those that are white-collar.

The argument here is that a cultural liberalization in viewpoints regarding women's productive and reproductive roles would create an environment where they have greater flexibility and opportunity to step into male-type occupations.

Results in Table 8.3 for women do not confirm the hypotheses. While the coefficients for both male-type occupations (blue- and white-collar) are indeed positive, they are not significant. However, the coefficient for white-collar female-

dominated occupations (logit = -0.854) is negative and significant indicating that women are *less likely* to be in such jobs (relative to blue-collar female-dominated) in more gender-egalitarian contexts. In a way, we can argue that occupational sex segregation may decrease in gender egalitarian contexts because women are not being typecast into typically female jobs such as domestics, *even if* we don't get significant results for male-type jobs.

One can also speculate about whether the observed result is an effect of the *kind* of variable used to measure gender egalitarianism: female/male primary school completion ratio for children ages 13 to 18. Although this may be a crude proxy for gender egalitarianism in light of high rates of primary school *enrollment* in South Africa, there is still a large gender gap in school *completion*, especially for girls who may drop out due to several reasons such as pregnancy, domestic chores, etc (Zuberi, 2005). Perhaps some other measure, e.g. attitudinal questions found in surveys such as the General Social Survey or the International Social Values Survey, would be more appropriate. Finally, such theories have been tested in cross-national analyses and it might be difficult to test them in the case of a single culturally diverse country such as South Africa—what might construe gender equality in one setting or one ethnic group may not be the case in another—an idea that is also reflected in Bozzoli's argument about the "patchwork quilt of patriarchies" (1983).

Female Share of the Labor Force (control variable)

Although "female share of the economically labor force" controls for possible "population" effects in the model, there are some significant results and so, I have

included a brief explanation here. A question that often emerges in the gender-work literature is whether increasing women's total share of the labor force will have an *integrative* effect on women's occupational placement, thus reducing occupational sex segregation (Charles and Grusky, 2005; Semyonov and Shenhav, 1988).

According to Table 8.3, a higher female share of the labor force increases women's likelihood of being in all categories of the dependent variable, *except* white-collar male-dominated occupations. The size of the coefficients is much larger among blue-collar occupations than white-collar occupations, indicating the possible disadvantage that women face when their labor force participation increases. To explain this phenomenon, I turn to the "economic discrimination" perspective put forward by Semyonov and Shenhav (1988). They argue that when women join the labor force in large numbers, they, by virtue of their minority status, "increase the pool of potential candidates for economic exploitation, ergo their occupational subordination" (1988: 977). Thus, higher female labor force participation is related to a lower representation of women in high status professional/managerial occupations, and greater representation in feminized and blue-collar jobs.

However, how much of this effect stems from the fact that although employed women approximate slightly less than half of the South African population, the regional sex composition (particularly within economically disadvantaged areas such as rural districts or former homelands) is unequal and skewed (Posel, 1996). This is particularly the case for black Africans because of the male-dominated migrant labor system, a pattern that has continued even after *apartheid* (Budlender, 1991).

8.4   Discussion and Conclusion

In this chapter, I described results from a multilevel analysis of women's likelihood of accessing white- or blue-collar male-dominated occupations in order to explain occupational sex segregation in South Africa.

As has been discussed throughout the dissertation, occupational sex segregation has deleterious economic and social consequences for women because they tend to be overrepresented in few, often low-paying, occupations. Conversely, occupations with a higher percent of men are more likely to be associated with higher income, prestige, or power. Hence, my dependent variable taps into this "gendered" occupational division in order to study the impact of labor demand and labor supply factors that increase women's likelihood of being in traditionally male-type jobs in order to better inform employment policy. While most of the labor supply hypotheses were supported, some at the macro-level are not, highlighting the need for better measures or possibly alternate theories to further explain the phenomenon.

Among the labor-demand factors, the results are mixed. While the effect of urbanization on women's occupational placement is not significant, which is indeed surprising, it contributes towards men's advantage in securing white/blue-collar male-dominated occupations. Instead, residence close to a former homeland district is beneficial for women *to some extent*, but they are also more likely to be in white-collar female-dominated or blue-collar occupations at the same time, thereby contributing into the process of segregation. Finally, the presence of a strong service sector in an area is advantageous for the white-collar occupational placement of women relative to blue-collar placement, although long term results may be different.

Several labor supply factors that differentially influence blue- and white-collar occupational placement among women have been identified. Overall, results seem to suggest the importance of human capital variables in explaining women's access to white-collar occupations, whereas blue-collar occupations are not explained as well by the same variables. Although higher levels of education are necessary to enter white- as well as blue-collar male-dominated occupations, the effect of educational attainment is stronger for the former rather than the latter job-types. Moreover, returns to education for women are not high *despite* their educational advantage over men (among all racial groups, women have more years of schooling than men). Even with higher levels of education, women have a higher likelihood of being placed in female-dominated rather than male-dominated occupations. Other aspects of human capital that have a significant effect among women is migration: immigrants tend to do relatively better in the labor market than South African migrants and non-movers. Both non-movers and immigrants are well represented in white-collar male-type jobs; internal migrants, on the other hand, are cloistered in blue-collar jobs. Age, representing experience and seniority has a negative nonlinear effect among white-collar occupations, but no effect among blue-collar occupations.

Finally, strong racial differences are observed in women's likelihood of being in white-collar as well as white/blue-collar male-dominated occupations indicating the important role that race plays in creating and sustaining horizontal and vertical segregation. Whites, followed by Asian-Indians, emerge as being more privileged in their occupational placement relative to Coloureds and black Africans. A question that naturally emerges in this regards is: Are there differential effects of context

(urbanization and economic restructuring, historical divisions, and gender

egalitarianism) and individual-level characteristics (human capital and family status)

on chances of being placed in white and blue-collar male-dominated occupations for

black African, Coloureds, Indians, and Whites women? That is, do these factors

interact differently for different social groups? The next chapter (Chapter 9) presents

multivariate regression analyses that will help answer the final questions posed above.

Chapter 9: Multivariate Analyses for Occupational Sex Segregation within Racial Groups for Women

In Chapter 8, results from a multilevel analysis of women's likelihood of holding white- or blue-collar male-dominated occupations were discussed in order to explain occupational sex segregation in South Africa. While most of the labor supply hypotheses were supported, some hypotheses at the macro-level were not. The pivotal role of race in sustaining horizontal as well as vertical segregation was also highlighted, with Whites, followed by Asian-Indians, being more privileged in their occupational placement relative to Coloureds and black Africans.

In this chapter, I disaggregate the analyses by race to see if the effects of the individual and macro-level explanatory factors observed in Chapter 8 are uniformly applicable across women of all racial groups. Or, does the likelihood of being placed in white and blue-collar male-dominated occupations differ for women of different races, thus highlighting possible interactions? (I chose to run the models separately by race instead of introducing interactions in a full model in order to make the interpretation less cumbersome.) The effects of human capital, family status, and labor demand factors are examined and compared across women belonging to the four main racial groups, i.e. black Africans, Coloureds, Indians, and Whites. Such an analysis is important in light of the overt racist and sexist nature of *apartheid* policies that have shaped women's occupational placement over the past several decades.

For this set of analyses, I have merged the original reference category, "being in a blue-collar female-dominated occupation" with "blue-collar gender-integrated" because of the small number of cases in both categories for Whites and Indians.

Hence, four pairs of outcomes are displayed: (1) white-collar male-dominated, (2) white-collar gender-integrated, (3) white-collar female-dominated and (4) blue-collar male-dominated *versus* blue-collar female-dominated/gender integrated in Tables 9.2 and 9.3 (black Africans), Tables 9.4 and 9.5 (Coloureds), Tables 9.6 and 9.7 (Asian-Indians) and Tables 9.8 and 9.9 (Whites). In addition, the reference category for "educational attainment" has been changed from "no education" in Chapter 8 to "in secondary school" in this chapter because of the small number of White and Indian women with no schooling or just primary education.

Analyses have been conducted for (1) all men and women combined (2) all women, and (3) all men for each racial group, but results for the combined sample and all women have been included in the study, of which only the results for women will be discussed in depth. Since I am primarily interested in women's allocation into *white collar male- and blue-collar male-dominated jobs*, the discussion will focus on these comparisons only, although others may be mentioned if needed to highlight any relevant issues or differences observed.

In terms of chapter organization, I follow the same pattern as Chapter 8: first state the hypotheses and then discuss findings for women of each racial group for each of the independent variables under consideration. Individual-level results will be followed by macro-level results as per the model building strategy suggested by Bryk and Raudenbusch (2002). A short summary at the end will discuss important racial differences between women's likelihood of holding white- and blue-collar male-dominated occupations.

9.1 Gender Inequality in Occupational Opportunity

Patterns observed in Chapters 7 and 8 are reinforced when the data are disaggregated by race: positive log odds for gender in the multivariate results for men and women combined (for each racial group) highlight the presence of gender inequality in holding male-type occupations even after controlling for various labor-demand and labor-supply factors. Positive coefficients are present for almost all categories, *except* white-collar female dominated occupations, reflecting some sort of gendered labor queuing in the allocation of jobs.

Tables 9.1, 9.2, 9.4, 9.6, and 9.8 around here

Expectedly, coefficients for "male" in blue-collar male-dominated occupation are much larger than those for white collar male-dominated occupations, indicating greater gender discrimination in hiring in the former job-type. For example, logits for black African men in blue-collar male-dominated occupations is 2.724, while corresponding values for other groups are as follows: 1.854 for Coloureds, 1.960 for Indians, and 2.100 for Whites. The larger coefficients for black Africans and Whites indicate that men and women belonging to these groups are more segregated from each other than Coloureds and Indians. In a way, this observation is also borne out by the higher indices of dissimilarity for the first two groups: 48.5 percent and 41.7 percent respectively (Table 7.3 in Chapter 7). Coefficients for white-collar male-dominated and gender-integrated occupations are much smaller possibly indicating lesser discrimination in hiring as well as higher gender integration.

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9.2   Compositional Racial Differences between Women

The Effect of Educational Attainment

> **Hypothesis 1b:** Educational attainment increases women's likelihood of being employed in male-dominated occupations, particularly in white collar occupations, across all racial groups.

> **Hypothesis 1c:** Returns to education are lower for non-White (black African, Coloured, and Indian) than White women, in terms of employment in white- and blue-collar male-dominated occupations.

Chapter 8 indicated that educational attainment had a strong effect on the placement of all women in white collar occupations and also increased their likelihood of moving into blue- and white-collar male-dominated occupations, although returns to education were not as high as expected.

Results are consistent when the analyses are run separately by race, thus supporting my first hypothesis above. For all women, the effect of higher levels of education, *particularly* secondary school completion and above, gradually increase *across* the four categories of the dependent variable, but the change in logit size is especially dramatic when we move from blue- to white-collar occupations, highlighting the importance of education in accessing such jobs. Despite racial inequities, higher levels of education also give women the foothold to move into both blue- and white-collar male-dominated occupations, ratifying the second hypothesis, although returns to education vary across groups, as will be discussed shortly.

Table 9.3 around here

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To further support the observation above, let's take the case of black African college educated women. In Table 9.3, coefficients for college education increase significantly from 0.943 for blue-collar male-dominated occupations to 3.273 for white-collar female-dominated, 4.504 (gender-integrated), and 4.227 (male-dominated). Similar patterns are also observed for secondary schooling as well as diploma/certificate training. In terms of odds ratios, compared to black African women who are still in secondary school (the reference category), those with a college degree are 2.6 times more likely ($e^{0.943} = 2.6$) to be employed in a blue-collar male-dominated occupation and more than 68 times more likely ($e^{4.227} = 68.5$) to be employed in white-collar male-dominated occupations relative to being in blue-collar female-dominated occupations. Thus, higher education is important for accessing white-collar jobs, resulting in the creation and sustenance of horizontal segregation.

Positive and increasing coefficient size *within* each category of the dependent variable in Table 9.3 implies that black African women with higher education are more likely than black African women with no or lower education to be employed in white- and blue-collar male-dominated occupations, along with others jobs. For example, coefficients for various educational categories increase in a predictable manner in the case of white-collar male-dominated occupations: -0.812 (no education), -1.003 (primary school), 1.372 (secondary school completion), 2.777 (diploma/certificate), and 4.227 (college education). Surprisingly and unexplainably, values for being "in primary school" are larger than "no schooling" for all individuals irrespective of race and gender—a pattern that was observed also in other research studies that used the 1996 Census (Treiman, 2005; Zuberi and Sibanda, 2005).

Coefficients for the blue-collar male-dominated category are similar to those above, although smaller in size: -0.244 (no education), -0.367 (primary school), 0.597 (secondary school completion), 0.926 (diploma/certificate), and 0.943 (college education), highlighting the importance of higher education in accessing male-dominated occupations, particularly those that are white-collar.

Tables 9.5, 9.7, and 9.9 around here

Patterns *across* the white- and blue-collar typology as well as within male-dominated occupations are similar for women of other racial groups. However, coefficients for White women are much smaller than those for non-White women, with black Africans having the largest coefficients, followed by Coloureds and then Indians. For example, in the case of Coloured women, Table 9.5 indicates that, compared to women who are still in secondary school, those with a college degree are 1.3 times more likely ($e^{0.292} = 1.3$) to be employed in a blue-collar male-dominated occupation and more than 27 times more likely ($e^{3.319} = 27.6$) to be employed in white-collar male-dominated occupations relative to blue-collar female-dominated occupations. Corresponding odds for Indian women are 3.2 and 35.0 while those for White women are 1.4 and 7.5 respectively, highlighting lower payoffs for their college education.

Finally, for women of different races, does occupational placement reflect one's educational attainment? Chapter 8 indicated that occupational returns to education are not as high as expected, a pattern that is again reflected in results for

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non-White women, *but not* White women. In the case of black African, Coloured, and Indian college educated women, the coefficients for white-collar gender-integrated occupations (logits = 4.508, 3.517, and 3.991 respectively) are larger than those for white-collar male-dominated occupations (logits = 4.228, 3.319, and 3.565 respectively). The pattern for White women is far more linear than bumpy (which is the case for non-White women), i.e. increasing gradually from blue-collar male-dominated (logit = 0.342) to white collar female-dominated (logit = 0.619), gender-integrated (logit = 1.983), and male-dominated (logit = 2.010).

Racial patterns discussed above are slightly different and yet consistent when we examine other levels of higher education such as diploma/certificate training *as well as* secondary school education. To explicate, for non-White women (i.e. black African, Coloured, and Indian women) with secondary school education, coefficients for white-collar female-dominated occupations (logits = 2.022, 2.047, and 1.851 respectively) are much larger than those for male-dominated (logits = 1.372, 1.693, and 1.484 respectively) *and* gender-integrated occupations (logits = 1.196, 1.565, and 1.309 respectively) highlighting lower returns to secondary school education, relative to White women. On the other hand, the corresponding logits for White women are 0.862 (white-collar female-dominated), 1.187 (white-collar male-dominated) and 0.992 (white-collar gender-integrated), the latter two coefficients indicating higher returns to their education. Patterns for diploma/certificate training are similar. Thus, even at high levels of education, non-White women are more likely to be placed in female-type rather than male-type occupations than White women.

In conclusion, although some aspects of human capital theories have been partially supported by the data, one could argue that returns to education are not high for non-White women compared to White women, with fewer minority women reaching male-dominated jobs despite having the requisite education

The Effect of Nativity and Migration

> **Hypothesis 2a:** South African non-movers, particularly black Africans, are less likely to be employed in blue-collar occupations than white collar occupations, compared to South African migrant women. Among white-collar occupations, they are less likely to be employed in female-dominated occupations.

> **Hypothesis 2b:** Immigrant women, particularly black Africans, are more likely to be employed in (white- and blue-collar) male-dominated occupations, than South African migrants.

As mentioned in Chapter 8, the combined effects of nativity and migration status reveal patterns that are possibly the result of stringent *apartheid*-era laws controlling black African mobility *within* the country and encouraging the legal immigration of skilled individuals. Again, because surveys underreport illegal immigration, results should be approached with caution, although they do corroborate with those of other South African researchers (Zuberi and Sibanda, 2005).

When the data is disaggregated by race, an important point from Chapter 8 is reinforced—the occupational differences between non-movers, internal migrants and immigrants for black African women (Table 9.3). The collapse of *apartheid* in 1994 ended the formal restriction on non-White mobility, as a consequence of which, internal female migration from rural to urban areas has sharply increased (Posel, 2003). However, compared to black African internal migrants, non-movers and

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immigrants are *more* likely to be in white-collar male-dominated jobs (logit = 0.23, reflecting their relatively higher level of skill, training, and education as well as the selective nature of the (legal) immigration policy.[64] The coefficient for holding blue-collar male-dominated occupations among both groups, relative to migrants, is not significant. (One can speculate that immigrants in white-collar occupations may be legal, while those in blue-collar ones may be illegal mining, agricultural, and construction laborers from neighboring countries.) Finally, both non-movers and immigrants are less likely to be in white-collar female-dominated occupations (logit = -0.24 respectively), indicating one way in which social inequality between both groups versus internal migrants is created or sustained.

Migration does not have any effect of the occupational placement of Coloured, Indian and White women (Tables 9.5, 9.7 and 9.9 respectively), i.e. none of the coefficients are significant. Because of the highly urbanized and regionally concentrated nature of Indians, and to some extent, Whites, there were very few internal migrants (or even immigrants) as of 2001, an issue that has also been highlighted by Bozzoli (1983) in her discussion of the urbanized and highly proletariatized nature of White (and Afrikaan) settlement. Finally, results would have been richer if we could examine the association between labor force outcomes and various *forms* of internal migration, i.e. from rural to urban, rural to rural, or even urban to rural, but such an exercise is not methodologically possible. For example, are migrants or immigrants better placed in rural or urban areas? Does the duration of

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[64] Coefficients for placement in white-collar gender integrated occupations were significant for both non movers and immigrants in individual-level analyses, but lost significance when contextual variables were introduced.

stay in the country as well as the country of citizenship influence immigrant

occupational placement?

The Effect of Various Dimensions of Family Status

> **Hypothesis 3a:** Currently married women, across all racial groups, are more
> likely to be employed in both white- and blue-collar male-dominated
> occupations than single women.

In Chapter 8, coefficients for "currently married" women were positive for all

categories of the dependent variable, which was somewhat predictable (and possibly

endogenous, the argument being that individuals marry when they get employed and

have "good" jobs). In Table 9.3 (black African women), Table 9.5 (Coloured

women), Table 9.7 (Asian-Indian women), and Table 9.9 (White women), a similar

pattern is observed when the data is disaggregated by race. Currently married women

of all races are more likely to be employed in all types of white- and blue-collar

occupations, including male-dominated ones, than are never or formerly married

women.[65] (The coefficient for black African women in blue-collar male-dominated

occupations was positive and not significant in individual-level analyses, but became

significant when macro-level variables were introduced in the model.) However,

irrespective of race, *among* currently married women, the coefficient for white-collar

female-dominated jobs is the largest indicating that although they may have an

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[65] In results not included, I regressed different marital statues (never married, cohabiting, currently
married, and formerly married) with divergent results for black African and non black African women.
Among the former group, currently and formerly married women were more likely to be in white-
collar occupations, while never married or cohabiting individuals were in blue-collar occupations. On
the other hand, none of the other groups exhibited this blue- and white-collar distinction.

occupational advantage over single women, among themselves they are still more likely to be placed in female-type than male-type jobs.

One way to justify these positive results in the case of South Africa is that it may, to some extent, reflect the emerging trend of the feminization of the workforce as well as household headship. In recent years, the proportion of women entering the labor force has increased across all four racial groups (refer to Table 2.3 in Chapter 2), while that for men has stagnated (Whites, Indians, and Coloureds) or reduced (black Africans). Declining dependence on men's income as well as economic constraints, especially for non-White women who have experienced spousal separation under *apartheid*, may force or motivate married women (compared to single women) to enter the labor force *and* compete for male-dominated occupations. Results could also mirror a rising trend of delayed marriage among (employed) women, although these issues are best captured in longitudinal analysis. In the case of Indian women, they may reflect the cultural universality of marriage. Or, as mentioned earlier, the effect for black African women may indicate the complexities of *measuring* union status, i.e. "marriage as a process," especially in surveys that are more "Euro-centric" in their conceptualization and measurement of the institution.

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> ***Hypothesis 3b:*** Women with fewer number of children ever born, across all racial groups, reflecting long term child bearing and rearing, are less likely to be employed in white-collar (particularly white-collar male-dominated occupations) than blue-collar occupations, more so than women with children.

Regarding long term child bearing and rearing (proxied by number of children ever born), results are again somewhat consistent across the four racial groups

(although with varying levels of statistical significance). Women with fewer children ever born are more likely to be employed in all types of white-collar occupations, *including* male-dominated ones. This can again be explained by the same factors as those in Chapter 8, namely childcare constraints associated with being physically in an office and the growth of white-collar jobs in general.

On the other hand, coefficients for being in a blue-collar male-dominated occupation are negative and not significant for black African, Indian, and White women, implying that the number of children ever born does not affect their placement into such jobs. In any case, relatively few White and Indian women are in such jobs, which might also explain the result. For Coloured women, however, logits for this job-type are negative and significant (logits = -0.03), which can be partially explained by the fact that within this category, a high proportion of them are miners and mining and construction laborers and such jobs may not allow them to bring their children to work (unlike home-based craft work or street vendors). Again, the causal direction between fertility and labor force outcomes is much debated in the literature because fertility may endogenous to the dependent variable.

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Hypothesis 3c: Women with children below age 5, across all racial groups, reflecting short term child bearing and rearing, are less likely to be employed in (blue-collar and white-collar) male-dominated occupations than women with older or no children.

A good estimate of women's short term child bearing and rearing obligations is the presence of children below age 5. Unlike the case for fertility, results for women vary across the four groups. For black African women, having a child under

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5 has *no effect* on their likelihood of being in a white-collar male-dominated

occupation, while the coefficient for blue-collar male-dominated is positive and

significant. On the other hand, the presence of a child actually *reduces* Coloured

women's likelihood of being in white collar male-dominated (logits = -0.16) or

gender-integrated (logits = -0.09) occupation, but has no effect on their placement in

blue-collar male-dominated jobs. (In a way, these results reflect Coloured fertility

patterns described earlier.) Coefficients are positive but not significant for Indian and

White women for both job types. So, could these results stem from the fact that

Coloureds may lack relevant childcare help at home because of their more nuclear

family structure? For example, while Indians and black Africans tend to live in

extended households where childcare may be readily available, White women living

in nuclear households might use market-based help because they can afford to do.

Finally, availability of possible childcare in the household is a mixed bag:

results are not significant for black Africans and Coloureds for both white- and blue-

collar male-dominated occupations. On the other hand, Indians and White women

who have possible childcare at home are *less likely* to be in white-collar male-

dominated jobs, which is somewhat surprising. Because the variable taps into the

presence of other economically not active women age 15 and above in the household,

could it, in a way, have proxied an extended household structure, which may have a

negative impact on Indian and White women's movements into male-dominated jobs

that might be more demanding of their time?

The Effect of Age (a control variable)

Tables 9.2 to 9.9 indicate that irrespective of race, the odds of employment in all white-collar occupations (across all sex-types) relative to blue-collar female-dominated/gender-integrated occupations increase with age, levels off, and then reverses, i.e. the coefficients for age are positive, while those for the squared term for all three categories are negative. However, in the case of Indian women, although results are not significant, age has a positive nonlinear effect in white collar occupations: i.e., a negative term followed by positive squared term. As mentioned in Chapter 8, the direction of the nonlinear term is somewhat surprising, especially with regard to white-collar male-dominated occupations, because one would expect that age, which may often connote seniority or work experience, in fact *increases* one's likelihood of holding high status occupations in general. A possible explanation is that it may reflect cohort differences in educational (or training) opportunities as well as the *kinds* of occupations available as the economy restructures.

The above-mentioned (negative) pattern persists when we move to blue-collar male-dominated occupations, but the effect for women of all racial groups is not significant, which can be explained by the fact that such occupations often lack mobility that is age or experience dependent.

9.3   Untangling the Complexities of Context: Multilevel Analyses

Divergent Effects of Urban Residence

> **Hypothesis 4c:** Residing in an urban magisterial district increases non-White women's likelihood of being employed in white- and blue-collar male-dominated occupations, i.e. it reduces racial discrimination in occupational typing.

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Results from Chapter 8 indicated that residing in an urban magisterial district did not have any effect on women's opportunity of holding male-type occupations, compared to their counterparts in rural districts. Does the story change once we disaggregate the data by race? That is, does urbanization improve the chances of women of different races in accessing white- and blue-collar male-dominated occupations? Modernization theory posits that urbanization (a good proxy for economic development) will be accompanied by a decline in the importance of ascriptive characteristics and the erosion of racial group identification. If that is indeed true, then non-white women residing in urban districts, particularly Coloureds and black Africans, are expected to do better in the labor market due to reduced racial discrimination, complemented by the availability of more job opportunities. This is especially relevant to South Africa, where *apartheid*-era regional planning policies pre-1994 led to a structural imbalance in the geographical location of jobs, with most economic progress concentrated in core urban metropolitan areas in the provinces of Gauteng, Western Cape, and KwaZulu-Natal.

Surprisingly, and yet somewhat expectedly on hindsight, urbanization does not *uniformly* improve women's occupational placement across all racial groups. In some cases, the picture can even be construed as somber. To explicate, Table 9.3 indicates that residence in an urban district does not have any effect on black African women's likelihood of holding either white- or blue-collar male-dominated occupations. However, it *reduces* their likelihood of being in white-collar female-dominated occupations relative to blue-collar female-dominated/gender-integrated

jobs. (On the other hand, in results not included, black African men are more likely to be in both types of jobs in urban areas.) A slightly modified version of the "minority threat" and "queuing" theories can be used to explain these results. As their concentration in the labor market increases, minority groups experience lower occupational status, lower incomes, and higher rates of unemployment (Tolnay, 2001; Cohen, 1998; Blalock, 1967). Similarly, if the number of good, average, and bad jobs is relatively fixed in any given labor market and employers assume that a subordinate group lacks desired attributes, then that group is relegated to the bottom of the job queue (Lieberson 1980). This may be the case for black African women who have migrated in large number to urban areas of Gauteng for better pay or living conditions, but have remained constrained in their jobs because of occupational immobility (e.g. an overwhelming proportion are still blue-collar domestic workers or work in the informal economy as street vendors or laborers).

For Coloured women (Table 9.5), urban residence has no effect on their access to white-collar male-dominated occupations, although it improves their likelihood of being in blue-collar male-dominated occupations (logits = 0.29) by a factor of 1.33, compared to those residing in rural districts. (In results not included, Coloured men, like black African men, are more likely to be in both types of jobs in urban areas). Coloured women's absence from the former job-type can again be explained by the "queuing" theory mentioned earlier. Their residence in rural areas as commercial farmers (e.g. in the Western Cape) may not have given them the educational qualifications to move into white-collar male-dominated occupations. In fact, could we speculate that the divergent results observed for white- and blue-collar

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occupations reflect lower returns to education and training in tight urban labor markets for both black African and Coloured women?

On the contrary, urbanization does not have any effect on Indian women's likelihood of holding either white- or blue-collar male-dominated occupations (coefficients in Tables 9.7 are positive but not significant). However, the effect may arise from methodological issues such as sample size and variability. Unlike black Africans, Indians were not consigned to "homelands," but in accordance with the Group Areas Act, lived in urban peripheral townships with long commutes to centers of work. So, they, as a group, have remained completely urbanized (particularly in the province of KwaZulu-Natal and Gauteng) which may explain the non-significant macro-level results, stemming from the lack of variability in the dependent variable across the independent variable.

Finally, White women are more likely to be in all white-collar occupations (i.e., male-dominated, gender-integrated, and female-dominated) in urban areas, highlighting their privileged position regarding occupational choices. In terms of odds ratios, White women residing in urban districts are 1.20 times more likely to hold white-collar male-dominated occupations relative to blue-collar female-dominated occupations than those residing in rural districts. However, coefficients for gender-integrated occupations (logits = 0.238) is the largest among all three sex-type jobs, with female-dominated next (logits = 0.208) followed by male-dominated (logits = 0.188). To some extent, this indicates that although urbanization is advantageous to White women in general compared to women of other races, it also places them in feminized occupations relative to themselves, thus contributing to the

process of segregation among Whites. Results are negative and not significant for blue-collar male-dominated occupations probably reflecting their relative absence from such jobs due to cultural constructions of White womanhood. (Results for White men are positive and significant across the entire spectrum of blue- and white-collar occupations.)

It is surprising to observe such results for non-White women because they do not corroborate theory or other empirical studies. While White women *partially* benefit from their residence in urban districts, black Africans do not, highlighting their marginalized position in the labor market and South African society, in general. As mentioned in Chapter 8, the non significant results could also be indicative of a tight labor market for women in South African urban areas where they are in competition for scare white-collar (male-dominated) jobs with men *and* with each other. In results not included, the positive association between men's residence in urban areas and their labor force outcomes further supports this crucial point.

Former Homeland Status: Expected Racial Differences

> ***Hypothesis 5a:*** Residence in and around homelands increases women's, particularly black African women's, likelihood of being employed in blue-collar occupations compared to white-collar occupations, compared to residence in non-homelands.

> ***Hypothesis 5b:*** Residence in and around homelands reduces women's, particularly black African women's, likelihood of being employed in male-dominated occupations, irrespective of the white- or blue-collar typology, but especially within the former, compared to residence in non-homelands.

Results in Chapter 8 indicated that residence in and around former homelands had an unexplainable positive effect on women's placement in white and blue-collar

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male-dominated occupations. This raises the obvious question: are the effects different for women or men of different races?

What might have seemed counterintuitive initially now seems more plausible once the data are disaggregated by race—the occupational placement of various racial groups is indeed differentially influenced by their residence in or around former homeland districts. (For this particular explanatory variable, I will again mention results for men because of consistent racial differences.) Coefficients are *not significant* for Coloured (Table 9.5), Indian (Table 9.7), and White women (Table 9.9). The large standard errors for the coefficients indicate the lack of variability within the dependent variable, which makes sense when we take into account the unique geographical segregation of these groups from one another under *apartheid* and till date. For example, most Indians reside in the province of KwaZulu-Natal (comprising of the former homeland of KwaZulu) and Gauteng (no homelands); Coloureds, on the other hand, are a significant percent of the agrarian population in the Western Cape (no homelands). Although Indian residential townships are near former homelands (e.g. Chatsworth was close to the KwaZulu homeland and residents from both areas worked in and around Durban), racial groups still remain geographically segregated from each other with limited contact, explaining the lack of variability and the large standard errors.

On the other hand, in results not included, White men are *more likely* to be in white-collar male dominated occupations in these districts, while coefficients for other occupational types are not significant. Finally, employed black African women (Table 9.3) and men (in results not included) are *more likely* to be in both white- and

blue-collar male-dominated occupations in or close to a former homeland district compared to their counterparts residing in non homeland districts. In terms of odds ratios, black African women residing there are 1.33 times more likely ($e^{0.286} = 1.33$) to hold white-collar male-dominated occupations and 1.41 times more likely ($e^{0.347} = 1.41$) to hold blue-collar male-dominated occupations (relative to blue-collar female-dominated) than those residing in non-homeland districts. The difference in log odds indicates that their chances of being in blue-collar relative to white-collar jobs are higher, thus supporting my first hypothesis. Moreover, the second hypothesis is ratified by an examination of coefficient sizes for all categories of the dependent variable. Among black African women residing in former homelands, the chances of being employed in white-collar female-dominated (logits = 0.374) is the highest, followed by blue-collar male-dominated (logits = 0.347), with white-collar male-dominated occupations (logits =0.286) being the lowest. Although women in former homelands may differentially have access to male-dominated occupations compared those residing in non-homelands, among themselves as a subgroup only, they are likely to be in more "feminized" than "masculinized" jobs.

How do we explain these results for black Africans and White men? Possible (and effective) approaches are the "enclave" and "queuing" theories that predict beneficial economic outcomes of segregation for subordinate groups. An ethnic enclave (such as a homeland) can be construed as a "sheltered" labor market where subordinate groups such as black Africans (particularly black African women) are free from competition with dominant groups in all sectors of the economy (Lewin-Epstein and Semyonov, 1994). Because a single ethnic group dominates the enclave,

workers can find good jobs (e.g. white- and blue-collar male-dominated in this case) despite low levels of education, while returns to human capital in terms of income and occupational status may be higher for well-educated individuals.

Appended to this is the "queuing theory," which has been mentioned in the previous section, whereby employers rank order prospective workers on desired attributes based on their assumptions about different groups; in such situation, subordinate group are often relegated to the bottom of the job queue (Lieberson 1980). But in communities with a sizable subordinate population (e.g. former homelands), that group should have opportunities higher in the occupational hierarchy because highly-ranked groups are not pushing as far down (Lieberson 1980: 297). Whites should also enjoy higher occupational outcomes in higher minority areas—because they comprise a smaller share of the overall population, they hold a smaller share of the best jobs at the top of the job queue. Thus, applying the queuing theory to South Africa, residence in or around former homelands should result in better average occupational outcomes for black Africans and White men, because they "overflow" into higher status jobs.

Stepping back, during *apartheid*, while black African entrepreneurship was restricted in the Republic of South Africa, it was officially encouraged in the homelands so that the government could disentangle itself of any economic responsibilities. The Bantu Investment Corporation facilitated the devolution of white-owned homeland enterprises to black African and provided business training and loans to them. This served to develop a stratum of black African petty capitalists in these areas, though most of them remained in commercial and service sector

enterprises that required low levels of finance and technology (Southall 1983:188).

The Corporation also developed small industrial parks in homelands to serve as sites

for factories and water and power facilities. In these areas, black African workers

were freed from the *de jure* job discrimination of *apartheid;* they could apprentice in

crafts normally closed to them and advance into skilled positions.

As discussed in the previous chapter, a strong public sector was also

developed and sustained, bringing with it a growth in associated jobs, especially in

health and educational services (van der Berg, 1985). For example, the public sector

in Transkei grew from 2,446 to 19,800 posts between 1963 and 1979, with the

explicit goal of replacing white officials with local black Africans (Southall, 1983).

However, a small number of White men continued to fill administrative roles in the

homelands, serving as intermediaries between the new homeland governments and

the Republic of South Africa (Butler et al. 1977). Public sector growth, in

conjunction with the development of a small number of universities and technical

institutes located in the homelands, provided opportunities for black Africans to

improve their educational and technical qualifications that would have been case

elsewhere (Southall, 1983).

In post-*apartheid* South Africa, black Africans residing in former homelands

face extremely high unemployment rates, which is detrimental to their economic

prospects. However, some studies now suggest that *employed* black Africans enjoy

higher occupational prestige there than their counterparts in other areas of the

country—that is, there is a strong selection effect for those employed (van der Berg

1985). This outcome can largely be attributed to the structure of labor markets in

homelands, e.g., a strong public sector, especially in health and educational services, that is the largest employer for black African women and the second largest (after the infrastructure and development sector) for black African men (van der Berg 1985).[66] On the other hand, in non-homelands, the domestic service sector is the largest employer of black African women while the mining/manufacturing and agricultural sectors are the second and third largest employers of black African men. These sectors do not provide high occupational status jobs.

On the other hand, for White men in homeland districts, the public sector comprises a smaller share and the highly commercialized agricultural sector (which still remains White- and Coloured owned) comprises a larger share of the labor market compared to non-homeland districts. Otherwise, according to Buchmann and Powell (2005), there are fewer marked differences in the labor market sectors for Whites across types of districts. Moreover, several of these former homelands or areas nearby are being developed as tourist spots, e.g. increasing numbers of black African men are hired as rangers on wildlife parks such as Kruger National Park, White men are lodge managers or owners. Mines situated close to homelands are still White-owned or managed. Finally, casinos (similar to Native American gambling resorts in the US) and entertainment spots (such as Sun City), have created service and associated managerial jobs that disproportionately hire black Africans. It is within this context that the above results make sense.

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[66] Research finds that African Americans and Israeli Arabs in ethnic enclaves who are employed in the public sector enjoy higher occupational status and earnings than their private sector counterparts (Collins 1983; Lewin-Epstein and Semyonov 1993).

> ***Hypothesis 6c:*** Women's specialization in service industries increases White women's likelihood but reduces non-white women's likelihood of holding male-dominated occupations, particularly those that are white-collar.

Results in Chapter 8 supported my hypothesis that women's specialization in service industries increases their placement in white-collar occupations relative to blue-collar (i.e. horizontal segregation), although it had an unexpected positive effect on women's placement in white-collar male-dominated occupations. An important question that emerges in the context of a multi-racial South African society is whether non-White women are more disadvantaged relative to White women in this matter?

Unlike the case in the United States, multivariate analyses do not support my hypothesis that specialization in service industries increases White women's likelihood but reduces non-white women's likelihood of holding (white-collar) male-dominated occupations in South Africa. Instead, with the exception of Indian women (which is quite unexplainable), all other women (black African, Coloured, and White) women are more likely to be employed in white-collar male-dominated occupations (relative to blue-collar female-dominated). For example, a standard deviation increase in the percent of service sector output in a magisterial district increases the log odds of a White woman being in a white-collar male-dominated occupation (relative to a blue collar female dominated/gender-integrated occupation) by a factor of 1.20. Corresponding log odds for black African and Coloured women are 1.26 and 1.86 respectively. All three groups of women are also more likely to be employed in white-collar gender-integrated occupations. While coefficients for white collar female-dominated occupations for White women are not significant, those for black

African and Coloured women are which may explain some of their segregation from the former.[67] Finally, results are negative (and not significant) for blue-collar male-dominated occupation placement for all groups except black African women whose odds of being in such a job reduces by a factor of 0.88 for the same standard deviation increase.

The results above again raise the important point that various sub-sectors *subsumed* within the broad category of service jobs may differentially impact employment outcomes for different racial groups, although regressions using them did not yield any interesting patterns. Importantly, how would we explain the results for Indian women especially since they are in heavily involved in white collar clerical positions and shop salespersons?

Gender Egalitarianism

> **Hypothesis 7a:** Women residing in more gender-egalitarian contexts are more likely that other women to hold male-dominated occupations (reflecting weaker vertical sex segregation), particularly in the white-collar (or non-manual) sector.

> **Hypothesis 7b:** The hypothesized effect of gender egalitarianism is applicable to women of all racial groups.

Results do not support the above hypotheses for either women or men across various racial groups. Although logit coefficients are positive for almost all groups, they are not significant. As mentioned in Chapter 8, such a result may stem from the

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[67] Men essentially have a similar pattern as that for women (positive across the white-collar spectrum), with some differences when we move our lens to blue-collar male-dominated occupations. Within the service sector, black African and Coloured men still occupy the blue-collar male-dominated occupations, while Indian and White men do not. Results are not significant for Indian men on all white-collar dimensions.

kind of variable used to measure the concept: female/male primary school completion ratio for children ages 13 to 18. A better measure or proxy might have yielded different results, but availability of appropriate data was an issue. Perhaps some other measure, e.g. attitudinal questions found in surveys such as the General Social Survey or the International Social Values Survey, would have been more appropriate. Or, in the case of a culturally diverse country such as South Africa, what might construe as gender equality in one setting or one ethnic group may not be the case in another because of unique cultural expectations and ideologies regarding work. For example, men's work in one cultural setting or group may be considered women's work in another. Finally, if one has to speculate, then such a result could also imply that women's occupational placement may not improve even in areas relatively characterized by gender equality because of ingrained patriarchal notions regarding men's privileged place in the job queue, especially in tight labor markets.

Female Share of the Labor Force (control variable)

Results from Chapter 8 indicated that for women a higher female share of the labor force increased their likelihood of being in blue-collar occupations rather than white collar occupations. When disaggregated by race, results are not significant for al racial groups except black African women: they have a lower probability of being in white collar male-dominated and gender-integrated occupations, but increased their representation in blue-collar male-dominated jobs. Again, this raises the question as to how much of this effect stems from the skewed regional sex composition (particularly within economically disadvantaged areas such as the former homelands)

(Posel, 1996). This is particularly the case for black Africans because of the male-dominated migrant labor system, a pattern that has continued even after *apartheid* and non-migrant women being left behind (Budlender, 1991).

9.4   Discussion and Conclusions

This dissertation seeks to better understand occupational sex segregation in South Africa by examining the importance of context, in addition to individual and household characteristics in South Africa. Racial and gender disparities found in most other societies are particularly magnified in this country where the marginalized social group constitutes a numerical majority of the population. These factors (gender and race), along with region, are dominant axes of inequality in South Africa, and within the multilayered labor market, they interlock to concentrate women and people of color in occupations that are lower paying and of lower status.

Results from the multi-level analyses have incorporated the three axes of inequality in South Africa—gender, race, and region—to study their effect on occupational sex segregation. The effect of other labor demand and supply factors on the likelihood of women holding white- and blue-collar male-dominated occupations has been the focus of the analysis. (In some cases, results for men were also mentioned briefly to highlight important contrasts or similarities.) While some hypotheses have been confirmed, others have not, indicating the need to further study the issue of occupational sex segregation using different measures or theories. Importantly, because the analysis was conducted for various racial groups, there was no strong consensus on which labor demand factors are consistently associated with

women's opportunity of holding male-dominated occupations across all racial groups.
On the other hand, results for labor supply factors—particularly education—are consistent.

In terms of results, the importance of human capital, namely education and migration as well as women's "location" are particularly relevant in order to explain the phenomenon of occupational sex segregation in South Africa. Indeed, the emphasis on regional and other institutional characteristics—stemming from the country's unique history of *apartheid*—is an important focus of this analysis because they reveal spatial patterns that are informative both in terms of the underlying causes of the issue and for targeting employment policy efforts to combat it.

Role of Education Attainment

> "Education is the most powerful weapon which you can use to change the world."
> (Nelson Mandela, South African President, 1994-1999)

Results demonstrate that higher education, particularly secondary schooling and higher, consistently play an important role in women's ability to move into white- or blue-collar occupations across all racial groups. This is expected since higher education provides individuals with the skills and training to enter competitive white-collar occupations. Although the education effect was not as strong among blue-collar workers, it still plays an important role in accessing such jobs, although the impact of education in increasing horizontal segregation and reducing vertical segregation is clearly evident in the multivariate analyses..

Returns to education for non-White women are lower than that for White women. And, if we have to make a broad gender comparison, then returns to education for women are higher than those for men (indicated through the smaller coefficients for the latter group), except for blue-collar male-dominated jobs. This pattern persists even when gender comparisons are made within racial groups: in general, women have higher returns to education than men.

In terms of policy implications, one should not be swayed by the positive results for education and assume that it has the ability to fix problems pertaining to unemployment or occupational sex segregation. As has been highlighted several times in the dissertation, despite having the requisite educational qualifications, and despite education being an equalizer in terms of opening avenues for employment, women and individuals of color, particularly black African women, are discriminated in the labor market because of ascriptive factors such as their race and gender. This issue is further highlighted when we observe the effect of context, e.g. urbanization, on women's ability to access male-dominated occupations. At the same educational level, results for black African women were not significant, but those for black African men as well as Coloured and White women were, highlighting the somewhat "limited" role of education as well as the importance of pushing the development process *in conjunction* with micro-level changes such as educational attainment.

Another issue that was highlighted in the results was the minimum threshold level of education needed for "good" employment. In almost all models, coefficients for primary school and below, relative to being in secondary school, were negative and significant. Given the fact that some black African women (and men), compared

to other women, tend to drop out of school because of pregnancy or other issues,
policy needs to address the issue of keeping them in through the secondary school
level in order to make them more marketable.

Role of Migration

Migration status is significant for only black Africans, highlighting the legacy
of *apartheid,* with most black Africans migrants occupy the lower rungs of the
occupational hierarchy, compared to non-movers, while immigrants are at both ends
of the occupational spectrum. So, while results for other racial groups may not be
significant, the issue emerges as a racially charged demographic and historical issue.

Although surveys tend to tap into legal (often skilled) immigration rather than
illegal immigrations, the results are interesting in many respects considering the
current immigration debate in South Africa. Since the past few days, there are
immense tensions in South Africa surrounding the debate on whether immigrants are
out-competing nationals, irrespective of race, for scarce job opportunities at a time
when the country is grappling with a high domestic unemployment rate. In other
analyses, immigrants often get jobs without accumulating much experience in the
South African labor market, suggesting that the domestic market has a critical
shortage of persons with the necessary skills to meet the demands of the economy.
Compared to South African non-movers and migrants, immigrants, depending on the
country of origin, have higher levels of education, although those from SADC
countries often have no or low levels of schooling. This educational composition of
immigrants, particularly from the SADC countries, is indicative of the demand for

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both low-skilled and very skilled workers—a demand that was historically met by special migrant labor agreements between the South African government and SADC countries such as Lesotho, Mozambique, and Malawi to keep costs low. These findings are not unique to South Africa, however. Recent research in New Zealand suggests that it is not unusual for native-born populations to have lower labor force outcomes than immigrants (Winkelmann, 2000).

Where does policy come in? Lack of relevant training and qualifications (due to sustained structural inequalities) prevent blacks Africans (and to some extent, Coloureds), from entering skilled and semi-skilled profession (e.g. white-collar male-dominated and gender-integrated occupations). Or, a large number of unskilled black African women have migrated in large number to urban areas of Gauteng for better pay or living conditions, but have remained constrained in their jobs because of occupational immobility. Hence, employment policy should focus on investing time and capital in the training and redevelopment of groups that have been marginalized by *apartheid*, in order to make them more competitive in the labor market.

Role of Urbanization and Former Homeland Residence

As mentioned earlier, gender as well as racial differences in the impact of urbanization on one's occupational placement was surprisingly. While almost all men benefited from urbanization (possibly reflecting gender discrimination as well as historically defined migration), results for women are varying. While black African women's placement in male-dominated occupations was not affected by urbanization, women of other races, particularly Coloureds and Whites, fared better in urban

magisterial districts. (In the case of Indian women, labor supply factors such as education, have greater predictive power than macro-level demand factors.) Because there still continues to be a structural imbalance between the geographical location of jobs, with most economic progress concentrated in core metropolitan areas in the provinces of Gauteng, Western Cape, and KwaZulu-Natal, the results are even more striking (and somber). Thus, important gender as well as racial differences in one's access to employment and occupations is highlighted, which requires policy attention.

On the other hand, while results for other racial groups are expectedly not significant for homeland residence, those for black Africans are positively significant. In these sheltered ethnic labor markets, black Africans face lesser competition and discrimination from other social groups than in more mainstream labor markets and hence, have a stronger foothold in the labor market. Thus, while black African men have positive occupational outcomes in both urban districts as well as former homelands, black African women fare batter in the latter, highlighting their tenuous position in the South African urban labor market. It also reinforces the point made earlier: despite having the requisite educational qualifications, black African women continue to be discriminated in the labor market because of their race and gender.

What emerges from these "structural" results is that although the government has rightly adopted education is an important development goal in light of the fragmented school system under *apartheid*, there needs to be more sustainable economic growth regionally to accommodate the large number of educated non-White women entering the labor market. This is especially relevant when we examine the rural labor economy where a large number of well-educated individuals

are employed in low-skill, poor-paying jobs because of the dearth of "good" jobs as well as a high unemployment rate, which increases competition. In a Catch-22 situation, this creates an impetus for migration into an already flooded urban labor market. That is, education must be accompanied by substantial and sustained growth and the creation of alternate secure jobs if it is to have a positive impact on employment. This is particularly the case for black African women, an overwhelming number of whom are domestics, with little growth prospect. For example, one could convincingly argue for the implementation of job reservations at the higher levels for black African women in particular.

Because different occupations are attached with different socioeconomic rewards, the quality of women's employment, reflected in their distribution across various occupations is a crucial factor for them to achieve equal status with men. Although it will require a longer timeline to evince definitive change, the critical issues raised in this dissertation are an appropriate starting point, especially in regards to public policy and prescripts. The next chapter (Chapter 9) will a suggest implications for policy and research. Limitations of the analysis as well as future research will also be discussed.

Chapter 10: Conclusions, Limitations, and Future Research

10.1   Filling the Research Gaps

As has been highlighted throughout this dissertation, South Africa is of unusual sociological interest partly because until 1994, it was the only remaining society whose political system and state institutions were explicitly and overtly designed to secure the advantage of one group at the expense of the remainder of the population. Today, Whites (9.6 percent in 2001) still maintain disproportionate control of the economy, while Coloureds (8.9 percent) and Asian-Indians (2.5 percent) continue to be more privileged than black Africans (79.0 percent) in almost all facets of life. It is thus of great interest, on both theoretical and policy grounds, to understand the consequences of this system of racial and gender domination on the socioeconomic opportunities of South African women.

This dissertation has attempted to fill that gap by focusing on the simultaneous intersections of both macro-level factors (urbanization, industrial composition, historical segregation, and gender egalitarianism) as well as individual characteristics (human capital and family status) in explaining occupational segregation in South Africa. The combination of detailed occupational data and hierarchical modeling was used to determine women's likelihood of being in white- and blue-collar male-dominated occupations for the four main racial groups, black Africans, Coloureds, Asian-Indians, and Whites. This study is particularly important because it has examined the issue using appropriate methodological techniques as well as nationally representative data; the use of such data allows us to generalize the findings in order to effectively inform employment policies in South Africa. Thus, an in-depth

analysis of occupational sex segregation will lead to a better understanding of various determinants as well as policy instruments in general, and in the case of South Africa.

10.2   Summary of Major Findings

The importance of human capital, namely education and migration as well as women's "location" has been particularly emphasized in this dissertation in order to explain the phenomenon of occupational sex segregation in South Africa.   Indeed, the emphasis on regional and other institutional characteristics—stemming from the country's unique history of *apartheid*—is an important focus of this analysis because they reveal spatial patterns that are informative both in terms of the underlying causes of the issue and for targeting employment policy efforts to combat it.

Results from the multi-level analyses in Chapters 8 and 9 incorporated three axes of inequality—race, gender, and region—in order to highlight an individual's, particularly women's, likelihood of holding white- and blue-collar male-dominated occupations. Important labor demand and supply factors were also included in the analyses and while some hypotheses were confirmed, others were not, indicating the need to further study the issue using alternate measures and theories. Importantly, because the analysis was conducted for various racial groups, there was no *consensus* on which labor demand factors are consistently associated with women's opportunity of holding male-dominated occupations, although the effect of human capital in the form of education, was consistent for all social groups.

To summarize the results, across all racial groups, educational attainment improved one's chances of holding male-dominated occupations among white collar

workers, but the effect is not as strong among blue-collar workers, reflecting a process of horizontal segregation due to education. Importantly, returns to education for non-White women are lower than that for Whites. For example, among college educated women, White women have a higher probability of *being in* white-collar male-dominated jobs than non-Whites. In terms of specific educational attainment, secondary schooling seemed like a prerequisite for better occupational placement for all women, with negative coefficients for no schooling and primary education.

Migration status is significant for only black Africans, highlighting the legacy of *apartheid*, with immigrants doing well in the labor market compared to non-movers and internal migrants. Finally, maternal incompatibility theories are again disproved—women's marital status and associated short-term child bearing obligations do not act as impediments to their occupational choices for almost all women, except Coloureds. In the unique case of Indian women, labor supply factors such as education, have greater predictive power than macro-level demand factors.

In terms of labor demand factors, residence in an urban magisterial district or close to a former homeland had varying results that could be interpreted as somber. While black African women's placement in male-dominated occupations is not affected by urbanization, women of other races, particularly Coloureds and Whites, fare better in urban magisterial districts. This result for black African women is grave in light of the rapid urbanization in post-*apartheid* South Africa and the dependence of rural households on migrant remittances. On the other hand, residence in and around homelands is beneficial for their movement into white- and blue-collar male-dominated jobs; the coefficient for other women is expectedly not significant. While

we could argue that these "sheltered ethnic labor markets" are good for black African women because they face less competition and discrimination from other social groups in more mainstream labor markets, one wonders what the long term scenario would be as these former homelands are being economically developed and may not remain "sheltered' labor markets for long. Finally, high percent of service industries in an area was positively associated with all women's changes of holding white-collar (but not the corresponding blue-collar) male-dominated jobs, irrespective of race, highlighting the process of horizontal sex segregation with post-industrialization.

10.3 Limitations of the Study

The results of the dissertation need to be considered in light of some limitations, several of which are discussed below.

First, issues of reporting (and concomitant quality) of employment in the Census may have implications for the analyses on occupational segregation by gender and race. Post enumeration Census checks underline the fact that those in the informal and subsistence agriculture sectors as well as multiple job holders, particularly among those working only a few hours per week run the risk of underreporting their employment status (and being classified as unemployed or not in the labor force. Other groups include "discouraged workers," illegal immigrants, part-time workers in the underground economy (e.g. housewives or students who might be temporary childcare workers at home), those working for kind rather than cash, or unpaid family business employees who may not consider such work "conventional" employment. Because such (under-reported) jobs tend to require

lower levels of education, and because there is a higher likelihood of more high status occupations (dominated by the highly educated) being reported, occupational data and patterns of occupational segregation can be upwardly biased.

The under-reporting of women's employment and their over-reporting of high-status jobs compared to low-status create three situations that may differentially influence our overall results. First, there may be higher levels of overall observed sex segregation because the absolute number of women in various occupational categories may be much lower than men. Second, the threshold for being in a male-dominated occupation compared to gender-integrated (or female-dominated) may be lower, resulting in more women reporting being in the former job type than might necessarily be the case. Finally, because more educated women tend to report their employment status correctly, the percent in white-collar rather than blue-collar occupations may be much higher. Moreover, because race and gender interact to influence (or bias) patterns of occupational segregation, minorities (and particularly minority women) are more likely to report themselves as unemployed (or underemployed in the informal economy).[68] Reflecting patterns described earlier, there may be an over-reporting of high status white-collar full time jobs in the formal sector. Thus, more White and Indian women (who tend to have higher levels of education) may report being in white-collar (male-dominated) occupations than Coloureds and black Africans. Such a situation invariably creates a methodological concern that educational as well as race effects (among other factors) may be inflated in occupational analyses because of who has erroneously been left out of the labor.

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[68] For example, in South Africa, black African women who have been particularly marginalized under *apartheid* are severely restricted in their opportunities for educational advancement, employment, and occupational placement.

Second, because of data availability and design, the cross-sectional analysis provides a *snapshot* of segregation and patterns of occupational distribution in South Africa, but no assumptions of causality can be made. Although a longitudinal or trend analysis would have been appropriate (and decennial censuses have indeed been carried out since 1911 in South Africa), the racial politics of *apartheid* has greatly compromised the quality of data available, rendering such a task difficult. With a non-partisan government in place and burgeoning interest in labor force data collection due to high rates of unemployment and occupational immobility, one would hope that future censuses will allow for a panel analysis of this phenomenon.

Third, the analysis was not run separately by rural and urban areas as is often done in other developing countries. An attempt to clearly define and classify both regions in South Africa is problematic in data collection efforts because of historically blurred regional distinctions and high rates of labor migration between homelands and capital-intensive areas (Maylam, 1990). Moreover, the urban-rural variable has been tenuously defined in the Census 2001, making it difficult to run the analyses separately by region. Hence, almost all analyses of labor force outcomes in South Africa introduce urbanization as an independent variable in the analysis.

Fourth, better measures of contextual variables, particularly for service sector output and gender egalitarianism, could be used. Perhaps some other measure, e.g. attitudinal questions found in surveys such as the General Social Survey or the International Social Values Survey, would have been more appropriate. Moreover, other measures pertaining to level of migration in a district, unemployment, various aspects of industrial composition may have had better explanatory power.

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Finally, the analysis would have been richer with more detailed migration data that tapped into the direction of migration, e.g. urban-rural, rural-urban etc. The variable used in the current analysis was a very crude provincial measure of migration, and although the results were consistent with other results, better quality data, both at the individual and contextual level, would have made the analysis richer.

10.4   Future Research

Despite these limitations, this study is unique because it is a first step in the direction of studying occupational sex segregation in South Africa. First and foremost, an important issue raised in this dissertation is the importance of place and segregation—black African women had more positive occupational outcomes in former homelands rather than in mainstream South African society. Although the high rate of unemployment and poverty on former homelands has been constantly highlighted in the literature, the selective (and positive) nature of women's employment has not. This was a serendipitous finding in the dissertation and calls for further in-depth analyses that involves disaggregating the data by former homelands and non former homelands status.

Moreover, while writing the literature review of the dissertation, I was struck by the paucity of research on occupational sex segregation in developing countries using detailed occupational data. While most analyses focus on industrialized countries, very few examine the issue in the context of developing countries. Hence, I would like to extend the current study on occupational sex segregation to incorporate other countries, e.g. compare patterns observed in South Africa with those

in neighboring countries, other African countries, or beyond. Additionally, the presence of a multi-racial society in South Africa would make it interesting to ccompare sex-race segregation patterns between South Africa, Brazil, and the United States. While several studies have compared racial differences in child health between Brazil and South Africa, a study of employment patterns—using a multilevel framework—would be meaningful. For example, would similar contexts yield the same results across countries, e.g., while residence in former homelands—which approximates segregation to some extent—is beneficial to some black Africans in South Africa, would similar levels of segregation have a similar effect in Brazil or the US. Studies from the US indicate that segregation has negative employment outcomes for blacks, but would results differ in the case of Brazil?

At a more micro-level, I am interested in further studying the occupational placement of Asian-Indians in South Africa. Among all racial groups, they are the least gender segregated, raising the "why" questions. If they tend to work in gender-integrated occupations, then what are the conditions under which occupations "integrate?" Do they, or other racial groups, experience the glass ceiling? If so, we need more research on the dynamics of the glass ceiling as it pertains to South Africa, how the glass ceiling works to keep women and minorities out of high status jobs, and what can be done to remedy that. On an unrelated note, although this study included a rather crude measure of migration, results were still meaningful. In this regard, inclusion of more information on migration would make the study richer.

In this study, I did not distinguish between full- and part-time workers because female-dominated occupations are more likely to offer part-time work and

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greater flexibility compared to male-dominated occupations. However, it would be interesting to study occupational segregation by full- and part-time workers in future research projects. Such disaggregation raises important questions about the casualization of work, flexible work hours, and wage differentials among women. In fact, in this regard, more qualitative studies or even time use studies on women's roles within the household will throw light on women's work choices and constraints. Thus, possibilities for future research are endless.

10.5   Conclusion

Despite post-*apartheid* progress, lack of fair and open access to the labor market hinders progress toward the redaction of racial and gender disparities in economic status. Although women, irrespective of race, account for approximately 43% of the measured employed labor force, they are relatively under-represented in some occupations. They remain concentrated in labor market "segments" or a restricted range of occupations where incomes, opportunities, and working conditions are relatively unfavorable. More specifically, black African women—like their counterparts in the United States—continue to remain on the "bottom of the earnings and occupation hierarchy, and have not benefited to the degree that white women have from the recent decrease in the gender wage gap" (King, 1995: 26). Their work history illustrates the combined effects—or double burden—of institutionalized racial and gender discrimination in the workplace. They remain, as the title of this dissertation suggests, marginalized by race and place.

Tables and Figures

Figure 2.1: Provincial Map of South Africa, 2001
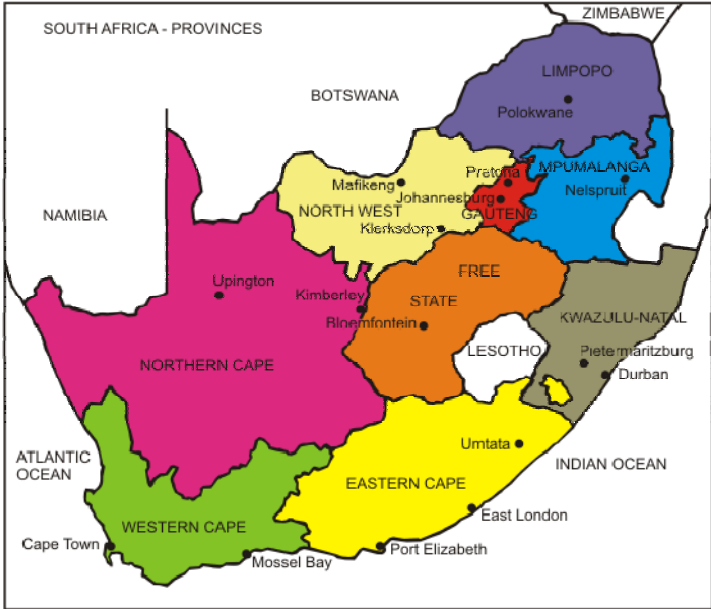
Figure 2.2: Black Homelands in 1984
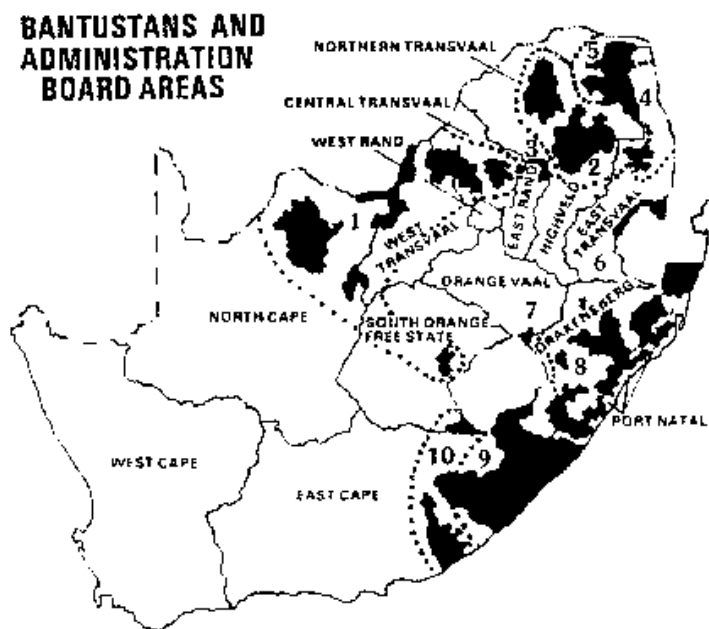
Table 2.1 Select Development Indicators for South Africa and Some Upper-Middle Income, sub-Saharan, and Neighboring countries, 2005

Countries	GNI per capita (US dollars)	Life expectancy (in years)	Under-5 mortality (per 1000)	Total fertility rate	HIV prevalence rate (ages 15-49; % in 2005)	Primary completion rate (%)	Improved water source access (%)	Gini Index
Select upper middle-income countries								
Thailand	5,000	68.3	12.9	1.9	1.4	--	99.0	42.0
Turkey	6,020	70.4	44.0	2.6	0.2	86.4	93.0	43.6
*South Africa**	*6,460*	*48.5*	*63.0*	*2.9*	*18.8*	*90.1*	*87.0*	*57.8*
Brazil	6,840	70.4	29.6	2.4	0.5	107.7	89.0	57.0
Uruguay	7,750	74.9	15.9	2.2	0.5	97.3	100.0	44.9
Malaysia	8,440	72.6	14.0	3.0	0.5	--	98.0	49.2
Argentina	8,890	73.8	19.4	2.5	0.6	98.8	96.0	51.3
Poland	10,150	73.7	9.2	1.3	0.1	95.2	--	34.5
Select sub-Saharan countries								
Tanzania	680	49.1	141.0	5.7	6.5	56.5	58.0	34.6
Kenya	1,150	52.3	117.0	5.0	6.1	92.6	57.0	42.5
Lesotho	1,330	48.8	108.4	4.0	23.2	60.1	79.0	63.2
South Africa	*6,460*	*48.5*	*63.0*	*2.9*	*18.8*	*90.1*	*87.0*	*57.8*
Botswana	8,190	48.9	101.0	3.4	24.1	89.9	95.0	60.5
Neighboring countries	GNI per capita (Atlas method)							
Mozambique	230	44.9	178.0	5.7	16.1	16.1	42.0	47.3
Zimbabwe	450	42.7	105.0	3.8	20.1	--	80.0	50.1
Lesotho	590	48.8	108.4	4.0	23.2	60.1	79.0	63.2
Swaziland	1370	45.4	142.0	4.1	33.4	64.3	62.0	50.4
Namibia	1880	54.4	69.0	3.9	19.6	81.6	80.0	74.3
South Africa	*3050*	*48.5*	*63.0*	*2.9*	*18.8*	*90.1*	*87.0*	*57.8*
Botswana	3310	48.9	101.0	3.4	24.1	89.9	95.0	60.5

Sources: World Development Indicators (WDI) database, 2007, World Bank; Human Development Report 2007/2008, UNDP
* Rates aggregated across racial groups

Table 2.2. Provincial Socioeconomic Indicators, South Africa, 2001

Selected Indicators	Eastern Cape	Limpopo	KwaZulu -Natal	North West	Northern Cape	Mpumalanga	Free State	Western Cape	Gauteng
Population Share (%)	15.8	13.4	21.1	8.0	1.8	7.3	6.7	9.0	17.0
Female Population (%)	54.1	54.2	52.1	49.8	49.4	49.8	50.2	49.8	46.5
Urban Population (%)	34.9	11.2	38.5	40.1	71.4	31.1	59.2	87	94.4
Black Population (%)	87.3	95.4	82.7	90.6	29.6	89.5	84	18.3	63
Infant Mortality Rate	58.2	57	44.7	35.2	31.5	41.2	45.1	26.8	43.5
Unemployment Rate (%)	41.4	41	33.1	32.8	27.2	33.4	26.1	18.6	20.9
Human Development Index	0.51	0.47	0.60	0.54	0.69	0.69	0.66	0.83	0.81
Per Capita GDP 1995	6339	3648	9125	7988	12214	13700	11519	18853	27074
Poverty Rating (%)	78	77	66	57	57	52	53	23	19

Source: Gyekye and Akinboade, 2003: 92

Table 2.3 Labor Force Participation Rates for Individuals Aged 15-65, By Race and Gender, South Africa, 1981-2001

	Men				Women			
	Black African	*Coloured*	*Indian*	*White*	*Black African*	*Coloured*	*Indian*	*White*
1981	70.5	74.0	71.7	77.5	33.0	43.8	24.5	49.7
1986	72.5	76.4	77.5	74.8	38.2	49.4	30.1	40.7
1991	65.1	73.6	76.9	74.6	41.0	51.3	34.6	46.8
1994	61.0	73.0	73.7	72.3	46.6	54.5	38.0	49.7
2001	61.7	72.1	74.7	74.9	50.9	54.5	44.1	56.4

Source: Standing, Sender, and Weeks, 1996: 60 and Population Census 2001
Note: Labor force participation defined as percent of working age population in employment or unemployed

Table 2.4 Percent Distribution Of Employed Individuals Ages 15-65 by Sector and Race, South Africa, 2001

Industry	Black Africans	Coloureds	Asian-Indians	Whites
Agriculture; hunting; forestry and fishing	7.52	13.68	0.80	2.43
Mining and quarrying	6.01	1.03	0.41	3.50
Manufacturing	12.81	18.51	25.42	14.16
Electricity; gas and water supply	0.86	0.60	0.76	0.99
Construction	6.46	7.35	3.59	4.59
Wholesale and retail trade	16.32	18.04	27.21	18.23
Transport; storage and communication	5.04	4.57	7.06	6.54
Financial; insurance, real estate, business services	7.52	9.42	14.06	22.58
Community; social and personal services	22.30	19.79	20.16	26.38
Private Households	15.16	7.00	0.52	0.61
Total	100.00	100.00	100.00	100.00

Source: Author's calculations using the South African Census, 2001

Table 2.5 Percent Distribution And Percent Female Share Of Employed Individuals By Sector and Gender, South Africa, 2001

Industry	1993 SALDRU			2001 Census			Female Share of Industry
	Total (%)	Men (%)	Women (%)	Total (%)	Men (%)	Women (%)	
Agriculture; hunting; forestry and fishing	12.2	14.5	8.7	7.1	8.3	5.6	34.3
Mining and quarrying	7.2	11.5	0.7	4.7	7.8	0.6	5.3
Manufacturing	16.7	18.8	13.6	14.4	16.7	11.3	34.2
Electricity; gas and water supply	1.9	2.9	0.4	0.8	1.2	0.3	17.0
Construction	5.5	8.5	1.2	6.1	9.9	1.2	8.7
Wholesale and retail trade	13.5	11.8	15.9	17.4	17.0	17.8	44.5
Transport; storage and communication	6.7	9.3	2.9	5.3	7.5	2.5	20.4
Financial; insurance, real estate, business services	4.2	3.4	5.4	10.7	10.8	10.6	42.9
Community; social and personal services	31.9	19.0	51.0	22.6	17.7	28.9	55.7
Total	100.00	100.00	100.00	100.00	100.00	100.00	

Source: Standing, Sender, and Weeks (1996: 69) for SALDRU 1993; Author's calculations for South African Census 2001

Table 2.6 Percent Distribution Of Employed Individuals Ages 15-65 by Sector by Race and Sex, South Africa, 2001

Industry	Black African		Coloured		Indian		White	
	Men	*Women*	*Men*	*Women*	*Men*	*Women*	*Men*	*Women*
Agriculture and fishing	8.75	5.84	15.64	11.53	0.97	0.54	3.22	1.48
Mining and quarrying	10.08	0.46	1.63	0.37	0.49	0.28	5.47	1.15
Manufacturing	15.23	9.50	19.34	17.59	26.54	23.69	17.7	9.94
Electricity; gas and water supply	1.27	0.31	0.96	0.21	0.95	0.45	1.42	0.49
Construction	10.42	1.07	13.05	1.07	5.22	1.08	6.83	1.93
Wholesale and retail trade	16.03	16.71	15.68	20.64	28.73	24.85	18.74	17.62
Transport; storage and communication	7.49	1.71	6.54	2.4	8.95	4.14	7.85	4.97
Financial, real estate, business	8.77	5.80	8.90	10	12.02	17.24	19.8	25.89
Community; social & personal services	17.78	28.47	16.54	23.37	15.86	26.85	18.66	35.57
Private Households	4.18	30.13	1.71	12.82	0.28	0.88	0.31	0.97
Total	100	100	100	100	100	100	100	100

Source: Author's calculations using the South African Census, 2001

Figure 4.1. Conceptualizing Occupational Sex Segregation as a Two-Dimensional Process

Blue-collar or manual occupations	White-collar or non-manual occupations	
Male	Dominated	
Gender	Integrated	VERTICAL SEGREGATION (Reflecting status differentials)
Female	Dominated	

HORIZONTAL SEGREGATION
(Reflecting gender essentialism)

Figure 4.2. Conceptual Framework Guiding the Current Analysis

Figure 4.2. Conceptual Framework Guiding the Current Analysis

Human Capital

Education
Migration Status

Background Characteristic

Gender and Race

Family Status

Marital Status
Long- and short-term
childbearing

**Occupational
Sex
Segregation**

MICRO-LEVEL

Person + Place

MACRO-LEVEL

Magisterial-Level Characteristics

Urbanization
Economic Restructuring
Cultural Context: Gender Egalitarianism
Historically Defined Homelands
(Female Share of Labor Force)

Table 5.1. Example of Hierarchical System of Occupational Data Collection Using "Professionals"

One-digit	Two-digit	Three-digit
1 Legislators, senior officials and managers		
2 Professionals	21 Physical, mathematical and engineering science professionals	210 Physical, mathematical and engineering science professionals 211 Physicists and astronomers 212 Mathematicians, statisticians and related 213 Computing professionals 214 Architects, engineers and related profs. 215 Physical sciences technologists 219 Physical, mathematical and engineering science professionals NEC
	22 Life science and health professionals	220 Life science and health professionals NFD 221 Life science professionals 222 Health professionals 223 Nursing and midwifery professionals 229 Life science and health professionals NEC
	23 Teaching professionals	230 Teaching professionals NFD 231 Higher education teaching profs. 232 Secondary education teaching profs. 233 Primary and pre-primary education teaching professionals 234 Special education teaching profs 235 Other teaching professionals 239 Other education professionals NEC
	24 Other professionals	240 Other professionals NFD 241 Business professionals 242 Legal professionals 243 Archivists, librarians and related information professionals 244 Social science and related profs 245 Writers & creative or performing artists 246 Religious professionals 249 Other professionals NEC
3 Technicians and associate professionals		
4 Clerks		
5 Service workers, shop and market sales workers		
6 Skilled agricultural and fishery workers		
7 Craft and related trades workers		
8 Plant and machine operators and assemblers		
9 Elementary occupations		
998 Undetermined		

Source: Codebook, South African Census, 2001

Table 5.2. Representative Occupations in Typology Created for the Dependent Variable (Employment in a White- or Blue-Collar Gender-Dominated or Gender-Integrated occupation)

Occupational Category	Representative Occupations
White-collar male-dominated occupation	Production Managers General Managers Architects Natural and Engineering Science Technicians Material Recorders and Transport Clerks
White-collar gender-integrated occupation	Other Managers, Business Professionals, Finance and Sales Associate Professionals Secretaries and Keyboard Operating Clerks Shop Salespersons
White-collar female-dominated occupation	Nursing and Midwifery Associate Professionals Primary Education Teaching Associate Professionals Teaching Associate Professionals Other Office Clerks NEC Cashiers, Tellers, and Associate Clerks
Blue-collar male-dominated occupation	Miners, Shot Firers, and Stone Cutters Building Frame and Related Trade Workers Machinery Mechanics and Fitters Motor Vehicle Drivers Protective Services
Blue-collar gender-integrated occupation	Agricultural, Fishery, and Related Workers Mining and Construction Laborers Manufacturing Laborers Housekeeping and Restaurant Services Street Vendors and Related Workers
Blue-collar female-dominated occupation	Textile, Garment, and Related Trades Workers Textile, Fur, and Leather Products Workers Personal Care and Related Workers Other Personal Care and Related Workers Domestic and Related Helpers

Table 5.3. Mean Earnings (in Rand) Across the Dependent Variable for Employed Men and Women Ages 25-54, South Africa, 2001

Dependent Variable	Mean Earnings (in Rand)		
	Total	Men	Women
Blue-collar female-dominated occupation	1,040	1,488	948
Blue-collar gender-integrated occupation	1,355	1,562	1,056
Blue-collar male-dominated occupation	2,469	2,550	1,848
White-collar female-dominated occupation	4,144	4,992	3,928
White-collar gender-integrated occupation	7,793	9,563	6,145
White-collar male-dominated occupation	7,892	8,165	6,626

Source: Author's calculations using the South African Census, 2001

Table 5.4. Covariates Used in Analyses, South African Census, 2001

Variables	Categories
Individual-level	
Sex	Female (ref.)
	Male
Race	Black African (ref.)
	Coloured
	Indian-Asian
	White
Human Capital	
Educational attainment	No education (ref.)
	In or completed primary
	In secondary
	Completed secondary
	Diploma/Certificate
	Some tertiary or college
Nativity and migration status	South African non-migrant (ref.)
	South African recent migrant
	Immigrant
Family Status	
Marital Status	Single (ref.)
	Currently Married
Long-term childbearing:	
Number of children ever born	0 and more
Short-term childbearing:	
Presence of child under age 5	No (ref.)
	Yes
Childcare help:	
Presence of economically not active women in hh	No (ref.)
	Yes
Compositional Controls	
Age and Age (quadratic term)	25 – 54 years
Magisterial District-level	
Economic Development and Restructuring	
Residence in Urban District	No (ref.)
	Yes
Post-Industrialization	Percent Service Sector
Cultural Factors	
Gender Egalitarianism	Ratio of male-female primary school completion rate
Historical Factors (Apartheid Policies)	
Whether Ex-Homeland	No (ref.)
	Yes
Female Share of the Labor Force *(Control)*	$(W_{E+Un})/(\text{All } M_{E+Un} + W_{E+Un})$

Table 5.5. Univariate Descriptives of Variables Used in the Analysis, South Africa Census, 2001

Variables	All Men and Women	Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	9.1	4.9
White-collar gender-integrated occupation	19.4	22.3
White-collar female-dominated occupation	13.5	23.3
Blue-collar male-dominated occupation	31.6	9.0
Blue-collar gender-integrated occupation	9.9	8.8
Blue-collar female-dominated occupation	16.5	31.8
Micro-level Independent Variables		
Sex		
Male	57.0	
Female	43.0	
Race		
Black African	65.8	64.5
Coloured	12.7	13.8
Asian/Indian	4.10	3.6
White	17.5	18.1
Human Capital		
Education		
No schooling	9.4	9.1
In or completed primary	19.8	18.5
In secondary	28.2	27.5
Completed secondary	25.2	25.1
Diploma/Certificate	11.0	13.2
College and Higher	6.4	6.7
Migration Status		
South African non-mover	10.5	11.1
South African migrant	84.3	85.8
Immigrant	5.1	3.2
Family Status		
Marital Status		
Single	45.8	53.4
Currently Married	54.2	46.6
Number of children ever born	n.a.	2.1
Presence of child under age 5	n.a.	13.5
Childcare help	43.2	37.5
Age (in years)	37.7	37.9
Number of observations	*589,476*	*253,340*

Source: Author's calculations using the South African Census, 2001

Table 5.6. Univariate Descriptives of Variables for Black Africans, South Africa, 2001

Variables	All Black African Men and Women	Black African Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	5.2	2.7
White-collar gender-integrated occupation	13.5	15.1
White-collar female-dominated occupation	12.3	20.4
Blue-collar male-dominated occupation	36.4	9.6
Blue-collar gender-integrated occupation	11.2	10.0
Blue-collar female-dominated occupation	21.5	42.3
Micro-level Independent Variables		
Sex		
Male	57.8	
Female *(ref)*	42.2	
Human Capital		
Education		
No schooling	13.1	12.9
In or completed primary	25.0	23.1
In secondary *(ref)*	29.4	28.7
Completed secondary	20.2	19.5
Diploma/Certificate	8.8	11.6
College and Higher	3.5	4.2
Migration Status		
South African non-mover	9.2	9.9
South African migrant *(ref)*	86.4	88.5
Immigrant	4.5	1.6
Family Status		
Marital Status		
Single *(ref)*	52.6	61.5
Currently Married	47.4	38.5
Number of children ever born	n.a.	2.4
Presence of child under age 5	n.a.	33.2
Childcare help	41.2	37.8
Age (in years)	37.6	38.1
Number of observations	*387,693*	*163,511*

Source: Author's calculations using the South African Census, 2001

Table 5.7. Univariate Descriptives of Variables for Coloureds, South Africa Census, 2001

Variables	All Coloured Men and Women	Coloured Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	7.2	4.0
White-collar gender-integrated occupation	16.4	19.6
White-collar female-dominated occupation	14.2	23.4
Blue-collar male-dominated occupation	31.6	12.5
Blue-collar gender-integrated occupation	16.5	14.9
Blue-collar female-dominated occupation	14.1	25.7
Micro-level Independent Variables		
Sex		
Male	57.0	
Female *(ref)*	43.0	
Human Capital		
Education		
No schooling	5.1	4.6
In or completed primary	24.0	23.6
In secondary *(ref)*	39.3	39.1
Completed secondary	22.7	23.1
Diploma/Certificate	6.5	7.2
College and Higher	2.4	2.3
Migration Status		
South African non-mover	14.0	13.4
South African migrant *(ref)*	86.0	86.6
Family Status		
Marital Status		
Single *(ref)*	42.3	49.5
Currently Married	57.7	50.5
Number of children ever born	n.a.	2.1
Presence of child under age 5	n.a.	35.8
Childcare help	46.7	37.2
Age (in years)	37.0	36.9
Number of observations	*74,730*	*34,846*

Source: Author's calculations using the South African Census, 2001

Table 5.8. Univariate Descriptives of Variables for Indians/Asians, South Africa Census, 2001

Variables	All Indian Men and Women	Indian Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	18.2	9.9
White-collar gender-integrated occupation	36.0	38.6
White-collar female-dominated occupation	17.4	30.4
Blue-collar male-dominated occupation	19.1	7.2
Blue-collar gender-integrated occupation	3.7	3.3
Blue-collar female-dominated occupation	5.7	10.5
Micro-level Independent Variables		
Sex		
Male	57.0	
Female *(ref)*	43.0	
Human Capital		
Education		
No schooling	1.4	1.6
In or completed primary	4.7	5.9
In secondary *(ref)*	28.8	27.1
Completed secondary	41.4	39.6
Diploma/Certificate	12.7	13.9
College and Higher	11.1	11.9
Migration Status		
South African non-mover	14.7	14.0
South African migrant *(ref)*	85.3	86.0
Family Status		
Marital Status		
Single *(ref)*	23.6	31.4
Currently Married	76.4	68.6
Number of children ever born	n.a.	1.6
Presence of child under age 5	n.a.	27.0
Childcare help	57.9	42.0
Age (in years)	37.3	36.5
Number of observations	*24,182*	*9,179*

Source: Author's calculations using the South African Census, 2001

Table 5.9. Univariate Descriptives of Variables for Whites, South Africa Census, 2001

Variables	All White Men and Women	White Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	23.4	12.6
White-collar gender-integrated occupation	40.2	46.7
White-collar female-dominated occupation	16.8	32.2
Blue-collar male-dominated occupation	16.5	4.5
Blue-collar gender-integrated occupation	1.5	1.1
Blue-collar female-dominated occupation	1.7	3.0
Micro-level Independent Variables		
Sex		
Male	57.0	
Female *(ref)*	43.0	
Human Capital		
Education		
No schooling	0.6	0.6
In or completed primary	0.7	0.8
In secondary *(ref)*	15.6	14.2
Completed secondary	41.8	43.6
Diploma/Certificate	21.9	23.0
College and Higher	19.5	17.8
Migration Status		
South African non-mover	13.3	13.6
South African migrant *(ref)*	75.3	75.2
Immigrant	11.5	11.2
Family Status		
Marital Status		
Single *(ref)*	27.9	32.0
Currently Married	72.1	68.0
Number of children ever born	n.a.	1.6
Presence of child under age 5	n.a.	22.4
Childcare help	44.9	36.0
Age (in years)	38.7	38.3
Number of observations	*102,871*	*45,804*

Source: Author's calculations using the South African Census, 2001

Table 5.10. Frequencies of Variables used in the Analysis, South Africa Census, 2001

Variables	All Men and Women	Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	53,759	12,397
White-collar gender-integrated occupation	114,564	56,435
White-collar female-dominated occupation	79,632	58,965
Blue-collar male-dominated occupation	186,322	22,739
Blue-collar gender-integrated occupation	58,130	22,295
Blue-collar female-dominated occupation	97,069	80,509
Micro-level Independent Variables		
Sex		
Male	336,136	
Female *(ref)*	253,340	
Race		
Black African *(ref)*	387,693	163,511
Coloured	74,730	34,846
Asian/Indian	24,182	9,179
White	102,871	45,804
Human Capital		
Education		
No schooling *(ref)*	55,561	23,053
In or completed primary	116,555	46,920
In secondary	166,362	69,576
Completed secondary	148,324	63,588
Diploma/Certificate	64,761	33,357
College and Higher	37,913	16,846
Migration Status		
South African non-mover	61,161	27,718
South African migrant *(ref)*	497,177	217,256
Immigrant	31,138	8,366
Family Status		
Marital Status		
Single *(ref)*	270,030	135,285
Currently Married	319,446	118,055
Presence of child under age 5		
No *(ref)*	173,814	173,814
Yes	79,526	79,526
Childcare help		
No *(ref)*	158,202	158,202
Yes	95,138	95,138
Number of observations	*589,476*	*253,340*

Source: Author's calculations using the South African Census, 2001

Table 5.11. Frequencies of Variables for Black Africans, South Africa, 2001

Variables	All Black African Men and Women	Black African Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	19,955	4,337
White-collar gender-integrated occupation	52,334	24,691
White-collar female-dominated occupation	47,589	33,281
Blue-collar male-dominated occupation	141,068	15,690
Blue-collar gender-integrated occupation	43,398	16,309
Blue-collar female-dominated occupation	83,349	69,203
Micro-level Independent Variables		
Sex		
Male	224,182	
Female	163,511	
Human Capital		
Education		
No schooling	50,837	21,043
In or completed primary	96,741	37,815
In secondary *(ref)*	113,997	46,945
Completed secondary	78,389	31,906
Diploma/Certificate	34,267	19,021
College and Higher	13,462	6,781
Migration Status		
South African non-mover	35,352	16,138
South African migrant *(ref)*	334,872	144,749
Immigrant	17,469	2,624
Family Status		
Marital Status		
Single *(ref)*	203,965	100,494
Currently Married	183,728	63,017
Presence of child under age 5		
No *(ref)*	333,354	109,172
Yes	54,339	54,339
Childcare help		
No *(ref)*	228,069	101,663
Yes	159,624	61,848
Number of observations	*387,693*	*163,511*

Source: Author's calculations using the South African Census, 2001

Table 5.12. Frequencies of Variables for Coloureds, South Africa Census, 2001

Variables	All Coloured Men and Women	Coloured Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	5,343	1,392
White-collar gender-integrated occupation	12,219	6,831
White-collar female-dominated occupation	10,615	8,151
Blue-collar male-dominated occupation	23,644	4,340
Blue-collar gender-integrated occupation	12,344	5,174
Blue-collar female-dominated occupation	10,565	8,958
Micro-level Independent Variables		
Sex		
Male	39,884	
Female	34,846	
Human Capital		
Education		
No schooling	3,811	1,616
In or completed primary	17,919	8,215
In secondary *(ref)*	29,395	13,626
Completed secondary	16,969	8,063
Diploma/Certificate	4,862	2,519
College and Higher	1,774	807
Migration Status		
South African non-mover	10,465	4,662
South African migrant *(ref)*	64,265	30,184
Family Status		
Marital Status		
Single *(ref)*	31,641	17,258
Currently Married	43,089	17,588
Presence of child under age 5		
No *(ref)*	62,268	22,384
Yes	12,462	12,462
Childcare help		
No *(ref)*	39,861	21,878
Yes	34,869	12,968
Number of observations	*74,730*	*34,846*

Source: Author's calculations using the South African Census, 2001

Table 5.13. Frequencies of Variables for Indians/Asians, South Africa Census, 2001

Variables	All Indian Men and Women	Indian Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	4,396	910
White-collar gender-integrated occupation	8,704	3,547
White-collar female-dominated occupation	4,199	2,794
Blue-collar male-dominated occupation	4,608	664
Blue-collar gender-integrated occupation	899	305
Blue-collar female-dominated occupation	1,376	959
Micro-level Independent Variables		
Sex		
Male	15,003	
Female	9,179	
Human Capital		
Education		
No schooling	335	142
In or completed primary	1,132	545
In secondary *(ref)*	6,963	2,491
Completed secondary	10,015	3,635
Diploma/Certificate	3,064	1,273
College and Higher	2,673	1,093
Migration Status		
South African non-mover	3,550	1,284
South African migrant *(ref)*	20,632	7,895
Family Status		
Marital Status		
Single *(ref)*	5,698	2,880
Currently Married	18,484	6,299
Presence of child under age 5		
No *(ref)*	21,705	6,702
Yes	2,477	2,477
Childcare help		
No *(ref)*	10,180	5,323
Yes	14,002	3,856
Number of observations	*24,182*	*9,179*

Source: Author's calculations using the South African Census, 2001

Table 5.14. Frequencies of Variables for Whites, South Africa Census, 2001

Variables	All White Men and Women	White Women
Micro-level Dependent Variable		
White-collar male-dominated occupation	24,065	5,758
White-collar gender-integrated occupation	41,307	21,366
White-collar female-dominated occupation	17,229	14,739
Blue-collar male-dominated occupation	17,002	2,045
Blue-collar gender-integrated occupation	1,489	507
Blue-collar female-dominated occupation	1,779	1,389
Micro-level Independent Variables		
Sex		
Male	57,067	
Female *(ref.)*	45,804	
Human Capital		
Education		
No schooling	578	252
In or completed primary	763	345
In secondary *(ref)*	16,007	6,514
Completed secondary	42,951	19,984
Diploma/Certificate	22,568	10,544
College and Higher	20,004	8,165
Migration Status		
South African non-mover	13,088	5,985
South African migrant *(ref)*	77,408	34,428
Immigrant	12,375	5,391
Family Status		
Marital Status		
Single *(ref)*	28,726	14,653
Currently Married	74,145	31,151
Presence of child under age 5		
No *(ref)*	92,623	35,556
Yes	10,248	10,248
Childcare help		
No *(ref)*	56,713	29,338
Yes	46,158	16,466
Number of observations	*102,871*	45,804

Source: Author's calculations using the South African Census, 2001

Table 5.15 Correlation Coefficient Matrix for Macro-level variables used in Analysis

	Urban District	Homeland District	Percent Service	Gender ratio in Prim School Completion	Female Share of Labor Force
Urban District	1.0000				
Homeland District	-0.3856	1.0000			
Percent Service	0.0433	0.4617	1.0000		
Gender ratio in Prim School Completion	0.2585	-0.3653	-0.2678	1.0000	
Female Share of Labor Force	-0.1914	0.4637	0.4605	-0.1096	1.0000

Table 5.16. Summary of Decision Rules for Variables Included in Multilevel Analyses

Step	Procedure
1.	Test a _fully unconditional model_ for significant random effects at the intercepts (i.e., test whether the proportion of individuals in various occupational groups differs across magisterial districts).
2.	Introduce grand-mean centered individual-level _control variables_.
3.	Introduce individual-level _human capital_ variables into the model and test for significant random effects (i.e., test to see whether the relationship of the predictor to occupational type differs across magisterial districts). The human capital variable (whose random effect is being tested) is not centered.
4.	Introduce _family status_ variables into the model, using the same procedure as described in step (3).
5.	Introduce grand-mean centered _contextual magisterial-level_ variables into the model.

Table 6.1. Percent Distribution of Key Independent Variables across Employment Status of Women Ages 25-54, South Africa, 2001

	Employed	*Unemployed*	*Economically Not Active*	*Occupation Not Reported*	*TOTAL*
Race					
Black Africans	29.26	45.90	22.91	1.84	100.00
Coloured	47.39	18.61	30.92	3.08	100.00
Asian-Indian	42.44	9.08	45.66	2.82	100.00
White	60.48	5.08	29.22	5.23	100.00
Education					
No Schooling	19.02	40.60	38.73	1.65	100.00
Primary	27.28	41.63	29.38	1.71	100.00
In secondary	31.46	43.13	23.25	2.16	100.00
Secondary completed	44.92	34.57	17.24	3.27	100.00
Diploma/Certificate	65.13	18.95	12.46	3.46	100.00
BA degree and above	74.77	7.26	13.53	4.44	100.00
Migration status					
Non-mover	46.36	31.78	19.33	2.52	100.00
South African migrant	33.34	38.89	25.48	2.29	100.00
Immigrant	45.71	22.37	28.15	3.76	100.00
Marital status					
Single	34.53	44.48	18.73	2.26	100.00
Currently married	34.93	30.25	32.37	2.45	100.00
Number of children ever born					
	2.26	2.46	3.04	2.22	2.52
Age					
25-29	27.66	51.48	18.71	2.15	100.00
30-39	36.49	39.92	21.21	2.39	100.00
40-49	38.98	29.89	28.65	2.48	100.00
50-54	31.79	22.38	43.58	2.25	100.00
Urban Magisterial District					
No	23.61	42.21	32.60	1.58	100.00
Yes	41.36	35.31	20.53	2.80	100.00
Former Homeland District					
No	41.36	34.01	21.80	2.83	100.00
Yes	20.93	45.94	31.79	1.34	100.00

Table 6.2. Percent Distribution of Key Independent Variables across Employment Status of All black African Women Ages 25-54, South Africa, 2001

	Employed	*Unemployed*	*Economically Not Active*	*Occupation Not Reported*	*TOTAL*
Education					
No Schooling	18.33	41.83	38.29	1.54	100.00
Primary	25.76	45.56	27.11	1.56	100.00
In secondary	28.16	52.03	18.03	1.78	100.00
Secondary completed	35.39	50.04	12.25	2.32	100.00
Diploma/Certificate	60.80	28.56	7.95	2.69	100.00
BA degree and above	74.42	14.69	7.31	3.58	100.00
Migration status					
Non-mover	40.00	42.19	15.77	2.04	100.00
South African migrant	28.39	46.35	23.44	1.82	100.00
Immigrant	30.34	42.32	25.07	2.27	100.00
Marital status					
Single	30.53	49.54	18.00	1.93	100.00
Currently married	27.44	40.91	29.94	1.71	100.00
Number of children ever born					
	2.52	2.49	3.33	2.48	2.68
Age					
25-29	20.71	59.55	18.10	1.64	100.00
30-39	30.77	47.92	19.43	1.89	100.00
40-49	34.81	37.16	26.01	2.01	100.00
50-54	28.58	29.12	40.65	1.65	100.00
Urban Magisterial District					
No	21.67	44.70	32.20	1.43	100.00
Yes	35.48	47.05	15.30	2.18	100.00
Former Homeland District					
No	35.54	45.71	16.51	2.24	100.00
Yes	20.53	46.39	31.80	1.28	100.00

Table 6.3. Percent Distribution of Key Independent Variables across Employment Status of All Coloured Women Ages 25-54, South Africa, 2001

	Employed	*Unemployed*	*Economically Not Active*	*Occupation Not Reported*	*TOTAL*
Education					
No Schooling	33.85	21.72	41.41	3.02	100.00
Primary	37.94	20.31	39.27	2.48	100.00
In secondary	44.45	20.68	31.87	3.00	100.00
Secondary completed	66.14	13.77	15.92	4.17	100.00
Diploma/Certificate	77.44	6.09	13.16	3.32	100.00
BA degree and above	80.38	3.19	11.55	4.88	100.00
Migration status					
Non-mover	53.49	15.66	28.13	2.71	100.00
South African migrant	46.59	18.99	31.28	3.13	100.00
Marital status					
Single	48.21	24.56	24.01	3.22	100.00
Currently married	46.61	12.96	37.48	2.95	100.00
Number of children ever born					
	2.12	2.19	2.68	2.08	2.30
Age					
25-29	49.47	26.72	20.30	3.51	100.00
30-39	51.27	19.51	26.03	3.20	100.00
40-49	45.89	14.77	36.62	2.72	100.00
50-54	45.89	10.73	53.27	2.85	100.00
Urban Magisterial District					
No	43.12	18.80	35.89	2.18	100.00
Yes	48.16	18.57	30.02	3.24	100.00
Former Homeland District					
No	47.52	18.43	30.97	3.08	100.00
Yes	38.51	30.75	27.78	2.97	100.00

Table 6.4. Percent Distribution of Key Independent Variables across Employment Status of All Indian Women Ages 25-54, South Africa, 2001

	Employed	Unemployed	Economically Not Active	Occupation Not Reported	TOTAL
Education					
No Schooling	19.72	10.28	67.08	2.92	100.00
Primary	21.77	9.51	66.80	1.92	100.00
In secondary	31.54	10.65	55.68	2.14	100.00
Secondary completed	51.15	8.74	36.73	3.38	100.00
Diploma/Certificate	66.27	6.66	23.27	3.80	100.00
BA degree and above	73.80	4.12	18.03	4.05	100.00
Migration status					
Non-mover	51.46	8.50	37.48	2.57	100.00
South African migrant	41.49	9.14	46.53	2.85	100.00
Marital status					
Single	50.76	15.10	30.61	3.52	100.00
Currently married	39.48	6.93	51.02	2.58	100.00
Number of children ever born					
	1.64	1.77	2.36	1.82	1.96
Age					
25-29	53.26	12.52	31.21	3.00	100.00
30-39	47.33	10.19	39.45	3.03	100.00
40-49	37.87	7.32	52.08	2.74	100.00
50-54	23.26	4.98	69.57	2.18	100.00
Urban Magisterial District					
No	38.82	8.47	48.35	4.37	100.00
Yes	42.71	9.12	45.46	2.71	100.00
Former Homeland District					
No	42.36	9.09	45.77	2.77	100.00
Yes	45.89	8.21	40.84	5.05	100.00

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Table 6.5. Percent Distribution of Key Independent Variables across Employment Status of All White Women Ages 25-54, South Africa, 2001

	Employed	*Unemployed*	*Economically Not Active*	*Occupation Not Reported*	*TOTAL*
Education					
No Schooling	27.04	9.66	56.65	6.65	100.00
Primary	31.62	10.45	51.60	6.32	100.00
In secondary	40.91	9.25	45.28	4.56	100.00
Secondary completed	62.25	4.75	27.43	5.58	100.00
Diploma/Certificate	71.46	3.01	20.47	5.06	100.00
BA degree and above	74.68	1.86	18.29	5.18	100.00
Migration status					
Non-mover	67.25	5.35	22.89	4.52	100.00
South African migrant	59.25	5.20	30.18	5.36	100.00
Immigrant	61.70	4.01	29.22	5.08	100.00
Marital status					
Single	69.28	7.40	17.95	5.37	100.00
Currently married	57.06	4.18	33.58	5.17	100.00
Number of children ever born					
	1.57	1.76	2.04	1.69	1.71
Age					
25-29	68.68	6.36	19.20	5.75	100.00
30-39	64.11	5.27	25.17	5.44	100.00
40-49	58.70	4.72	31.52	5.06	100.00
50-54	47.34	4.07	44.03	4.56	100.00
Urban Magisterial District					
No	51.86	6.31	37.08	4.74	100.00
Yes	61.59	4.92	28.20	5.29	100.00
Former Homeland District					
No	60.61	5.03	29.18	5.18	100.00
Yes	55.06	7.19	30.68	7.08	100.00

Table 7.1. Weighted Percent Distribution and Percent Female Share of Employed Individuals Ages 25-54 Years by Major Occupational Groups, South Africa, 2001

Occupational Category	Percent Total Distribution	Men (%)	Women (%)	Female Share of Occupation
Legislators; senior officials and managers	5.9	7.2	4.1	29.5
Professionals	7.8	7.6	8.0	43.2
Technicians and associate professionals	10.9	8.2	14.6	56.4
Clerks	11.5	7.2	17.4	63.8
Service workers; shop and market sales workers	10.7	12.0	8.8	34.8
Skilled agriculture and fishery	2.7	3.4	1.7	26.1
Craft and related trades workers	13.3	19.5	4.8	15.3
Plant and machine operators and assemblers	9.8	14.7	3.1	13.2
Elementary occupations	27.5	20.2	37.5	57.4
Total	100.0	100.0	100.0	43.0

Index of Dissimilarity (1-digit)	34.5%
Index of Dissimilarity (2-digit)	43.7%
Index of Dissimilarity (3-digit)	51.0%

Source: Author's calculations using the South African Census, 2001

Figure 7.1: Horizontal Segregation Across Nine Major Occupational Group for Employed Men and Women Ages 25-34, South Africa, 2001

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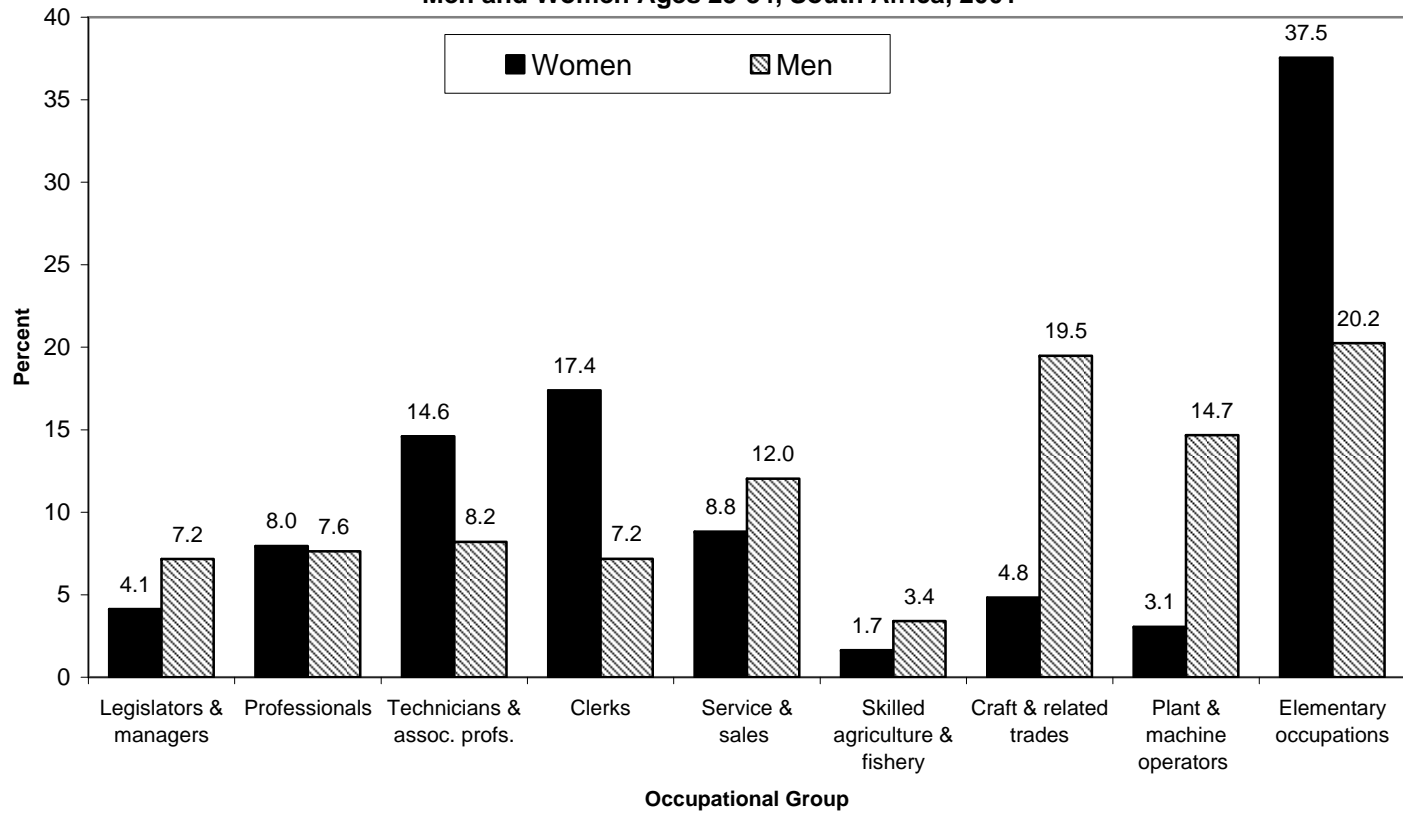
Table 7.2. Indices of Dissimilarity (in descending order) and Size Standardized Indices for South Africa and All Provinces, 2001

Province	Index of Dissimilarity (2-DIGIT)	Size Standardized Index of Dissimilarity (2-DIGIT)
Free State	53.9	46.0
North West	53.5	48.5
Mpumalanga	48.5	43.3
Northern Cape	47.8	37.5
Gauteng	46.4	39.1
Eastern Cape	45.3	42.6
Rural—Whole Country	44.5	56.5
Whole Country	**43.7**	**37.3**
Urban—Whole Country	43.6	38.2
Limpopo (Northern Province)	42.6	39.5
Kwazulu-Natal	40.7	34.8
Western Cape	37.2	33.3

Source: Author's calculations using the South African Census, 2001

Table 7.3. Indices of Dissimilarity (Using 2-digit Classification) by Gender and Race for Individuals Ages 25-54 years, 2001

Race	Occupational gender segregation (women vs. men)		Occupational racial segregation (from whites of same gender)	
	Within race	*Versus white men*	*Women*	*Men*
White	41.7	41.7	--	--
Indian-Asian	31.0	46.0	19.7	23.5
Coloureds	37.6	61.8	47.0	46.6
Africans	48.5	66.8	58.0	51.2

Source: Author's calculations using the South African Census, 2001

Table 7.4. Occupational Sex Segregation by Gender and Race across Select Provinces for Individuals Ages 25-54 years, 2001

Race	Selected Provinces							
	Free State (Highest ID: 53.9)		Whole Country (43.7)		Gauteng (Mid-range ID: 46.4)		Western Cape (Lowest ID: 37.2)	
	Gender	Racial	Gender	Racial	Gender	Racial	Gender	Racial
White	46.8	--	41.1	--	40.1	--	38.8	--
Indian-Asian	NA*	NA*	31.3	19.1	32.2	9.8	34.7	16.2
Coloureds	51.6	42.4	36.5	46.0	36.6	25.4	33.7	49.2
Africans	54.7	62.7	47.9	57.2	45.8	55.1	46.2	63.2

Source: Author's calculations using the South African Census, 2001
NA*: Number of individuals too low to calculate the ID statistic

Table 7.5. Percent Distribution of Employed Individuals Ages 25-54 Years across Major Occupational Groups by Race and Sex, 2001

Occupation al Category (1 digit)	Legislators and Managers	Professional	Technicians and Associate Professionals	Clerks	Service and Sales Workers	Skilled Ag/Fishery Workers	Craft and Related Trades Workers	Plant and Machine Operators	Elementary Occupations	
TOTAL	5.6	7.6	10.9	12.2	11.2	2.4	13.3	9.5	27.4	100
Black Africans										
Total	2.5	4.6	9.2	9.0	11.5	2.7	14.4	11.6	34.5	100
Men	3.0	4.3	6.5	6.9	13.2	3.2	20.9	17.9	24.2	100
Women	1.6	4.9	13.1	12.0	9.2	1.9	5.5	2.9	48.9	100
Coloureds										
Total	3.9	4.3	9.7	14.9	9.5	2.3	14.4	8.9	32.2	100
Men	4.6	4.3	7.5	9.1	9.4	3.1	21.5	11.2	29.2	100
Women	3.0	4.4	12.1	21.5	9.7	1.4	6.3	6.1	35.5	100
Asian- Indian										
Total	12.5	13.1	13.6	22.9	12.5	0.3	10.8	9.00	5.3	100
Men	15.3	12.7	12.3	15.5	13.8	0.4	14.2	10.2	5.4	100
Women	8.2	13.7	15.5	34.4	10.1	0.1	5.4	7.1	5.1	100
White										
Total	16.1	20.0	17.0	19.6	11.2	2.0	9.2	2.2	2.8	100
Men	20.8	20.6	14.7	6.8	12.3	3.0	15.3	3.6	3.0	100
Women	11.0	19.2	19.8	34.6	10.0	0.7	1.7	0.6	2.6	100

Source: Author's calculations using the South African Census, 2001

Table 7.6. Representation Ratios for Employed Women Ages 25-54 Years across Major Occupational Groups by Province, South Africa, 2001

Occupational Category (1 digit)	Legislators and Managers	Professional	Tech and Associate Profs	Clerk	Service and Sales Workers	Skilled Ag/Fish Workers	Craft and Related Trades Workers	Plant and Machine Operators	Elementary Occupations
Free State	0.60	0.67	0.88	0.80	0.89	0.87	**1.31**	0.88	**1.26**
Black-African	0.72	0.62	0.89	0.79	0.82	0.69	**1.37**	**1.13**	**1.12**
White	0.71	0.89	0.88	**1.15**	**1.19**	**2.30**	0.79	0.70	**1.31**
North West	0.71	0.77	**1.04**	0.88	**1.06**	0.84	**1.09**	0.70	**1.13**
Mpumalanga	0.64	0.66	0.88	0.78	0.97	**2.26**	0.88	0.52	**1.28**
Northern Cape	0.82	0.59	0.80	0.93	0.94	**1.51**	0.69	0.41	**1.30**
Gauteng	**1.35**	**1.24**	0.91	**1.22**	**1.09**	0.30	0.83	0.59	0.91
Eastern Cape	0.79	**1.12**	**1.36**	0.90	0.92	0.87	0.92	**1.01**	0.93
Limpopo	0.55	0.95	**1.15**	0.74	0.92	**2.02**	0.90	0.39	**1.17**
Kwazulu-Natal	0.89	0.92	**1.11**	0.90	0.87	**1.54**	**1.34**	**1.90**	0.93
Western Cape	**1.25**	**1.01**	0.89	**1.10**	**1.09**	0.90	0.99	**1.56**	0.91
Black-African	**1.05**	0.77	0.53	0.77	**1.39**	0.63	0.70	0.67	**1.20**
Coloured	0.89	0.87	0.94	0.88	0.97	**1.26**	**1.01**	**1.19**	**1.08**
Asian-India	**1.76**	**1.11**	**1.00**	0.89	**1.19**	0.00	0.49	0.20s	**1.59**
White	**1.08**	**1.05**	**1.00**	0.91	**1.09**	0.96	0.97	0.89	**1.11**

Source: Author's calculations using the South African Census, 2001
Note: Representation ratios values above 1.0 have been bolded.

Table 7.7. An Example of Vertical Sex Segregation across Different Occupational Groupings
(Using the 1-, 2- and 3-digit coding), South Africa, 2001

	Women's Percent Share of Total Employed		
	1-digit	2-digit	3-digit
1. Professional Workers (2)	43.2		
2. Teaching Professionals (23)		61.0	
3. College/Higher Education Teachers (231)			49.2
Secondary School Teachers (232)			61.9
Primary and Pre-Primary Teachers (233)			65.9
1. Professional Workers (2)	43.2		
2. Life Science and Health Professionals (22)		55.6	
3. Life Science Professionals (221)			36.1
Health Professionals (except Nursing) (222)			38.2
Nursing and Midwifery (223)			90.0

Source: Author's calculations using the South African Census, 2001

Table 7.8. An Example of Vertical Sex Segregation across Different Occupational Groupings by Race (Using the 1-, 2- and 3-digit coding), South Africa, 2001

	Women's Percent Share of Total Employed			
	Total	1-digit	2-digit	3-digit
Black-Africans				
Share of labor force	*41.0*			
1. Professional Workers (2)		43.7		
2. Teaching Professionals (23)			58.3	
3. College/Higher Education Teachers (231)				42.5
Secondary School Teachers (232)				59.6
Primary and Pre-Primary Teachers (233)				62.2
Coloureds				
Share of labor force	*46.3*			
1. Professional Workers (2)		46.6		
2. Teaching Professionals (23)			53.6	
3. College/Higher Education Teachers (231)				48.1
Secondary School Teachers (232)				53.6
Primary and Pre-Primary Teachers (233)				58.2
Asian-Indians				
Share of labor force	*37.8*			
1. Professional Workers (2)		39.5		
2. Teaching Professionals (23)			57.6	
3. College/Higher Education Teachers (231)				42.5
Secondary School Teachers (232)				55.7
Primary and Pre-Primary Teachers (233)				63.6
Whites				
Share of labor force	*44.3*			
1. Professional Workers (2)		42.7		
2. Teaching Professionals (23)			68.9	
3. College/Higher Education Teachers (231)				55.2
Secondary School Teachers (232)				75.0
Primary and Pre-Primary Teachers (233)				78.0

Source: Author's calculations using the South African Census, 2001

Table 7.9 Ten Largest Occupations For Employed Women Ages 25-54, South Africa, 2001

Detailed 2001 Occupational Title and Code	% of Employed Females in Occupation	% Female in Occupation
Domestic and Related Helpers; Cleaners and Launderers (913)	26.7	83.7
Other Office Clerks and Clerks NEC except Cust Services Clerks (419)	5.3	66.6
Primary Education Teaching Associate Professionals (331)	4.1	68.0
Agricultural; Fishery and Related Labourers (921)	4.0	31.6
Secretaries and Keyboard-Operating Clerks (411)	3.9	63.2
Shop Salespersons and Demonstrators (522)	3.7	41.0
Cashiers; Tellers and Related Clerks (421)	3.6	74.2
Nursing and Midwifery Associate Professionals (323)	3.3	92.4
Teaching Associate Professionals NEC	2.3	72.4
Manufacturing Labourers (932)	2.4	40.0
Total (%)	**59.0%**	

Source: Author's calculations using the South African Census, 2001

Table 7.10 Ten Largest Occupations for Employed Men Ages 25-54, South Africa, 2001

Detailed 2001 Occupational Title and Code	% of Employed Males in Occupation	% Female in Occupation
Motor Vehicle Drivers and Related Workers (832)	8.3	2.7
Protective Services Workers (516)	6.6	11.0
Agricultural; Fishery and Related Labourers (921)	6.3	31.6
Mining and Construction Labourers (931)	4.9	24.5
Miners; Shot-Firers; Stone Cutters and Carvers (711)	4.3	13.5
Shop Salespersons and Demonstrators (522)	3.9	41.0
Domestic and Related Helpers; Cleaners and Launderers (913)	3.8	83.7
Building Frame and Related Trades Workers (712)	3.7	4.1
General Managers (131)	3.3	27.4
Building Finishers and Related Trade Workers (932)	2.6	5.1
Total (%)	**47.6%**	

Source: Author's calculations using the South African Census, 2001

Table 7.11 Top 10 Occupations for Employed Black Africans, Coloureds, Indian-Asians, and Whites Ages 25-54 by Sex, 2001

Black African Women	Percent	Black African Men	Percent
Domestic and Related Helpers (913)	36.6	Motor Vehicle Drivers and Related Workers (832)	10.3
Primary Education Teaching Assoc Profs (331)	4.7	Protective Services Workers (516)	8.1
Cashiers; Tellers and Related Clerks (421)	4.2	Agricultural; Fishery, Related Labourers (921)	6.2
Agricultural; Fishery, Related Labourers (921)	3.8	Mining and Construction Labourers (931)	6.0
Shop Salespersons and Demonstrators (521)	3.3	Domestic and Related Helpers (913)	5.3
Nursing and Midwifery Assoc Profs (323)	3.3	Miners, Shot-Firers, Stone Cutters, Carvers (711)	5.1
Clerks NEC except Cust Serv Clerks (419)	3.0	Building Frame and Related Trades Workers (712)	4.4
Housekeeping/Restaurant Workers (512)	2.9	Manufacturing Labourers (932)	3.2
Manufacturing Labourers (932)	2.7	Shop Salespersons and Demonstrators (521)	3.1
Teaching Associates NEC (339)	2.4	Building Finisher (713)	2.7
Total	**66.9%**	**Total**	**54.4%**

Coloured Women	Percent	Coloured Men	Percent
Domestic and Related Helpers (913)	17.0	Agricultural; Fishery, Related Labourers (921)	12.6
Agricultural; Fishery, Related Labourers (921)	9.2	Mining and Construction Labourers (931)	7.9
Clerks NEC except Cust Serv Clerks (419)	6.1	Motor Vehicle Drivers and Related Workers (832)	5.9
Cashiers; Tellers and Related Clerks (421)	5.0	Protective Services Workers (516)	5.2
Secretaries, Keyboard-Operating Clerks (411)	4.5	Building Frame and Related Trades Workers (712)	5.0
Shop Salespersons and Demonstrators (521)	4.1	Manufacturing Labourers (932)	3.4
Textile, etc Machine Operators (826)	4.1	Shop Salespersons and Demonstrators (521)	3.2
Manufacturing Labourers (932)	4.1	Miners, Shot-Firers, Stone Cutters, Carvers (711)	2.9
Mining and Construction Labourers (931)	3.8	Building Finisher (713)	2.8
Nursing and Midwifery Assoc Profs (323)	3.6	Clerks NEC except Cust Serv Clerks (419)	2.6
Total	**61.5%**	**Total**	**51.5%**

Table 7.11 (contd.)

Asian-Indian Women	Percent	Asian-Indian Men	Percent
Clerks NEC except Cust Serv Clerks (419)	9.8	Shop Salespersons and Demonstrators (521)	9.8
Shop Salespersons and Demonstrators (521)	7.2	General Managers (131)	7.5
Secretaries, Keyboard-Operating Clerks (411)	7.1	Motor Vehicle Drivers and Related Workers (832)	5.4
Cashiers; Tellers and Related Clerks (421)	5.9	Clerks NEC except Cust Serv Clerks (419)	5.0
Textile, etc Machine Operators (826)	5.8	Other Managers/Department Managers (123)	4.5
Business Professionals (241)	4.6	Secretaries, Keyboard-Operating Clerks (411)	3.9
Numerical Clerks (412)	4.5	Finance and Sales Associate Professionals (341)	3.6
Client Information Clerks (422)	3.6	Business Professionals (241)	3.4
Other Managers/Department Managers (123)	3.4	Machinery Mechanics and Fitters (723)	3.0
General Managers (131)	3.1	Natural and Engineering Science Technicians (311)	2.9
Total	**55.0%**	**Total**	**49.0%**

White Women	Percent	White Men	Percent
Clerks NEC except Cust Serv Clerks (419)	12.2	General Managers (131)	9.6
Secretaries, Keyboard-Operating Clerks (411)	10.2	Shop Salespersons and Demonstrators (522)	6.9
Business Professionals (241)	6.9	Other Managers/Department Managers (123)	6.1
Shop Salespersons and Demonstrators (522)	5.1	Business Professionals (241)	6.0
General Managers (131)	4.4	Architects, Engineers, Related Professionals (214)	4.1
Numerical Clerks (412)	4.3	Natural and Engineering Science Technicians (311)	4.0
Administrative Associate Professionals (343)	4.2	Protective Services Workers (516)	3.9
Other Managers/Department Managers (123)	4.1	Machinery Mechanics and Fitters (723)	3.7
Finance and Sales Assoc. Professionals (341)	3.7	Finance and Sales Associate Professionals (341)	3.6
Client Information Clerks (422)	3.1	Miners, Shot-Firers, Stone Cutters, Carvers (711)	2.5
Total	**58.2%**	**Total**	**50.4%**

Source: Author's calculations using the South African Census, 2001

Table 8.1   Distribution of Select Independent Variables by Occupational Type for Individuals Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated	Blue-collar gender-integrated	Blue-collar female-dominated
Individual-level Variables						
Gender						
Men	12.31	17.29	6.15	48.67	10.66	4.93
Women	4.89	22.28	23.28	8.98	8.80	31.78
Race						
Black African	5.15	13.50	12.27	36.39	11.19	21.50
Men	6.97	12.33	6.38	55.93	12.08	6.31
Women	2.65	15.10	20.35	9.60	9.97	42.32
Coloured	7.15	16.35	14.20	31.64	16.52	14.14
Men	9.91	13.51	6.18	48.40	17.98	4.03
Women	3.99	19.60	23.39	12.45	14.85	25.71
Asian-Indian	18.18	35.99	17.36	19.06	3.72	5.69
Men	23.24	34.37	9.36	26.29	3.96	2.78
Women	9.91	38.64	30.44	7.23	3.32	10.45
White	23.39	40.15	16.75	16.53	1.45	1.73
Men	32.08	34.94	4.36	26.21	1.72	0.68
Women	12.57	46.65	32.18	4.46	1.11	3.03
Region						
Rural	4.25	10.48	10.90	36.48	20.00	17.90
Urban	10.67	22.27	14.33	30.06	6.65	16.01

Table 8.1 (contd.)

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated	Blue-collar gender-integrated	Blue-collar female-dominated
Human Capital						
Education: All men and women						
No schooling (ref.)	2.63	6.70	4.26	38.85	19.50	28.07
In or completed primary	2.46	6.46	2.16	41.28	18.12	29.53
In secondary	6.40	14.87	8.88	39.28	10.59	19.98
Completed secondary	13.09	26.50	21.22	27.29	4.68	7.22
Tertiary and above	19.54	39.52	28.78	8.97	1.08	2.11
Education: All men						
No schooling (ref.)	3.61	6.21	2.44	58.47	20.78	8.47
In or completed primary	3.35	6.05	1.31	61.79	19.36	8.15
In secondary	8.44	12.81	3.46	59.17	10.69	5.42
Completed secondary	17.58	23.61	9.44	41.61	5.05	2.70
Tertiary and above	29.32	38.52	15.12	14.80	1.35	0.89
Education: All women						
No schooling (ref.)	1.24	7.39	6.82	11.17	17.68	55.69
In or completed primary	1.14	7.07	3.42	10.84	16.28	61.26
In secondary	3.57	17.70	16.38	11.77	10.46	40.12
Completed secondary	7.11	30.34	36.91	8.20	4.19	13.24
Tertiary and above	9.38	40.55	42.97	2.90	0.80	3.39
Family Status						
Average number of children	1.81	1.86	2.00	2.38	2.62	2.67

Table 8.2. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Reference: Blue-collar female-dominated occupations) for All Men and Women Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated	Blue-collar gender-integrated
Individual-level variables					
Sex *(Female is omitted)*					
Male	2.689***	1.548***	0.391***	3.515***	2.250***
	(0.022)	(0.016)	(0.018)	(0.017)	(0.018)
Race *(Black African is omitted)*					
Coloured	1.244***	1.051***	1.155***	0.745***	0.658***
	(0.026)	(0.021)	(0.022)	(0.020)	(0.023)
Asian-Indian	2.164***	1.979***	1.445***	0.581***	0.628***
	(0.041)	(0.038)	(0.040)	(0.040)	(0.051)
White	3.145***	2.773***	1.997***	1.749***	0.757***
	(0.029)	(0.027)	(0.028)	(0.028)	(0.038)
Education *(No schooling is omitted)*					
Primary	-0.188***	-0.123***	-0.671***	-0.019	-0.171***
	(0.035)	(0.035)	(0.031)	(0.016)	(0.018)
In secondary	0.799***	0.795***	0.941***	0.367***	-0.177**
	(0.032)	(0.022)	(0.026)	(0.017)	(0.018)
Secondary completed	2.190***	2.081***	2.792***	0.823***	-0.114***
	(0.033)	(0.024)	(0.027)	(0.020)	(0.023)
Diploma/Certificate	3.347***	2.991***	4.284***	1.052***	-0.291***
	(0.040)	(.032)	(0.034)	(0.031)	(0.044)
BA degree and above	4.322***	4.554***	3.665***	0.830***	-0.068
	(0.058)	(0.052)	(0.055)	(0.056)	(0.081)
Migration status *(South African migrant is omitted)*					
Non-mover	0.052*	-0.010	-0.090***	-0.095**	-0.036
	(0.021)	(0.018)	(0.019)	(0.017)	(0.020)
Immigrant	0.291***	0.240***	-0.316	0.320***	0.486***
	(0.038)	(0.035)	(0.040)	(0.033)	(0.038)
Marital status *(Single is omitted)*					
Currently married	0.516***	0.360***	0.448***	0.293***	-0.070***
	(0.014)	(0.011)	(0.012)	(0.011)	(0.013)
Number of children ever born					
	-0.108***	-0.089***	-0.117***	-0.051***	0.014**
	(0.008)	(0.005)	(0.005)	(0.005)	(0.005)
Child under age 5 present					
Yes	0.125*	0.134***	0.179***	0.130***	0.214***
	(0.025)	(0.016)	(0.016)	(0.019)	(0.018)
Possible childcare help available					
Yes	-0.026	-0.007	0.154***	0.225***	-0.022
	(0.013)	(0.011)	(0.016)	(0.017)	(0.012)

(over)

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Table 8.2 (contd.)

	White-collar male-dominated	*White-collar gender-integrated*	*White-collar female-dominated*	*Blue-collar male-dominated*	*Blue-collar gender-integrated*
Age	0.116***	0.066***	0.153***	0.055***	-0.063***
	(0.008)	(0.007)	(0.007)	(0.006)	(0.007)
Age-squared	-0.001***	-0.001***	-0.002***	-0.001***	0.000***
	0.000	(0.000)	(0.000)	(0.000)	(0.000)

Magisterial District variables

Urban Magisterial District					
Yes	0.222**	0.141*	-0.061	0.140*	-0.182*
	(0.071)	(0.065)	(0.062)	(0.058)	(0.075)
Former Homeland District					
Yes	0.549***	0.562***	0.695***	0.540***	0.117***
	(0.095)	(0.087)	(0.082)	(0.078)	(0.100)
Percent in Service Sector					
	0.003	0.006*	0.001	-0.015***	-0.035***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)
Gender Ratio of Primary School Completion					
	0.405	0.167	-0.587*	0.183	-0.161
	(0.330)	(0.294)	(0.281)	(0.261)	(0.325)
Female Share of Labor Force					
	0.016*	0.021**	0.038***	0.020**	0.044***
	(0.008)	(0.007)	(0.007)	(0.007)	(0.008)
Intercept	-4.551***	-2.671***	-2.606***	-2.231***	-1.201***
	(0.067)	(0.057)	(0.057)	(0.051)	(0.063)

Notes: * significant at $p < 0.05$　　** significant at $p < 0.01$　　*** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated.*
Standard errors in parentheses

Table 8.3. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated occupations) for Women Ages 25-54, South Africa, 2001

	White-collar male-dominated	*White-collar gender-integrated*	*White-collar female-dominated*	*Blue-collar male-dominated*	*Blue-collar gender-integrated*
Individual-level variables					
Race *(Black African is omitted)*					
Coloured	1.295***	1.191***	1.273***	0.925***	0.663***
	(0.041)	(0.026)	(0.026)	(0.029)	(0.033)
Asian-Indian	2.536***	2.212***	1.733***	1.111***	0.763***
	(0.060)	(0.048)	(0.049)	(0.060)	(0.076)
White	3.235***	2.937***	2.299***	1.705***	0.620***
	(0.039)	(0.032)	(0.032)	(0.039)	(0.056)
Education *(No schooling is omitted)*					
Primary	-0.280***	-0.188***	-0.761***	-0.136***	-0.169***
	(0.075)	(0.033)	(0.038)	(0.027)	(0.025)
In secondary	0.783***	0.749***	0.980***	0.277***	-0.095***
	(0.065)	(0.030)	(0.031)	(0.027)	(0.025)
Secondary completed	2.238***	2.090***	2.841***	0.884***	0.021
	(0.065)	(0.031)	(0.032)	(0.031)	(0.033)
Diploma/Certificate	3.459***	3.117***	4.345***	1.191***	-0.257***
	(0.070)	(.040)	(0.039)	(0.046)	(0.064)
BA degree and above	4.605***	4.681***	3.794***	1.355***	-0.225
	(0.086)	(0.063)	(0.065)	(0.083)	(0.131)
Migration status *(South African migrant is omitted)*					
Non-mover	0.045	-0.016	-0.069***	-0.072**	-0.127***
	(0.033)	(0.022)	(0.022)	(0.026)	(0.028)
Immigrant	0.451***	0.283***	-0.105*	0.195***	0.835***
	(0.057)	(0.049)	(0.051)	(0.059)	(0.060)
Marital status *(Single is omitted)*					
Currently married	0.313***	0.321***	0.439***	0.086***	-0.051***
	(0.023)	(0.015)	(0.015)	(0.017)	(0.018)
Number of children ever born					
	-0.065***	-0.072***	-0.109***	-0.008	0.028**
	(0.009)	(0.005)	(0.005)	(0.006)	(0.005)
Child under age 5 present					
Yes	0.056*	0.074***	0.177***	0.126***	0.122***
	(0.027)	(0.017)	(0.017)	(0.019)	(0.019)
Possible childcare help available					
Yes	-0.014	0.043***	0.063***	0.060**	-0.019**
	(0.023)	(0.015)	(0.015)	(0.017)	(0.018)
Age	0.096***	0.066***	0.155***	-0.026*	-0.084***
	(0.014)	(0.009)	(0.009)	(0.010)	(0.011)
Age-squared	-0.001***	-0.001***	-0.002***	0.000	0.001***
	0.000	(0.000)	(0.000)	(0.000)	(0.000)

(over)

Table 8.3 (contd.)

	White-collar male-dominated	*White-collar gender-integrated*	*White-collar female-dominated*	*Blue-collar male-dominated*	*Blue-collar gender-integrated*
Magisterial District variables					
Urban Magisterial District					
Yes	0.037	0.032	-0.126*	0.056	-0.023
	(0.077)	(0.065)	(0.060)	(0.073)	(0.109)
Former Homeland District					
Yes	0.423***	0.530***	0.639***	0.537***	0.701***
	(0.101)	(0.086)	(0.086)	(0.097)	(0.145)
Percent in Service Sector					
	0.008**	0.007**	0.004*	-0.017***	-0.032***
	(0.003)	(0.002)	(0.002)	(0.003)	(0.004)
Gender Ratio of Primary School Completion					
	0.371	-0.039	-0.854**	0.263	-0.311
	(0.389)	(0.306)	(0.302)	(0.341)	(0.484)
Female Share of Labor Force					
	0.011	0.017*	0.031***	0.041***	0.042**
	(0.009)	(0.007)	(0.007)	(0.341)	(0.012)
Intercept	-4.477***	-2.619***	-2.683***	-2.017***	-1.545***
	(0.087)	(0.058)	(0.058)	(0.062)	(0.087)

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated*.
Standard errors in parentheses

Table 9.1 Distribution of Select Independent variables by Occupational Type for Individuals Ages 25-54 by Race and Sex, South Africa, 2001

Black Africans	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated	Blue-collar gender-integrated/fem dominated	Total
Education: All Black Africans						
No schooling (ref.)	6.24	6.33	4.46	14.35	18.86	100.0
In or completed primary	11.53	11.56	4.10	29.38	35.50	100.0
In secondary	25.89	26.04	16.79	34.14	32.89	100.0
Completed secondary	31.03	28.90	33.94	19.01	11.13	100.0
Tertiary and above	25.31	27.17	40.72	3.11	1.61	100.0
Education: All Black men						
No schooling (ref.)	3.39	6.06	2.46	60.04	28.04	100.0
In or completed primary	3.26	6.03	1.29	63.85	25.57	100.0
In secondary	5.93	10.62	3.27	62.32	17.86	100.0
Completed secondary	10.52	17.83	10.40	50.66	10.59	100.0
Tertiary and above	18.15	32.75	27.90	17.91	3.29	100.0
Education: All Black women						
No schooling (ref.)	1.11	7.18	6.60	11.22	73.90	100.0
In or completed primary	1.00	6.60	3.14	10.10	79.16	100.0
In secondary	2.30	13.20	11.93	11.46	61.11	100.0
Completed secondary	4.08	21.43	35.46	10.25	28.78	100.0
Tertiary and above	5.37	30.52	55.63	2.89	5.59	100.0

Table 9.1 (contd.)	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated	Blue-collar gender-integrated/female dominated	Total
Coloureds						
Education: All Coloureds						
No schooling (ref.)	1.24	1.33	1.05	4.61	10.39	100.0
In or completed primary	6.78	8.58	3.77	25.77	43.72	100.0
In secondary	35.79	38.10	31.70	48.26	37.52	100.0
Completed secondary	37.75	34.68	43.48	18.55	7.48	100.0
Tertiary and above	18.45	17.31	20.01	2.81	0.89	100.0
Education: All Coloured men						
No schooling (ref.)	2.55	3.64	1.18	41.82	50.80	100.0
In or completed primary	2.76	4.61	1.15	50.98	40.50	100.0
In secondary	8.45	12.04	3.52	57.79	18.20	100.0
Completed secondary	16.92	21.46	12.81	40.48	8.33	100.0
Tertiary and above	25.10	33.46	20.34	18.70	2.40	100.0
Education: All Coloured women						
No schooling (ref.)	0.62	5.14	5.26	10.64	78.34	100.0
In or completed primary	1.14	7.33	3.51	13.94	74.08	100.0
In secondary	4.01	19.60	20.14	15.43	40.83	100.0
Completed secondary	6.33	28.85	43.09	9.70	12.04	100.0
Tertiary and above	7.26	35.95	49.38	3.12	4.30	100.0
Total	7.15	16.35	14.20	31.64	30.66	100.0
Women	3.99	19.60	23.39	12.45	40.56	100.0
Men	9.91	13.51	6.18	48.40	22.01	100.0

Table 9.1 (contd.)	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated	Blue-collar gender-integrated/female dominated	
Asian-Indians						Total
Education: All Indians						
No schooling (ref.)	1.02	0.99	1.00	1.97	3.12	100.0
In or completed primary	2.39	2.77	1.83	7.83	15.30	100.0
In secondary	22.36	24.17	20.22	46.01	50.73	100.0
Completed secondary	45.18	40.06	54.42	36.26	25.76	100.0
Tertiary and above	29.05	32.01	22.53	7.92	5.10	100.0
Education: All Indian men						
No schooling (ref.)	17.10	28.50	8.81	34.20	11.40	100.0
In or completed primary	11.93	20.61	4.26	46.17	17.04	100.0
In secondary	16.64	27.50	6.25	38.93	10.67	100.0
Completed secondary	25.14	33.98	12.32	23.34	5.22	100.0
Tertiary and above	31.35	47.86	8.94	9.90	1.96	100.0
Education: All Indian women						
No schooling (ref.)	8.45	21.83	17.61	17.61	34.51	100.0
In or completed primary	6.42	22.02	9.54	16.51	45.50	100.0
In secondary	8.27	32.17	21.63	12.40	25.53	100.0
Completed secondary	10.51	36.29	41.24	5.01	6.96	100.0
Tertiary and above	11.77	54.85	29.01	2.03	2.34	100.0
Total	18.18	35.99	17.36	19.06	9.41	100.0
Women	9.91	38.64	30.44	7.23	13.77	100.0
Men	23.24	34.37	9.36	26.29	6.74	100.0

Table 9.1 (contd.)	White-collar	White-collar	White-collar	Blue-collar	Blue-collar	

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Whites	male-dominated	gender-integrated	female-dominated	male-dominated	gender-integrated/female dominated	Total
Education: All Whites						
No schooling (ref.)	0.44	0.38	0.52	0.91	2.11	100.0
In or completed primary	0.40	0.46	0.53	1.27	5.20	100.0
In secondary	12.12	12.40	17.63	33.67	31.58	100.0
Completed secondary	38.33	39.84	48.88	44.68	38.34	100.0
Tertiary and above	48.72	46.91	32.45	19.47	22.77	100.0
Education: All White men						
No schooling (ref.)	23.01	24.54	4.91	41.72	5.83	100.0
In or completed primary	16.51	22.49	3.83	44.26	12.92	100.0
In secondary	21.04	21.78	3.41	49.67	4.10	100.0
Completed secondary	30.02	33.29	5.39	28.81	2.49	100.0
Tertiary and above	39.68	43.09	3.77	12.17	1.29	100.0
Education: All White women						
No schooling (ref.)	12.30	31.35	29.37	7.14	19.84	100.0
In or completed primary	7.83	27.83	21.74	8.99	33.62	100.0
In secondary	9.54	38.83	36.81	6.59	8.24	100.0
Completed secondary	11.65	44.10	35.94	4.90	3.41	100.0
Tertiary and above	14.92	53.23	26.36	2.99	2.50	100.0
Total	23.39	40.15	16.75	16.53	3.18	100.0
Women	12.57	46.65	32.18	4.46	4.14	100.0
Men	32.08	34.94	4.36	26.21	2.40	100.0

Table 9.2. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated/gender-integrated occupations) for All Black Africans Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Individual-level variables				
Sex *(Women is omitted)*				
Men	1.830***	0.752***	-0.239***	2.724***
	0.032	0.018	0.020	0.018
Education *(In secondary school is omitted)*				
No schooling	-0.882***	-0.795***	-0.780***	-0.382***
	0.034	0.022	0.027	0.015
Primary	-0.938***	-0.839***	-1.406***	-0.331***
	0.027	0.018	0.027	0.012
Secondary completed	1.336***	1.180***	1.983***	0.480***
	0.023	0.016	0.018	0.014
Diploma/Certificate	2.691***	2.234***	3.937***	0.706***
	0.034	0.028	0.028	0.030
BA degree and above	3.894***	4.284***	3.149***	0.497***
	0.060	0.055	0.059	0.067
Migration status *(South African migrant is omitted)*				
Non-mover	0.104***	-0.026	-0.105***	-0.078***
	0.027	0.020	0.022	0.017
Immigrant	-0.225***	-0.070	-0.712***	0.077**
	0.048	0.037	0.057	0.027
Marital status *(Single is omitted)*				
Currently married	0.602***	0.371***	0.487***	0.326***
	0.018	0.013	0.014	0.010
Number of children ever born				
	-0.112***	-0.093***	-0.126***	-0.060***
	0.011	0.005	0.006	0.005
Child under age 5 present				
Yes	0.128**	0.159***	0.216***	0.259***
	0.035	0.018	0.018	0.019
Possible childcare help available				
Yes	0.014	0.040**	0.021	0.000
	0.017	0.012	0.014	0.010
Age	0.160***	0.104***	0.244***	0.098***
	0.011	0.008	0.009	0.006
Age-squared	-0.002***	-0.001***	-0.003***	-0.001***
	0.000	0.000	0.000	0.000

(over)

Table 9.2 (contd.)

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Magisterial District variables				
Urban Magisterial District				
Yes	0.273***	0.148**	-0.077	0.256***
	0.069	0.056	0.059	0.058
Former Homeland District				
Yes	0.478***	0.436***	0.500***	0.492***
	0.088	0.072	0.074	0.076
Percent in Service Sector				
	0.018***	0.020***	0.012***	0.004
	0.003	0.002	0.002	0.002
Gender Ratio of Primary School Completion				
	0.565	0.207	-0.871**	0.319
	0.336	0.265	0.279	0.265
Female Share of Labor Force				
	-0.023**	-0.009	0.019**	-0.009
	0.008	0.006	0.007	0.007
Intercept	-3.968***	-2.133***	-2.160***	-2.267***
	0.066	0.050	0.053	0.050

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated/gender-integrated.*
Standard errors below coefficients

Table 9.3. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated/gender-integrated occupations) for Black African Women Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Individual-level variables				
Education *(In secondary school is omitted)*				
No schooling	-0.812***	-0.687***	-0.766***	-0.244***
	0.074	0.032	0.033	0.028
Primary	-1.004***	-0.831***	-1.498***	-0.367***
	0.061	0.026	0.03	0.023
Secondary completed	1.372***	1.196***	2.022***	0.597***
	0.044	0.022	0.022	0.026
Diploma/Certificate	2.778***	2.334***	3.951***	0.926***
	0.056	0.036	0.033	0.050
BA degree and above	4.228***	4.504***	3.273***	0.943***
	0.085	0.070	0.074	0.117
Migration status *(South African migrant is omitted)*				
Non-mover	0.121*	-0.031	-0.063*	-0.033
	0.051	0.028	0.027	0.031
Immigrant	0.348**	0.092	-0.710***	-0.110
	0.105	0.061	0.083	0.071
Marital status *(Single is omitted)*				
Currently married	0.340***	0.279***	0.464***	0.048*
	0.034	0.018	0.017	0.019
Number of children ever born				
	-0.051***	-0.062***	-0.123***	-0.010
	0.012	0.006	0.006	0.006
Child under age 5 present				
Yes	0.022	0.049*	0.193***	0.112***
	0.038	0.019	0.019	0.021
Possible childcare help available				
Yes	-0.011	0.054**	0.043*	0.033
	0.034	0.018	0.018	0.019
Age	0.066**	0.086***	0.236***	0.003
	0.021	0.011	0.011	0.012
Age-squared	-0.001**	-0.001***	-0.003***	0.000
	0.000	0.000	0.000	0.000

Table 9.3 (contd.)

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Magisterial District variables				
Urban Magisterial District				
Yes	0.028	-0.038	-0.201**	0.015
	0.076	0.054	0.060	0.063
Former Homeland District				
Yes	0.286**	0.317***	0.374***	0.347***
	0.091	0.067	0.074	0.080
Percent in Service Sector				
	0.015***	0.014***	0.009***	-0.008**
	0.003	0.002	0.002	0.002
Gender Ratio of Primary School Completion				
	0.645	0.041	-1.100***	0.501
	0.427	0.275	0.294	0.320
Female Share of Labor Force				
	-0.025**	-0.014*	0.009	0.020**
	0.009	0.006	0.007	0.007
Intercept	-3.784***	-1.914***	-2.009***	-1.877***
	0.074	0.047	0.051	0.054

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated/gender-integrated*.
Standard errors below coefficients

Table 9.4. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated/gender-integrated occupations) for All Coloureds Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Individual-level variables				
Sex *(Women is omitted)*				
Men	1.222***	-0.113**	-1.146***	1.854***
	0.063	0.041	0.044	0.040
Education *(In secondary school is omitted)*				
No schooling	-1.775***	-1.718***	-1.823***	-0.972***
	0.131	0.086	0.102	0.046
Primary	-1.447***	-1.285***	-1.963***	-0.610***
	0.061	0.039	0.056	0.025
Secondary completed	1.641***	1.494***	2.050***	0.534***
	0.045	0.036	0.038	0.035
Diploma/Certificate	2.666***	2.327***	3.406***	0.838***
	0.089	0.082	0.080	0.085
BA degree and above	3.150***	3.469***	2.188***	-0.058
	0.157	0.148	0.163	0.183
Migration status *(South African migrant is omitted)*				
Non-mover	0.063	0.008	-0.137**	-0.060
	0.048	0.038	0.042	0.032
Marital status *(Single is omitted)*				
Currently married	0.703***	0.576***	0.590***	0.343***
	0.038	0.028	0.030	0.023
Number of children ever born				
	-0.104***	-0.138***	-0.174***	-0.087***
	0.024	0.014	0.015	0.014
Child under age 5 present				
Yes	-0.063	-0.070	0.036	0.143**
	0.066	0.039	0.040	0.040
Possible childcare help available				
Yes	0.074*	0.134***	0.072*	0.216***
	0.035	0.027	0.030	0.022
Age	0.135	0.073	0.179	0.057
	0.022	0.017	0.019	0.014
Age-squared	-0.001***	-0.001**	-0.002***	-0.001**
	0.000	0.000	0.000	0.000

(over)

Table 9.4 (contd.)

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Magisterial District variables				
Urban Magisterial District				
Yes	0.330*	0.297*	0.122	0.281*
	0.155	0.124	0.126	0.109
Former Homeland District				
Yes	0.356	0.140	0.098	0.308
	0.256	0.209	0.214	0.184
Percent in Service Sector				
	0.039***	0.036***	0.023***	0.017***
	0.006	0.005	0.005	0.004
Gender Ratio of Primary School Completion				
	0.854	0.390	0.150	0.504
	0.708	0.555	0.575	0.465
Female Share of Labor Force				
	-0.017	-0.013	0.010	-0.010
	0.018	0.015	0.015	0.013
Intercept	-3.033***	-1.242***	-1.083***	-1.440***
	0.144	0.111	0.114	0.097

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated/gender-integrated.*
Standard errors below coefficients

Table 9.5. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated/gender-integrated occupations) for Coloured Women Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Individual-level variables				
Education *(In secondary school is omitted)*				
No schooling	-2.196***	-1.717***	-1.817***	-0.831***
	0.323	0.119	0.118	0.088
Primary	-1.510***	-1.273***	-2.088***	-0.558***
	0.115	0.051	0.066	0.043
Secondary completed	1.693***	1.565***	2.047***	0.667***
	0.076	0.048	0.046	0.057
Diploma/Certificate	2.497***	2.244***	3.174***	0.549***
	0.131	0.102	0.097	0.142
BA degree and above	3.319***	3.517***	2.150***	0.292
	0.229	0.201	0.215	0.324
Migration status *(South African migrant is omitted)*				
Non-mover	0.123	0.089	0.062	0.033
	0.084	0.051	0.052	0.056
Marital status *(Single is omitted)*				
Currently married	0.490***	0.493***	0.568***	0.205*
	0.064	0.036	0.037	0.038
Number of children ever born				
	-0.051	-0.128***	-0.195***	-0.034*
	0.027	0.015	0.016	0.015
Child under age 5 present				
Yes	-0.157*	-0.099*	0.058	-0.020
	0.073	0.042	0.042	0.044
Possible childcare help available				
Yes	0.081	0.169***	0.128**	0.197***
	0.065	0.037	0.038	0.039
Age	0.123**	0.090***	0.206***	0.000
	0.040	0.023	0.023	0.024
Age-squared	-0.001**	-0.001**	-0.002***	0.000
	0.001	0.000	0.000	0.000

(over)

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Table 9.5 (contd.)

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Magisterial District variables				
Urban Magisterial District				
Yes	0.250	0.255	0.129	0.294*
	0.205	0.137	0.136	0.116
Former Homeland District				
Yes	0.498	0.170	0.228	0.026
	0.361	0.247	0.244	0.263
Percent in Service Sector				
	0.041***	0.038***	0.024***	0.008
	0.007	0.005	0.005	0.004
Gender Ratio of Primary School Completion				
	1.209	-0.549	-0.166	0.146
	1.044	0.646	0.645	0.575
Female Share of Labor Force				
	-0.006	-0.026	-0.002	-0.005
	0.024	0.016	0.016	0.014
Intercept	-2.966***	-1.289***	-1.244***	-1.523***
	0.202	0.125	0.124	0.116

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated/gender-integrated.*
Standard errors below coefficients

Table 9.6. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated/gender-integrated occupations) for All Indians Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Individual-level variables				
Sex *(Women is omitted)*				
Men	1.390***	0.309***	-0.773***	1.960***
	0.097	0.080	0.085	0.102
Education *(In secondary school is omitted)*				
No schooling	-0.262	-0.424*	-0.207	-0.118
	0.208	0.173	0.204	0.175
Primary	-0.788***	-0.834***	-1.173***	-0.225*
	0.126	0.096	0.137	0.092
Secondary completed	1.349***	1.163***	1.701***	0.331***
	0.070	0.063	0.070	0.066
Diploma/Certificate	2.074***	1.676***	2.269***	0.542***
	0.119	0.114	0.119	0.123
BA degree and above	3.022***	3.374***	2.272***	0.454*
	0.200	0.195	0.207	0.227
Migration status *(South African migrant is omitted)*				
Non-mover	0.072	0.055	-0.033	0.110
	0.095	0.088	0.095	0.093
Marital status *(Single is omitted)*				
Currently married	0.491***	0.441***	0.279***	0.294***
	0.068	0.060	0.065	0.065
Number of children ever born				
	-0.047	-0.124***	-0.126***	0.014
	0.041	0.032	0.034	0.041
Child under age 5 present				
Yes	0.224	0.252**	0.275**	0.071
	0.115	0.095	0.098	0.124
Possible childcare help available				
Yes	-0.043	-0.010	0.034	0.113
	0.060	0.055	0.059	0.058
Age	0.047	0.027	0.032	0.039
	0.035	0.032	0.035	0.034
Age-squared	0.000	0.000	0.000	-0.001
	0.000	0.000	0.000	0.000

(over)

Table 9.6 (contd.)

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Magisterial District variables				
Urban Magisterial District				
Yes	0.061	0.186	-0.115	0.068
	0.342	0.314	0.297	0.197
Former Homeland District				
Yes	-0.457	-0.326	-0.077	-0.204
	0.415	0.384	0.370	0.265
Percent in Service Sector				
	-0.010	-0.009	-0.011	-0.022***
	0.012	0.011	0.010	0.006
Gender Ratio of Primary School Completion				
	-3.589	-3.643	-0.512	-0.169
	2.216	2.041	1.956	1.447
Female Share of Labor Force				
	0.011	0.010	0.023	0.038*
	0.036	0.033	0.031	0.018
Intercept				
	-0.231	1.089***	0.655*	-0.479*
	0.300	0.275	0.267	0.200

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated/gender-integrated*.
Standard errors below coefficients

Table 9.7. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated/gender-integrated occupations) for Asian-Indian Women Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Individual-level variables				
Education *(In secondary school is omitted)*				
No schooling	-0.362	-0.781**	-0.548*	0.095
	0.342	0.249	0.261	0.258
Primary	-0.730**	-0.821***	-1.239***	-0.178
	0.203	0.131	0.168	0.186
Secondary completed	1.484***	1.309***	1.851***	0.312*
	0.123	0.095	0.097	0.128
Diploma/Certificate	1.985***	1.762***	2.342***	0.303
	0.188	0.162	0.162	0.030
BA degree and above	3.565***	3.991***	2.676***	1.179**
	0.360	0.343	0.352	0.431
Migration status *(South African migrant is omitted)*				
Non-mover	-0.005	-0.089	0.062	0.033
	0.151	0.051	0.052	0.056
Marital status *(Single is omitted)*				
Currently married	0.432***	0.493***	0.568***	0.205***
	0.107	0.036	0.037	0.038
Number of children ever born				
	0.023	-0.128***	-0.195***	-0.034*
	0.048	0.015	0.016	0.015
Child under age 5 present				
Yes	0.054	-0.099*	0.058	-0.020
	0.128	0.042	0.042	0.044
Possible childcare help available				
Yes	0.002	0.169***	0.128**	0.197***
	0.100	0.037	0.038	0.039
Age	-0.022	0.090***	0.206***	0.000
	0.063	0.023	0.023	0.024
Age-squared	0.000	-0.001**	-0.002***	0.000
	0.001	0.000	0.000	0.000

(over)

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Table 9.7 (contd.)

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Magisterial District variables				
Urban Magisterial District				
Yes	-0.100	0.255	0.129	0.294
	0.444	0.137	0.136	0.116
Former Homeland District				
Yes	0.044	0.170	0.228	0.026
	0.546	0.247	0.244	0.263
Percent in Service Sector				
	0.005	0.038***	0.024***	0.008
	0.014	0.005	0.005	0.004
Gender Ratio of Primary School Completion				
	-3.641	-0.549	-0.166	0.146
	2.893	0.646	0.645	0.575
Female Share of Labor Force				
	-0.036	-0.026	-0.002	-0.005
	0.045	0.016	0.016	0.014
Intercept	-0.340	-0.725*	-1.244***	-1.523***
	0.380	0.349	0.124	0.116

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated/gender-integrated*.
Standard errors below coefficients

Table 9.8. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated/gender-integrated occupations) for All Whites Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Individual-level variables				
Sex *(Women is omitted)*				
Men	1.240***	0.110*	-1.498***	2.100***
	0.058	0.054	0.058	0.066
Education *(In secondary school is omitted)*				
No schooling	-0.488**	-0.691***	-0.771***	-0.861***
	0.165	0.150	0.167	0.159
Primary	-1.466***	-1.422***	-1.686***	-1.347***
	0.138	0.113	0.138	0.118
Secondary completed	1.051***	1.017***	0.851***	0.076
	0.050	0.047	0.050	0.049
Diploma/Certificate	1.404***	1.113***	0.974***	-0.071
	0.060	0.057	0.060	0.060
BA degree and above	1.990***	2.120***	0.766***	-0.574***
	0.076	0.074	0.079	0.082
Migration status *(South African migrant is omitted)*				
Non-mover	0.171**	0.184**	0.091	0.080
	0.062	0.060	0.062	0.063
Immigrant	0.041	-0.149	-0.301**	-0.261**
	0.082	0.080	0.084	0.086
Marital status *(Single is omitted)*				
Currently married	0.389***	0.317***	0.316***	0.303***
	0.043	0.041	0.043	0.044
Number of children ever born				
	-0.151***	-0.085***	-0.034	-0.132***
	0.026	0.023	0.024	0.030
Child under age 5 present				
Yes	0.131	0.125	0.084	0.244**
	0.072	0.067	0.068	0.083
Possible childcare help available				
Yes	-0.131**	-0.160***	-0.143**	0.077
	0.040	0.039	0.041	0.041
Age	0.125***	0.089***	0.041	0.114***
	0.024	0.023	0.024	0.024
Age-squared	-0.001***	-0.001**	0.000	-0.002***
	0.000	0.000	0.000	0.000

(over)

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Table 9.8 (contd.)

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Magisterial District variables				
Urban Magisterial District				
Yes	0.475***	0.492***	0.467***	0.216*
	0.087	0.080	0.080	0.086
Former Homeland District				
Yes	0.350*	0.297*	0.147	0.230
	0.157	0.145	0.149	0.156
Percent in Service Sector				
	0.009**	0.011***	0.002	-0.014***
	0.003	0.003	0.003	0.003
Gender Ratio of Primary School Completion				
	0.052	0.086	0.214	-0.771
	0.520	0.477	0.488	0.509
Female Share of Labor Force				
	-0.007	-0.005	0.005	0.004
	0.010	0.009	0.009	0.010
Intercept				
	-0.467***	0.934***	0.961***	0.065
	0.106	0.099	0.101	0.108

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated/gender-integrated*.
Standard errors below coefficients

Table 9.9. Hierarchical Generalized Linear Models (HGLMs) of Occupational Type Placement (Ref: Blue-collar female-dominated/gender-integrated occupations) for White Women Ages 25-54, South Africa, 2001

	White-collar male-dominated	White-collar gender-integrated	White-collar female-dominated	Blue-collar male-dominated
Individual-level variables				
Education *(In secondary school is omitted)*				
No schooling	-0.555*	-1.034***	-1.066***	-0.817**
	0.238	0.188	0.190	0.283
Primary	-1.537***	-1.685***	-1.884***	-1.069***
	0.223	0.147	0.156	0.213
Secondary completed	1.094***	1.018***	0.857***	0.518***
	0.075	0.063	0.063	0.083
Diploma/Certificate	1.187***	0.992***	0.862***	0.291**
	0.086	0.074	0.075	0.099
BA degree and above	2.010***	1.983***	0.619***	0.342*
	0.108	0.099	0.102	0.132
Migration status *(South African migrant is omitted)*				
Non-mover	0.161	0.179*	0.092	0.037
	0.085	0.078	0.079	0.102
Immigrant	0.279**	0.109	-0.092	0.055
	0.087	0.081	0.083	0.108
Marital status *(Single is omitted)*				
Currently married	0.203**	0.287***	0.345***	0.196**
	0.059	0.053	0.054	0.071
Number of children ever born				
	-0.133***	-0.098***	-0.067**	-0.060
	0.028	0.025	0.026	0.034
Child under age 5 present				
Yes	0.141	0.122	0.121	0.193*
	0.078	0.071	0.072	0.091
Possible childcare help available				
Yes	-0.128	-0.094	-0.071	-0.021
	0.057	0.051	0.052	0.067
Age	0.160***	0.110**	0.075*	0.025
	0.035	0.032	0.032	0.041
Age-squared	-0.002***	-0.001**	-0.001*	0.000
	0.000	0.000	0.000	0.001

(over)

Table 9.9 (contd.)

	White-collar male-dominated	*White-collar gender-integrated*	*White-collar female-dominated*	*Blue-collar male-dominated*
Magisterial District variables				
Urban Magisterial District				
Yes	0.181*	0.238*	0.208*	-0.137
	0.116	0.104	0.104	0.122
Former Homeland District				
Yes	0.042	0.192	0.040	-0.030
	0.212	0.190	0.192	0.227
Percent in Service Sector				
	0.013**	0.009**	-0.001	-0.015***
	0.004	0.003	0.003	0.004
Gender Ratio of Primary School Completion				
	0.595	0.484	0.628	-0.224
	0.688	0.624	0.626	0.737
Female Share of Labor Force				
	-0.009	0.000	0.009	0.036**
	0.012	0.011	0.011	0.013
Intercept	-0.285*	0.994***	1.067***	-0.039
	0.120	0.104	0.105	0.129

Notes: * significant at $p < 0.05$ ** significant at $p < 0.01$ *** significant at $p < 0.001$
Reference category is *Blue-collar female-dominated/gender-integrated*.
Standard errors below coefficients

Bibliography

Aliber, Michael. 2003. "Chronic Poverty in South Africa: Incidence, Causes, and Policies." *World Development* 11(3): 473-490.

Anker, Richard. 1998. *Gender and Jobs: Sex Segregation of Occupations in the World*. Geneva: International Labor Office.

Anker, Richard and Catherine Hein. 1986. *Sex Inequalities in Urban Employment in the Third World*. St. Martin's Press: New York.

Becker, Gary. 1957. *The Economics of Discrimination.* Chicago: University of Chicago Press.

Becker, Gary. 1981. *A Treatise on the Family*. Cambridge, MA: Harvard University Press.

Becker, Gary. 1975. *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. Columbia University Press, New York.

Beller, Andrea H. 1982. "Occupational Segregation by Sex: Determinants and Changes." *The Journal of Human Resources* 17(3): 371-92.

Berger, Iris. 1992. *Threads of Solidarity: Women in South African Industry, 1900-1980*. Bloomington and London: Indiana University Press and James Currey.

Bergmann, Barbara. 1974. "Occupational Segregation, Wages and Profits: When Employers Discriminate by Race or Sex." *Eastern Economic Journal* 1(2): 103-110.

Bernstein, Hilda. 1978. *For Their Triumphs and For Their Tears: Women in Apartheid South Africa.* London: International Defense and Aid Fund.

Bianchi, Suzanne and Nancy Rytina. 1986. "The Decline in Occupational Sex Segregation During the 1970s: Census and CPS Comparisons." *Demography* 23 (1): 79-86.

Blackburn, Robert and Jennifer Jarman. 2006. "Gendered Occupations: Exploring the Relationship between Gender Segregation and Inequality." *International Sociology* 21(2): 289-315.

Blackburn, Robert, Jude Browne, Bradley Brooks, and Jennifer Jarman. 2002. "Explaining Gender Segregation." *British Journal of Sociology* 53(4): 513-536.

Blackburn, Robert, Jennifer Jarman, and Bradley Brooks. 2000. "The Puzzle of Gender Segregation and Inequality: A Cross-National Analysis." *European Sociological Review* 16(2): 119-135.

Blalock, Hubert M. 1967. *Toward a Theory of Minority Group Relations*. New York: Wiley.

Blau, Francine D., Patricia Simpson, and Deborah Anderson. 1998. "Continuing Progress? Trends in Occupational Segregation in the United States over the 1970s and 1980s." *Feminist Economics* 4(3): 29-71.

Blau, Francine D. and Ferber, Marianne A. 1992. *The Economics of Women, Men and Work.* Englewood Cliffs, N.J: Prentice-Hall.

Bloomquist, Leonard E. 1990. "Local Labor Market Characteristics and the Occupational Concentration of Different Sociodemographic Groups." *Rural Sociology* 55(2): 199-213.

Board ,Christopher, Ronald J. Davies, and Thomas J.D. Fair. 1970. "The Structure of the South African Space Economy." *Regional Studies* 4(3): 367-92.

Bornstein, Lisa. 2000. "Institutional Context," in Julian May (Ed.), *Poverty and Inequality in South Africa, Cape Town*. Davis Philip Publishers; London and New York: Zed Books.

Boserup, Esther. 1970. *Women's Role in Economic Development*. New York: St. Martins Press.

Boserup, Esther. 1990. "Economic Change and the Roles of Women" in *Persistent Inequalities: Women and World Development* Irene Tinker, ed. New York: Oxford University Press.

Bozzoli, Belinda. 1983. "Marxism, Feminism, and South African Studies." *Journal of Southern African Studies* 9(2): 139-171.

Brewster, Karin and Ronald R. Rindfuss. 2000. "Fertility and Women's Employment in Industrialized Nations." *Annual Review of Sociology* 26: 271-296.

Browne, Ireme and Joya Misra. 2003. "The Intersections of Gender and Race in the Labor Market." *Annual Review of Sociology* 29: 487-513.

Buchmann, Claudia and Dan Brakewood. 2000. "Labor Structures and School Enrollments in Developing Societies." *Comparative Education Review* 44: 2.

Budlender, Debbie. 1984. "Agriculture and Technology: Four Case Studies." Carnegie Conference Paper No. 23.

Budlender, Debbie. 1991. *Women and the Economy: A Report to Form the Basis of the Annual Report of the Secretary-General of the United Nations on Women under Apartheid.* CASE Offices, South Africa.

Bundy, Colin. 1972. *The Rise and Fall of the South African Peasantry.* Berkeley: University of California Press.

Butler, J, R. I. Rotberg, and John Adams. 1977. *The Black Homelands of South Africa: The Political and Economic Development of Bophuthatswana and KwaZulu.* Berkeley: University of California Press.

Buvinic, Mayra, Marguerite Berger, and Cecelia Jaramillo. 1989. "Impact of a Credit Project for Women and Men Microentrepreneurs in Quito, Ecuador." In *Women's Ventures*, edited by M. Berger and M. Buvinic, 222-246. West Hartford, CT: Kumarian Press.

Casale, D. and D. Posel. 2002. "The Continued Feminisation of the Labour Force in South Africa: An Analysis of Recent Data and Trends." *The South African Journal of Economics* 70(1): 156-184.

Chang, Mariko Lin. 2004. "Cross-National Variation in Sex Segregation in Sixteen Developing Countries." *American Sociological Review* 69(1): 114-137.

Chang, Mariko Lin, 2000. "The Evolution of Sex Segregation Regimes." *The American Journal of Sociology* 105(6): 1658-1701.

Chant, Sylvia. 1995. "Gender Aspects of Urban Economic Growth and Development." Paper prepared for the UNU/WIDER Conference on Human Settlements in the Changing Global Political and Economic Processes, Helinski

Charles, Maria. 2003. "Deciphering Sex Segregation: Vertical and Horizontal Segregation in Ten Countries." *Acta Sociologica* 46: 267-287.

Charles, Maria. 1998. "Structure, Culture, and Sex Segregation in Europe." *Research in Social Stratification and Mobility* 16: 89-116.

Charles, Maria. 1992. "Cross-National Variation in Occupational Sex Segregation." *American Sociological Review* 57: 483-502.

Charles, Maria and Marlis Buchmann. 1994. "Assessing Micro-level Explanations of Occupational Sex Segregation: Human-Capital Development and Labor

Market Opportunities in Switzerland." *Swiss Journal of Sociology* 20: 595-620.

Charles, Maria and David B. Grusky. 2005. *Occupational Ghettos: The Worldwide Segregation of Women and Men*. Stanford: Stanford University Press.

Charles, Maria and Grusky, David B. 1995. "Models for Describing the Underlying Structure of Sex Segregation." *American Journal of Sociology* 100: 931-71.

Clark, Roger. 1992. "Economic Dependency and Gender Differences in Labor Force Sectoral Change in Non-Core Nations." *The Sociological Quarterly* 33(1): 83-98.

Crankshaw, Owen. 1997. *Race, Class, and the Changing Division of Labour Under Apartheid*. New York: Routledge.

Cobbett, William and Brian Nakei. 1987. "Behind the 'Curtain' at Botshabelo: Refining the Urban Labor Market in South Africa." *Review of African Political Economy* 40.

Cohen, Philip N. 1998. "Black Concentration Effects on Black-White and Gender Inequality: Multilevel Analysis for U.S. Metropolitan Areas." *Social Forces* 77: 207-229.

Cotter, David A., Joan M. Hermsen, and Reeve Vanneman. 1999. "Systems of Gender, Race, and Class Inequality: Multilevel Analyses." *Social Forces* 78: 433-460.

Cotter, David A., JoAnn DeFiore, Joan M. Hermsen, Brenda Marsteller Kowalewski, and Reeve Vanneman. 1997. "All Women Benefit in an Integrated Labor Market: The Macro-Level Effects of Occupational Gender Integration on Gender Earnings Equality."

Crush, Jonathan. 1996. "A Bad Neighbour Policy? Migrant Labour and the New South Africa." *Southern African Report* 12(1).

Crush, J. and V. Williams. 1999. *The New South Africans? Immigration Amnesties and their Aftermath*. Cape Town: South African Migration Project.

Davenport, T. R. H. 1987. *South Africa: A Modern History*. 3rd edition. Toronto and Buffalo: University of Toronto Press.

Modood, T. 1997. "Employment." Pp. 83-149 in *Ethnic Minorities in Britain: Diversity and Disadvantage*, ed. T. Modood and R. Berthoud. London: Policy Studies Institute.

Dreze, Jean and Mamta Murthi. 2001. "Fertility, Education, and Development: Evidence from India." *Population and Development Review* 27(1): 33–63.

Dubow, S. 1989. *Racial Segregation and the Origins of Apartheid in South Africa 1919-1936*. London: MacMillan Press Ltd.

Durand, John D. 1975. *The Labor Force in Economic Development: A Comparison of International Census Data, 1946-1966*. Princeton: Princeton University Press.

England, Paula. 1982. "The Failure of Human Capital Theory to Explain Occupational Sex Segregation." *Journal of Human Resources* 18: 358-70.

Ganzeboom, Harry B.G. and Donald J. Treiman. 1996. "Internationally Comparable Measures of Occupational Status for the 1988 International Standard Classification of Occupations." *Social Science Research* 25: 201-239.

Gatta, Mary L. and Patricia A. Roos. 2005. "Rethinking Occupational Integration." *Sociological Forum* 20(3): 369-403.

Glass, Jennifer and Valerie Camarigg. 1992. "Gender, Parenthood, and Job-Family Compatibility." *The American Journal of Sociology* 98: 131-151.

Glass, Jennifer, Marta Tienda, and Shelly A. Smith. 1988. "The Impact of Changing Employment Opportunity on Gender and Ethnic Earning Inequality." *Social Science Research* 17: 252-76.

Goldin, Claudia. 1990. *Explaining the Gender Gap*. Oxford: Oxford University Press.

Grun, Carola. 2004. "Direct and indirect gender discrimination in the South African labor market." *International Journal of Manpower* 25(3/4): 321-342.

Hakim, Catherine. 1996. *Key Issues in Women's Work*. London: The Athlone Press.

Hannum, Emily and Yu Xie. 1998. "Ethnic Stratification in Northwest China: Occupational Differences between Han Chinese and National Minorities in Xinjiang, 1982-1990." *Demography* 35(3): 323-333.

Houghton D. Hobart. 1973. *The South African Economy*. Cape Town: Oxford University Press.

Jacobs, Jerry A. 1989a. "Long-Term Trends in Occupational Segregation by Sex." *American Journal of Sociology* 95(1): 160-73.

Jacobs, Jerry A. 1989b. *Revolving Doors: Sex Segregation and Women's Careers*. Stanford, CA: Stanford University Press.

Jaffe, A. J. and K. Azumi. 1960. "The Birth Rate and Cottage Industries in Underdeveloped Countries." *Economic Development and Cultural Change* 9(1): 52-63.

Joekes, Susan. 1985. "Working for lipstick? Male and female labour in the clothing industry in Morocco" in *Women, Work and Ideology in the Third World,* Haleh Afshar, ed. London: Tavistock.

Jones, Jo Ann and Rachel A. Rosenfeld. 1989. "Women's Occupations and Local Labor Markets: 1950-1980." *Social Forces* 67: 666-92.

Kanter, Rosabeth. 1977. *Men and Women of the Corporation*. New York: Basic Books.

Kingdom, Geeta and John Knight. 2002. "Quality of Schooling and the Race Gap in South African Unemployment." Mimeographed, Centre for the Study of African Economies, Oxford.

Kingdom, Geeta and John Knight. 2001. "What have We Learnt about Unemployment from Microdatasets in South Africa." *Social Dynamics* 27(1): 79-95.

Klasen, Stephan. 1997. "Poverty, Inequality and Deprivation in South Africa: An Analysis of the 1993 Saldru Survey." *Social Indicators Research* 41: 51-94.

Lam, David, and Kermyt G. Anderson. 2001. "Causes and Consequences of Schooling Outcomes in South Africa: Evidence from Survey Data." *Social Dynamics* 27(1): 37-59.

Lee, Everett. 1966. "A Theory of Migration." *Demography* 3(1): 47-57.

Lewin-Epstein, Noah and Moshe Semyonov. 1994. "Sheltered Labor Markets, Public Sector Employment and Socioeconomic Returns to Education of Arabs in Israel." *American Journal of Sociology* 100: 622-651.

Lieberson, Stanley. 1980. *A Piece of the Pie: Blacks and Immigrants since 1880*. Berkeley: University of California Press.

Lim, Linda Y. 1990. "Women's Work in Export Factories: The Politics of a Cause" in *Persistent Inequalities: Women and World Development* Irene Tinker, ed. New York: Oxford University Press.

Mabin, Alan. 1992. "Dispossession, Exploitation, and Struggle: An Historical Overview of South African Urbanization." Pp. 13-24 in *The Apartheid City and Beyond: Urbanization and Social Change in South Africa*, edited by David Smith. London: Routledge.

Macdonald, C. L. and C. Sirianni. 1996. "The Service Society and the Changing Experience of Work." In C. L. Macdonald and C. Sirianni (editors) *Working in the Service Sector*. Philadelphia: Temple University Press.

Mager, Anne. 1989. "Moving the Fence: Gender in the Ciskei and Border Textile Industry 1945-1986." *Social Dynamics* 15(2).

Makgetla, Neva Seidman. 1995. "Women and Economy: Slow Pace of Change." *Agenda* 24: 7-20.

Magubane, Bernard. 1975. "The 'Native Reserves' (Bantustans) and the Role of the Migrant Labour System in the Political Economy of South Africa." In Helen I. Safa and Brian M. Du Toit (Eds.) *Migration and Development*, pp. 225-67. The Hague: Mouton.

Mason, Karen Oppenheim, and V.T. Palan. 1981. "Female Employment and Fertility in Peninsular Malaysia: The Maternal Role Incompatibility Hypothesis Reconsidered." *Demography* 18: 549-75.

Massey, Douglas S., Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino, and J. Edward Taylor. 1993. "Theories of International Migration: A Review and Reappraisal." *Population and Development Review* 19(3): 431-466.

May, Julian. 2000. *Poverty and Inequality in South Africa*. Capetown: Davis Philip Publishers; London and New York: Zed Books.

Maylam, Paul. 1990. "The Rise and Decline of Urban Apartheid in South Africa." *African Affairs* 89(354): 57-84.

Mazur, Robert E. 1991. "Rural Household Strategies in Mali and Zimbabwe: Labor Allocation and Migration." *Rural Sociology and Development* 5: 87-111.

Mazur, Robert E. (1998). "Migration Dynamics and Development in Rural South Africa: Demographic and Socioeconomic Perspectives." *Research in Rural Sociology and Development* 7: 195-225.

Meer, Fatima. 1991. *Black Women Workers: A Study in Patriarchy, Race, and Women Production Workers in South Africa*. Durban: Madiba Publications.

Mickelson, Roslyn Arlin, Mokubung Nkomo, and Stephen Samuel Smith. 2001. "Education, Ethnicity, Gender, and Social Transformation in Israel and South Africa." *Comparative Education Review* 45(1): 1-35.

Mincer, J., Polachek, S., 1974. Family investments in human capital: earnings of women. Journal of Political Economy 82 (2), S76–S108.

Mohanty, Chandra. 1991. *Third World Women and the Politics of Feminism*, (co-edited with Lourdes Torres and Ann Russo). Urbana Champaign: Indiana University Press.

Murray, C. 1981. *Families Divided: The Impact of Migrant Labor in Lesotho*. Cambridge: Cambridge University Press.

Mwabu, G. and T. P. Schultz. 2000. "Wage Premiums for Education and Location of South African Workers by Gender and Race." *Economic Development and Cultural Change* 48(2): 307-334.

Natrass, Jill. 1976. "The Migrant Labour System and South African Economic Development," *South African Journal of Economics* 44(1): 78.

Okamoto, Dina and Paula England. 1999. "Is There a Supply Side to Occupational Sex Segregation." *Sociological Perspectives* 42: 557-582.

Oppenheimer, Valerie Kincaid. 1970. *The Female Labor Force in the United States*. Berkeley: Institute for International Studies.

Pampel, F. C and K. Tanaka. 1986. "Economic Development and Female Labor Force Participation: A Reconsideration." *Social Forces* 64(1): 599-619.

Posel, Dori R. and Alison Todes. 1995. "The Shift to Female Labour Force in Kwazulu/Natal." *The South African Journal of Economics* 63: 225-246.

Posel, D. and D. Casale. 2003. "What Has Been Happening to Internal Labour Migration in South Africa?" Development Policy Research Unit Working Paper, no. 03/74.

Presser, Harriet B. and Hsiao-ye Yi. 2008. "Women's Gender-Type Occupational Mobility in Puerto Rico: 1950-1980." *Feminist Economics*.

Presser, Harriet B. and Sunita Kishor. 1991. "Economic Development and Occupational Sex Segregation in Puerto Rico: 1950-80." *Population and Development Review* 17(1): 53-85.

Ramirez, Francisco O. and Jane Weiss. 1979. "The Political Incorporation of Women." Pp. 238-252 in *National Development and the World System*, edited by J. W. Meyer and M. T. Hannan. Chicago: University of Chicago Press.

Reskin, Barbara. 1993. "Sex Segregation in the Workplace." *Annual Review of Sociology* 19: 241-70.

Reskin, Barbara and Irene Padavic. 1994. *Women and Men at Work*. Thousand Oaks, California: Pine Forge Press.

Rogerson, Christian M. 1996. "Urban Poverty and the Informal Economy in South Africa's economic heartland." *Environment and Urbanization*, 8(1): 167-181.

Spenner, Ken and Rachel Rosenfeld. 1990. "Women, Work, and Identities: An Event History Analysis." *Social Science Research* 19: 266-299.

Russell, Margo. 1998. "Black Urban Households in South Africa." *African Sociological Review*, 2(1): 174-180.

Salam Fall, Abdou. 1998. "Migrants' Long-distance Relationships and Social Networks in Dakar." *Environment and Urbanization* 10(1): 135-145.

Seidman, Gay. 1999. "Is South Africa Different? Sociological Comparisons and Theoretical Contributions from the Land of Apartheid." *Annual Review of Sociology* 25: 419-440.

Semyonov, Moshe and Shenav, Yehouda. 1988. "Investment Dependence, Economic Development and Female Employment Opportunities in Less Developed Countries." *Social Science Quarterly* 69: 961-78.

Shrestha, Nanda. 1996. "A Structural Perspective on Labour Migration in Underdeveloped Countries." Pp. 463-91 in *Geography and Migration*, edited by Vaughan Robinson. Brookfield, VT: Edward Elgar.

Southall, Roger J. 1983. *South Africa's Transkei: The Political Economy of an 'Independent' Bantustan*. New York: Monthly Review Press.

Standing Gay., John Sender, and John Weeks. 1996. *Restructuring the Labour Market: the South African Challenge. An ILO Country Review*. International Labour Office. Geneva.

Stycos, Mayone J. and Robert H. Weller. 1967. "Female Working Roles and Fertility." *Demography* 4(1): 210-217.

The Economist. 2002. "South African immigration: Want to throw them out." June 8: 43.

Tolnay, Stewart E. 2001. "African Americans and Immigrants in Northern Cities: The Effects of Relative Group Size on Occupational Standing in 1920." *Social Forces* 80: 573-604.

Tomaskovic-Devey, Donald. 1993. "The gender and race composition of jobs and the male/female, white/black pay gaps." *Social Forces* 72: 45-76.

Tomlinson, Richard. 1988. "South Africa's Urban Policy: a new form of influx control." *Urban Affairs Quarterly* 23: 487-510.

Trappe, Heike and Rachel A. Rosenfeld. 2004. "Occupational Sex Segregation and Family Formation in the Former East and West Germany." *Work and Occupations* 31: 155-192.

Treiman, Donald J., Matthew. McKeever, and Eva. Fodor. 1996. "Racial Differences in Occupational Status and Income in South Africa, 1980 and 1991." *Demography* 33(1): 111-132.

van der Berg, Servas. 1985. "An Overview of Development in the Homelands." Pp. 196-209 in *Up Against the Fences: Poverty Passes and Privilege in South Africa*, edited by H. Giliomee and L. Schlemmer. New York: St. Martin's Press.

van der Lippe, Tranja and Liset van Dijk, 2002. "Comparative Research on Women's Employment." *Annual Review of Sociology* 28: 221-241.

Walker, Cheryl. 1990. *Women and Gender in Southern Africa to 1945.* London: James Currey.

Ward, Kathryn. 1988. *Women Workers and Global Restructuring.* Ithaca, N.Y.: ILR Press.

Wolpe, Harold. 1972. "Capitalism and Cheap Labour-Power in South Africa: From Segregation to Apartheid." *Economy and Society* 1(4): 431-33.

Worden, Nigel. 1995. *The Making of Modern South Africa: Conquest, Segregation and Apartheid.* 2nd edition. Oxford: Blackwell.