

**eThekweni's Changing Occupational Structure: A Question of
Deindustrialization and Racial Inequality**

Michael Lombard LMBCOR001

A minor dissertation submitted in partial *fulfillment* of the requirements for the award
of the degree of Master of Social Science

Supervised by

Professor Owen Crankshaw

Faculty of the Humanities

University of Cape Town

2015

COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: *mlombard* _____

Date: 25/11/2015 _____

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

Abstract:

Scholars have argued that deindustrialization has had different effects on the occupational structure of South African cities. Some have argued for a polarisation of the occupational structure, where the decline of the manufacturing sector is argued to result in a loss of middle-income jobs. This is accompanied by large growth of employment in high-income and low-income jobs, resulting in an occupational structure bereft of middle-income jobs and polarised between classes of high-income and low-income workers. Others have argued for a professionalising pattern defined by the predominant growth of employment in highly-skilled, high-income managerial, professional, associate professional and technical jobs. In contrast to the growth of highly-skilled jobs is the stagnation or decline in growth of all other occupational groups, and rising unemployment. These changes in the occupational structure have also been argued to have specific consequences for persisting racial inequality. This study tests the aforementioned theories of occupational change by looking at the metropolitan municipality of eThekweni, which houses the city of Durban. It demonstrates that deindustrialisation in eThekweni is undergoing a pattern of middle-income, semi-skilled growth that does not support the polarisation or professionalization hypotheses. It also produces evidence that does not support the argument that deindustrialisation results in an occupational structure polarised between a class of mostly white, highly-paid managers and professionals and a class of mostly black (black Africans, coloureds and Indians) low-paid service workers as the eThekweni middle-class is undergoing substantial de-racialisation. However, it argues that inter-racial inequality still persists due to the uneven high-representation of whites in high-income jobs, opposed to the class of low-income workers and unemployed which are almost entirely dominated by black Africans. Alongside this is a pattern of deepening intra-racial inequality between the growing black African middle-class, and the class of black Africans which dominate the unemployed.

Acknowledgements:

I am grateful to Data First at the University of Cape Town for providing me with all the census and labour force survey data needed for this study. In particular, I am thankful for the Post-Apartheid Labour Market series data set they set up for the analysis of the 2004-2007 LFS's. I would like to thank Assoc Prof David Lincoln and Prof Rajen Govender for offering me advice on the history of Durban and methods respectively. Lastly, I am indebted to my supervisor Prof Owen Crankshaw for all his help in guiding my work, quick feedback to my questions and involved assistance during the writing of this dissertation. My thinking has benefitted much from working with him.

We've barely begun.

Table of Contents

<u>Abstract</u>	2
<u>Chapter 1: Introduction, Literature Review and Hypotheses</u>	5
<u>Chapter 2: Research Methods and Methodology</u>	17
<u>Chapter 3: Changes in eThekweni's Occupational Structure of Employment</u>	30
<u>Chapter 4: A Question of Racial Inequality</u>	45
<u>Conclusion</u>	62
<u>Bibliography</u>	64
<u>Appendices</u>	69

Chapter 1:

Introduction, Literature Review and Hypotheses

Cotemporary South Africa is beset with vast inequalities, affecting many areas of life from economic, political, social and geographic spheres. However, how best to deal with issues of inequality is a significant challenge and how to understand and analyse them is not always clear, resulting in uncertainty and contention. A notable example of contention and debate over inequality in contemporary South Africa is the city, and the experiences of urban inequality. Scholars have argued that the deindustrialization of the global economy has had varied effects on the occupational structure of global cities, a debate which is also taking place within the context of South Africa. Some of these effects have been argued to be the growth in employment of high-income professionals and low-income service-sector workers, resulting in social polarization, or the increasing growth of high-income, skilled work resulting in professionalization of the workforce. Further debate has ensued over the accompanying social effects of deindustrialization and the changing class structure, with emphasis on the changing spatial dynamics of cities or the increasing role of low-skilled immigration. In the South African context the relationship between race and urban inequality has received particular focus, that the persistent racial inequality in our major cities is caused by deindustrialization, which has led to high unemployment along racial lines and an occupational structure defined by a polarization into a class of predominantly white, high-income managers and professionals and a class of almost exclusively black, low-income service sector workers. In contrast, other scholars have argued for the professionalization of the occupational structure, where an increasingly racially-mixed middle class co-exists with a black working class and spatially isolated neighbourhoods characterized by high-unemployment.

Research looking at this debate, such as studies by Lemanski, Beavon, Turok, Crankshaw and Borel-Saladin have primarily looked at the cities of Johannesburg and Cape Town, as these are South Africa's largest cities and ranked highest within the Global City Index, both holding positions as "Emerging Cities". The argument that deindustrialization leads to social polarization is made by Lemanski (2007), who used Cape Town as the basis of her study. The basis of this argument is that the economies of cities has shifted from an industrial structure to one dominated by

service sector jobs, which has created a polarized pattern of employment growth that entails the growth of high-income managerial and professional jobs, but also large growth of low-income service jobs. This is accompanied by a significant decline in the manufacturing jobs which traditionally were the base of semi-skilled middle-income work. This absolute growth at the top and bottom ends of the occupational structure observed in deindustrialized cities has resulted in “social polarization”, which Lemanski argues is evident in Cape Town, with absolute growth in highly-skilled and low-skilled jobs, on the one hand, and a decline in semi-skilled, middle-income employment on the other hand. Additionally, scholars such as Turok (2001) and Beavon (2005) have argued that cities like Johannesburg and Cape Town are experiencing a spatial polarization, where deindustrialization has affected the occupational structure in a way that is creating racially segregated neighbourhoods. These areas are socially divided between poor, working class blacks who live in townships which are displaced from the growing service sector, which is booming in middle-class suburban residential neighbourhoods. These spatial effects and the persisting racial inequality could be argued to be evidence of the effects of social polarization.

A different side to the debate is argued by Crankshaw and Borel-Saladin. Studies on Cape Town by Crankshaw (2012) and Borel-Saladin and Crankshaw (2009) and on Johannesburg (Crankshaw, 2008; Crankshaw and Borel-Saladin, 2014) have argued that Cape Town and Johannesburg are not experiencing absolute polarization as there is not a polarized growth between high and low-skilled jobs. Instead, they argue that these cities are experiencing a professionalization which is characterized by the large growth of high-income, highly-skilled managerial and professional jobs, resulting in a dramatic growth of the professional and managerial middle-class. Additionally, they also argue that there is increasingly a general upgrading of the skills and income of the employed workforce. While such an argument does agree that there has been a decline in semi-skilled, middle-income manufacturing work, they disagree with proponents of the polarization thesis that the growth in the service sector has been between highly-skilled, high-income jobs and low-skilled, low-income work. Instead, Crankshaw and Borel-Saladin (2014) argue that the Greater Johannesburg area is home to a growing class of well-paid, non-manual service workers, such as white-collar semi-skilled clerical and sales jobs, who cannot be

characterized within the low-income bracket of occupations. This growth of semi-skilled jobs was also greater than that of low-skilled employment, which is not evident of a polarizing pattern. This professionalization is also characterized by growing unemployment, as there is a class of unemployed workers who cannot find jobs due to the decline of unskilled manufacturing work and growth of skilled service-sector jobs. This is argued to create inequality that is characterized by social divisions between several employed classes by their incomes, and a growing class of the unemployed as well.

This debate also has important consequences in terms of racial inequality in South Africa as well, as the changing nature of urban occupational structures will have an impact on racial inequality. If we follow the social polarization thesis advanced by scholars like Lemanski (2007) in her study of Cape Town then Cape Town's increasing role as a global city and the decline of manufacturing jobs is maintaining racial inequality within the spatially divided city. As argued by Turok (2001) there is a gulf between the poor townships and wealthier areas and this spatial gap could be reinforced by market forces, which then isolate the poor from areas where they would be able to find jobs. Arguments like those by Lemanski are similar to those made by scholars in favour of the social polarisation hypothesis who argue that polarisation is also producing racial inequality. The workforce is argued to be polarising racially, with non-whites concentrated in low-skilled, low-income service jobs and whites who are concentrated in well-paid and highly-skilled managerial and professional jobs (Baum 1997; 1999; Harrison and Bluestone 1988, 70; Sassen 1990, 83-4; Sassen 1998, 46; Sassen 2001, 321).

Scholars who argue for professionalization agree that deindustrialisation and the growth of service-sector employment has increased racial inequality due to blacks (black Africans, Coloureds and Asians/Indians) bearing the brunt of middle-income job losses in the manufacturing sector. They also agree that the better-educated white population has benefitted from the growth of highly-skilled and highly-paid managerial and professional and technical work. However, those in favour of professionalization argue that racial inequality is further increased by growing unemployment which is resulting in greater unemployment rates for low-skilled blacks than those found amongst better-educated whites (Kasarda, 1989: 33; Kesteloot, 1995: 211-14; Kesteloot, 2000: 199-201; Ortiz, 1996; Wilson, 1980;

Wilson 1987, 39-41; Wilson, 1996: 30). In the South African context, this is also argued to be producing increasing intra-racial inequality. As more black Africans are gaining the skills and education to be employed in well-paid, highly-skilled jobs, there is a contrast with the growing number of black Africans who remain unemployed. Scholars like Crankshaw (2008; 2012) argue that the middle class in both Cape Town and Johannesburg is becoming deracialized but that the increasing unemployment (partly the result of the professionalizing occupational structure) is creating a large class of unemployed who are almost exclusively black. Similar arguments are made by Seekings and Nattrass (2005) and Seekings (2001; 2011) about increasing intra-racial inequality in contemporary South Africa as the large number of unemployed black Africans are argued to form part of an “underclass”. This underclass consists of households entirely bereft of any working members, thus lacking both skills and social capital. In a market where there is a decline in low-skilled work and growing demand for skilled employment, social connections are crucial and those households which lack both skills and social connections will be at risk for unemployment. Such an underclass of unemployed black Africans is likely to grow in the conditions of deindustrialisation; a stark contrast to those who have the skills to benefit from the growing service sector.

eThekwini:

Aside from these studies of Cape Town and Johannesburg there have not been further intensive studies of the changing occupational structure and the effects of deindustrialization within other urban contexts in South Africa. This is understandable as not many South African cities are large enough to fit into the global city context. A logical further study would be the city of Durban which is, along with Johannesburg and Cape Town, one of South Africa’s largest cities and is the focal point of the large Kwazulu-Natal province (Morris, Barnes & Dunne, 2001). This study will look at the entire Metropolitan Municipality of eThekwini, which includes the city of Durban and the surrounding towns like Umdloti and Verulam, and aim to analyse the changing occupational class structure and how these changes have also affected racial inequality within the city. Historically, the city was shaped by being a port-city, one which is one of the largest coastal trading ports on the African continent. The position on the East African coast is also significant, as it serves as a gateway to Asia and trade with other large economies like India. Spurred on by the

trade-power of the harbour, the city has a history as a manufacturing hub, with the production and exporting of goods being the focus of eThekweni's economy for decades. Morris, Barnes and Dunne (2001) argue that in the early 2000's 30% of eThekweni's GDP came from manufacturing, with food, automotive and clothing industries dominating the economy. Prinsloo (1996) argues that alongside the Western Cape clothing industry, eThekweni is responsible for the bulk of South Africa's clothing manufacturing, with several clothing firms competing in a massive local clothing sector. The large role of manufacturing in the city's economy also led to a large reliance on either semi-skilled machine operators, such as in the clothing industry (Prinsloo, 1996:7) or in unskilled labour employed in elementary occupations, such as stevedoring or longshoreman working at the docks (Dubbeld, 2003). This status as a large, growing manufacturing dominated city will make for an interesting urban environment to study if deindustrialization is taking place. Of particular note will be how observations of the city's changing occupational structure relate to theories of urban polarization and professionalization.

It will also be of interest to see how the racial composition of the occupational structure has changed, and if the evidence presented supports contemporary arguments about race and class in South Africa, particularly regarding persisting racial inequality. A pre-1994 study of the whites-only eThekweni neighbourhood of Albert Park (Maharaj and Mpungose, 1994) examined the "greying" of the neighbourhood and traces the arrival of black Africans into the area since the 1980's, making a case for racial desegregation in the city. Studies by Kitchin (2002) and Morris and Hindson (1997) also look at the history of the city's spatial segregation and how recent decades have seen the gradual de-racialisation of the middle class, alongside increasing intra-racial inequality. In a more recent study, Schensul and Heller (2011) use what they call a sociological cartographical approach to determine how inequality exists spatially in the city in terms of race and class and how this urban distribution affects eThekweni's development. They argue for three emerging kinds of neighbourhoods: firstly, one that is mono-racial, socially isolated and impoverished. Secondly, there are neighbourhoods which are racially diverse with economic opportunities that may or may not also have a variation in class as well. Finally, they argue that "transformed" neighbourhoods are also emerging that are diverse across racial and class lines and are economically articulated. Apart from

how these arguments may reveal a possible relationship between the spatial composition of the city and deindustrialization, insight into the specific geographical and historical compositions of the city will be useful in understanding the historical background of this specific case study.

eThekwini and Racial Inequality Under Apartheid:

It is also necessary to go into some historical detail of the racial dynamics in eThekwini and how Apartheid shaped racial inequality. In the aisles of history, the policies of the Apartheid government stand out as some of the most extreme attempts of social engineering in the 20th century. Policies which divided the populace into racial groups which were placed onto a social hierarchy created exceptional opportunities for the life-chances for those who benefited from the Apartheid system, namely the white population. Those who experienced discrimination by the social hierarchy created by Apartheid, such as black, Indian and coloured South Africans, had their life-chances drastically reduced. As this study is looking at changes experienced by a city, it is logical to briefly detail some of the ways which the policies of Apartheid impacted urban racial inequality. Due to laws like the Group Areas Act, cities experienced severe urban segregation, which combined with policies preventing inter-racial marriage or sex, limited the possibility of racial assimilation or crossing racial boundaries (Seekings, 2011:532). Residential segregation was also regulated, with areas designated to specific racial groups, which in combination with policies over influx control such as the pass system, limited where black Africans could live and work. The designated areas for blacks were limited to small and poor housing in planned townships, which were not only removed from the Apartheid city, but were ideal fostering grounds for the development of unemployment (Seekings,2011: 533).

These racial divisions were not purely geographic and also extended to matters of income. Seekings and Natrass (2005) argue that racial discrimination affected incomes directly, with white and black people who had the same qualifications and jobs being paid different wages, particularly in public sector jobs. For example, the starting salary for a black African nurse was only two-thirds of what was paid to a white nurse with the same qualifications (Seekings and Natrass, 2005: 2).Such racial discrimination present in income extended to school teachers and police constables who were paid half as much as their white counterparts, and to black old-

age pensioners who received substantially less pensions from the state than old-age whites. The social engineering of racial inequality was further entrenched by the role of segregated and unequal education during Apartheid. Separate education systems were developed for whites, coloureds, Asians/Indians and black Africans which stretched from primary to tertiary education (Johnson, 1982: 214). These different forms of education by race were grossly unequal, with white children having free access to schooling, textbooks and the best quality education available. The “Bantu” education created for black African children was neither free, nor compulsory and progressing to secondary school forced them to learn in either English or Afrikaans, neither which most black African children were proficient in (Johnson, 1982: 221). Finally, this form of school was of extraordinary low quality, created to preserve the social divisions of Apartheid by educating black Africans in a way that would preserve their economic and social place in being sub-ordinate to whites (Johnson, 1982: 221-222). The combination of limited opportunities on the basis of race, dispossession from property, vastly unequal wages and poor education resulted in substantial racial inequality, which would limit the social and economic mobility of black Africans during both the Apartheid and post-Apartheid years.

The particular ethnic and racial make-up in eThekweni is quite unique when compared to the broader South African context. The Kwazulu-Natal province has, as the name suggests, historically been the home of a large group of South Africa’s Zulu-speaking population, with local political parties such as the Inkatha Freedom Party long being a representation of the province’s Zulu-speakers (Moffet and Freund, 2004:139). The eThekweni area has also accommodated other members of South Africa’s black African population. The white population is made-up primarily of first-language English speakers, and not those who speak Afrikaans; Afrikaners are a smaller minority in the population of both eThekweni and the Natal province than in the rest of the country (Moffet and Freund, 2004:138). Perhaps the most glaring and unique feature of eThekweni’s racial population is the large presence of a population of Indian-descent that is particularly concentrated within the city. The presence of Indians is so large within Durban itself that there are estimates that eThekweni accounts for 60 percent or more of South Africa’s entire Indian population (Moffet and Freund, 2004:138). This has led to the Indian population of eThekweni having a large role in the commercial and industrial development of the city, argued by Moffet

and Freund (2004) to have also formed part of eThekweni's social elite structure. How exactly the Indian population has been represented in the different occupational groups over the last four and a half decades will be interesting in how they compare to other racial groups as they too experienced discrimination under the policies of Apartheid. If the Indian population has formed part of the social elite in eThekweni, this should show in their representation in the better-paid and higher-skilled occupational groups. How the Indian population as a whole has developed since 1994 in comparison to the black population will also be of interest: has there been equal development of skills in both racial groups over time? Have both groups made similar inroads in moving out of unskilled jobs and unemployment?

Residentially, eThekweni, most of the Durban CBD and the surrounding suburbs, such as Umhlanga Rocks, were white areas while the urban townships designated for black Africans were areas like Umlazi, Ntuzuma and Inanda (Schensul and Heller, 2011: 84). Following the end of Apartheid, there are several obvious questions in relation to the dismantling of the Apartheid city: firstly if previously whites-only areas are becoming deracialised, and if black Africans who previously were trapped in poor townships have gained greater social and economic mobility. While there are examples, such as Maharaj's and Mpungose's (1994) study of the deracialising or "greying" of Albert Park, of decreasing inter-racial inequality the question remains just how much racial inequality is decreasing. In addition, if there is upward social mobility among middle-class blacks, how does it compare to increasing unemployment for poor black Africans? Such questions of inter and intra racial inequality are important for this study.

Origins of the Occupational Structure Debate:

The origins of the debate around the changing of urban occupational structures can be traced back to the "Social Polarisation" thesis, most famously used by Saskia Sassen in *The New Inequalities in Cities* (1994). Sassen is also well-known for developing the argument about the modern "Global City": international command centres for transnational corporations (Sassen, 1994: 107). Sassen argues that the changing economies of cities has shifted from an industrial structure to one dominated by service sector jobs, which has created a polarized pattern of employment growth that entails the growth of high-income managerial and professional jobs, but also the large growth of low-income service jobs. This is

accompanied by a significant decline in the manufacturing jobs which traditionally were the base of semi-skilled middle-income work. This absolute growth at the top and bottom ends of the occupational structure observed in deindustrialized cities has resulted in “social polarization” (Sassen, 1994: 107). Sassen further argues that the resultant inequality in cities takes on a geographical form as well; less-skilled workers are concentrated in the run-down areas of the housing market often within inner-city neighbourhoods. Due to the large amount of immigration to large cities like New York and Los Angeles, Sassen argues that minority racial and ethnic groups are concentrated in low-income jobs (Sassen, 1994: 116-117). Following on Sassen’s social polarization thesis, is a study by Chui and Lui (2004) looking at Hong Kong’s changing occupational structure since the 1990’s. Chui and Lui argue that Hong Kong’s transformation from a port and colony dominated by industry to a Chinese global city driven by producer services resulted in social polarization. This is useful to the proposed study as not only does it provide scholarly evidence of a decline in manufacturing jobs and an application of Sassen’s theory, but Hong Kong is also a port city which though much larger, can possibly be compared to eThekweni.

The alternate professionalization argument was most notably raised by Hamnett, who argues that Sassen’s polarization thesis does not apply to all global cities, despite her effective analysis of New York and Los Angeles (Hamnett, 1994: 401). He instead argues that there is an occupational professionalization taking place by producing evidence from the Randstad in Holland and London in the United Kingdom which is characterized by the large growth of high-income, highly-skilled managerial and professional jobs, resulting in a dramatic growth of the professional middle class. In addition to this growing professional and managerial middle class (which is not defined as the “middle class” of blue-collar middle-income jobs, a definition used by most American scholars) there is a general growth of skilled jobs across the occupational structure. However, the growth of professional and managerial jobs is much greater than the growth in other jobs and in addition to this, there is a decline in unskilled work and also growing unemployment (Hamnett, 1994: 411) (Hamnett, 2003). The increasing education level of the population and increasing demand for service sector white-collar semi-skilled and highly-skilled work leads those who are uneducated or whom previously depended on blue-collar semi-skilled work, to be at risk of unemployment (Hamnett, 1994:413). These semi-skilled jobs

were largely found in the manufacturing sector, which as a result of deindustrialization are declining in number. In addition to arguing for a different outcome of deindustrialization on urban occupational structures, Hamnett also seeks to identify why the results from cities like New York and Los Angeles produce the polarisation effect argued for by Sassen, which he argues could be down to high levels of low-skilled immigration.

The Research Questions:

When specifying the research question, and how it relates to the research design, there is a sense of theory testing to it: I aim to analyse the changes of eThekweni's occupational structure, and particularly if deindustrialization is taking place. To do this, I will need to firstly determine if the manufacturing sector is declining. Theories of social polarization and professionalization both argue for particular patterns of growth of urban occupational structures, so I will be able to test these theories by comparing them to the results of this study. Finally, I will also be able to test theories about how the deindustrialization of the occupational structure in global cities is affecting racial inequality. A prediction would be that eThekweni will be experiencing deindustrialization in that there is a decline in the manufacturing sector and manual jobs, on one hand, and a substantial growth in service sector jobs, on the other.

That being said, the aim will not be to purely test theory but also to measure the changes in the distribution of occupations which could present some original and unique findings within this debate. If the results are unlike anything that the theories of social polarization or professionalization suggest, this study could be used to build theory too. De Vaus (2001) argues that a difference between building theory and testing theory can be that the logic behind building a theory is inductive, as the theory is developed after observations are made and attempt to make sense of what was observed. As we aim to measure the spread of occupations of eThekweni's workforce and how it has changed over a period of time, there will be an inductive logic to how we make sense of the results. However, I will need to review previous studies on the debate to familiarise myself with the different perspectives and results. The results and arguments made by other studies could influence how I approach the questions of whether eThekweni is experiencing deindustrialization and if the occupational structure is becoming polarized or professionalized. Such influence could bring elements of prediction into play as we test the conclusions of other

positions within the debate and thus I could simply try to replicate the results I most agree with; leading to a more deductive form of logic. My aim is not to purely replicate the results and arguments of previous studies but also to look at the research questions and issues concerning the debate through the lens of the particular context of eThekweni. If the results are different from or offer a fresh take on predominant theories, then these theories may need to be modified or rejected, in which case I could build new theory from observations which are different to what both proponents of social polarization and professionalization or claiming. It is also important to note that these arguments can be swayed by how the different economic occupations and sectors are conceptualized in the literature. Studies have produced results arguing for social polarization as they have conceptualized clerical, sales and service jobs as low-income service jobs when the evidence shows that the income of these clerks, sales and service workers is closer to manufacturing workers which are classified as middle-income, than the low-income bracket they are assumed to be in (Borel-Saladin and Crankshaw, 2009) To avoid potentially skewing results, I will have to clearly define how the research intends to conceptualize and define the different occupations and their related economic sectors.

In summarising the research questions below, it is possible to formulate several initial hypotheses and link them to the listed questions from the theories regarding the effect of deindustrialization on the occupational structure, and how this has affected racial inequality:

- 1) Firstly, is eThekweni experiencing deindustrialization in regards to employment? The related hypothesis would be that eThekweni is experiencing a decline of employment in the manufacturing sector. Such a decline could be absolute, where the number of workers employed in the manufacturing sector decrease, or a relative, where the rate of increase in manufacturing jobs and the total share of the workforce employed in manufacturing declines relative to the growth of other economic sectors.
- 2) Secondly, is eThekweni experiencing occupational polarisation? A hypothesis, related to the polarisation argument, is that eThekweni will be experiencing absolute polarization, with large absolute increases in the number of high and low-income service jobs accompanying an absolute decrease in middle-income manufacturing work. A rival hypothesis would be that eThekweni could

instead be experiencing professionalization in that there is dramatic absolute growth in highly-skilled, high-income managerial, professional and technical jobs, and the absolute decline or stagnation of other occupational groups. Present alongside this professionalization of the occupational structure would be growing unemployment for those deprived of skills required for semi-skilled or highly-skilled jobs.

- 3) What are the changes of employment in eThekweni? Is the unemployment rate increasing? A hypothesis in accordance to the professionalization argument would predict that it is.
- 4) How do the arguments about the effect of social polarisation on racial inequality hold up in the case of the city of eThekweni? As argued by Lemanski (2007: 457) deindustrialization has created a polarisation that takes on a racial form, with whites dominating the better-paid and more skilled jobs in comparison to black African, Coloured and Indian workers who, due to the decline of middle-income working class jobs, are further cut off from being employed in middle-income and high-income work. Such a hypothesis predicts that black African workers will predominantly be employed in low-income jobs, with few black Africans employed in middle-income and high-income jobs. A rival hypothesis to this would be, as argued by Crankshaw (2012: 849), that the mobility of black African, Indians and Coloureds into middle-income and high-income jobs, has resulted in the de-racialisation of eThekweni's middle class.

Important questions that this study will not look at are (a) the relationship between changes in the occupational structure and the growing feminisation of the workforce, (b) the relationship between changes in the occupational structure and intergenerational occupational mobility and (c) the causes of unemployment and deindustrialization within the context of eThekweni. With my analysis looking at eThekweni over a period of several decades, changes in the occupational structure and racial composition should be evident; the results and patterns over time in the city should allow me to make a substantive contribution to the debate around urban inequality.

Chapter 2:

Research Methods and Methodology

When considering how to approach the research questions, we must consider the nature of the debate around urban inequality in South Africa in regards to the changing occupational structure and how this is argued to be affecting both social and racial inequality in society. Hence, we must look carefully at the logic of the specific arguments regarding the debate, starting with those who argue in favour of social polarization, such as work by Sassen (1991; 1994), Friedman and Wolf (1982) and then considering arguments for professionalization made by Hamnett (1994; 2003), Levy (1987) and Clarke (1993). Firstly, we can gain a good sense of the polarization argument and its logic by looking at Sassen's work. She argues that there is a shift in the economies of cities, as there are significant numerical changes in the economic sectors, which has resulted in occupational and income polarisation. The first of these changes is self-evident when describing the concept of "deindustrialization": she argues that the number of industrial, manufacturing jobs has decreased significantly, and in contrast there has been large growth in service sector employment. This is not merely an argument about decreasing numbers within one sector and growth in another, but also how jobs that are assumed to belong to specific income-levels are changing. Firstly, the argument is concerned with how deindustrialization has resulted in the decline of manufacturing jobs that were full-time contractually protected by trade unions (Sassen, 1994: 106). These declining jobs are argued to have been formal middle-income jobs such as skilled craftsperson's and trade workers or semi-skilled plant and machine operators and assemblers. The remaining jobs in the manufacturing sector are argued to increasingly being downgraded to casual, part-time manufacturing jobs that offer low wages: such as jobs in sweatshops.

In contrast, the growing service sector is argued to be polarized between the growth of highly-skilled, high-income managerial, professional, associate professional and technical jobs and low-skilled, low-income personal service jobs. The growth of the service sector employment takes on the form of an hourglass, where the numbers of jobs are either at the top (high-income) or at the bottom (low-income), with middle-income jobs argued to have declined the most (Marcuse, 1989:699). In regards to my methodology, this argument is making quantitative claims, as the logic is based

upon the changing numbers of the occupational structure, the numerical decline of manufacturing and growth of the service sector, and how this has affected the number of available jobs within particular income brackets. The arguments made by scholars who are in favour of professionalization are also quantitative in nature. Scholars like Levy (1987), Bell (1973) and Hamnett (1994 ; 2003) argue that large cities are seeing increasing demand for highly-skilled workers that is leading to dramatic growth of employment in highly-skilled, high-income managerial, professional and technical jobs, leading to creation of a large professional and managerial middle class. In comparison, growth in other occupations is declining or stagnating. As this argument claims that there is such a substantial growth in these particular highly-skilled jobs, it too is making a numerical claim about where and how much the employed workforce is changing. As the demand for skills in the workforce grows, those who are unskilled are at greater risk of unemployment, which pro-professionalization scholars argue is also increasing. Both the polarization and professionalization arguments are based on the changing numbers of the occupational structure and measuring where these changes are happening; thus a quantitative approach is logical for my study.

This discussion on the quantitative nature of the debate around the changing occupational structure can further be linked to the philosophy behind quantitative approaches and how the logic of this particular incarnation of the scientific method works. The aim of science is often argued to be the generation of objective knowledge of our reality through observation, which can then be replicated and ultimately be generalized from one case study of a phenomenon to many, or in some cases, all. As argued by Sayer, a key feature of quantitative approaches to research is generalization: as such research attempts to gain an approximate measure of a number of phenomena in a population which may belong to the same class or descriptive property (Sayer, 1992: 100). What this entails for a study like this is that the results of quantitative estimates from sample surveys or from censuses can then be generalized to the population. A successful use of such quantitative methods will allow me to make observations about the real population of eThekweni that is related to the research questions detailed in chapter 1. Additionally, an aim is to produce results which could further be compared to other studies, replicated and ideally achieve some level of standardization. Studies like those by Sassen (1984),

Hamnett (1994; 2001), Lemanski (2007), Crankshaw (2008; 2009) and Chiu and Lui (2004) demonstrate how the logic behind a quantitative approach works. In this case, deindustrialization (the declining manufacturing sector and growth of the service sector) has been argued to be the cause of social polarization, and has thus also been seen as an explanation for urban inequality. This kind of causal explanation is, as deemed by Sayer (1992: 127), “instrumentalist” as it is not referring to an actual causal mechanism which has produced the changes in the occupational structure. Instead, this explanation is referring to the statistical effects that are created by numerical changes, in this case referring to how the statistical distribution of service sector occupations is argued to be more polarised than those in the manufacturing sector. The increase in the size of the former and the decrease in the size of the latter ‘causes’ the overall occupational structure to take on a polarized form. The concept of causation used here is therefore not implying a causal social mechanism that has directly produced urban inequality; instead, it describes the overall statistical effect of the changing occupational distributions in major economic sectors.

It may also be useful to consider the logic of falsification proposed by Karl Popper here, who argues that scientific knowledge and theories cannot be proven to be true, but instead theories or general claims can be proven to be false (Williams and May, 1996: 29). Rigorous study of particular claims and theories can lead to different results, which may test and build on the library of scientific knowledge by falsifying some of the original theory’s claims. I could apply such thinking to all the studies that have tested Sassen’s theory of social polarization, and particularly those that have produced different results and questioned the general claim of social polarization in cities, such as Hamnett’s professionalization theory. In order to test these results in a wider sense and to critically evaluate the debate around the changing urban occupational structure, it would be logical to use a similar quantitative approach to measure the changes in a city’s occupational structure, to test if deindustrialization is taking place, and if the occupational structure is as polarized between high-income and low-income jobs as proponents of social polarization claim. In regards to this study, I can compare eThekweni’s results to the other South African studies done by Lemanski (2007), Crankshaw (2008; 2009) and Crankshaw and Borel-Saladin (2014), observing if eThekweni is becoming polarized or professionalized. I will also

be able to empirically test theories regarding racial inequality by measuring the racial composition of eThekweni's employed workforce and its unemployed over time.

To measure the changes of eThekweni's occupational structure, the number of employed workers and the racial composition of the employed workforce over time, this study will make use of questionnaire-survey data, similar to the other studies discussed in chapter one. It is therefore necessary to be familiar with the logic of probability sampling, which is utilized in large scale questionnaires surveying the population, such as the Labour Force Surveys. Moser and Kalton (1971) argue that probability sample surveys have two noted objectives: to firstly estimate the quantities of specific population parameters and secondly to test statistical hypotheses regarding a population. The logic of a probability sample is that each unit of the sample has a chance, a known non-zero probability, of being included in that sample (Levy and Lemeshow, 1999:20). Each of the units can only be selected once and as the selection for each unit of the sample has a known probability of being selected it is possible to get an unbiased sample (Fink, 2003: 11).

In this study I have made use of earlier South African Census data (which are full counts of the whole population) and the Labour Force Surveys, which are samples drawn from the population. The LFS samples are based on data collected from the 2001 census, which divided the country into 80,787 enumeration areas (Stats SA, 2013: 1). The LFS's also make use of the Stats SA household surveys which use a Master sample of Primary Sampling Units (PSU), which comprise the enumerator areas that were drawn from all the enumeration areas of the country. The LFS samples are designed to be statistically representative at provincial and metropolitan levels, and further within urban and rural geography types relative to each metropolitan area. This was fitting for a study looking at the eThekweni metropole. While we may like to think that such a sample is a miniature representation of the population it aims to measure, it is possible that some groups may not be represented correctly. The problem of potential under or over representation of responses, or non-sampling bias, can be caused by several factors. Firstly, not all who are eligible to participate in a survey do take part in it, and not all the actual respondents necessarily answer all the survey questions (Fink, 2003: 27). This is termed the problem of non-response. Secondly, how a sample is framed, in the definitions of the variables and how it includes or excludes responses will logically

influence the result (Fink, 2003: 26). Errors in the sample frame could also occur if the definitions of variables and what constitutes them change; an example could be if an occupational group listed in the ISCO groupings is collapsed into another, or if a new occupational group is added. It is important to organise a survey in a way that is consistent with the best available theory and also endure historical changes in social policy. Another way which surveys address problems of misrepresentation is through the concept of weighting. Surveys like the LFS use weighting adjustments which attaches an adjustment to each unit in the survey. These weights are constructed so that the sample, which is only a small part of the population, can be altered to an estimated value which would reflect the real values of the population. The weights in the LFS are expanded to represent the whole general South African population, so that the estimations of the survey are as accurate as possible. (Stats SA, 2013: 1). It must be considered that estimates gathered by a single sample cannot be assumed to be exact measurements of a population. For the research to be effective, the sample and estimate must be as precise as possible.

To help ensure this, Moser and Kalton (1971:69) argue that the standard distribution of an infinite number of samples can be used to assess the precision of an estimate derived from a single sample. The values of different sample estimates gather around the true value of the parameter in the population; the variation of the values of different sample estimates around the true population value is called the sampling error. It is important to understand the sampling error as it can show how much variation is to be expected among the estimates of other samples: the statistic which describes the sampling error is the standard error, which is the standard deviation of the distribution of sample estimates. By calculating the standard error, I will be able to determine how precise and reliable the estimates of a particular sample survey will be, by seeing how much the standard error of the estimate in the sample deviates from estimates of other, hypothetical samples. In this instance I will be measuring the standard error of the absolute numbers estimated by the surveys. As I will test hypotheses related to differences in employment size between occupational groups over time, it is crucial that the differences between estimates are accurate estimates of the real differences in the population, and not simply the result of random error. I will have to calculate the standard error to ensure that the differences in the sample estimates represent differences in the population. This calculation must be done at a

level where it is probable that numerous surveys would result in an estimate that falls within a particular interval, which is called the probability level (Czaja and Blair, 1996: 127). The specified interval, or confidence interval, will be the range of precision around the sample estimate. This range is formed by multiplying the calculated standard error multiplied by two, since I will use a 95% probability level to calculate the standard error that form the confidence intervals around my estimates. If the reliability of the sample estimate is at a probability level of 95%, then 95% of all other hypothetical sample surveys would result in an estimate that falls within my confidence intervals (Czaja and Blair, 1996: 127). If the standard error and the associated confidence interval of two estimates are too high then, for example, the differences between the two estimates for my occupational groups could be due to random error (Czaja and Blair, 1996: 126). The estimate could be completely different in another sample, creating the possibility that the estimates with large differences could be reversed, calling into question the accuracy and reliability of the estimates, which I wish to avoid. On the other hand, if the standard error is appropriately small and at a 95% probability level, it will show that the estimates of the trends of the different occupational groups are not due to random error.

Data Collection and Survey's Used:

This study relies on the statistics from the formal and informal sector regarding employment, unemployment, employment by economic sector, employment by occupational grouping and employment in population groups (race) collected by available population census and the later Labour Force Surveys (LFS's). There are several sets of data: firstly, the population censuses which cover a series from 1980 to 2001, specifically including data from 1980, 1991, 1996 and 2001. I did not use the 2011 population censuses as they do not include data on occupations. Instead I used data from the Labour Force Surveys post-2001. I firstly used a set of LFS's from 2004 to 2007 which were collected bi-annually and formed part of the Post-Apartheid Labour Market Surveys, which were accessed from Data First at the University of Cape Town. I then used a series of LFS's from 2008 to 2014 which were accessed from Data First as well.

In order to study the intended changes in eThekweni accurately, I have to address a geographical problem. The current eThekweni boundary is a metropolitan boundary that did not exist until recently (1994). Hence, Census data prior to 1994 do not have

a variable which measures the population within the post-1994 eThekweni boundary. To address this problem, I have collected the data of the Magisterial Districts that fall within the modern boundaries of eThekweni. Magisterial Districts are areas under the jurisdiction of a magistrate, which have been used by the state as the geographical units for the presentation of population census statistics. Due to their boundaries remaining relatively stable over many years, Magisterial Districts are the most historically accurate way of comparing the results of different population censuses (StatsSA, 2007). A table of all the Magisterial Districts I used is below. Some of the districts are used twice in the censuses prior to 1996, as the districts were divided racially, with frequency analysis only showing data for specific racial groups while excluding others. Hence I had to use both: in the 1980 and 1991 data, the Districts which are not labelled were taken from data that was designated only to include the white, coloured and Asian/ Indian populations. The 1980 and 1991 Districts which are repeated are labelled as “Black African Designated” was taken from datasets for the 1980 and 1991 Census designated for the black African population:

<u>1980</u>	<u>1991</u>	<u>1996</u>	<u>2001</u>
Durban	Durban	Durban	Durban
Pinetown	Camperdown	Inanda	Inanda
Inanda	Inanda	Pinetown	Pinetown
Camperdown	Pinetown	Chatsworth	Chatsworth
Empumalanga	Chatsworth	Camperdown	Camperdown
Embumbulu	Embumbulu	Umbumbulu	Umbumbulu
Camperdown (Black African Designated)	Umlazi	Umlazi	Umlazi
Umlazi	Empumalanga		
Ntuzuma	Ntuzuma		
Pinetown (Black African Designated)			

Table 1: List of Magisterial Districts used to form eThekweni boundary, 1980-2001 censuses

When classifying the different occupational groups, I made use of the International Standard Classification of Occupations (ISCO) major groupings or 1-digit occupation codes (International Labour Organisation, 2012:66-67) which namely are: Managers, Professionals, Technicians and Associate Professionals, Clerical Support Workers,

Services and Sales workers, Skilled Agricultural, Forestry and Fisheries workers, Craft and Related Trades workers, Plant and Machine Operators and Assemblers; and Elementary Occupations. Not all the population censuses used the ISCO major groupings classification. So in cases like the 1980 and 1991 data I had to classify the data from large lists of occupations into the ISCO groups. The ISCO 08 document (2012) has detailed descriptions of the groupings and which jobs fit in where, which was used to help re-code the data in the major groups.

To determine the groupings for the different economic sectors and industries, I used a combination of the groups provided in the later LFS's, and Statistics South Africa Standard Industrial Classification of All Economic Activities (Stats SA, 2012). The standard industrial classification has a list of 21 groupings, which is more detailed and specified compared to the LFS which has a "main industry grouped" variable which only has 11 groupings. As there are less groups but a clear separation of manufacturing and service industries, it was still appropriate to use the LFS groups. The groups defined in the later LFS's specifically are: "Agriculture", "Mining", "Manufacturing", "Electricity, Gas and Water", "Construction", "Wholesale and Retail Trade", "Transport", "Financial Intermediation and business services", "Personal and Community Services" and "Private Households". As I am interested specifically in testing the argument that the manufacturing sector is declining the numbers and trends of employment in the manufacturing sector I be of particular interest. So too will the expected growth of the personal and community services and financial services sectors.

Concerning the analysis of race, I used the "population group" variables in the data. The later 1996 and 2001 census, along with the LFS's had the population group variable coded into "Black African", "Coloured", "Indian or Asian" and "White" racial groups, which we used for all our racial analysis. The earlier 1980 and 1991 data had more racial groups which often split off into different ethnic groupings, which I recoded into the 4 groups mentioned above. A table of the original racial groups for 1980 to 1991 follows:

<u>1970</u>	<u>1980</u>	<u>1980 Continued</u>	<u>1991</u>
White	White	Xhosa	White
Malay	Cape Coloured	Zulu	Indian or Asian
Coloured	Cape Malay	Swazi	Coloured
Griqua	Griqua	South Ndebele	Black
Other Coloured	Other Coloured	North Ndebele	
Indian or Pakistani	Chinese	North Sotho	
Chinese	Indian	South Sotho	
Other Asian	Other Asian	Tswana	
South African Blacks			Shangaan/Tsonga
Foreign Blacks		Venda	
		Other Black	

Finally, when looking at the employment and unemployment trends over time, it is important to note that I measured the employment variables only looking at the employed and unemployed workforce and not those who were “not economically active”.

I used the SPSS program to view the data sets and to perform the various statistical analyses. To start off, I selected the appropriate magisterial districts or metropolitan cases that would measure employment in the eThekweni area, as discussed earlier in this chapter. For the occupational analysis, I used frequency distributions to measure the spread of the occupational distribution of employment in each specific year. I also used frequency distributions when looking at the changes in employment by economic sectors, and to measure the number of employed and unemployed. When looking at race, I used cross-tabulations to look at the racial population groups and the variable I wished to look at in racial terms. These specifically were the occupations and employment variables. To visually represent and display the results I used Microsoft Excel to create scatter plot graphs and tables which would show the trends over time, and give a better indication of how certain occupations grew or declined over the years, allowing us to test the hypothesis about deindustrialization and social polarization. I also used graphs to depict the changing racial composition

of each occupational group, and the employment and unemployment trends in racial terms.

I must mention that the data from the 1991 census is highly problematic, as the estimates of the population are far too high. When looking at the occupations, the 1991 data gave estimates for clerical support workers and services and sales workers and crafts and related trades workers which are higher than values recorded by labour force surveys 15 years later. This large spike in employment then immediately comes down again in the 1996 census and only reaches such heights again post 2005. I suspect that the estimates and the weights used were not done well, and using this data should be done with caution. This study also recommends that the 1991 census should be looked at again and reweighted to fix these problems.

Main Occupational Groups:

To test the social polarization hypothesis I have attempted to categorise the International Standard Classification of Occupations (ISCO) occupational groups into smaller groups that correspond to the ISCO skill ranking average monthly salary of each group. The reasoning for this is that the social polarization hypothesis should be conceptualised as the growth in occupations that are higher-paid and higher-skilled or lower-paid and less-skilled than the manufacturing jobs that are argued to be in decline, which are semi-skilled, middle income occupations. I have hence classified “legislators, senior officials and managers”, “professionals” and “technicians and associate professionals” into one category for “highly-skilled, high-income workers”. Unlike studies like those by Baum (1997) and Chiu and Lui (2004), who classify “services and sales workers” as unskilled, low-income occupations, I have classified them, along with “clerical support workers” as “semi-skilled, middle-income workers” (also referred to as “white-collar, middle-income jobs) as done by Crankshaw and Borel-Saladin (2009; 2014). This is based on evidence that these jobs share the same ISCO skill ranking and that the average monthly salary of this group is significantly higher than low-skilled, low-income elementary jobs and also slightly higher than “craft and related trades workers and plant and machine operators and assemblers” (also referred to as “blue-collar, middle-income jobs) The occupational group of “skilled agricultural, forestry and fisheries workers” is quite a problematic one as it could be possible to classify them as either low-income or

semi-skilled workers. These workers have the lowest average income of all the groups and yet they are not unskilled elementary workers. It could be possible to classify them as low-income workers but these jobs are more skilled than the unskilled manual work performed by most elementary workers. However, skilled agricultural, forestry and fisheries workers were by far the lowest number of employed workers in the workforce with very low counts, due to eThekweni being an urban area; as a result, I have not included this occupational group in the income analysis.

International Standard Occupation	Average Monthly Salary (R)	Occupation Grouped by Income	Average Monthly Salary (R)	99% Standard Error
Managers	8,906	<i>Highly-Skilled, High-Income</i> Managers, Professionals and Technicians	7,813	379
Professionals	7,609			
Technicians and Associate Professionals	7,121			
Clerical Support Workers	5,243	<i>White-Collar, Semi-Skilled, Middle-Income</i> Clerical, Services and Sales Workers	4,931	359
Services and Sales Workers	4,645			
Craft and Related Trades Workers	3,951	<i>Blue-Collar, Semi-Skilled, Middle-Income</i> Craft and Trades Workers and Plant and Machine Operators and Assemblers	4,129	205
Plant and Machine Operators and Assemblers	4,298			
Elementary Workers	2,671	<i>Low-skilled, Low-income</i> Elementary (Unskilled) Workers	2,671	181

Table 3: Occupational Groups and their Average Monthly income in eThekweni 2013
(Source: 2013 Labour Market Dynamics Survey)

Standard Error Calculations:

I performed standard error calculations on several of the results of my analysis, which are discussed in chapters 3 and 4. These are namely the growth of economic sectors, occupational groups, employment and unemployment and the racial composition of the occupational groups and of the employed and unemployed. I particularly focused on the standard error of the overall trends, to show that the results of employment growth in the variables like occupational groups, when compared to each other, were not due to random error. I used the formula recommended by Moser and Kalton (1971) for calculating one standard error of a proportion: The formula is below in which “p” is the proportion of the sample estimate and “n” is the sample size of the population, in this case the employed workforce.

$$1 \text{ s.e.}(p) = 1 * \sqrt{p(1-p)/n}$$

In this case the single (“1”) standard deviation score will be substituted with 1.96, as that is the number of standard deviations that measures 95% of the area under the normal curve. As it would be impractical to showcase every standard error calculation here or when discussing the results in chapter 3 and 4, I have presented an example of how one of my standard error calculations was done below, specifically the calculation for the workers employed in the manufacturing sector from the 2014 LFS. I ran unweighted frequency distributions for the total employed workforce to generate the initial sample size (n) and I calculated the proportion (p) by dividing the estimated number of workers in the manufacturing sector by the total number of employed workers across all the economic sectors.

2014 Q1 95% Standard Error of the Proportion (s.e.p)

$$\begin{aligned} - \quad 95\% \text{ (s.e.p)} &= 1.96 \sqrt{0.2 (1- 0.2)/ 203} \\ &= 1.96 \times \sqrt{0.2 (0.8)/ 1431} \\ &= 1.96 \times \sqrt{0.145494511/ 1431} \\ &= 0.01976 \end{aligned}$$

With this value we could then determine the standard error of the absolute estimate total by multiplying the standard error of the proportion by the absolute estimate, as argued by Lohr (2009,37). Hence, the 95% standard error of the absolute estimate (s.e.a) will be:

$$\begin{aligned} 95\% \text{ s.e.a} &= 0.01976 \times 208,056 \\ &= 4,112 \end{aligned}$$

Therefore, the confidence interval ranges from 4,112 less than 208,056 (203,944) to 4,112 greater than 208,056 (212,168), with the total confidence interval being $2 \times 4,112 = 8,224$.

Standard Error calculations and the associated confidence intervals of estimates from the data will be of particular importance, specifically:

- 1) When assessing the differences in trends related to changes of numbers of employed in the different economic sectors, the long-term changes in the different occupational groups in the occupational structure and changes in the unemployment rate.
- 2) The racial compositions of the occupational structure and of the unemployed.
- 3) This will of course be dependent on the results, which I will begin to address in chapter 3 which deals with changes of employment in eThekweni's economic sectors and occupational structure.

Chapter 3:

Changes in eThekweni's Occupational Structure of Employment

In this chapter I will discuss the results of my analysis of eThekweni's changing occupational structure. The particular focus here will be threefold: firstly on whether employment in the manufacturing industry has declined, thus testing the deindustrialization hypothesis. Secondly, I will measure the changes in eThekweni's occupational structure since 1980 to test the occupational polarization and professionalization arguments and how the results from eThekweni area fit into the occupation structure debate. Lastly, this chapter will look at unemployment rate of eThekweni's workforce and how this relates to changes taking place in the occupational structure. I argue that eThekweni has undergone deindustrialization, but that the pattern of employment growth is not a polarizing or professionalizing one. My results show that there has been large growth in both low-skilled, low-income and highly-skilled, high-income occupations, but that the largest absolute growth of employment has been in the combination of white-collar and blue-collar semi-skilled occupations. This has resulted in a pattern of middle-income growth. I will also argue that while the unemployment rate in eThekweni is lower than the national rate, there is a large class of unemployed workers which forms a division in the occupational structure between the employed and unemployed, which is also contrary to the social polarisation hypothesis. All the statistical changes discussed and relevant to arguments were calculated at a 95% probability level. In some cases like the discussions on absolute changes in economic sectors and occupational groups, I have specifically mentioned the 95% confidence intervals.

Deindustrialization in eThekweni:

To look at how employment has changed across the various economic sectors in eThekweni over the last few decades I performed cross-tabulations of employment in each of the major economic sectors to record the changes over time. This is represented visually in figure 1.

An immediate observation about employment trends in eThekweni's economic sectors is that the manufacturing sector has not declined in the same rapid and substantial deindustrialization experienced by Johannesburg's manufacturing sector (Crankshaw and Borel-Saladin, 2014: 1855). In terms of absolute employment, the

manufacturing sector experienced considerable employment growth from 1980 until the mid-2000s. The last decade has seen the manufacturing sector experience slower growth, as there has been a decline in its rate of increase, which is further evidenced when considering relative employment. The evidence shows that in 2001 the manufacturing sector account for 24 percent of employment across all the economic sectors; by 2014 this share had decreased to 18 percent (table 4). The considerable relative decline of employment in manufacturing from 2001 to 2014 is evidence of deindustrialization. The relative decline in manufacturing employment is quite a contrast to sectors that have experienced growth, such as the financial services sector and wholesale and retail trade sectors in which employment has grown in both relative and absolute terms during the same 2001 to 2014 period.

If this result from eThekweni is compared to the deindustrialization experienced by Johannesburg, a similarity is that both cities' manufacturing sectors are employing less than 20 percent of their respective workforces. The difference in size is quite small, with only 2 percent difference between the 18 percent in eThekweni in 2014, and the 16 percent in Johannesburg in 2010 (Crankshaw and Borel-Saladin, 2014: 1855). The difference between these two cities is that the relative size of employment in Johannesburg's manufacturing sector declined dramatically in the 1980's and then recovered (Crankshaw and Borel-Saladin, 2014: 1855). In eThekweni, employment in manufacturing started to decline only in the mid-2000s, which could possibly be related to Durban's role as a port city and the historical importance of manufacturing in such an environment. What both Johannesburg and eThekweni do share is a faster employment growth in the service sector, which has overtaken the growth in manufacturing. The resultant deindustrialization experienced due to the relative decrease of employment in the manufacturing sector is argued to result in social polarization, according to scholars like Sassen (1991, 9).

Sectors related to services, namely the community, social and personal services sector (hereafter, 'personal services') and the finances, real estate and insurance services sector (hereafter, 'financial services'), experienced considerable growth in employment from 1980 to 2014. Absolute employment in the personal services sector grow steadily from 1980 until 2014¹. There has been a slight decline in

¹ I suspect the large values for this sector in 1996 are a result of weighting problems as the numbers are unrealistic in comparison to the years before and immediately after.

personal services in terms of relative employment, however: in 2001 personal services accounted for 23 percent of all employment in eThekweni and, by 2014, this had declined to 20 percent (table 4). Despite this relative decline, personal services are taking up a portion of the employed workforce currently larger in size than the manufacturing sector.

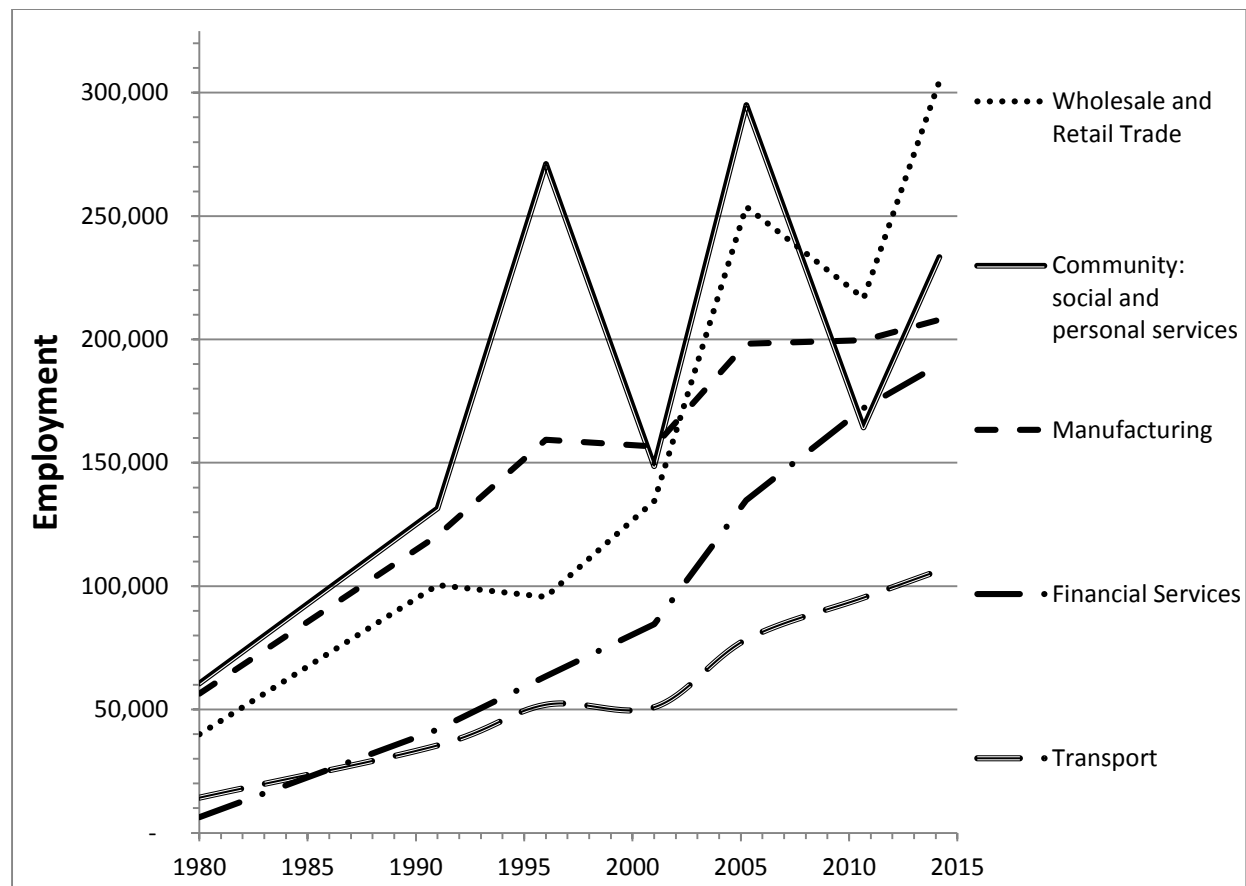


Figure 1: Employment by Economic Sector in eThekweni 1980-2014.

Employment in the financial, real estate, insurance and other business services sector grew at a slower rate than employment in community, social and personal services. However, the financial services sector has experienced continuous growth of employment from 1980 to 2014. In relative terms, financial services only accounted for 3 percent of employment in eThekweni in 1980 but by 2001 this had increased to 13 percent. By 2014 this relative share had grown to 16%, a large difference from 1980 (table 4). This notable relative growth was also accompanied by large growth in absolute terms: there was more absolute growth of employment between 1980 and 2014 in financial services than in any other economic sector (evidenced by percentage growth in table 5). Additionally, absolute growth in

financial services from 2001 to 2014 was larger than the growth in either personal services or manufacturing, only being smaller than the absolute growth experienced by wholesale and retail trade during the same period (table 5). Alongside the large growth of absolute employment, the wholesale and retail trade sector also has the largest share of relative employment, accounting for 26 percent of employment in eThekweni's economic sectors in 2014, a notable increase from the 21 percent it accounted for in 2001 (table 4).

Economic Sectors	1980	2001	2014
Wholesale and Retail Trade	17	21	26
Community: social and personal services	25	23	20
Manufacturing	24	24	18
Financial Services	3	13	16
Transport	6	8	9
Agriculture, hunting, forestry and fishing	18	3	1
Mining and Quarrying	0	0	0
Electricity: Gas and Water supply	1	1	0
Construction	7	6	11
Total	100	100	100

Table 4: Relative changes of employment in economic sectors, 1980, 2001 and 2014 (% point change) (Source: South African Population Censuses 1980, 2001 and Labour Force Survey 2014)

Economic Sectors	1980	2001	2014	Absolute Change 1980-2014	Absolute Change 2001-2014	% Change 1980-2014	% Change 2001-2014
Wholesale and Retail Trade	39,913	134,543	304,759	264,846	170,216	664	127
Community: social and personal services	60,480	148,645	233,328	172,848	84,683	286	57
Manufacturing	56,470	156,619	208,056	151,586	51,437	268	33
Financial Services	6,308	84,634	189,784	183,476	105,150	2909	124
Transport	14,328	50,967	106,366	92,038	55,399	642	109

Table 5: Absolute changes of employment in economic sectors, 1980, 2001 and 2014
(Source: South African Population Censuses 1980, 2001 and Labour Force Survey 2014)

Economic Sectors	95% Confidence Interval 1980-2014	95% Confidence Interval 2001-2014
Wholesale and Retail Trade	257,930 - 271,762	163,300 - 170,216
Community: social and personal services	168,029 - 177, 667	79,864 - 89,502
Manufacturing	147,474 - 155,698	47,325 - 55,548
Financial Services	179,860 - 187,092	101,534 - 108,766
Transport	90,458 - 93,618	53,819 - 56,979

Table 6: Confidence Intervals calculated at the 95% probability level for employment changes in economic sectors, 1980-2014 and 2001-2014.

Is eThekweni experiencing social polarization or professionalization?

As mentioned in chapter 2, I analysed the changes in employment of eThekweni's occupations by using both the single-digit ISCO groups (Major Groups) and then with a second set of occupational groups categorized out of the initial ISCO groupings and their associated monthly salaries. The rationale for this is that as I am attempting

to test the social polarization hypothesis, which should be conceptualised as growth in employment of jobs that are either higher-income, higher-skilled or less-paid and lesser-skilled, and the decline of employment in middle-income, semi-skilled jobs.

Before evaluating the evidence, it will be useful to conceptualise what a polarizing or professionalizing pattern would be in relation to various occupational groups. If eThekweni is experiencing a polarization of its occupational structure the expected pattern of growth would be large growth in highly-skilled, high-income and low-skilled, low-income occupations and an accompanied decline in semi-skilled, middle-income occupations. Logically such a polarizing pattern of growth would involve growth in the managers, professionals, technicians and associate professional grouping of occupations and in elementary occupations. While scholars in favour of polarization have argued that a polarizing pattern would also involve the growth of semi-skilled clerical support, services and sales occupations as they are low-income jobs, I have presented evidence in chapter 2 to the contrary. The average monthly salary of clerical support workers and services and sales workers (or white-collar jobs) was calculated as higher than the monthly salaries of craft and related trades workers and plant and machine operators and assemblers (or blue-collar jobs). Proponents of the polarization thesis conceptualise these blue-collar jobs as the declining middle-income jobs giving the polarized occupational structure its hourglass-like shape. Therefore, a pattern of growth that includes growth of semi-skilled clerical support, services and sales jobs cannot be conceptualized as polarization as they are not low-income occupations. If eThekweni's occupational structure is undergoing a professionalized pattern of growth, there will be evidence of absolute growth of employment in highly-skilled, high-income managerial, professional, technical and associate professional occupations, alongside a decline or stagnation in all other occupational groups. If there is an equal pattern of growth in all occupations, then it will be evidence of an occupational structure that is not experiencing professionalization.

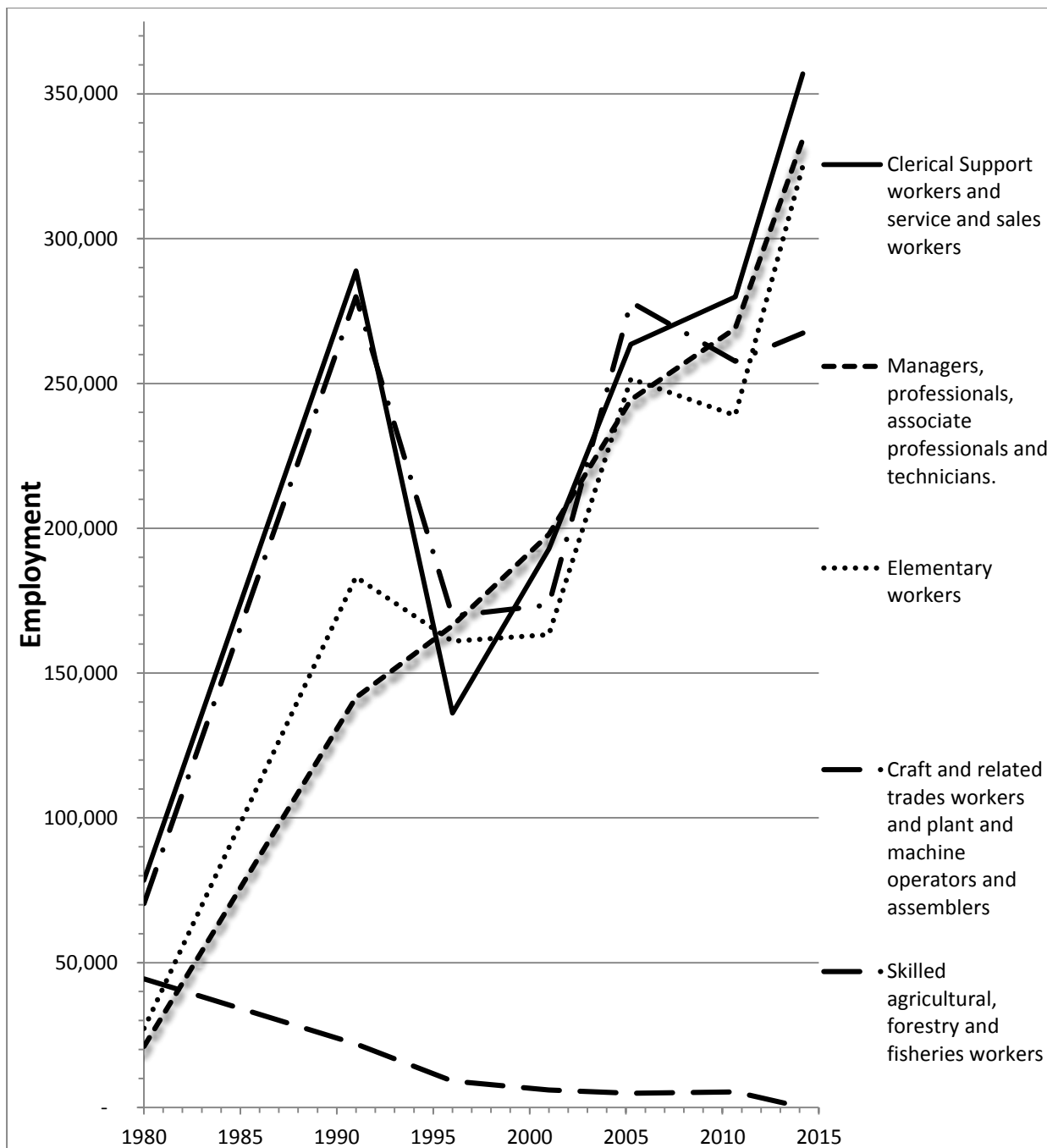


Figure 2: Employment by Major Occupational Group in eThekweni 1970-2014

As shown in figure 2, absolute employment in managerial, professional, technical and associate professional jobs grew enormously. In 1980, highly-skilled, highly-paid jobs had the lowest number of employed workers in eThekweni, but by 2014 it had become one of the largest occupational groups, increasing almost fifteen-fold from 1980 to 2014. These highly-skilled, high-income jobs also grew significantly in regards to relative employment. In 1980 they accounted for only 9 percent of all employment in eThekweni’s occupational structure; by 2014 this had increased to 26

percent, a staggering percentage point change of 17 percent (table 7). Striking as well is the growth of clerical support, services and sales workers, which I also refer to as “white-collar” semi-skilled jobs. While white-collar jobs declined in relative terms from 1980 to 2014, declining by 5 percentage points from 32 to 28 percent, absolute employment in clerical support, services and sales jobs grew considerably (table 8, 9). Though the percentage change in absolute employment from 1980 to 2014 was not as drastic as that experienced by managers, professionals, technicians and associate professionals or elementary workers (partly due to being the largest occupational group in 1980) clerical support, services and sales workers was the largest occupational group in 2014.

Occupations	1980	2014	Change
Highly-Skilled, High-Income Occupations	9	26	17
White-Collar Middle-Income Occupations	32	28	-5
Blue-Collar Middle-Income Occupations	29	21	-8
Low-Skilled, Low-Income Occupations	11	25	14
Skilled agricultural, forestry and fisheries workers	18	0	-18
All Occupations	100	100	
All Semi-Skilled, Middle-Income Occupations	62	49	-13

Table 7: Relative changes in the occupational distribution of the employed workforce, 1980 and 2014 (Source: South African Population Census 1980 and Labour Force Survey 2014)

Jobs found in the craft and related trades workers and plant and machine operators and assemblers group, also referred to as “blue-collar” (manual) semi-skilled jobs grew at a slower rate than those found in clerical support, services and sales occupations. Absolute employment in blue-collar middle-income employment did increase substantially from 1980 to 2014, but the percentage growth during this period (table 9), at 280 percent, was lower than the percentage change for highly skilled, high-income jobs (1482 percent), white-collar middle-income jobs (355 percent) and low-skilled, low-income jobs (1094 percent).

Absolute Employment	1980	1991	1996	2001	2005	2010	2014
Managers, professionals, technicians and associate professionals.	21,140	141,547	166,382	197,887	244,415	269,035	334,457
Clerical Support workers and service and sales workers	78,428	288,869	136,133	192,867	263,501	279,869	356,889
Craft and related trades workers and plant and machine operators and assemblers	70,390	279,961	169,747	173,506	278,074	257,654	267,400
Elementary workers	27,230	183,168	160,977	163,210	251,554	238,988	325,225
Skilled agricultural, forestry and fisheries workers	44,416	21,908	9,152	6,037	4,868	5,391	-
Total	241,604	937,982	642,391	792,098	1,046,642	1,050,937	1,283,971

Table 8: Employment by major occupational groups in eThekweni, 1980-2014

There is also evidence of a relative decline in these blue-collar jobs when looking at relative employment: in 1980 they made up 29 percent of employment in eThekweni, but by 2014 this had declined to 21 percent (table 7). This is notable for two several reasons: firstly, no other occupational group apart from craft and related trades workers and plant and machine operators and assemblers declined in relative terms from 1980 to 2014. Secondly, while blue-collar workers had the second largest number of employed workers in 1980, in 2014 they had the lowest employment of all the main occupational groups excluding skilled agricultural, forestry and fishery workers (table 8). Perhaps most interestingly is the trend for low-skilled, low-income elementary workers: a small group in 1980, it grew massively in both absolute and relative terms between 1980 and 2014.

Elementary jobs had the second largest percentage change in terms of absolute growth, and their share of eThekweni's relative employment increased from 11 percentage points in 1980 to 25 percentage points in 2014 (table 7). This long-term trend of employment in low-skilled, low-income occupations is intriguing as it is quite similar to the trend of highly-skilled, high-income occupations discussed above.

Employment in both occupational groups increased massively in both absolute and relative terms, with the growth of low-skilled, low-income jobs being smaller but following a similar trend.

After establishing the long-term trends in each occupational group, I can consider how the employment growth of the occupational structure as a whole relates to the debate about polarization and professionalization. Between 1980 and 2014, the largest absolute growth of employment was in highly-skilled, high-income managerial, professional, technical and associate professional jobs (table 9, figure 3). There was also very large growth of employment low-skilled, low-income elementary occupations. As for the employment trajectory of semi-skilled jobs, there are two noticeable trends. While employment in blue-collar craft and related trades workers and plant and machine operators and assemblers decline relative to the growth experienced by other occupational groups, it grew in absolute terms. Despite the relative decline of blue-collar jobs, the large absolute growth of semi-skilled, white-collar jobs associated with service sector occupations like clerical support, services and sales workers is particularly striking. This absolute growth is comparable to the growth experienced by highly-skilled, high-income and low-skilled, low-income occupations (table 9). If the growth of semi-skilled, white-collar and blue-collar jobs is considered together, the combined absolute growth was so large that it is greater than the absolute growth experienced by both highly-skilled and low-skilled occupations (table 9; figure 4). As semi-skilled, middle-income occupations experienced the largest absolute growth of employment in eThekweni, this result does not support the social polarisation hypothesis. A polarising pattern of employment is one defined by absolute decline of employment in semi-skilled occupations, alongside absolute growth of employment in low-skilled and highly-skilled jobs; my evidence is contrary to this.

Occupations	Absolute Employment 1980	Absolute Employment 2014	Absolute Change	% Change	Change 95% Confidence Intervals
Highly-Skilled, High-Income Occupations	21 140	334 457	313 317	1482	306,033 - 320,601
White-Collar Middle-Income Occupations	78 428	356 889	278 461	355	270,527 - 286,395
Blue-Collar Middle-Income Occupations	70 390	267 400	197 010	280	191,622 - 202,398
Low-Skilled, Low-Income Occupations	27 230	325 225	297 995	1094	290,976 - 305,014
All Occupations	197 188	1 283 971			
All Semi-Skilled, Middle-Income Occupations	148 818	624 289	475 471	319	459,987 - 490,955

Table 9: Absolute changes in the occupational distribution of the employed workforce, 1980 and 2014 (Source: South African Population Census 1980 and Labour Force Survey 2014)

The argument for an occupational structure dominated by semi-skilled, middle-income employment is strengthened further if I look at the relative employment changes. When combining white-collar and blue-collar semi-skilled employment into a single semi-skilled, middle-income category, such a grouping would account for 62 percent (table 7) of all employment in all occupations in 1980. In 2014, the combined semi-skilled, middle-income grouping would still account for 49 percent of all employment which, while smaller, is evidence of an occupational structure dominated by semi-skilled jobs and large, continuous growth of middle-income employment (table 7).

This is an unexpected result as it is not indicative of either occupational polarization or professionalization. Firstly, while the growth in both low-skilled, low-income and highly-skilled, high-income occupations is large, the status of all semi-skilled, middle-income jobs as the occupational group with the largest absolute growth since 1980 is evidence that eThekweni's occupational structure is not taking on an hourglass form, split between highly-skilled, high-income and low-skilled, low-income jobs. Thus I argue that the overall pattern of employment growth is not a polarizing one, largely due to the continued growth of white-collar, clerical support and sales jobs. The

results also do not support the professionalization argument, which predicts that the professional and managerial middle-class has grown dramatically more than all other occupations (Hamnett, 1994). What does seem to be present is the general upgrading of skills of the employed workforce: due to the growth of semi-skilled (particularly white-collar service jobs) and high-skilled, high-income managerial and professional jobs, there has been a greater growth in jobs that required semi-skilled or greater expertise relative to the growth of low-skilled jobs. The number of jobs that require skilled, non-manual workers (highly-skilled professionals, managers and technicians or semiskilled clerical support and sales workers) have experienced significant more absolute growth than those which are unskilled or low-skilled (figure 3, table 9). While this result does not support the professionalization trend defined by the domination of only the highly-skilled managerial, professional, technical and associate professional jobs experienced by Johannesburg's occupational structure (Crankshaw and Borel-Saladin, 2014: 1860), eThekweni is experiencing a pattern of employment which is dominated by the increasing of skills. There is large growth in both highly-skilled and semi-skilled occupations, thus the increasing of skills is not merely in highly-skilled "professional" type jobs which the professionalization argument is termed after (figure 3). However, as I demonstrated in discussing the changing patterns of relative employment, and in figure 4 below, combining all semi-skilled occupations into one occupational grouping indicates that middle-income occupations have experienced the most absolute growth, and in terms of relative employment they account for the largest share of employment in eThekweni's occupational structure by a considerable margin. Thus I argue that the eThekweni workforce is experiencing a pattern that is neither polarizing nor professionalizing, but one of semi-skilled middle-income growth (figure 4).

Theories that argue for specific changes in the occupational structure have been described by using analogies with shapes to portray the pattern of growth associated with the argument. For example, Marcuse (1989: 699) describes the pattern argued for by the polarization argument is taking the shape of an hourglass, divided by growth at the top (high-income jobs) and at the bottom (low-income jobs) while the centre is narrow due to the argued decline in middle-income jobs. The typical Fordist occupational structure shape was argued to be that of an egg, which due to middle-income manufacturing growth, was widest in the middle-area, occupied by middle-

income jobs (Marcuse, 1989: 699). While manufacturing has declined in eThekweni, due to the pattern of middle-income growth spurred on by the growth of white-collar jobs, I argue that eThekweni's pattern of growth can also be described as a similar shape. Due to the accompanied growth in high-income and low-income jobs, perhaps an onion shape (which is more rounded at the top and bottom than an egg) is more appropriate.

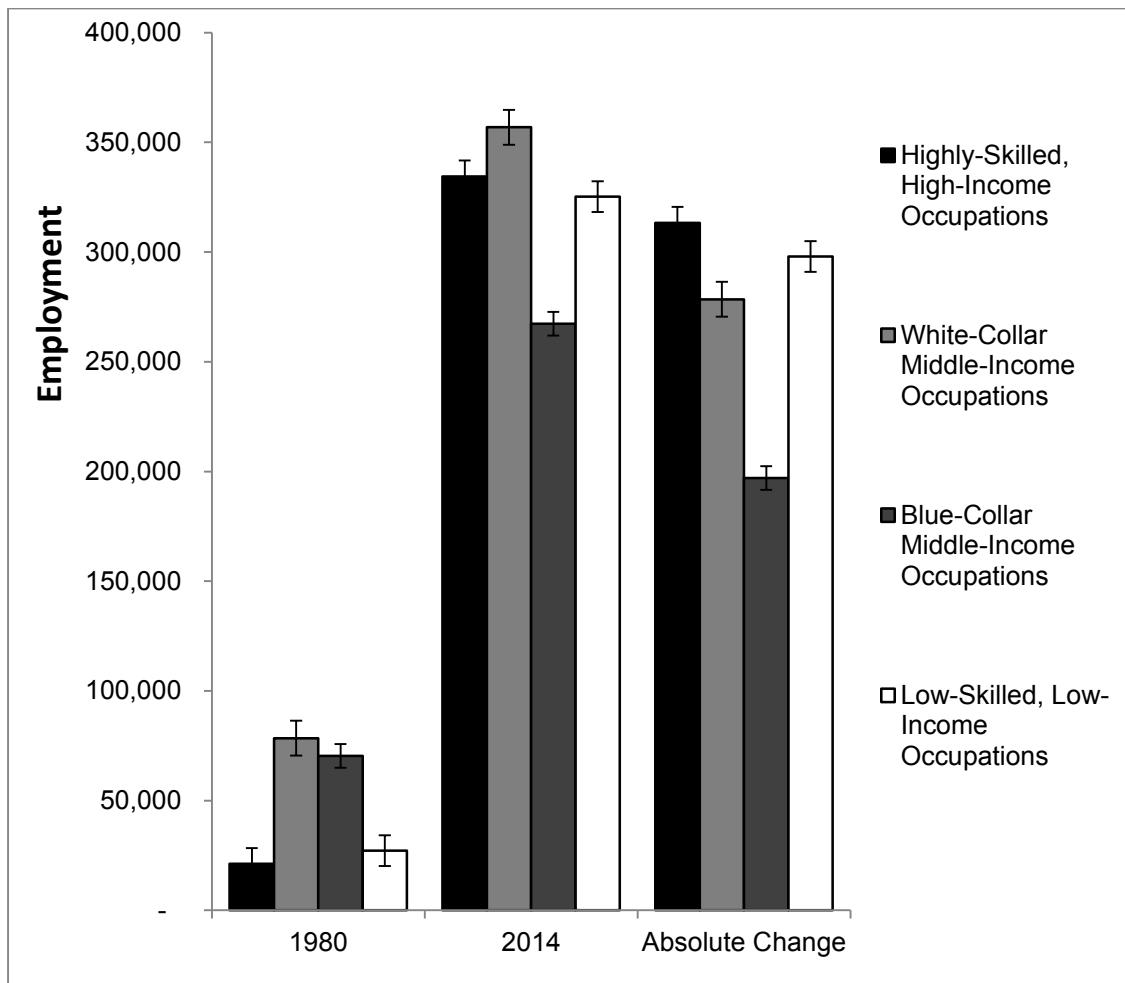


Figure 3: Changes in employment across the occupational structure, grouped by income; separation of middle-income white-collar and blue-collar occupations.²

² The confidence intervals for the employment estimates of the occupational groups and the absolute changes in figure 3 and 4 were calculated at a 95% probability level, and are shown in table 9.

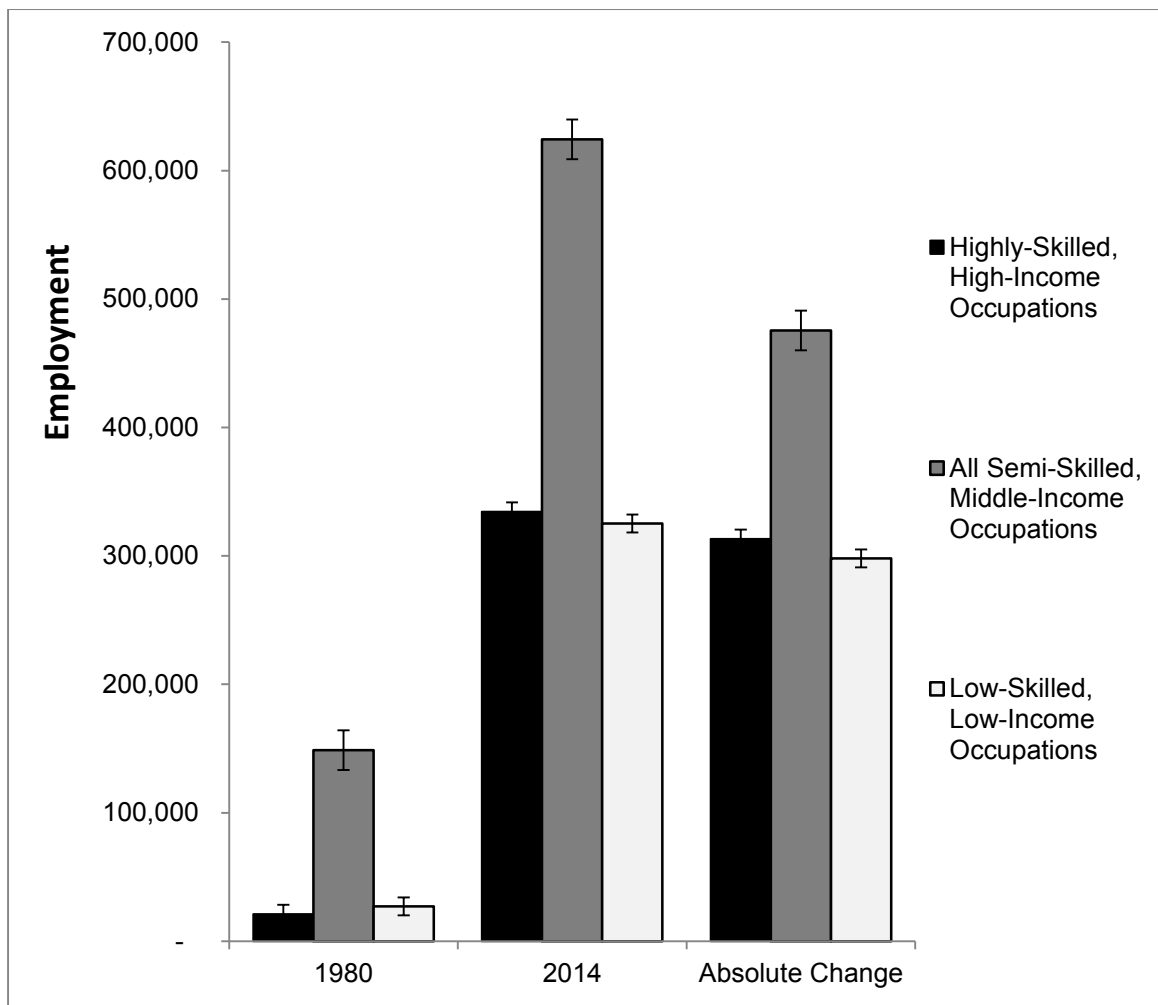


Figure 4: Changes in employment across the occupational structure, grouped by income; all semi-skilled occupations combined.

The impact of unemployment:

Alongside the increasing demand for skills in the workforce is increasing unemployment. The national unemployment rate in South Africa has increased from the 16 percent recorded in the mid-1970's (Bell, 1985: 25) to 25 percent in 2012 (Stats SA, 2012: 25). In eThekweni unemployment increased steadily from 15 percent in 1980 to very high numbers in most of the 2000's such as the 28 percent in 2005. Since then, it has declined, with the most recent 2014 estimate at 16 percent (table 10). There is a notable difference between the unemployment rate in eThekweni (16 percent) and the national rate (25 percent). This could be accounted for by taking into account that my results have shown large growth of employment in low-skilled, low-income jobs. With a large demand for low-skilled jobs, there will be opportunities for unskilled and low-skilled labourers in eThekweni's labour market. This could at least partly explain why there is a lower rate of unemployment in the city. While the

unemployment rate has declined in recent years, and is lower than the national rate, it remains high. The large number of unemployed is significant for this study for several reasons: firstly as it a feature of the professionalization argument. As the demand for skills in workers is increasing, those who are unskilled are left with fewer opportunities to find work. This results in a social class division where on one hand there is a growing class of increasingly well-paid, highly-skilled non-manual workers and on the other there is growing group of unemployed workers, who as termed by Esping-Anderson (1993) and Hamnett (1996), can be referred to as an “outsider surplus population”. While I have presented evidence that there is still a demand for low-skilled, low-income jobs with the high number of employed elementary workers, this has not stopped the unemployment rate from reaching the highs it has. Secondly, the existence of a large class of unemployed workers is at odds with the social polarization hypothesis, which argues that the primary division in the occupational structure is between high and low-income workers. If 16 percent of the workforce is unemployed, there is a significant division between the employed (on all levels) and the unemployed.

Employment Status	1980	2005	2010	2014
Employed	249,603	1,046,642	1,050,938	1,283,970
Unemployed	43,915	416,165	151,167	249,217
Unemployment Rate	15	28	13	16

Table 10: Unemployment in eThekweni, 1980, 2005, 2010 and 2014³

This high unemployment rate has particular consequences for racial inequality, both between racial groups, in what can be referred to as inter-racial inequality, and within such racial groups in what can be called intra-racial inequality. As scholars have argued elsewhere, South Africa’s Apartheid past has left a legacy where a large portion of the local black African population faces living in poor socio-economic environments that puts them at prime risk for unemployment and becoming the “outsider surplus populace”. In the next chapter, I will look at how these changes in occupations and growing unemployment has affected the racial population groups in the eThekweni area. The relationship between race and class will also be of particular importance

³ The 95% confidence interval for the 2014 unemployment estimate is 244,886 – 253,548. The interval for the 2014 employed estimate is 1,262,383 – 1,305,557.

Chapter 4:

A Question of Racial Inequality

The focus of this chapter is to investigate how eThekweni's changing occupational structure has affected racial inequality within the city, and how the representation of racial groups within specific occupational groups reflects racial class divisions between different income levels. Of particular concern also will be the relationship between unemployment and race, and if unemployment is particularly dominated by racial groups which were disadvantaged during Apartheid who now form part of an "outsider surplus population". I will argue that the middle-class is becoming de-racialized, with substantial growth in employment of black Africans and Indians in highly-skilled, high-income and semi-skilled, middle-income jobs. This result is contrary to the argument that social polarisation results in socioeconomic polarisation based on race. Despite the de-racialisation of the middle-class, I will also present evidence that black Africans almost entirely account for employment in low-skilled, low-income jobs and that they also dominate the class of unemployed. I argue that this is evidence of inter-racial inequality when contrasted with the over-representation of the employed white population in highly-skilled, high-income jobs. I also present evidence of growing intra-racial inequality between black Africans who are employed in low-income jobs or unemployed, and the growing number of black Africans employed in high-income jobs. Once again, the statistical changes discussed and relevant to my arguments were calculated at a 95% probability level.

Is the occupational structure becoming de-racialized?

A hallmark of racially inequality within the city will be how the occupational structure is distributed racially; scholars like Wolpe (1977:153), Simkins and Hindson (1979: 1-12) and Crankshaw (1997a; 1997b: 635) argued that the 1970's saw an increase of coloureds, Asians and black Africans into non-manual, more-skilled employment. Wolpe in particular emphasised a noticeable growth in the black African middle class between the 1960's and 1970's. Logically, opportunities for better education and the required qualifications for more-skilled better-paying jobs will only have increased for coloureds, Asians/Indians and black Africans after the end of Apartheid. Access to highly-skilled, highly-paid managerial, professional and technical jobs in particular should have improved, leading to the de-racialization of jobs within the high-income

brackets. It could also be expected that black Africans and Indians could gain better access to semi-skilled jobs and employment in general, backed up by government policies like affirmative action are aimed at giving those who were previously disadvantaged a foothold in South Africa's economic sphere. To test this, I ran cross-tabulations of the occupations and racial population group variables, looking at how employment within each occupational group was distributed according to race. I used the same main occupational groups that grouped the single-digit ISCO groups together according to income that were conceptually detailed in chapter 2 and used for the occupational analysis in chapter 3.

The racial composition of highly-skilled, highly-paid managerial, professional, associate professional and technical jobs (figure 5) stayed quite similar for several decades before changing somewhat dramatically over the past 10 years. While black Africans, Indians and whites all experienced employment growth within this occupational grouping from 1980, managerial, professional and technical jobs were largely dominated by the white population. The white population continuously accounted for the largest absolute number of managers, professionals and technicians until the late 2000's and went through periods where they alone made up for almost 40% of this entire occupational group, as in 2005 (table 11). This started to change by the late 2000's, with both black Africans and Indians starting to outnumber whites in these highly-skilled, highly-paid jobs. By 2014, black Africans account for 46 percent of these jobs, a domination which is the complete inverse of previous decades (table 11). The Indian population too has had a larger representation within this occupational grouping than whites the last several years.

Race	1980	1996	2001	2005	2010	2014
Black African	52	28	31	29	35	46
Coloured	1	3	4	7	1	3
Indian or Asian	19	31	32	26	38	29
White	28	39	33	38	27	22
All Races	100	100	100	100	101	100

Table 11: Relative employment of managers, professionals, technicians and associate professionals by race, 1980-2014

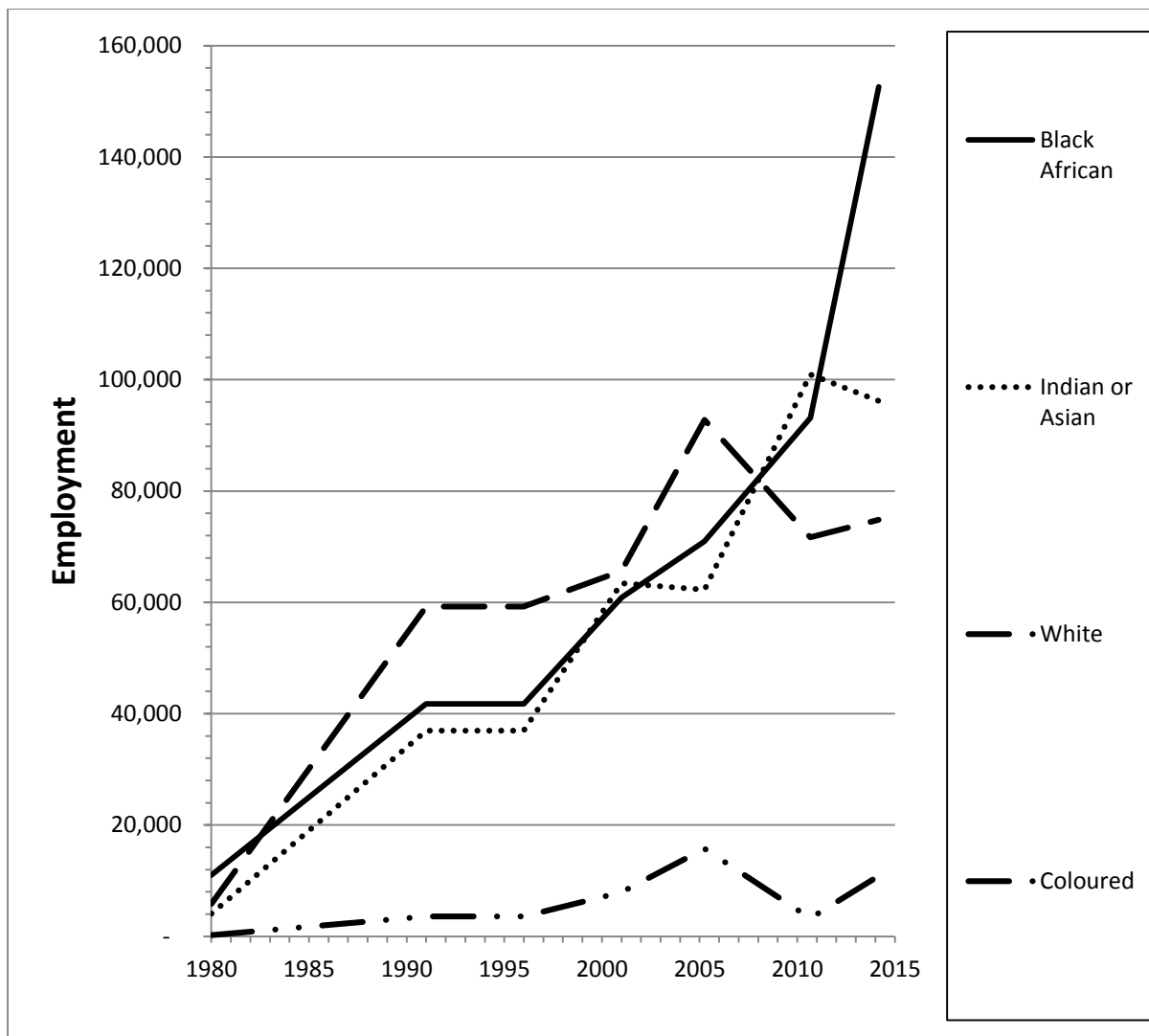


Figure 5: Employment in managerial, professional or associate professional or technical occupations by race, 1980 to 2014.

Race	1980	1996	2001	2005	2010	2014
Black African	10,985	45,575	60,890	70,956	93,141	152,611
Coloured	244	5,016	7,937	15,733	3,274	10,843
Indian or Asian	4,091	50,846	63,428	62,293	100,913	96,166
White	5,820	63,662	65,628	92,793	71,710	74,836
All Races	21,140	166,383	197,883	241,775	269,038	334,456

Table 12: Employment of managers, professionals, associate professionals and technicians by race, 1980-2014

Race	2005			2014		
	Employment in High-Income Jobs	% of all employment in high-income jobs	Total Employed	Employment in High-Income Jobs	% of employed in high-income jobs	Total Employment
Black African	70,956	29	637,493	152,611	46	939,703
Indian or Asian	62,293	26	198,932	96,166	29	219,449
White	92,793	38	156,667	74,836	22	95,567
Coloured	15,733	7	50,910	10,843	3	29,251
All Races	241,775	100	1,044,002	334,456	100	1,283,970

Table 13: Employment change in highly-skilled, high-income occupations by racial groups: 2005 and 2014.

It should be noted that the total employed white population has declined. Despite the decline in the absolute number of employed whites, the majority of their employed can be found in these managerial, professional or technical occupations: In 2014, 78 percent of all employed whites were employed in these high-income jobs (table 14). In fact, relative to the size of all employed whites, the percentage of whites employed in highly-skilled, high-income occupations has actually *increased* between 2005 to 2014 (table 14).

White Employment by Occupation	Absolute Employed 2005	Relative Employed 2005	Absolute Employed 2014	Relative Employed 2014	Absolute Change 2005-2014	95% Confidence Interval 2005-2014
Highly-Skilled, High-Income Jobs	92,793	60	74,836	78	-17,957	32,219 - 3,695
White-Collar, Middle-Income Jobs	37,419	24	14,121	15	-23,298	26,508 - 20,088
Blue-Collar, Middle-Income Jobs	23,269	15	4,796	5	-18,473	20,265 - 16,681
Low-Skilled, Low-Income Jobs	867	1	1,814	2	947	890 - 1,004
Total Employed Whites	153,481	100	95,567	100	-57,914	62,962 - 52,866

Table 14: Absolute and relative changes of employment of whites in the occupational structure, 2005 and 2014 (Source: Labour Force Surveys: 2005 and 2014)

This high representation of whites in managerial, professional, technical and associate professional jobs is striking, as they amount to a small share of eThekweni's employed workforce in comparison to black Africans (figure 14 shows that as of 2014 there were 95,567 employed whites compared to the 794,280 employed black Africans in table 26). Despite this, whites have a very high representation in the most-skilled and best-paid jobs. Only recently have other racial groups with larger total employed populations come to also have large numbers in the most lucrative occupations (figure 5). While it can be argued that the white population had the education and skills needed to be employed in these jobs since the Apartheid era, it took over a decade for this occupational grouping to deracialise, and if there is such a high percentage of the total number of employed whites in these jobs, one would expect them not to have high representation in the worse-paid occupations. This is proven to be true when we look at all the other occupations: despite periods where whites had numbers ranging from 14-20 percent of employment in white-collar clerical support and services and sales jobs, whites have not had large representations in any of the other occupational groups (table 14). By 2014, whites amounted to only 1 percent of employment in elementary occupations and 2 percent of employment in craft and related trades workers and plant and machine operator and assembler jobs (table 14). There are therefore two trends for employed whites in eThekweni: firstly, that the number of whites employed in highly-skilled, high-income jobs are declining in both relative and absolute terms. Secondly, despite this absolute and relative decline, whites are over-represented in highly-skilled, high-income jobs with the more than three-quarters of all employed whites working in managerial, professional, technical or associate professional occupations.

Race	1980	1996	2001	2005	2010	2014
Black African	78	38	42	61	62	73
Coloured	1	4	5	4	1	3
Indian or Asian	16	34	35	21	31	19
White	6	23	18	14	6	4
All Races	100	100	100	100	100	100

Table 15: Relative employment in clerical support, services and sales workers by race, 1980-2014

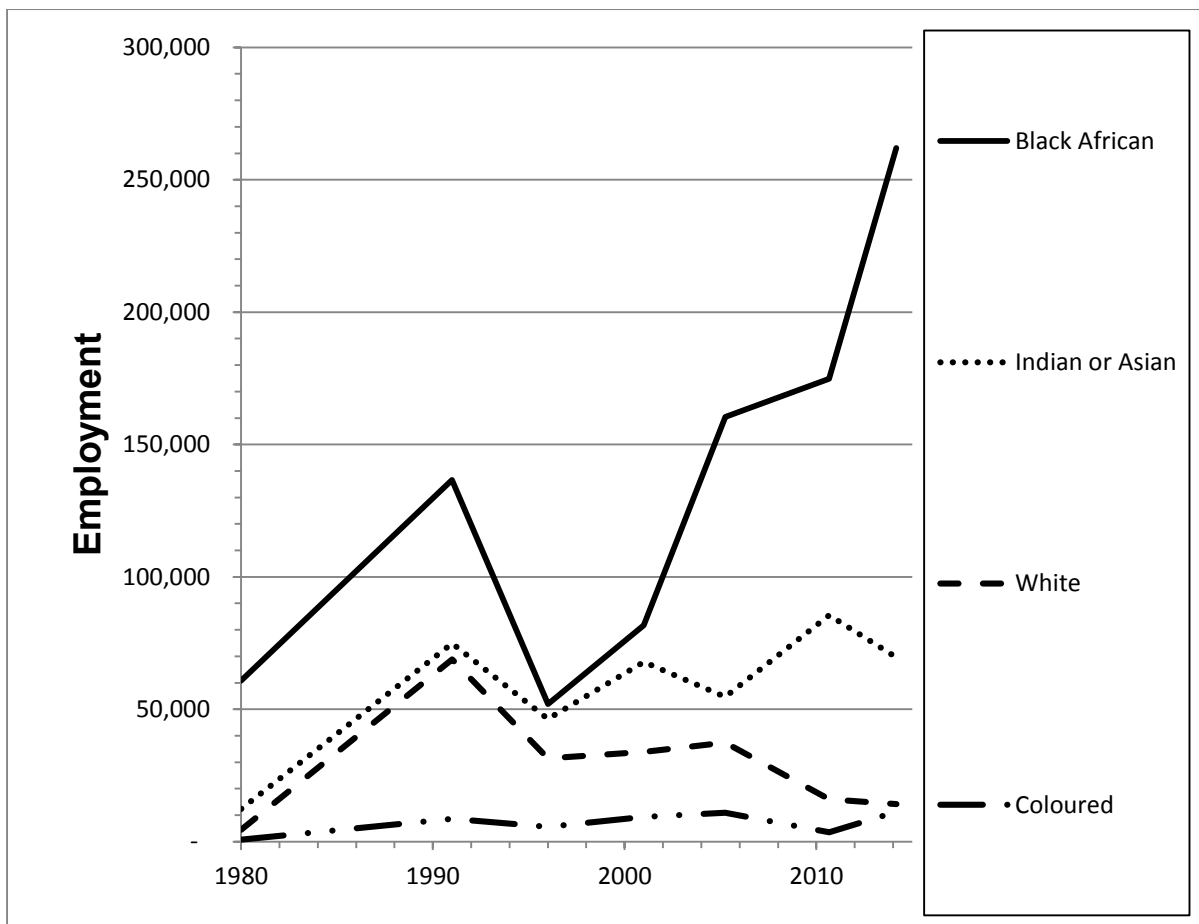


Figure 6: Employment in clerical support, and services and sales jobs by race, 1980-2014

Race	1996			2014		
	Employment in white-collar middle-income Jobs	% of employed in white-collar middle-income	Total Employed	Employed in white-collar middle-income	% of employed	Total Employed
Black African	52,006	38	411,413	261,961	73	939,703
Indian or Asian	46,299	34	206,451	69,572	19	219,449
White	31,435	23	147,504	14,121	4	95,567
Coloured	5,619	4	23,498	11,235	3	29,251
All Races	135,359	100	794,081	356,889	100	1,283,970

Table 16: Employment in white-collar, middle-income occupations by racial groups: 1996 and 2014.

The racial pattern of employment in clerical support, services and sales jobs (figure 6) shows that black Africans have accounted for the largest presence in this particular occupational grouping for the last several decades. The absolute number of black Africans grew steadily from 1996 reaching a large pinnacle in 2014. The dramatic amount of growth from 1980 to 2014 was similar to the increasing number of black Africans in managerial, professional, associate professional and technical jobs; their presence in white-collar semi-skilled jobs is a testament to the increasing skills of the black African workforce (figure 26). The Indian population has had steady employment in white-collar middle-income jobs over that past two decades. While Indians and coloureds employed in white-collar, middle-income jobs have declined in relative terms, they have also experienced absolute growth.

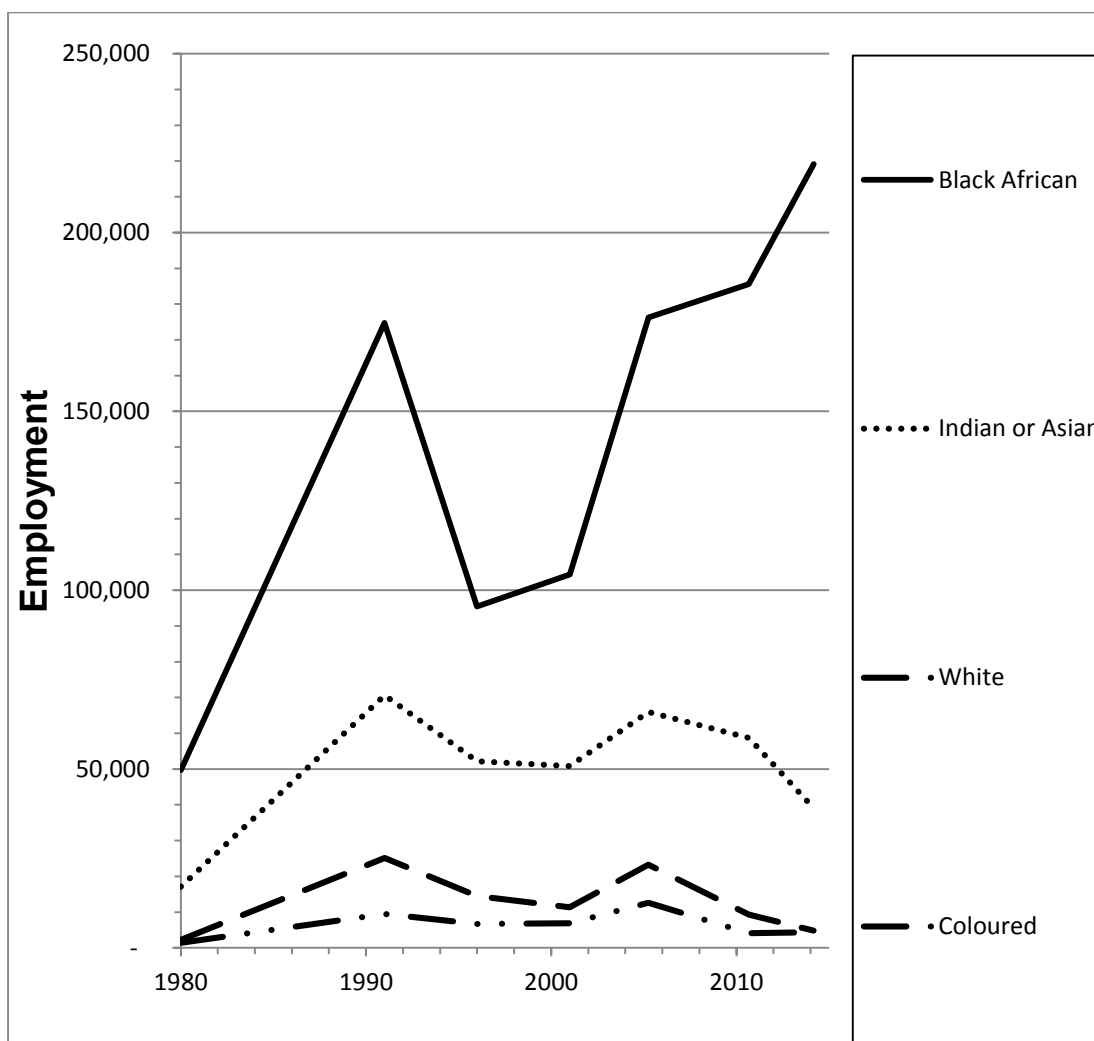


Figure 7: Employment in crafts and related trades workers or machine operators and assembler jobs by race, 1980 to 2014

Race	1980	1996	2001	2005	2010	2014
Black African	49,745	95,410	104,418	176,249	185,542	219,146
Coloured	1,403	6,739	6,871	12,632	4,088	4,345
Indian or Asian	17,043	52,157	50,862	65,923	58,703	39,114
White	2,199	14,452	11,350	23,269	9,322	4,796
All Races	70,390	168,758	173,501	278,073	257,655	267,401

Table 18: Employment in craft and related trades workers, and plant and machine operators and assemblers by race, 1980-2014

Race	1980	1996	2001	2005	2010	2014
Black African	71	57	60	63	72	82
Coloured	2	4	4	5	2	2
Indian or Asian	24	31	29	24	23	15
White	3	9	7	8	4	2

Table 19: Relative employment in craft and related trades workers, and plant and machine operators and assemblers by race, 1980-2014

Race	2005			2014		
	Employment in blue-collar middle-income Jobs	% of employed in blue-collar middle-income	Total Employed	Employed in blue-collar middle-income Jobs	% of employed in blue-collar middle-income	Total Employed
Black African	176,249	63	637,493	219,146	82	939,703
Indian or Asian	65,923	24	198,932	39,114	15	219,449
White	23,269	8	149,900	4,796	2	95,567
Coloured	12,632	5	50,910	4,345	2	29,251
All Races	278,074	100	1,046,642	267,400	100	1,283,970

Table 20: Employment numbers and percentages in blue-collar, middle-income occupations by racial groups: 2005 and 2014.

As for the racial composition of the craft and related trades workers and plant and machine operators and assemblers group, it is a grouping that has also been dominated by black Africans, although there is also a modest group of employed Indian workers (figure 7). This pattern could be seen to be similar to the one observed for clerical, services and sales workers but the crucial difference is that these blue-collar middle-income jobs have experienced considerably less growth. This is logical considering the overall decline of crafts, trade and machine operator

and assembler occupations discussed in chapter 3. That the growth of black Africans in clerical support and services and sales jobs has been greater than that which they experienced in craft and related trades workers and plant and machine operator and assembler jobs supports this argument. There is further evidence of the decline of this occupational group when looking at relative employment within the racial groups: while the absolute numbers of black Africans employed in semi-skilled, blue-collar jobs has increased, the relative share of the black African population employed in these jobs decreased from 34 percent in 1980 to 23 percent in 2014 (table 26). All other racial groups experienced both absolute and relative decline during this same period.

Indian Employment by Occupation	Absolute Employed 1996	Relative Employed 1996	Absolute Employed 2014	Relative Employed 2014	95% Confidence Interval 1996-2014
Highly-Skilled, High-Income Jobs	50,846	32	96,166	44	90,793-101,539
White-Collar, Middle-Income Jobs	46,299	29	69,572	32	19,628 - 26,918
Blue-Collar, Middle-Income Jobs	52,157	33	39,114	18	15,228 - 10,858
Low-Skilled, Low-Income Jobs	10,634	7	14,597	7	3,553 - 4,373
Total Black African Employment	159,936	100	219,449	100	55,414 - 63,612

Table 21: Absolute changes in the occupational distribution of employed Indians, 1996 and 2014 (Source: South African Population Census 1996 and Labour Force Survey 2014)

There is a similar trend in the Indian population employed in blue-collar semi-skilled jobs: steady growth until the mid-2000s, followed by a decline. These blue-collar, semi-skilled jobs aside, the combined number of Indians employed in both white-collar semi-skilled work and in highly-skilled, high-income jobs account for the majority of employed Indians in the eThekweni area (table 21). This is evidence that Indians in eThekweni have managed to acquire the resources required by a workforce demanding an increasingly skilled workforce.

Race	1980	1996	2001	2005	2010	2014
Black African	23,878	145,254	145,984	226,535	225,346	305,986
Coloured	294	1,280	1,524	11,618	890	2,828
Indian or Asian	2,814	10,634	13,120	12,534	11,417	14,597
White	244	3,003	2,588	867	-	1,814
All Races	27,230	160,171	163,216	251,554	237,653	325,225

Table 22: Employment in elementary occupations by race, 1980-2014

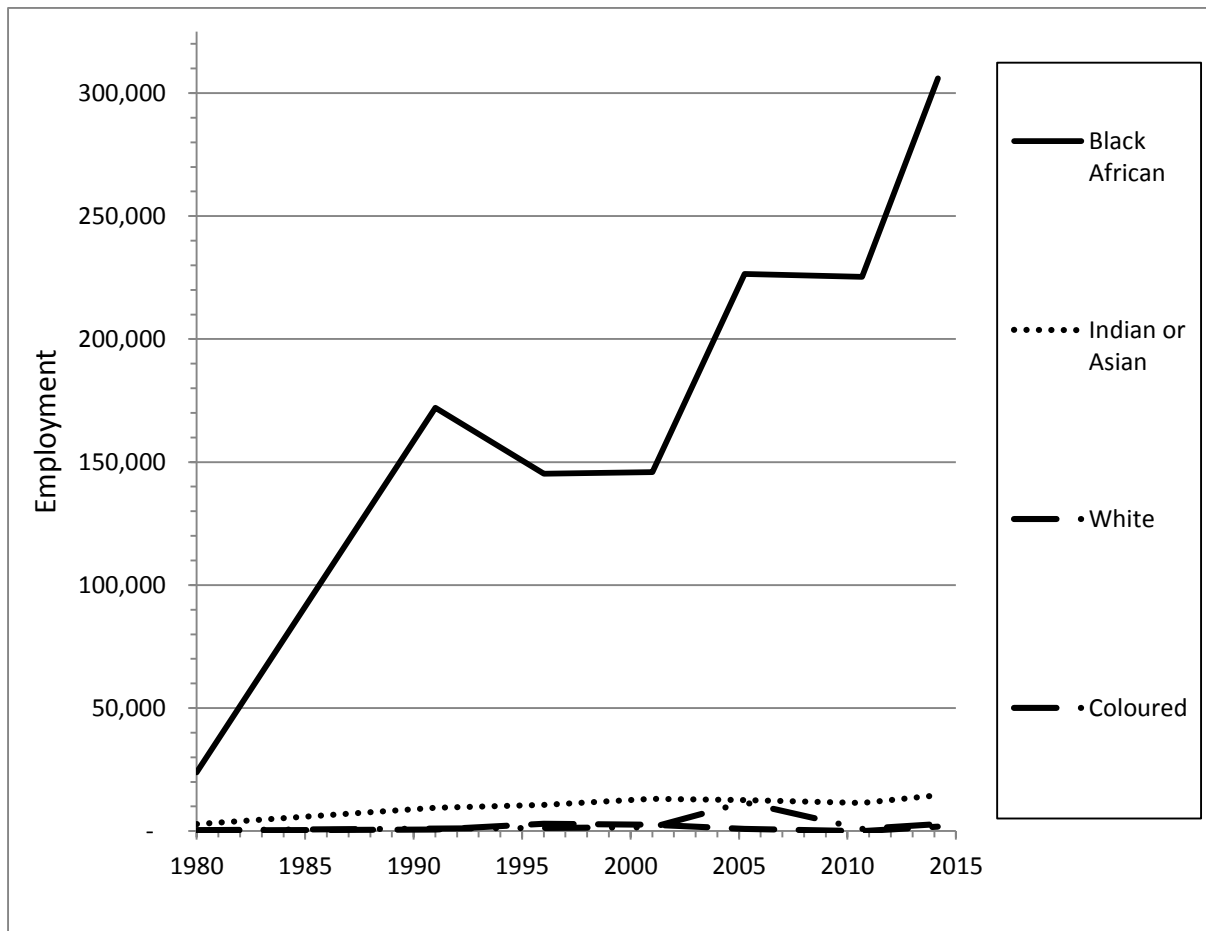


Figure 8: Employment in elementary occupations by race, 1980 to 2014

Race	1980	1996	2001	2005	2010	2014
Black African	88	90.7	89	90	95	94
Coloured	1	6.6	1	5	0	1
Indian or Asian	10	1.9	8	5	5	4
White	1	0.8	2	0	0	1
All Races	100	100	100	100	100	100

Table 23: Relative employment in elementary occupations race, 1980-2014

Race	1996			2014		
	Employed in low-income Jobs	% of employed in low-income jobs	Total Employed	Employed in low-income Jobs	% of employed in low-income jobs	Total Employed
Black African	145,254	90.7	411,413	305,986	94	939,703
Indian or Asian	10,634	6.6	206,451	14,597	4	219,449
White	3,003	1.9	147,504	1,814	1	95,567
Coloured	1,280	0.8	23,498	2,828	1	29,251
All Races	160,977	100	794,081	325,225	100	1,283,970

Table 24: Employment numbers and percentages in low-skilled, low-income occupations by racial groups: 1996 and 2014.⁴

When lastly looking at the racial composition of elementary occupations, it is the occupational grouping most dominated by a single racial group. Since the 1980s, it has almost entirely been occupied by black Africans, with employment growing continuing to grow steadily over the decades to 2014. Black Africans have amounted for more than 90 percent of employment in elementary jobs consistently (as seen in 1996 and 2014). As seen in table 24, the only racial group with large growth in absolute terms in elementary jobs from 1996 to 2014 are black Africans. My evidence thus shows that elementary occupations are the occupational group with the highest number of employed black Africans in the entire occupational structure (table 26). Many black African workers are still dependent on such low-income jobs for employment. This arguably shows that despite the growth in both highly-skilled, high-income occupations and semi-skilled, middle-income white-collar jobs, many

⁴ The 95% confidence interval for the absolute growth of black Africans in elementary jobs is 153,455 – 168 019.

black Africans still depend on low-skilled, low-income work and do not have the skills (or access to means to gain skills) to move beyond elementary work. The next question to address is the racial composition of the unemployed, and if black Africans also dominate the number of unemployed in a relative sense.

Unemployment, inter-racial and growing intra-racial inequality:

As discussed in chapter 3, in 2014 the unemployment rate in eThekweni was 16 percent. That the unemployment rate is high asks a further question: what is the racial composition of the unemployed workforce? Logic would dictate that those racial groups that were disadvantaged under Apartheid would be greatest risk of unemployment as they would have had less time to gain a quality education and acquire the necessary skills demanded by an economy requiring more skilled jobs. This would certainly make sense in an urban environment which is undergoing professionalization, in which the pattern of employment growth is towards a high-skill economy, as is argued to be the case in Johannesburg (Crankshaw and Borel-Saladin, 2014: 1860). Racial inequality is also argued to increase in occupational structures undergoing a polarised pattern of growth, as it is claimed that there are a disproportionate number of whites employed in highly-skilled, high-income jobs, while black Africans, Coloureds and Asians are disproportionately concentrated in low-skilled, low-income jobs (Baum, 1997: 1897; Lemanski, 2007:457; Sassen 1990, 83-4; 1998, 46; 2001, 321). Due to the decline of semi-skilled employment in a polarising occupational structure, those who are not highly-skilled would be limited to the low-skill, low-income pool of jobs. The competition for low-skilled jobs from semi-skilled workers, who are argued to be losing their jobs do to the decline in semi-skilled work, along with low-skilled and unskilled workers could leave large numbers of these workers without access to jobs. However, as my evidence in chapter 3 showed, eThekweni is not experiencing a polarisation or professionalization of its occupational structure; while there has been growth in both highly-skilled and low-skilled jobs, my evidence suggests a continuous pattern of semi-skilled, middle-income growth. With the fast growth of semi-skilled occupations, there is still potential for workers who are not highly-educated or highly-skilled to find employment in semi-skilled jobs: high-school dropouts could still find middle-income manual jobs, or the low-income equivalent.

Race	Unemployed	95% Confidence Interval	% of all Unemployed
Black African	210,622	201,852 - 219,392	85
Indian or Asian	31,236	30,046 - 32,426	13
White	1,212	1,202 - 1,222	0.5
Coloured	6,147	6,037 - 6,257	2.5
Total Unemployed	249,217	244,886 – 253,548	100

Table 25: Racial composition of the unemployed workforce, 2014

Race	Absolute Employed 1980	Relative Employed 1980	Absolute Employed 2014	Relative Employed 2014	Absolute Change 1980-2014	95% Confidence Interval 1980-2014
Highly-Skilled, High-Income Jobs	10,985	8	152,611	16	141,626	134,515 - 148,736
White-Collar, Middle-Income Jobs	60,816	42	261,961	28	201,145	190,153 - 212,136
Blue-Collar, Middle-Income Jobs	49,745	34	219,146	23	169,401	160,138 - 178,664
Low-Skilled, Low-Income Jobs	23,878	16	305,986	33	282,108	274,821 - 289,394
Total Black African Employment	145,424	100	939,704	100	794,280	773,622 - 814,936

Table 26: Absolute changes in the occupational distribution of employed black Africans, 1980 and 2014 (Source: South African Population Census 1980 and Labour Force Survey 2014)

Despite the availability of semi-skilled and low-skilled jobs in eThekweni, my evidence shows that the racial composition of the unemployed is dominated by black Africans to a shocking extent. Black Africans are by far the largest group accounting for unemployment numbers as in 2014 they alone account for 85 percent of all unemployed workers (table 25). If the number of unemployed black Africans (249,217, table 25) were considered as an occupational group on their own, it would be a group similar in size to the number of black Africans employed in white-collar and blue-collar middle-income jobs. Notably, this would be larger than the number of black Africans employed in highly-skilled, high-income managerial, professional or technical jobs (table 26).

However, the high unemployment among black Africans asks questions of the ability of unemployed workers to find both jobs and the necessary resources to look for work. As discussed in chapter 3, an aspect of the professionalization argument is that with urban economies having an increasing demand for highly-skilled jobs, workers who do not have skills or the resources to gain those skills are forming part of a growing unemployed “outsider surplus population”. What is particularly interesting in the case of eThekweni is that there is still a large demand for elementary occupations which are low-skilled jobs, which is one of the occupational groups with highest number of employed black Africans. In the context of the debate about polarisation, Sassen argues that the large growth of low-skilled, low-income work in New York and Los Angeles is due to the high and continuous level of immigration bringing with it a large low-skilled immigrant labour supply (Sassen, 1984: 140). Such logic could be applied to the case of the significant number of employed black Africans in eThekweni’s elementary occupations: eThekweni is the urban focal point of the Kwa-Zulu Natal province. As of such, it logically would be the destination of choice for many of the migrant workers who seek employment coming from the more rural parts of the province. However, Sassen argument makes the claim that the cause of the growth of low-skilled jobs in cities is large-scale immigration. Hamnett (1994) disagrees, and notes that while other global cities have large numbers of immigrants, Sassen bases her argument of the causes of growth in low-skilled employment in global cities on the levels of immigration experienced by New York and Los Angeles (Hamnett, 1994: 407-408). Hamnett argues that the proportions of immigration in those two cities are much higher than in others, and that growth in employment is related to economic, social and demographic factors of the contextual city. In the case of eThekweni, scholars have argued that the importance of unskilled and low-skilled manual work relates to the busy trading port in the city (Dubbeld, 2003; Freund, 2000: 147). The continued importance of elementary occupations in eThekweni could relate to its status as a port city, and the supply for those jobs could be provided by migrant labour.

Referring back to the debate around the changing occupational structure, I can discuss the evidence presented in this chapter in relation to the arguments about polarisation, professionalization and their effects on racial inequality. Scholars who support the polarisation hypothesis, like Sassen (1990, 83-4; 1998, 46; 2001, 321)

and Lemanski (2007:457) argue that racial inequality is caused by several factors related to the polarisation of the occupational structure. Firstly, that a disproportionate number of blacks are concentrated in low-skilled, low-income jobs as opposed to high-income occupations which are dominated by whites. Secondly, the decline of manufacturing employment and blue-collar jobs has deprived black Africans of access to middle-income jobs and which has led to a “significant socioeconomic polarization based on race” (Lemanski, 2007: 457). My evidence shows that high-income managerial, professional, technical and associate professional jobs have growing high numbers of employed black Africans and Indians alongside whites (table 12). This challenges the first argument made by proponents of the polarisation thesis as whites no longer dominate eThekweni’s highly-skilled, high-income jobs in absolute terms, despite the over-representation of whites in these jobs relative to their employment in other occupations. Regarding the second argument that deindustrialization has limited the access black Africans have to middle-income employment, I demonstrated in chapter 3 that there has been considerable growth of employment in semi-skilled, middle-income clerical support, services and sales jobs. Black Africans are highly represented in these white-collar jobs, alongside a smaller group of Indians, which is indicative of the social mobility of previously disadvantaged racial groups, not of their socioeconomic isolation in low-skilled, low-income jobs (table 16). My results thus do not support the argument of social polarisation based on race, but is instead more consistent with arguments made by scholars who argue that there is significant educational, income and occupational differentiation among racial groups (Clark, 1998: 191; Clark and McNicholas, 1996: 61; Clark, 2003: 124; Hamnett, 2003: 115; Waldinger and Bozorgmehr, 1996: 26-27; Wilson, 2003: 1099).

While I have considered the growth of all racial groups in both highly-skilled and semi-skilled jobs, to further investigate questions of inequality in regards to the inequality between racial groups, I must also look at the inequality *within* racial groups. In doing this, the question of unemployment and its racial composition comes into play. Despite the increasing number of black Africans employed in high and middle-income jobs, there remains a large number employed in low-skilled, low-income work and high number of unemployed. High numbers of unemployed blacks is a feature discussed by proponents of the professionalization argument, who argue

that deindustrialization has resulted in higher rates of unemployment amongst low-skilled workers than those who are better educated (Kasarda, 1989: 33; Kesteloot, 1995: 211-14; Kesteloot, 2000: 199-201; Ortiz, 1996; Wilson, 1980; Wilson, 1987: 39-41; Wilson, 1996: 30). As there is a growth of employment in, and thus demand for, jobs that require skills those who are unskilled are left at the mercy of an occupational structure where it is very difficult for them to find jobs, putting them at risk of unemployment. In other South African studies of Cape Town and Johannesburg, this outsider surplus population has been argued to be dominated by black Africans (Crankshaw, 2008; 2012; Crankshaw and Borel-Saladin, 2014).

My evidence has shown that the racial composition of the unemployed workforce is indeed almost entirely dominated by black Africans (table 25), which is in stark contrast to the increasing number of black Africans employed in middle class jobs (table 26). In regards to the polarisation debate, the evidence of black African mobility into middle-income jobs is contrary to what is argued by proponents of the polarisation thesis, like Lemanski, who argues that black Africans have been deprived of opportunities to middle income jobs. My evidence shows that black Africans and Indians are both highly-represented in white-collar and blue-collar middle-income jobs, which counters the claim of significant socioeconomic polarisation based on race (Lemanski, 2007: 457). It could be argued that the increasing number of black Africans in high-income and middle-income jobs is a sign of decreasing inter-racial inequality. However, this does not mean that inequality is declining racially. While my results show that there has been increased social mobility for black Africans and Indians into the middle-class, a large proportion of the black African population is either unemployed or working in low-income jobs. In comparison, the vast majority of whites are employed in high-income jobs, and have almost no representation in the low-income and unemployed classes (table 14). Indians, while not as highly-represented as black Africans in low-income work and the unemployed, still have larger proportions of their population represented in the unemployed and low-income class than whites (table 25). Relative to the high-representation that black Africans have in these classes, there is still inequality between whites and other races.

Secondly, greater social mobility for black Africans and access to higher-incomes has led to increasing intra-racial inequality. The experience of those black Africans

who account for large portion of highly-skilled, high-income jobs in 2014 will be the complete opposite of the almost a third of black Africans who are unemployed in the same year. Racial inequality has taken on an additional form, where it not merely present between different racial groups, but there is increasing inequality within racial groups, particularly between black Africans. Based on my evidence, I agree with an argument made by several scholars about the post-Apartheid racial and class structure in South Africa: the middle class is experiencing de-racialisation due to the mobility of previously disadvantaged racial groups; however the unskilled, low-skilled and unemployed classes remain almost entirely comprised of black Africans, a persisting feature from the Apartheid-era. Except now, instead of simply having vast inter-racial inequality there is also increasing intra-racial inequality (Crankshaw, 1997; Seekings and Nattrass, 2005).

Conclusion

This study has examined the changes of eThekweni's occupational class structure, firstly demonstrating that the City has experienced deindustrialisation by measuring the changes in employment of the different economic sectors. The manufacturing sector has declined, but relative to the deindustrialisation experienced by other major South African cities like Cape Town or Johannesburg, the decline of the manufacturing sector in eThekweni occurred later in the mid-2000s. I then tested arguments related to the effects of deindustrialisation of the occupational structure, particularly the social polarisation thesis, by studying the long-term trends in the occupational structure. My results demonstrate that employment in eThekweni has undergone a pattern of semi-skilled, middle-income growth. There was large relative and absolute growth in low-skilled, low-income and highly-skilled, high-income work from 1980-2014, but the absolute growth of all semi-skilled, middle-income occupations was the largest in the City's occupational structure during this period. This result presents challenges to other arguments within the debate surrounding urban and occupational inequality: firstly to the argument that deindustrialisation results in occupational polarisation, as despite the growth of high-income and low-income jobs the largest absolute growth of employment has been in middle-income occupations. Secondly, my results show that eThekweni is not experiencing a professionalising pattern either, as large growth of employment has not been exclusively dominated by highly-skilled, high-income jobs. Instead, there has been absolute and relative growth in all occupations. The pattern of large semi-skilled growth also had consequences for the unemployment rate: while there is high number of unemployed in eThekweni, the unemployment rate is lower than the national rate in South Africa or the rate experienced in Johannesburg. I have argued that this may be in relation to the growth of employment in low-skilled jobs alongside the large pattern of semi-skilled growth as there are more opportunities for work for unskilled, low-skilled and semi-skilled workers in eThekweni than in an urban context like Johannesburg which has experienced a professionalising pattern of employment growth.

This study has also examined the relationship between eThekweni's changing occupational structure and racial inequality. My results show that pattern of middle-income growth in employment in the city has been accompanied by the de-

racialisation of both semi-skilled, middle-income jobs and highly-skilled, high-income jobs. Black Africans have grown tremendously in terms of both absolute and relative employment in white-collar semi-skilled jobs and highly-skilled jobs, becoming the dominant employed racial group in these occupations. I have argued that whites are persistently over-represented in highly-skilled jobs despite their declining numbers in total employment, but they no longer dominate those jobs in absolute terms. Both black Africans and Indians now have more numbers employed in highly-skilled, high-income occupations than whites. The accompanying growth of black Africans and Indians in white-collar jobs is further evidence of the de-racialisation of the best-paying jobs in the City. I thus argued that eThekweni is not experiencing socioeconomic polarisation based on race, as argued by Lemanski (2007). However, while the middle-class has deracialised, there is growing intra-racial inequality between black Africans as they almost entirely account for all employment in low-skilled, low-income work. Glaringly too, my results show that black Africans account for vast majority of the unemployed in the City too. As the low-income working class and employed classes in the city are almost exclusively black, there is a stark contrast with the growing number of black Africans employed in skilled, well-paid jobs. The emerging pattern of intra-racial inequality is thus in line with arguments made by Crankshaw (1997) and Seekings and Nattrass (2005) about race and class in South Africa. Despite an occupational structure that is experiencing growth in both semi-skilled and low-skilled employment many black Africans cannot escape unemployment.

Word Count: 18 286

Bibliography:

- Baum, S. 1997. Sydney, Australia: A Global City? Testing the Social Polarization Thesis. *Urban Studies* 34 (11): 1881-1901.
- Baum, S. 1999. Social Transformations in the Global City: Singapore. *Urban Studies* 36 (7): 1095-1117.
- Beavon, K. 2005. Changes in the Ordering of Johannesburg's Spatial Domain, 1990-2002 in S. Raiser and K. Volkmann (Eds.) *Emerging Patterns of the Global City Region: Spatial Changes in Johannesburg, Mumbai/Bombay, Shanghai and São Paulo*. Osteuropa-Institut der Freien Universität : Berlin, 2005:11-36.
- Bell, D. 1973. The Coming of Post-Industrial Society. New York: Basic Books.
- Bell R.1985. Issues in South African unemployment. *South African Journal of Economics* 53 (1): 17–26
- Borel-Saladin, J. and Crankshaw, O. 2009. Social Polarisation or Professionalisation: Another look at theory and evidence. *Urban Studies* 46(3), 2009, pp.645-664.
- Burger, A and Silima, T. 2006. Sampling and Sample Design. *Journal of Public Administration*, 41 (3.1):656-667.
- Chiu, S and Lui, T. 2004. Testing the Global City-Social Polarisation Thesis: Hong Kong since the 1990s. *Urban Studies* 41(10): 1863-1888.
- Clark, W.1993. Urban restructuring from a demographic perspective, *Economic Geography*, 63: 103-125.
- Clark, W. 1998. The California Cauldron: Immigration and the Fortunes of Local Communities. New York: Guilford Press.
- Clark, W.2003. Immigrants and the American Dream: Remaking the Middle-Class. New York: Guildford Press.
- Clark, W and McNicholas, M. 1996. Re-Examining Economic and Social Polarization in a Multi-Ethnic Metropolitan Area: The Case of Los Angeles. *Area* 28 (1): 56-63.
- Crankshaw, O.1997a. Changes in the Racial Division of Labour During the Apartheid Era. *Journal of Southern African Studies*, 22 (4): 633-656
- Crankshaw, O. 1997b. Race, Class and the Changing Division of Labour Under Apartheid. London: Routledge.
- Crankshaw, O. 2012. Deindustrialization, Professionalization and Racial Inequality in Cape Town. 1980-2010', *Urban Affairs Review*, 48(6): 836-862.

- Crankshaw, O. 2008. Race, Space and the Post-Fordist Spatial Order of Johannesburg. *Urban Studies* 45(8): 1692-1711.
- Crankshaw, O and Borel-Saladin, J. 2014. Does Deindustrialization cause social polarization in global cities? *Environment and Planning A* 46 (1): 1852-1872.
- Czaja, R and Blair, J. 1996. Designing Surveys: A Guide to Decisions and Procedures. Thousand Oaks, California: Pine Forge Press.
- De Vaus, D. 2001. Research design in Social Research. London: SAGE Publications.
- Duminy, J. 2007. Rapid Urban Development and Fragmentation in a Post-Apartheid Era: The Case of Ballito, South Africa, 1994 to 2007. Durban: University of Kwazulu-Natal Press.
- Dubbed, B. 2003. Breaking the Buffalo: The Transformation of Stevedoring Work in Durban Between 1970 and 1990. *IRSH* 48.
- Esping-Anderson G. 1993 Changing Classes: Stratification and Mobility in Post-industrial Societies. London: SAGE
- Fink, A.2003. How to Sample in Surveys. London: SAGE.
- Friedman, J. and Wolff, G. 1982. World City Formation: An Agenda for Research and Action. *International Journal of Urban and Regional Studies*: 309-342.
- Freund, B. 2000. The City of Durban: Towards a Structural Analysis of the Economic Growth and Character of a South African City. In *Africa's Urban Past*: 144-158.
- Hamnett, C.1994. Social Polarisation in Global Cities: Theory and Evidence, *Urban Studies* 31(3): 401-424.
- Hamnett, C. 2003. Unequal City: London in the Global Arena. London: Psychology Press.
- Harrison, B., and B. Bluestone. 1988. The Great U-Turn: Corporate Restructuring and the Polarizing of America. New York: Basic Books.
- International Labour Organisation. 2012. International Standard Classification of Occupations. International Labour Office: Geneva.
- Johnson, W. 1982. Education: Keystone of Apartheid. *Anthropology and Education Quarterly* 13 (3): 214-233.

- Kasarda, J. 1989. Urban Industrial Transition and the Underclass. *Annals of the American Academy of Political and Social Science* 501: 26-47.
- Kesteloot, C. 1995. Three Levels of Socio-Spatial Polarization in Brussels. *Built Environment* 20 (3): 204-17.
- Kesteloot, C. 2000. Brussels: Post-Fordist Polarization in a Fordist Spatial Canvas. In *Globalizing Cities: A New Spatial Order?*, edited by P. Marcuse and R. van Kempen, 186-210. Oxford, UK: Blackswell.
- Kitchin, F. 2002. Desegregation, resegregation and center/ periphery relationships in Durban. *Rencontres de l'innovation territoriale*.
- Lemanski, C. 2007. Global Cities in the South: Deepening social and spatial polarization in Cape Town. *Cities* 24 (6): 448-61.
- Levy, P. 1987. The middle class: is it really vanishing? *The Bookings Review*, Summer. 77-122
- Levy, P and Lemeshow, S. 1999. Sampling of Populations: Methods and Applications. New York: John Wiley and Sons Inc.
- Lohr, S. 2009. Sampling: Design and Analysis 2nd Ed. Duxbury Press
- Maharaj, B and Mpungose, J. 1994. The Erosion of Residential Segregation in South Africa: The "Greying" of Albert Park in Durban. *Geoforum*, 25(1): 19-32.
- Marcuse, P. 1989. Dual city: A muddy metaphor for a quartered city. *International Journal of Urban and Regional Studies* 13 (4): 697-708.
- Moffet, S and Freund, B. 2004. Elite Formation and Elite Bonding: Social Structure and Development in Durban. *Urban Forum* 15 (2).
- Morris, M, Barnes, J and Dunne, N. 2001. Globalisation and Industrial Restructuring in a South African City. *Economic and Political Weekly* 36 (24).
- Morris, M and Hindson, D. 1997. Class and household restructuring in metropolitan Durban. *Society in Transition* 1(1-4).
- Moser, C and Kalton, G. 1971. Survey Methods in Social Investigation. Dartmouth: Aldershot
- Ortiz, V. 1996. The Mexican-Origin Population: Permanent Working Class or Emerging Middle Class? In *Ethnic Los Angeles*, edited by R. Waldinger and M. Bozorgmehr, 247-77. New York: Russell Sage Foundation.

- Prinsloo, E. 1996. Sectors, Clusters and Regions: the Clothing Industry in Durban. *Development Policy Research Unit, University of Cape Town*. Working Paper 3.
- Sassen, S. 1990. The Mobility of Labor and Capital: A Study in International Investment and Labor Flow. New York: Cambridge University Press.
- Sassen, S. 1991. The Global City: New York, London, Tokyo. Princeton: Princeton University Press.
- Sassen, S. 1994. The New Inequalities in Cities, *Cities in a World Economy* (Pine Forge Press, Thousand Oaks: 99-117).
- Sassen, S. 1998. Globalization and Its Discontents: Essays on the New Mobility of People and Money. New York: New Press.
- Sassen, S. 2001. The Global City: New York, London, Tokyo, 2nd ed. Princeton, NJ: Princeton University Press.
- Sayer, A. 1992. Method in Social Science: A realist approach. London & New York: Routledge.
- Schensul, D. 2009. Remaking an Apartheid City: State-Led Spatial Transformation in Post-Apartheid Durban, South Africa. Providence, Rhode Island: Brown University Press.
- Schensul, D and Heller, P. 2011. Legacies, Change and Transformation in the Post-Apartheid City: Towards an Urban Sociological Cartography. *International Journal of Urban and Regional Research* 35(1): 78-109.
- Seekings, J. 2011. Race, Class and Inequality in the South African City. *The New Blackwell Companion to the City*. Blackwell Publishing Ltd.
- Seekings, J. 2014. Taking Disadvantage Seriously: The Underclass in Post-Apartheid South Africa. *Africa* 84 (1): 135-141.
- Seekings, J and Nattrass, N. 2005. Class, Race and Inequality in South Africa. New Haven and London: Yale University Press.
- Simkins, C and Hindson, D. 1979. The Division of Labour in South Africa, 1969-1977. *Social Dynamics* 5 (2): 1-12
- Stats SA: Statistics South Africa, Pretoria:
- 2013 Labour Force Survey Meta Data, Quarter 3.

- 2007 Using the 2001 Census: Approaches to Analysing Data
- 2012 Classifications Standard Industrial Classification of all Economic Activities (SIC) Seventh Edition

Turok, I. 2001. Persistent polarization post-Apartheid? Progress towards urban integration in Cape Town. *Urban Studies* 38 (13): 2349-77.

Waldinger, R and Bozorgmehr, M. 1996. The Making of a Multicultural Metropolis. In *Ethnic Los Angeles*, edited by R. Waldinger and M. Bozorgmehr, 3-38. New York: Russell Sage Foundation.

Williams, M & May, T. 1996. Introduction to the Philosophy of Social Research. London: UCL Press.

Wilson, W. 1980. The Declining Significance of Race: Blacks and Changing American Institutions. Chicago: University of Chicago Press.

Wilson, W. 1987. The Truly Disadvantaged: The Inner City, the Underclass and Public Policy. Chicago: University of Chicago Press.

Wilson, W. 1996. Societal Changes and Vulnerable Neighbourhoods. *When Work Disappears: The world of the new urban poor*. Alfred A. Knopf, New York: 25-50.

Wolpe, H. 1997. The Changing Class Structure of South Africa: the African petit-bourgeoisie. P, Zarembka (ed.), *Research in Political Economy 1: An Annual Compilation of Research* (Greenwich, Connecticut).

Appendices:

Sample Sizes

As the Census data (1980, 1991, 1996 and 2001) are full population counts, there are no necessary samples. These are the sample sizes I used to calculate the standard errors and 95% confidence intervals.

Income Calculations (Labour Market Dynamics Survey 2013)

Basic ISCO Groups:

Main occupation grouped	Mean	N, Sample Size	Std. Deviation	SE= $\sqrt{S^2/n}$: =SQRT(S ² /n)
Managers	8,906	589	15,564	641.30
Professionals	7,609	394	8,341	420.22
Technical and Associate professionals	7,121	772	19,014	684.34
Clerical Support Workers	5,243	806	9,309	327.89
Service and Sales Workers	4,645	837	18,062	624.32
Craft and Related trades workers	3,951	657	8,021	312.94
Plant and machine operators and assemblers	4,298	684	6,997	267.55
Elementary Occupation	2671	1,570	7,186	181.35
Skilled agricultural and fishery workers	1,572	7	1,010	381.79

Main Occupations Grouped by Income:

Main Occupations Grouped By Income	Mean	N	Std. Deviation	SE= $\sqrt{S^2/n}$: =SQRT(S ² /n)
Managers, Professionals, Technicians	7813	1,755	15,858	378.54
Clerical, Sales and Services Workers	4931	1,643	14,552	359.02
Skilled Agricultural, Forestry and Fisheries	1572	7	1,010	381.79
Craft and Related Trades Workers and Machine Operators and Assemblers	4129	1,341	7,517	205.27
Elementary (Unskilled) Workers	2671	1,570	7,186	181.35

Unweighted Employment by Economic Sector Values:

Economic Sector	2005	2010	2014
Agriculture, hunting, forestry and fishing	6	10	9
Mining and Quarrying	1	-	-
Manufacturing	151	271	236
Electricity: gas and water supply	7	2	6
Construction	45	117	141
Wholesale and Retail Trade	191	291	367

Transport	49	128	122
Financial Services	94	242	243
Community: social and personal services	235	255	307
Total Employment	779	1,316	1,431

Unweighted Employment by Occupational Grouping Values:

Main Occupations Grouped	2005	2010	2014
Managers, professionals, technicians and associate professionals	175	398	439
Clerical Support workers and service and sales workers	197	388	426
Craft and related trades workers and plant and machine operators and assemblers	207	328	318
Elementary workers	197	328	377
Total	776	1,442	1,560

Unweighted Employment and Unemployment:

Employment Status	2005	2010	2014
Employed	783	1,446	1,560
Unemployed	291	217	290
Total Workforce	1,074	1,663	1,850

Unweighted Employment and Unemployment by Race:

All Races	Employed 2005	Unemployed 2005	Employed 2010	Unemployed 2010	Employed 2014	Unemployed 2014
Black African	452	222	923	158	1093	241
Indian	198	56	388	54	303	38
White	104	3	112	2	119	2
Coloured	27	10	23	3	45	9

Unweighted employment in highly-skilled, high-income occupations by race:

All Races	2005	2010	2014
Black African	43	151	194
Indian	56	158	137
White	65	82	92
Coloured	9	7	16
Total	173	398	439

Unweighted employment in white-collar, semi-skilled, middle-income occupations by race:

All Races	2005	2010	2014
Black African	106	232	298

Indian	57	130	92
White	27	19	19
Coloured	7	7	17
Total	197	388	426

Unweighted employment in blue-collar, semi-skilled, middle-income occupations by race:

All Races	2005	2010	2014
Black African	124	233	246
Indian	66	80	59
White	10	9	6
Coloured	7	6	7
Total	207	328	318

Unweighted employment in low-skilled, low-income occupations by race:

All Races	2005	2010	2014
Black African	176	306	355
Indian	16	18	15
White	1	-	2
Coloured	4	2	5
Total	197	326	377