UNIVERSITY OF THE WESTERN CAPE

DEPARTMENT OF ECONOMICS

How education outcomes differed between types of schools in nineteenth-century South Africa

by

Furnandy Jade Henn (3429562)

A full dissertation submitted in fulfilment of the requirement of the degree of Master of Commerce in the Department of Economics, University of the Western Cape.

Supervisor: Dr Christie Swanepoel

October 2021

DECLARATION

I, **Furnandy Jade Henn**, hereby declare that the work on which this dissertation, entitled "How education outcomes differed between types of schools in nineteenth-century South Africa", is my original work (except where acknowledgements indicate otherwise) and that neither the work documented, nor any part of it has been, is being or is to be submitted for another degree or examination in this or any other university. I authorise the University of the Western Cape to reproduce for the purpose of research either the entire or any portion of the contents in any manner whatsoever.

Signature: 

Date: 2021/09/29

ABSTRACT

Economists have confidently agreed that the progression of human capital has an important effect on a state's productivity and growth. Moreover, current research proves the importance of educational outcomes throughout history. Therefore, measuring the quality of education throughout periods can test whether or not human literacy rates directly impact the long-run economic growth of a society.

South Africa's current educational system stems from deeply rooted practices instilled in a previously colonised state. A new branch of economics in South Africa's context is economic history, which allows researchers to analyse previous historical events and make inferences regarding practices, laws, and phenomena occurring in the current era. Missionary education deemed for religious conversion in the eighteenth and nineteenth centuries has had a positive and long-lasting effect on human capital in the Cape. Sparse literature regarding colonial education provides an opportunity for further research and development.

This study, therefore, explores literacy, its relationship with the types of schools in existence, geographical positioning, racial groups, religious denominations and gender, keeping the policy implementation that occurred during the period in mind.

The empirical evidence reveals that the highest school attendance rates were among the Coloured population of the Cape.

However, the type of school in this respect had a valuable impact on the literacy recorded. Schooling was non-compulsory, and Sunday school equipped inhabitants with religious instruction towards the end of the nineteenth-century. It should also be noted that females had higher attendance rates, but it was insignificant when determining whether the group attained higher literacy rates. Other results show that lower literacy was experienced in rural areas where most Coloured inhabitants lived. Additionally, residing in a mission station and being older than 15 years contributed to higher literacy rates.

KEYWORDS: Cape Colony, education, literacy rates, illiteracy, school attendance, types of schools.

JEL: B52, F54, I20, J15.

ACKNOWLEDGEMENTS

I would like to, first and foremost, thank our Heavenly Father, without Him, this academic endeavour would not have been possible. A year of pondering, contemplation, and stubbornness made me realise that research is of utmost importance to my goals personally and professionally. This, I would not have realised if I had not religiously followed a scripture dear to my heart; Jeremiah 29:11. My sincere gratitude to all personages who have helped me during this period. I would not be where I am today without the guidance, words of encouragement, patience and unconditional support.

My deepest gratitude to my parents, **Mr Furdinand Henn** and **Mrs Esme Henn,** for instilling the importance of Academia and unending support of all my decisions, big or small.

Inexpressible recognition to **Dr Christie Swanepoel** for your patience, guidance and faith in my ability to conclude this research assignment. It has been an honour to grasp, expand and develop academic skills under your supervision.

I extend credit to the **University of the Western Cape** for affording me this opportunity to further my research and **Bankseta** for financial support during the 2020 Academic year.

Last but not least, appreciation to family, friends, colleagues, research counterparts and any persons of interest that have contributed one way or another to the completion of this project.

Thanking you

Furnandy Henn

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CAPS	Curriculum Assessment Policy Statements
GLM	Generalised Linear Model
GDP	Gross Domestic Product
HOD	Head of Department
MS	Mission station
SGB	School Governing Body
OLS	Ordinary Least Squares
OBE	Outcomes-Based Education
TIMMS	Trends in International Mathematics and Science Study
PIRLS	Progress in International Reading Literacy Study
MOOC	Master of Orphan Chamber
VOC	Dutch East India Company

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION

1.1 Background and problem statement

As defined by Bates, Greif, Levi, Rosenthal and Weingast (1998), economic history is of use for two different objectives. First, it uses analytical accounts as theories to explain economic phenomena, whereas methodological formation's focal point used economic theories to explain historical processes. These accounts justify behaviour with the use of applied theories. Second, it uses historical economic phenomena to inform and support the formulation and design of prevalent economic theories in political economics. Thus, general economic theories can be devised based on historical observational behaviour, occurrences, and procedures. One of the main areas that have gained attention in economic history is human capital and its formation. This study forms part of this aspect of economic history.

Economists confidently agree that human capital is an essential determinant of economic growth and performance. Education is a precondition for long-run economic growth and the improvement of human capital articulation. Its capacity is further supported by various theoretical models (Becker, 1964; Lucas, 1988; Mincer, 1974; Romer, 1989a; Solow, 1957) and empirical studies (Romer, 1989b; Castelló and Doménech, 2002; Hanushek and Woessmann, 2012). More recently, there has been renewed interest in the history and the formation of human capital (Wantchekon, Klašnja and Novta, 2013; Gallego and Woodberry, 2010; Cappelli, 2016; Acemoglu, Gallego and Robinson, 2014; Baten and Fourie, 2015).[1] Although many of these studies are focused on the western world, Africa and other developing regions have not been left behind, with the colonial state playing a crucial role in the development of Africa's education systems.(Jedwab, Moradi and Meier zu Selhausen, 2017; Nunn, 2007; Huillery, 2009)

Before I discuss the education systems of South Africa, a brief timeline is provided to structure the rest of the thesis and stipulate when specific events took place. More information regarding the education systems and changes to it can be found in chapter two. South Africa first saw inhabitants over 100,000 years ago with hunter-gathers groups like the Khoikhoi and San

[1] More on the evidence can be found in the second chapter, Literature Review.

people. The Bantu-speaking farmers later joined them to the north and east. The first contact with Europeans came when Vasco da Gama sailed around the tip of Africa to link Europe and Asia. The first settlement of Europeans came in 1652 when Jan van Riebeeck arrived at the Cape on a mission from the Dutch East India Company (VOC). He was to establish a refreshment station for the numerous ships of the VOC between Europe and Asia. The Dutch settled within the colony when it became clear that a small military force would not meet the demand from passing ships. The Dutch settlers expanded the colony both east and northward when the soil around Cape Town and the harbour were no longer suitable. De Kiewiet (1941:11) writes that this expansion was possible because natural barriers that existed in other colonies were not present here. The expansion also required a larger labour force, and while the colonists were prohibited from enslaving the local population, the VOC imported slaves from 1658.

With the Napoleonic wars in Europe, the VOC's reach and influence dwindled in the late eighteenth-century. The Cape Colony first became part of the British Empire in 1796 but was returned to Batavian control in 1803. It was, however, in 1806 that it was fully incorporated under British rule.

South Africa's economic history has seen a vast increase in studies, especially in the Dutch period between 1652 and 1796. This includes but is not limited to the history of the wealth of the settlers (Fourie, 2013), living standards and wages (de Zwart, 2011; du Plessis and du Plessis, 2012), demography (Cilliers and Fourie, 2012), the significance of it to trade routes (Boshoff and Fourie, 2010), and the productivity of slaves (du Plessis, Jansen and von Fintel, 2015; Fourie and Green, 2015; Links, Fourie and Green, 2020). Studies on the British period include the fiscal history (Gwaindepi and Siebrits, 2020), public expenditure and social savings (Herranz-Loncan and Fourie, 2018), the emancipation of slaves in 1834 (Ekama and Ross, 2021; Ekama, Fourie, Heese and Martin, 2021), and national accounts (Magee, Greyling and Verhoef, 2016).

The field of economic history that this piece contributes to is education. There are a few studies that have investigated education at the Cape Colony. Chapter two provides more details on these and the developments of education at the Cape. The establishment of formal education in South Africa stems from missionary education practised during the eighteenth and nineteenth centuries. Educational institutions in the nineteenth-century became increasingly aware of schooling as an essential factor towards growth in societies. Initially, the motivation of

missionary schools was to convert as many indigenous people as possible rather than provide education (Fourie and Swanepoel, 2015). However, schools were eventually used to educate settler children and the inhabitants of the regions around mission stations as well. The empirical evidence confirms that these missionary schools positively impacted human capital at the Cape (Fourie, Ross and Viljoen, 2014; Fourie and Swanepoel, 2015; Christopher, 2015).[2] However, all three studies are based in the Dutch period, and much of the nineteenth-century remains unstudied. More recently, Henn (2018) studied the latter half of the nineteenth-century using the colonial census data from 1865 and 1875 and concluded that the expansion of the Cape saw residents' benefit in terms of educational outcomes.

Given the revived interest in economic history, human capital formation, the current education debate in South Africa, and the sparse local empirical literature, additional studies about the history of education must be performed. Studies to date have focused primarily on White education, given more widely available data sources, creating a gap in the research about Coloured[3]education. This study proposes to use the census data of the nineteenth-century to determine the development of Coloured education and the respective differences in the types of schools affiliated with geographical positioning, racial groups, religious denominations, and gender.

1.2 Research questions and objectives of the study

The purpose of this study is to examine census data from 1865 and 1875 to determine the educational attainment and its interdependence on the type of schooling in the Cape Colony during the nineteenth-century period.

Although previous empirical studies focus on educational attainment levels, this study will supplement school information and their respective attendance levels. Therefore, two specific research questions are drafted:

---

[2] Other studies that are of less interest here but that contribute to education is Fourie and von Fintel (2014) that studied the skills of winemakers at the Cape. They show how the French Huguenots used their skills to integrate into Dutch society.

[3] We follow a suit of historians and use the term "Coloured" for all non-White population in the Cape post-emancipation. This includes modern Coloured and Black/African population.

1. What were the Coloured educational outcomes and development in the nineteenth-century?
2. What type of school benefitted colonial children of all races?

From these questions, the two research objectives of the study are to:

- Study the educational outcomes of the Coloured population in the nineteenth-century.
- Determine if a specific school type was beneficial to children at the time.

1.3 Relevance of the study

The history of education in the Cape Colony can offer new insights into all population groups' attainment and attendance levels. The current nature of South African educational outcomes is defined by race. However, this may not have always been the case. This study can shed more light on a period when significant changes in educational outcomes occurred, using the information available on indigenous education during the nineteenth-century. With the aid of both census data from 1865 and 1875, the researcher will be able to track attendance and attainment levels and determine when specific educational shifts were made.

1.4 Outline of the thesis

The study is structured as follows: The first chapter introduced the study and provided the background and motivation of the study. It also provided a brief timeline of the Cape Colony, its governance and where this study fits in. Finally, it also discusses the study's objectives.

The second chapter's main objective is to review the significant literature related to the study. It is broken down into four main sections—first, the theoretical economic literature related to human capital development and why it is essential for economies. Second, the empirical literature from both modern studies and studies related to economic history. Economic history's contribution to human capital development has two main aspects that interest this study: the impact on gender inequality and how Africa's history differs from other regions' development. This is followed by a review of South African specific literature and the legislation of the colonial period that is relevant to this study. This section on legislation is broken down by the Dutch and British periods of Cape colonial history. Finally, given the importance of history and how it shapes development, the chapter briefly looks at the post-Apartheid experience of education in South Africa.

Thereafter, chapter three introduces the data utilised and the methodology employed in the study. The methodology expands to include the categorisation of literacy recorded in the census and how this affects the methodology employed for descriptive statistics and econometric analysis to analyse the data source. The chapter concludes with the limitations applicable to the data. Penultimately, chapter four discusses the empirical findings generated from the descriptive statistics and econometric regression analysis. Lastly, chapter five reviews the findings for both the descriptive statistics and econometric analysis and concludes with further avenues for research.

2 LITERATURE REVIEW

2.1 Introduction

This chapter reviews previous literature about educational attainment levels in formerly colonised states and the broader empirical framework of why human capital is considered necessary in economics. To test whether education is a determinant of economic growth, it is fundamental that we understand the theoretical framework between economic growth and human capital. Thus, the point of departure for this chapter is to study the empirical literature that has discussed human capital's relation to economic growth. The two most cited frameworks are the human capital theory developed by Becker (1967) and the Solow model of growth (Solow, 1957; Romer, 1989b).

I follow the discussion of the theoretical framework with an in-depth study of the empirical literature of education in history. This discussion is further subdivided into a discussion of literacy rates and how this differed in different world regions, focusing on Africa's colonial experiences. Finally, the focus turns to South Africa in two parts: 1) the colonial experience of education and 2) the post-Apartheid experience with education and why understanding our historical legacy is important.

While education and human capital may take many forms, literacy and numeracy are the easiest measures of education. As in this study, many historical records exist depicting whether individuals can read or write, and other methodologies like age-heaping help identify numeracy. In addition, modern school surveys rely on similar measures, like TIMMS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study). TIMMS studies trends in mathematics and science outcomes, while PIRLS provides global insight into reading and comprehension (Boston College, 2021).

2.2 Theory and evidence explaining the link between human capital and growth

The human capital theory has long been acknowledged as an essential input into economic models because of its pecuniary outcomes (Becker, 1967).[4] The Solow model assumes a

[4] Non-pecuniary benefits of education as defined by Oreopoulous and Salvanes (2011) are healthier lifestyles, less likes to be divorced or separated, more future bound, less likely to have offspring as teenagers and less likely to be arrested. Economics, however, focus on pecuniary benefits.

neoclassical approach and attempts to explain long-run economic growth with technological progress. Here, human capital is key to effectively implementing new developments in technology and has been augmented to include the effect of human capital (Romer, 1989b). The Becker model explains pecuniary payoffs using the human capital theory. It states that education is an investment that yields returns due to increased productivity. Becker (1964) and Mincer (1974) studied the demand for education regarding investment and current resources to optimise retirement income. They show that further education is rewarded by higher wages and, ultimately, more retirement income. A diagram of the theories can be found in Romer (1989b:43) and Becker (1964:29). These are left out in the essence of the consciousness and length of the thesis.

Human capital can also be treated as endogenous and exogenous in models. The most common and probably the easiest way to measure human capital is through the years spent in education. A study conducted by Harmon, Oosterbeek, and Walker (2003) looked at education in the form of private investment and the rate of return thereof. The results suggest a positive effect on earnings from participation in education, even though the Ordinary Least Squares (OLS) specification is insensitive to changes.

There are also historical theories and applications to consider. For example, Sokoloff and Engerman (2000) draw the exact inference for the United States and Canada based on historical data as Harmon et al. (2003). They study the types of institutions in addition to investments in the public schooling system that widened the inequality gap within America. Disparities in growth rates were explained by institutions[5]and property rights, investments in human capital and public infrastructure, corruption, and the structure of financial sectors. The prosperity of the United States and Canada stemmed from their adoption of British institutions and explored how factor endowments could have a long-term effect on economic development.

However, Acemoglu, Johnson, and Robinson (2001) argued that institutions were erected to protect private property or extract rent. They offer this as an explanation for varying outcomes between colonies. They argue that the disparities between rich and poor colonies arise because

[5] North (1990: 3): "Institutions are the rules of the game in a society or, more formally, are humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social, or economic. Institutional change shapes the way societies evolve through time and hence is key to historical change."

of extractive policies in Africa and South America, leading to labour force oppression, monopolies, legal discrimination, and property rules. This, in turn, is related to low investment in education. In other colonies, some institutions were constructed to improve economic growth. The strategy of Colonisation was based on the feasibility of the settlement itself. In areas with high a mortality rate of Europeans, more extractive institutions were erected. The authors found that the casual relationship from high mortality rates to the existence of rent-taking institutions resulted in low GDP per capita. These findings encouraged more research into Africa's colonial experience and how this impacts economic outcomes today. Moreover, Nunn (2007) suggests that colonisers chose the "rate of extraction", where a high extraction rate was attributed to a lower production equilibrium, and Dell (2010) supports the idea that high extraction led to low investment in education and low non-pecuniary outcomes for children. Interestingly, Bezemer and Bolt (2009) found that colonial human capital explains long term growth better than measures for extractive institutions.

As the three mentioned above, many of the persistence studies ignore large periods in Africa's history. Austin (2008) calls this the "compression of history" and explains the importance of assessing growth theories against long-term history. He calls for a more differentiated approach to casual relationships and not oversimplifying historical events' causation on current economic outcomes.

Returns to schooling in a historical context are also studied by Wantchekon, Klašnja and Novta (2013). They used evidence on colonial students from the first state schools in Benin to test the effect of schooling on living standards, political involvement, and occupation. The results showed that there is a positive relationship between education and their different outcomes of interest. For example, education allowed for higher living standards, better social networks and individuals that were less likely to be farmers. Equivalently, Caicedo (2018) and Henn (2018) found that residing nearby or within a mission station and metropolitan allowed for higher literacy and income rates. More evidence on this will be presented throughout this chapter.

It is also important to note that no colonial state was the same. Today, what might have aided in successfully schooling systems in Europe might not have been the case for Africa, Asia, or the Americas. Romer (1989b) uses a Cobb-Douglass production and found that an increase in the literacy rates of 1% is associated with an increase of the share of investment in GDP from 14%-16% for the United Nations. This is similar to what was found by Harmon, Oosterbeek, and Walker (2003), Sokoloff and Engerman (2000) and Wantchekon, Klašnja and Novta

(2013). Castelló and Doménech (2002) studied the effect of human capital inequality on economic growth. While they conclude that most countries have converged on human capital or decreased human capital inequality, higher human capital inequality is still associated with lower economic growth rates. Hanushek and Woessman (2012) provide three mechanisms through which education influences long-term economic growth: it increases labour productivity, it increases innovative capacity in the economy, and finally, it facilitates the diffusion of knowledge to implement new technologies.

A historical example of this can be found in Easterlin (1981). Using the rise of the steam engine during the Industrial Revolution, he shows how education was needed to make technological advancement efficient. He further documented how a specific order to develop education exists: primary schooling should be prioritised first, followed by secondary education and finally tertiary education. Additionally, Becker, Cinnirella and Woessmann (2012) utilized school enrolment rates and factory employment data of approximately 300 countries from pre-industrial phases of industrialisation in the 1800s. They found that basic education was correlated with non-textile industrialisation in both industrial phases of Prussia's Industrial revolution. Distinctively, the degree of industrialisation would have been lessened by one third had all Prussian countries only achieved education levels of the least educated nation. As mentioned before, Sokoloff and Engerman (2000) demonstrated how colonial North America used laws and regulations – like local taxes for schools and compulsory schooling – to increase efficiency in education. This, they claim, led to the divergence of North America in terms of human capital. Finally, Ricart-Huguet (2021) shows that the uneven supply of primary education across African colonial districts explains why certain districts have developed more than others.

Gallego and Woodberry (2010) promote another institutional view of education by studying colonialized regions and the mission stations in these regions. Contrasting Protestant and Catholic regions, they postulate that the policies in Protestant regions were more receptive to conversion and education and were, therefore, more successful. In Protestant colonies, neutral policies advocated for missionaries to work under identical conditions. In contrast, Catholic colonies policies favoured the Catholic stations and restricted Protestant expansion. Furthermore, Becker and Woessmann (2009) argue that the Protestant Reformation in the sixteenth-century and the act of making the Bible widely available led to more persons reading the Bible. This spurred human capital formation, which was pivotal for economic affluence.

Finally, with the use of data from the late nineteenth-century Prussia, Protestantism led to better education.[6] This is further supported by Boppart, Falkinger, Grossman, Woitek and Wuthrick (2013), who confirmed that Protestantism had several positive effects on the social environment.

Furthering this argument, Cappelli and Baten (2017) test how the demand and supply of education affect the formation and continuation of human capital. The results show that education is reliant on the interaction of policy and missionary activity. Although they are supported by Acemoglu et al. (2014), who found that differences in human capital and the effect of institutions result in long-run development, the evidence does not support those differences in human capital endowments of early European colonists that impacted institutional development. The results derived differed from Cappelli et al. (2017). They found that European trade, slavery and colonialism had ties with human capital formation, emphasising a heterogenous relationship, thus emphasising differences in policies and education supply.

2.2.1 Racial and gender bias and its effect on literacy

The colonial era was infamous for slavery, racial segregation, and gender discrimination. Although most developing nations today can attest that low literacy and GDP rates are attributed to poor colonial education, it is fundamental that assumptions are not generated based on prominent colonies. Each colony has had a different experience. For example, Martinez-Fritscher, Musacchio and Viarengo (2014) proved that the expansion of colonial education in Brazil only affected White and mixed-race Brazilians, whereas blacks did not benefit much during the periods 1889 and 1930. They did so by examining whether colonial institutions determined outcomes that have persisted for several years or if changes and or shocks to the institutions' altered development outcomes in the long run. Documenting variation in export tax revenues in Brazilian states between the periods 1889 and 1930, it was found that states that had low literacy rates throughout the nineteenth-century century were ranked highest by 1940 and vice versa. A similar experience is shown in Henn (2018). Using the Cape Colonial

[6] The next section depicts racial and gender bias and the effect on literacy. It is of importance to note that the authors found the gender gap in education was less in Protestant countries than that of Catholic countries.

data, she found that colonial education between 1865 and 1875 was almost non-existent for the minority, as almost three-quarters of the Coloured population were illiterate.

There is little to no evidence on the pre-colonial and colonial positions of women. One method author's have attempted to trace the origins of the gender-literacy gap is backcasting male and female literacy by their birth year from post-colonial census data. A study conducted by Meier zu Selhausen (2019) depicted women's access to missionary education in African colonies. He shows that gender inequality in education increased for those born in the colonial era. Baten, De Haas, Kemptner and Meier zu Selhausen (2019) use census data from various African countries in the twentieth-century. They similarly conclude that the male-female gender gap grew by one additional year of schooling for every year of missionary education gained by the population. Hence, unequal access to primary education during the colonial era and gender discrimination resulted in unequal levels of human capital between men and women. South Africa is the exception here. Meier zu Selhausen (2019) illustrates that South Africa was the only country with an equal number of girls and boys attending primary schools whilst other African nations consistently had double boys' enrolment rates to girls. As discussed before, this unequal sex distribution continued through secondary school – support for Easterlin (1981). He further indicates that these enrolment rates were more equally shared between former British ruled colonies than French, Portuguese, or Belgian colonies. This unequal distribution is still observed in 1963 at the eve of Independence struggles and declarations in Africa.

It is important to note that the various denominations of the Church had differences in their goal for mass conversion and how this will be achieved. For instance, Protestant mission stations in British Africa have been restricted in the French, Belgian and Portuguese colonies. Protestant missionaries believed that personal salvation was brought about with the ability to read the Bible, thus the increased incentive for both males and females to have basic education for baptism. Catholics also aimed at conversion through means of education but placed a lower priority on vernacular scriptures (Boppart et al. 2013).

Nevertheless, Meier zu Selhausen (2019) highlights that the driving force behind Africa's mass education reform was the work of African missionaries and teachers. First, the high mortality rates among European missionaries made it costly to replace teachers continually. Second, the indigenous immunity to malaria made it more cost-effective to train local teachers. It also became too expensive to pay European teachers' salaries, travel costs, and medical equipment. In contrast, African missionaries and teachers were paid with the aid of local contributions.

Lastly, African missionaries and teachers were more effective in converting the indigenous and spreading the gospel in African vernacular languages. African missionaries produced Christian scriptures, hymn books and catechisms. This meant the local populations contributed to the expansion of education.

Another aspect of missionary work can be found in Meier zu Selhausen (2014). In this study, he explored the role of missionary education on African women's socio-economic status in the household in Uganda. Protestant missionary education in Uganda maintained more than half of primary school scholars in the 1920s, but the content provided in schools were different between boys and girls. Girls were taught basic literacy, domestic skills, motherhood, and Christian values, whereas boys were prepared for modern employment. The content provided in schools practically excluded women from employment in the colonial wage labour market, which transcended parents' demand for their daughter's education declining. The missionaries' disapproval of coeducational schools is further supported and causes gender inequality in Meier zu Selhausen's 2019 work. Using the Anglican marriage registers, he showed that the increase in education did not translate into employment opportunities for females. These registers show that 80 per cent of urban females were literate, but they were largely excluded from the colonial workforce, except for work at mission stations. This could have positive income effects.

Meier zu Selhausen and Weisdorf (2016) also used archival data in the form of marriage registers from the Anglican "St Paul's Cathedral" in Kampala to investigate human capital accumulation and occupational mobility amongst African men and women. The couple's capacity to sign the record provided an indicator of literacy development, reported their age was an indicator of numeracy development and recorded their occupation comprised valuable information on skills development, labour market participation, and social mobility. Their results confirm that European colonialism in the colonial era contributed to gender-balanced human capital formation and the disintegration of female disempowerment. Comparably, Meier zu Selhausen, Van Leeuwen and Weisdorf (2018) used these marriage registers from Kampala and a few rural parishes to investigate long-term social mobility trends in Uganda. They found that colonial influences brought about more equal opportunities for social furtherment than in pre-colonial times. Despite these results, they point to issues regarding data representativeness. There is the absence of Muslims and Catholics to consider and the adherence to cultures like polygamy that were prominent among Ugandan men. De Haas and Frankema (2016), too, point to selection biases and data representativeness. They suggest that

selection biases in the church records overemphasise the European influences on Africa's schooling revolution.

It is evident from these previous studies that the advancement of indigenous people occurred inconsistently: certain demonisations (Protestant or Catholic) or colonised states experienced rapid human capital formation, whereas "infertile" areas lagged.[7] Meier zu Selhausen (2019) notes that although several studies find a strong relationship between European missions and long-term educational outcomes are seen today, one must consider the partial availability of locations of only European run missions from maps and missionary atlases. First, these records often omit missions, failing to include mission schools run by African missions and teachers. Secondly, the measurement bias is further intensified because the earliest mission locations were colonised in the most developed areas. For example, in Ghana, between 1751 and 1932, missions adopted a cost-benefit approach when establishing churches and schools. Factors that influenced decision making were geography, institutions, African incomes, medical innovations, investments in transport and the timing of the colonial quest.[8] Thus, in the earliest settlement period, more developed areas (mining towns and cash crop production areas) with a demand for mission schooling adopted the Christian faith at an earlier date.

With the use of the Namirembe dataset and Uganda's 1991 population census, de Haas and Frankema (2016) could track literacies and numerical development from the 1890s onwards. Their results confirm that individuals with ties to the church were more educated, but caution should be observed when using various data sets. They show that a person married in the Namirembe Cathedral performed far better than a person from Kampala in the census data. The authors conclude that the census data suggests that the gender literacy gap was less dramatic and that there were profound inconsistencies between Church records and census data. Church records depicted a rapid diffusion of literacy and numeracy amongst a select group, whereas census data revealed a slower diffusion amongst a random sample.

Additionally, regression analysis emphasised discrepancies as gender, place of birth and ethnicity played a crucial role in the selection into mission schools – this supports Fourie and Swanepoel (2015), discussed more below. Lastly, emanating occupational opportunities in

[7] See Jedwab, Meier zu Selhausen and Moradi (2017)

[8] Medical innovation in the form of quinine and infrastructure such as railroads.

Kampala were restrictive to the exclusion of Uganda's substantial productive smallholders residing in the countryside. The authors argue that demand for African skilled workers was limited, and the government lacked incentives to invest in the development of African working skills. This further supports Meier zu Selhausen (2019), who emphasises that one must pay precise attention to dynamic determinants and African agency in expanding Christian missions. This will minimise the overestimation of missions' long-term effects on educational outcomes today.

2.2.2 How Africa's experience differed from the rest of the world

The recent Renaissance of African Economic History (Austin and Broadberry, 2014) has not left aspects of human capital behind. A pivotal study by Frankema (2012), hypothesised that the supply of schooling in British colonial Africa was more successful than French, Spanish and Portuguese colonies because it was mainly done by converts which increased enrolment rates. However, British financial support for African education was minimal before World War II. Nevertheless, African converts allowed for the increasing enrolment rates of students. He is supported by White (1996), who indicated that while the French colonisers built more schools, they were unsuccessful because it was heavily centralised and dependent on mother country contributions.

Moreover, Jedwab, Meier zu Selhausen and Moradi (2017) found that although missionaries contributed to high literacy rates in British Africa, it was heavily reliant on the supply and demand of Westernised education. Certain areas benefitted more from Western education at the cost of "infertile" areas. Factors such as non-malarial areas, proximity to railway lines, and healthcare determined whether an area would be colonised or not. This will, in turn, determine the education provided. The provision of basic education was selective; thus, Africans had to develop their institutions for educating the masses. More discussion of this can be found in section 2.2.1. The growing interest in African economic history has compelled researchers to find alternative measures to quantify human capital development. Records used by economic historians include but are not limited to census data (as used here), court records, marriage registers, and mission station records.

Cappelli and Baten (2017) found that human capital development in today's Senegal, Gambia, and Western Mali was linked to European trade, slavery, and early colonisation in 1770-1900. However, the Atlantic slave trade brought about an increase in disparities between regions. Regions closest to the slave trade route, i.e., coastal areas, developed more rapidly than inland

areas. They estimated numeracy levels separately for Christians and Muslims for macro-regions of Western Sudan. The evidence supports Austin's (2008) theory that human capital growth is dependent on local conditions, factor endowments and institutions. The results show that European demand for cash crops had different impacts on education outcomes across different regions, particularly the demand for peanut production. Additionally, inhabitants of coastal regions depicted higher levels of numeracy and the poor endowments of inland areas with high reliance on slaves, and low population density meant human capital in these regions stagnated or declined. A persistent gap also exists between Christian and Muslims in the area, with Christians showing a higher/lower level of educations attainment.

Asia also experienced a colonial history which is further investigated by Frankema (2013). This article exceeds in just attempting to account for literacy in our Asian counterparts. The author also explores the causes of the poor Dutch legacy. The study uses the Indonesian colonial education system, deemed the poorest colonial system in Southeast Asia. The contribution of Asia allows for the exploitation of comparisons between the Eastern frontier and Africa. The study argues that the inconsistent spread of popular education was due to lacked financial commitment of the Dutch government and unequal allocation of funds for education coupled with a reluctance to support initiatives in private education. He presents the following stylised facts that apply to the Indonesian case. Firstly, if the colonial government had taken responsibility for the budgetary consequences of educational policies in different colonies, it would have allowed for speedier access to all levels of education. Furnival (1943) found that the Netherlands Indies accounted for the lowest enrolment rates in primary education instead of the French Indochina and British Burma. However, other British colonies like British India has similar rates in literacy.

Furthermore, British investments in education lacked compared to the Japanese and American involvement in education. This depicts that the major differences in educational investment resulted from differences between European and Non-European colonial powers. A similar case is found in Africa, where the dominant British significantly impacted countries' educational outcomes than the French (Frankema, 2012).

Secondly, Indonesia experienced a long-term break in the development of colonial school enrolment expansion after Independence. Independence initiated a revolution in Indonesian educational access. The results show that secondary schooling thrived in the 1950s, and thereafter tertiary enrolment rates also soared. This change in trends reflected the distinguished

economic value of basic literacy skills and stimulated demand for schooling. In addition, the gender gap was large in school enrolment rates but with expansion decreased (Frankema, 2013). This is different to the African experience, where many inequalities remained after independence – see section 2.2.1 for more details.

Lastly, considerable gaps existed in ethnic enrolment and literacy rates. For example, most Dutch and Indo-European children were enrolled in European schools where the standard Dutch curriculum was taught. However, gaps were seen between Chinese and Indonesians. The differences might be because of the importance of home education amongst the Chinese ethnic group and their insistence that the colonial authorities support the expansion of Chinese schools (Frankema, 2013). While studies discussed in section 2.2.1 show a similar trend in some African countries, the limited settlement in Africa means it is hard to estimate such effects. I will attempt to add to this in this study.

In the South African context, there are four historical studies to note. First, Fourie et al. (2012) studied the missionary schools of the Cape Colony and showed the effect of missionaries on improving literacy rates amongst the inhabitants of the region. This coincides with Nunn (2010), which found that historical events can leave long term effects on culture. In his study, European missionaries transfer of beliefs is still being attested today. Second, their study was expanded by Fourie and Swanepoel (2015). They demonstrated that the effect of geographical positioning of mission schools in the nineteenth-century still accounts for high education levels today. However, this study was limited to the census data obtained in 1849.

Additionally, Baten and Fourie (2015) used reported ages of criminals from court records to determine numeracy levels and the trends of the native Khoesan, European settlers and imported slaves from neighbouring African regions and Asia between the seventeenth and nineteenth centuries. The study provided an overview of the human capital transfer to isolate the slaves born at the Cape. The results show that the education levels of most non-European populations groups did improve over the first two centuries after European settlement.

Additionally, Cape-born slaves were more literate than slaves born outside of the Cape. This quantitatively demonstrated that the great inequality seen in the 1800s between settlers and slaves' human capital levels can account for South Africa's educational inequality today. Christopher (2015) superficially assesses the different censuses conducted from 1865 to 2011, and the literacy rates recorded for 1865 and 1875 corresponds with my study.

Given the four studies focused on the Cape Colony 's experience, much of the nineteenth-century has been excluded from studies like Fourie and Swanepoel (2015). It is the primary purpose of this thesis to fill some of this gap. It will collect and use data collected from the 1865 and 1875 censuses of the Cape Colony. Census data for 1865 provides types of schooling, namely learners attending day school, only Sunday school or neither. This suggests that schooling was not compulsory during these periods as literacy levels could be analysed even if the only form of schooling was Sunday school.

2.3 Cape Colonial education and policies

2.3.1 The development of education in the Cape Colony (1652-1806)

The establishment of the Cape Colony in the early 1600s had not initially considered the education of settlers, indigenous populations or children. The settlement's sole purpose was to assist fleets temporarily as a refreshment station. It was only with the expansion of the colony that the necessity arose to provide facilities for a civilised society like churches, houses and schools. The initial Dutch settlers were supplemented with French Huguenots in 1665 and brought about the expansion of Protestantism. The first school was established to educate the slaves from the ship Amersfoort in 1658, followed five years later by a school for colonialist's children and Khoi children. A doctor and clergyman, respectively, ran these early schools. In 1682, the school was made compulsory for children under twelve, but it was largely ignored by the indigenous Khoi, settlers, and slaves (Le Roux, 1998).

Skills taught at schools at this time was limited. It mainly focused on reading and writing skills, specifically reading the Bible. Reading at the time was acquired from the Bible, and it served to equip children from spiritual and physical dangers (Le Roux, 1998). Malherbe (1925) indicated that the purpose of the first slave school was only intended to benefit the Dutch East India Company by teaching slaves to communicate in Dutch and conversation to the masses.

The first evidence of separate schooling occurred in 1676 when the Representative of the Ecclesiastical court requested that the council of policy establish a separate school for slave children. The first form of policy regulation occurred in 1685 when the commissioner investigated schools in the colony. Regulations were set in terms of the curriculum, methods of discipline, study hours and clergy members who had to inspect schools each fortnight. However, the Council decided that more proficient slave children should attend school until a suitably qualified teacher could be allocated for the slave school whilst the rest were sent to separate schools (Malherbe, 1925; Le Roux, 1998). It was believed that this request was made

to the council since the number of children of school-going age increased and provision at the time was inadequate. Additionally, there were disparities between the slave communities in slave quarters as they did not practise a Christian way of life.

Eventually, the expansion of the Cape Colony brought about difficulty for the colonists at the time. The further settlers veered into the interior areas, the further away they were from schools and churches. The first mission school was established in 1737 by George Schmidt of the Moravian brotherhood at Genadendal. Charity schools allowed indigenous children to receive an education presided by Churchwardens in each parish (Malherbe, 1925; Le Roux, 1998). However, farmers took it upon themselves to hire private teachers. This could explain part of the significant disparities between interior and coastal regions literacy and enrolment rates. This led to the government exercising control over interior areas in 1743, stating that no one could teach without consent from the church council. As a result of this decision, the church council could control who could teach and whether the content was subscribed to the Reformed Faith.

A rudimentary form of legislation was passed in 1714 when the School of Ordinance of De Chavonnes introduced the innovative educational practice. A board of scholars was elected to supervise education along with the council of policy and church. The end of the eighteenth century saw public schools run either by a sick comforter or authorised teacher, and charity schools established by the church to cater to children responsible for the Orphan Chamber. The Orphan Chamber was further responsible for the care of children orphaned through the estates of the deceased. The estates' inventories are known as the MOOC8 series, where MOOC is the abbreviation of Master of Orphan Chamber. Fourie and Swanepoel (2018) used these records to study the extensive Cape credit use. However, what is interesting is that there were provisions for "childcare", often education. One such example is Neeltjen van Makassar. Her estate was taken in 1697 (MOOC8/1.26). She was a free black at the Cape, married to another free black, Jacob van Bengalen and had three children – Kornelis, Mietjen and Catharijn. Her estate owed 24 guldens to Kathrijn Bakkers for the education of a child. There are also examples of estates that were owed loans for educating children. Education at the Cape staggered, and with the arrival of the British, it was evident that education was not of importance. Nevertheless, in the late 1700s, they did establish a young ladies seminary for daughters of well to do citizens.

2.3.2 The development of education in the Cape Colony (1807-1910)

Interestingly, the interchanging of control over the Cape in the 1800s brought about various methods, theories and rules regarding the provision and development of education in the colony. When the colony became a British territory in 1806, the government implemented many changes to the education system in the Cape. One of the first was the appointment of a commissioner, JA de Mist, to investigate education conditions in the Cape. He expressed his concern about the lack of adequate educational facilities and low levels of culture (Le Roux, 1998). With the aid of the school commission and Bible, the commissioner proposed that teachers be selected from teaching training schools in the Netherlands, especially for the remote inland areas. In addition, he advocated for advanced learning in other subjects of matter such as foreign language, history, geography, ethics, and natural history.

De Mist's proposal for an education system for the Cape consisted of the following remarks: it was in the best interest for inland children to attend boarding schools. A separate education fund should be established once the colony had economic improvement. Alcohol tax formed part of contributions to the school fund. The management and control of schools were the responsibility of the council of policy, school commission, and representatives of the church and the governor. The minister was to nominate candidates for teacher training schools. Although schooling was not compulsory, the parents had the responsibility to educate their children. Although the implementation and ordinance of De Mist's proposal were pursued years later, it is evident that the second phase of British rule brought about more concern regarding education at the Cape (Le Roux, 1998).

The introduction of English into a predominantly Dutch colony experienced several obstacles. In some cases, English was introduced to Dutch schools as a manner to broaden the scope of the curriculum. Under the leadership of Lord Charles Somerset, he granted the school commission permission to recruit teachers from the Netherlands for established Dutch schools in the colony. However, the schooling in inland areas was of great concern. Attendance was irregular and erratic. English schools opened across the colony because of private initiative, most likely attended by Dutch children whose parents wanted them to learn English. However, in 1882 Somerset proclaimed English as the colony's official language and free English schools established in inland areas had a dual aim of providing accessible education and accomplishing anglicisation of the nation. The English free school movement established by Somerset in 1822 as part of his anglicisation policy quickly demised along with the rival of private schools. The

reasons for the unpopularity with the free school movement were that Dutch parents did not want Dutch removed as a language of instruction, believed that free schooling would affect the quality of schooling, that salaries were too low to attract quality teachers, and that poor children stayed at home to help with household chores (Le Roux, 1998).

2.3.2.1 Governments grant aid system

The expansion of private schools left inadequacies between the standard of those schools against government schools (Le Roux, 1998). The government initiated a government aid system in the form of a grant to assist communities with obtaining the district educational needs. The grant system depended on the local initiative to provide educational facilities such as school buildings and contributions to teachers' salaries (Malherbe, 1925). A drawback of the aid was that it was entirely left to the community to provide educational needs, as seen with what was found by Sokoloff and Engerman (2000). The system aided proactive communities but left no indifference to the ones that did not initiate the community's educational needs. Mission schools were the first to benefit from the system. In 1841, the government paid teachers' salaries, and in return, schools refrained from nonconformist religions instruction and teaching became compulsory. The preconditions for the grant as set out in 1843 were that English would become the colloquial language. Schools had to be accessible to all, fees were applicable, but free tuition was granted to indigent children at the discretion of local school commissions and Holy scriptures were used for religious instruction, which formed part of the daily routine.

The changing education environment can be attributed to the change in the social-economic conditions. The improvement and prosperity of the colony affected education directly. This can be seen in the fact that the number of pupils of school-going age school attendance increased. However, a series of commission enquiries arose due to irregularities at school inspections. For example, some children only attended school to learn Dutch catechism. The Fairbairn commission on enquiry recommended that teachers be procured from England and the extension of the pound for pound principle, which made the government and the local community equally responsible for schooling costs (Le Roux, 1998). However, the local community did not financially contribute to schooling.

In contrast, the Watermeyer commission of enquiry made recommendations regarding the provision of basic education using evidence of government teachers and clergy members. The following recommendations were made: religious instruction was the church's responsibility

and parents and should be separate from schooling and is not compulsory. Although it was challenging to find morally and intellectually qualified teachers, teachers had to be bilingual. Schools were to be inspected by an independent board, and inspections had the purpose of aiding staff, abolition of free education, whereas the government aid was provided to denominational public schools according to the pound for pound system and the medium of instruction could be Dutch if preferred.

2.3.2.2 Legislative efforts

In 1834 an executive and legislative council were formed based on a democratic political strategy. This system of representatives was elected by colonists and had authority over laws, levying of taxes and control of public funds. Despite De Mist's proposal, in 1807, the school commission reported various issues regarding shortages of funds, lack of free schooling for indigenous children, poor education standards due to unqualified teachers, and buildings' unsuitability. Under the rule of Sir John Cradock, he implemented the monitoring of schools by church clerks and the instruction of English. Additionally, he advocated for free public schools run by Church clerks. Church schools were to be monitored by district school commissions to ensure teachers were educated and the appointment of itinerant teachers for sparsely populated areas.

Notwithstanding, because of inadequacies of schools, poverty, and disinterested parents, the enrolment rates for the majority of children were low. Thus, the Bible and school commission suggested free schooling (Monitor schools) for neglected indigent children. They would be taught the principles of Christianity and moral conduct. Not only could the Church consistently monitor these schools, but they also allowed for the introduction of English into the curriculum.

Evidently, the 1830s had experienced vast amounts of educational reform. John Fairbairn, the editor of the South African commercial advisors, advocated for educational reform and replacing the school commission and Bible (Le Roux, 1998). However, only in 1837 did Colonel Bell submit a memorandum on the public-school reform to the governor. He proposed the ideology of a superintendent of education. Various memorandums publicised throughout the 1830s led to the first superintendent of education being elected, Dr Jones Rose-Innes. Towards the end of 1830, a government memorandum of education was published. The memorandum highlighted the advantage of education for personal prosperity, the use of education in the daily lives of colonists, the division of schools into first- and second-class schools depending on the curriculum taught and the issue of fees and anglicisation. The

ineffectiveness of the Bible and school commission led to the establishment of local commissions in 1842. Local school commissions were responsible for overseeing examinations, suggesting improvements, handling grievances, ensuring elementary education was free and accessible to all, and ensuring all children attended school regularly.

Act 13 of 1865, the Education Act integrated and systemised various modifications from attempts to adopt a centralised government educational system for the community's needs. Appropriations of funds were regulated, and preconditions complied with schools that met the criteria: instruction in English, non-secretariat religious instruction and an open-door policy regarding school inspections. Schools were thus divided into three classes: denominational public schools, mission schools and aboriginal schools. As a result of the anglicisation uprising in the 1870s, the following amendments were made to the act: (i) instruction in Dutch (parents could choose English or Dutch), and (ii) the inclusion of religious instruction outside of school hours (Malherbe, 1925).

Act 5 of 1885, section 32, was designed to impose the functions and power of district councils since the termination of school commissions. They had to control education within districts. Additionally, Act 14 stipulated educational boards. The role of the school board was to nominate and appoint a principal, regulate repairs and the collection of fees, to deal with grievances relating to the professional and moral conduct of the headmaster. Not only are these acts archival rudiments of the educational system seen in South Africa today, but they also allowed for parents to be more involved in educational issues within the colony. Nonetheless, the period of anglicisation left parents of Dutch parents opting for private schooling instead of free schools (Malherbe, 1925).

These acts provided hope for a better educational system, nonetheless a sixth of children of school-going age were attending, and education was inferior and attendance irregular. This led to the Barry commission, which was passed on to the superintendent of education in 1892. The superintendent enhances the schools' board act with Act 35 of 1905. This act was the first crucial education legislation since 1865. The previous acts and enquiries were temporary and only applicable to certain facets of education. The act provided for the division of the colony into school board districts of whom had to be elected democratically from local taxpayers, the creation of school commissions comprising of parents and guardians elected by the public, supervision of schools, the governor had to appoint or suspend teacher and deal with

grievances, advise the board on all matters affecting the school and lastly ensure that school is opened with the Lord's prayer and scripture reading.

A key legislative act was the Destitute Children Relief Act of 1895. Towards the end of the nineteenth-century, colonial authorities from different colonies were forced to review their approach to education and policies implemented to the detriment of the minority. The Cape Colony experienced this change in 1894 when Sir Thomas Scanlen, former Prime Minister of the Cape, provided evidence to the Select Committee on the Destitute Children Relief Bill. He believed that the interest of the State and the education of poor White children were interdependent (Duff, 2011). Colonial officials believed that White impoverishment would misrepresent racial, social, moral, and economic order in the colony. Efforts to eradicate White poverty stemmed from the concern that the poor, uneducated White children were a threat to the Colony. There are various depictions that schooling and training were the best means of preventing a destitute future generation and conserving White control of the colony's economic development (Chisholm, 1986; Bickford-Smith, 1995; Bundy, 1986; Duff, 2011). By the 1870s colonial critics associated the productivity of the state with White children's education and welfare. Moreover, the 1890s showed that educating White children were also used to prevent the deterioration of the White race. Hence, ensuring White supremacy in the Cape Colony required restoration of welfare imbalances in the White populace.

The Destitute Children Relief Act of 1895 was introduced to solve the issue of poor White children. However, both Decker (2010) and Duff (2011) explain that the education and the maintenance of White control were not only seen in the Cape Colony or the period. Mission schools were mechanisms for providing African children with enough skills to fulfil the position of civilised subjects. This made mission schools the target of the Destitute Children Relief Act and later under the Union government and Apartheid that destroyed the mission schools with the Bantu Education Act.

The education crisis of the 1870s brought about unwanted attention to the Cape Colony. The seriousness of White poverty was only realised after inquiry and publications from the Church of England in 1872. The concern for White education was depicted in colonial critics' views of the Cape's White agricultural sector as "those who were poor – those whose land produced low yields or only enough to support them or who cultivated land as tenants on other farms" (Duff, 2011). S.J. du Toit was appointed as the Superintendent for Education in 1881. His appointment led to the establishment of a Christian nationalist education that aimed to link the

state's interests with the upbringings of White children. To eradicate White destitution and assert White-control, the government allowed for easy accessibility to secondary and tertiary education for White children.

The concern for White education was further supported by the enrolment rates of 1878, which showed that less than half of the colony's White children were enrolled in some form of education. Additionally, since the inception of the Cape's Department of Education in 1839, there has been a constant battle with White parents in rural areas to send their children to school. Of the White children enrolled in school in 1883, the Inspector-General, Donald Ross, advised that 80% of poor rural children could barely read or write. On the other hand, in 1891, England had approximately 80% of five to fourteen-year-olds enrolled, and of that percentage, attendance was an average of 62%. In retrospect, these poor White rural populations were deemed uncivilised.[9] An inspector from the Department of Education refuted the claim that White parents did not want to educate their children. Rural populations were poor, and the majority of the time, poor farmers could not afford to send their children to schools. Famers were granted permission in 1882 by the Department of Education to open schools. These efforts were not entirely successful as it was expensive and in times of drought and disease farmers would migrate to favourable land. As a result of the illiteracy of rural White adults, the likelihood that parents would send their children to school were minimal, and their importance of working on the farm resulted in a trade-off between education and livelihood.

The growing number of poor Whites, Coloured and African children on Cape Town's streets in the 1880s-1890s resulted in the legalisation of child labour to excise control. Additionally, the slums created due to non-school going children brought about the establishment of the Porter Reformatory in 1882. The establishment was formed based on concerning increases in crime, begging on the streets and the threat to social and moral order in Cape Town. Therefore, it is evident that poor children's attendance levels were low during the 1880s and 1890s. If we couple this with child labour legislation, this policy does not promote education for poor children, thus hindering school attendance. Consequently, this is one of the reasons for low attendance towards the end of the nineteenth-century century.

[9] Civilised at the time defined as White churchgoing, respectable and middle-class individuals.

The colonial authorities were not only concerned about White education. It was feared that overeducated African and Coloured children posed a threat to society as they would be unwilling to work menial jobs. As a result, the provision of schooling for the minority relied heavily on missionary societies and churches. However, in 1875, of the 171,581 African and Coloured children that were fit for school attendance, only 18% were in school (Henn, 2018). In hindsight, schooling for White children was important for moulding them into professionals, whereas schooling for the minority prepared them for menial jobs. Contrastingly, in 1878 a third of the White children were enrolled in mission schools. This was a result of the Department of Education's decision to fund missionary schools.

Nevertheless, in 1875 the literacy rates of Whites were twelve times more than that of Africans and people of colour. The policy implementation ensured that White children were more educated and prevented Coloured children from excelling. Efforts to keep a tight rope on the policy objective was seen in the funding provided. Mission schools received only 15% of the total allowance allocated to the White schools.

The purpose of the Destitute Children Relief Act of 1895 required churchmen to report and take custody of destitute White children and place them in public schools or apprentice them. However, the act also allowed the Department of Public Health, established in 1891, to prosecute parents who did not vaccinate their children during the pandemic, the Deserted Wives and Children Protection Act of 1895 made it mandatory for husbands who have deserted their families to support them still financially. The laws passed for the benefit of the White populace were accompanied by the establishment of the Coloured Peoples Association in the early 1890s. The association demanded compulsory primary schooling for all children and opposed racial segregation in schools. Nevertheless, the Act promoted the ideology that White supremacy should remain in the colony and aimed to ensure that White children were educated.

2.4 South Africa's educational system post-apartheid

While this study will not specifically focus on the Apartheid period in South Africa, one of the most destructive education acts was passed in 1953 – the Bantu education Act. The Act aimed first to bring the mission schools, as discussed above, under state control after the Second World War and to control Black youths (Giliomee, 2009). However, despite bringing these schools under state control, they were still expected to be self-funded (van der Berg and Bhorat, 1999). As a result, the education provided to the majority under the Bantu Education Act was substandard despite its aim to educate Black for the labour market (Fourie and Mariotti, 2014).

The end of the apartheid regime in the 1990s brought about the dilemma of how the new democratic government would address the inequities in the educational system. Decentralisation has become an effective strategy used in governments and sectors, including education and large-scale reforms (Dyer and Rose, 2005).[10] However, most countries in Sub-Saharan Africa made use of centralisation right after independence. Nevertheless, it was determined that a move towards decentralisation would benefit democratic participation and reduce the central government's expenditure in its infancy. Contrastingly, decentralisation was accompanied by political and social reforms that have reiterated the efficacy of a democratised educational system in the South African context. Sayed (1997) concluded that the main objective of the struggle for educational democracy should be that decision making in schools and school governance should be inclusive of all sectors, role-players and stakeholders. Secondly, accountability, legitimacy and democracy are warranted at local levels. This ideology is proclaimed in the South African Schools Act, 84 of 2006 where it states that the South African educational system should reiterate the rights of learners, parents and teachers and should promote the responsibility that each of these groups has for the organisation, governance and funding whilst liaising with the State.

Notwithstanding, during the early post-apartheid democracy, the government increased regulation, accountability and control rather than commit to stakeholder democracy and decision making. Authors have argued that the government are limiting the control of school governing bodies and the power of stakeholders, especially in the appointment of teachers.

Lauglo (1995) suggests that three principles need to be addressed to allow for decentralisation: political legitimacy, quality of services rendered and efficient use of resources. The type of decentralisation applicable is determined based on which principle is most important. Firstly, if decentralisation results from political rationale, a shift in authority is to the school governing body rather than the school management team. This is depicted in Section 16 and 16A of the Schools Act "governance of a public school is vested in its SGB…while the principal must undertake the professional management of a public school under the authority of the head of

[10] Decentralisation is a shift in the location of governance and the transfer of authority and institutional autonomy to the local school and community (Dyer and Rose, 2005).

the provincial department of education (HOD)" (Du Plessis, 2020: 4). Du Plessis (2020) argues that this form of decentralisation in effect centralises the governance system.

Of what can be noted previously, it is evident that power has been transferred to central and provincial governments concurrently; SGBs experience more control concerning their decision-making probabilities. The government has been asserting dominance with the aid of regulation. The reason for this is the interests in teaching and learning, irregularities between what is being implemented and what the policies stipulate, and the weakening of government legitimacy. Firstly, the stakeholders in the educational system have a "vested interest in own the system works, including its structure and funding" (Du Plessis, 2020: 12). An example of this could be a textbook supplier wanting to provide quality books and cares about profits or a parent wanting to complain about a teacher but fears the child could suffer retaliation. Different people have different interests, making it more difficult for the effectiveness and improvement of learning (Du Plessis, 2020).

An example of this was when the largest teachers' union, the South African Democratic Teachers Union, affiliated with the Congress of South African Trade Unions, fought against the testing and evaluation of members in 2000 as part of the National Policy on Whole School Evaluation. This led to a loss in hours spent in the classroom and several teachers and principals being intimidated and assaulted. This protest allowed for an amendment in the Act that states that underperforming schools must prepare an improvement plan. The government avoided confrontation with the union and decentralised responsibility from the principals to act against teachers. Unions well protect these underperforming teachers. A second scenario would be the mismanagement and corruption of textbooks in 2012 in Limpopo, which links to a ruling party that resulted in a shadowy textbook distributer. The amendment to the law now states that the SGBs can apply for materials, but the HOD has the power to refuse the application. The National Development Plan for 2030 recommends that additional support is granted to SGBs and that schools should be allowed to implement policy, and top-performing schools have a responsibility to help under-performing schools (Du Plessis, 2020).

The changes in legislation brought with it change in the curriculum as well. The South African education system has seen OBE (Outcomes-Based Education) and CAPS (Curriculum Assessment Policy Statements). Mouton, Louw and Strydom (2012) discuss the OBE experiment in South Africa in detail with the overall opinion that it was problematic from the start. They argue that one reason for this is that the South African outcomes were similar to

developing countries and not developed countries where similar curriculums are implemented. Van der Berg and Gustafsson (2019) note a similar conclusion when using TIMMS for Grade 9 learners. Spaull and Kotze (2015) show how South African pupils lag in mathematical knowledge, with less than 50% of Grade three learners performing at the appropriate level. This suggests that despite the almost universal uptake of schooling in South Africa, quality is still lacking.

The current education debate could learn from the injustices of the past. It is also prudent that more research on education in South Africa's past is added to understand the roots of inequality. Colonial education in South Africa has been stigmatised for being racially driven mass education for the White populace. In terms of private and public schools today, School Governing Bodies must work along with the Head of the Department. Public schools are left to their dismay and might not have the necessary skills and knowledge to run a school. The next chapter will discuss the data collected and methodology on the nineteenth-century education in South Africa used to answer the research questions as determined in Chapter 1.

3 RESEARCH METHODOLOGY AND DATA

3.1 Introduction

The main objective of this chapter is to provide an analysis of the methodology and data utilised in the study. The data employed represents the literacy and educational attendance of the Cape Colony throughout the nineteenth-century, with specific reference to census data from 1865 and 1875. The study aims to differentiate between educational outcomes across various facets of the colony. The data collected from the 1865 and 1875 census is supplemented by data from Fourie et al. (2014) to compare changes in literacy rates. This will answer the first question raised in Chapter 1. The cross-sectional data further permits a regression analysis of literacy and schooling and how these outcomes differed between particular groups of residents. This will answer the second question raised in Chapter 1 and determine whether educational outcomes differ between school types. The chapter's next section focuses on the data collected, followed by an overview of the methodology used, how results are presented before concluding, and the limitations surrounding the data.

3.2 Data

The study intends to use quantitative cross-sectional data methods to determine the outcomes of different types of schools during the nineteenth-century. The colonial-era data, in its primary form, was collected from census data from 1865 and 1875. These raw censuses were retrieved from the Stellenbosch University archives. In its original state, photocopies were made of each page of the census so that the student could digitise this information. In addition, the information regarding both census periods have been digitised for current and future research purposes, and we assess the information at a district level.

The Act of 1862 was passed for taking of a census. The census was meant as a successor to the system of annual Blue Books that ended in 1856. However, the collection of data through Blue Books was ended due to financial constraints. Further, financial constraints only resulted in the Act being passed in 1864, of which the census was officially conducted between 6 and 11 March 1865. Field cornets performed the enumeration of work under the direction of the civil commissioners. The respective managing bodies and superintendents took charge of data collection concerning municipalities, missionary institutions and native locations. The census collected data on gender and race, disabilities, ages, migration, education, occupations and

various agricultural aspects. By mid-March, the returns that reached the colonial office reached over 1,000 volumes (Cape of Good Hope, 1865).

Previous literature has depicted that the colonial authorities in power at the time conducted the censuses. With the advent of these censuses, the government was in the midst of implementing the Education Act of 1865. Subsequently, crucial educational reform and policy implementation was at the forefront of the colony's strategic planning. More detail on the educational policies and reform can be found in section 2.3. It is also unknown whether or not the colonial authorities used the same methodology when retrieving the census data in both periods. Both periods have shown that data could easily be manipulated by the individual in charge of the capturing. This will be further explained in the limitations section to follow.

The data for 1865 contains information on 90 districts within the Cape and distinguishes between literacy rates and school attendance between districts, towns and mission stations. The demographical variables indicated in this census period is race and gender. The racial category thus consists of two groups, namely, White and Coloured. I assume that the racial category Coloured comprised of all inhabitants that were not categorised as White. As mentioned before, this is in line with historians' use. This means we do not distinguish between Coloured and Black/Africans as in modern censuses. In the next census period, ten years, a more refined data set is found. The data for 1875 expands on the previous census' data and compares the two census years outcomes.

Additionally, it supplements the existing 1865 with additional variables of interest. Race is now categorised as White, Exclusive of White and Malay, Hottentot, Fingo, Kafir and Bethuana and Mixed and Other. [11] To stay consistent with the classifications of race in the 1865 census, the various rates of literacy are categorised into two racial groups, White and Coloured.

[11] Although the Dictionary of South African English on Historical Principles (1996) denotes the term "Kafir" as offensive, the use of the word finds itself in pre and colonial South Africa. "Kafir" is derived from the Arabic word for non-believer or infidel. In the Pre-colonial period, the term suggested the trading of goods and slaves around the Indian Ocean. Thus, indicating the impact of Muslim merchants on trade in Africa. Whilst in the colonial period, the Dutch and English used the term to describe objects perceived to have the behaviour and mentality of the indigenous people (such as fauna and flora). The second use was to remake the landscape; enabling an unnatural relationship between the native people and their rightful claim to the land. Lastly, it was used as a depiction of time (Baderoon, 2007).

The literacy rates are also depicted amongst age groups which are subdivided into male or female: under 15 years, 15 years and upwards, under five years, 5-10 years, 10-15 years, 15-20 years, 20-25 years, 25-30 years, 30-35 years, 35-40 years, 40-45 years, 45-50 years, 50-55 years, 55-60 years, 65-70 years, 70-75 years, 75-80 years, 80-85 years, 85 years and upwards and lastly unspecified. The literacy rates obtained now account for broader racial and or cultural groups, varying ages and inhabitants that live outside towns and cities and live inside towns and cities.[12] Regarding the colony's total inhabitants, in 1865, the residents in the Cape Colony tallied at 493 873. Ten years later, in 1875, the number surveyed almost doubled to the value of 978 590. The study aims to indicate whether or not the increase in residents, specifically the Coloured population, impacted the literacy and illiteracy rates and how many inhabitants actively attended school.

3.3 Methodology

The empirical modelling utilised in the study aims to explain how the educational outcomes differed and for what reason, i.e., how race and geographical positioning played a role in school attendance and literacy. In addition, due to the nature of the data, a quantitative analysis is performed using descriptive statistics and econometric modelling.

3.3.1 The categorisation of literacy and school attendance in the 1800s

The census data obtained for 1865 and 1875 represents the Cape Colony 's literacy and illiteracy rates at a time in history when fundamental changes were set in place to modernise the educational system. Both census periods made use of the following distinctions for the rates of literacy to examine literacy:

1. Can read and write.
2. Can only read.
3. Can neither read nor write.

The study defines literacy as individuals who fall within (1) and (2). Hence, illiterate individuals constitute category (3).

[12] Can distinguish between literacy in rural towns (outside cities and towns) and urban metropolises.

It is, however, only in the 1865 census period that school attendance is measured. The distinctions made in this census period for attendance are as follows:

1. At Sunday school only.
2. Attends day school or other.
3. Neither attends day school or Sunday school.

The study will use these distinctions to shed light on the different types of schools and how they affected literacy.

3.3.2 Descriptive analysis

The quantitative analysis will investigate both 1865 and 1875 census periods across all residents to examine literacy and school attendance. The descriptive statistics will refer to the following:

- Biographical characteristics: age, gender, race.
- Geographical characteristics: inside cities, outside cities.
- Educational attainment characteristics: school attendance, literacy rates.

3.3.3 Econometric analysis

The interdependence of school and literacy at the Cape could shed light on the educational outcomes achieved and the reasoning for discrepancies between racial groups or gender. For the econometric analysis of the study, the ordinary least squares regression model will be utilised. This model is most applicable due to the nature of the cross-sectional data and the ability to use dummy variables. A suitable model must be used based on the nature and quality of the data at hand. The data obtained had been newly digitised, and errors of measurement are a possibility and therefore approximations or round-offs are made where possible.

The ordinary least squares method is popularly used for regression analysis as it is mathematically simpler than the maximum likelihood method. According to Gujarati and Porter (2009), this method allows the researcher to choose certain explanatory variables to explain variation in a dependent variable. To make an inference about a population, one must generate a regression function for a given sample size (n) and observations of X and Y to get an estimate as close as possible to the actual Y or Y_i. The error term captures any unobserved effects, $\hat{u}_i$.

A sample regression function is expressed as below:

$$Y_i = \beta_1 + \beta_2 X_i + \hat{u}_i$$

Due to the nature of the data, this study will encompass two double log regression functions. First, it must be noted that school attendance was only recorded in the 1865 census. Hence, regression one aims to test the literacy level recorded for only 1865 and various aspects that determine literacy. In this regression, literacy is defined as the proportion of inhabitants in the colony that "can read and write" and "can only read". During this period, literacy rates were determined by the simple practice of reading from the Bible. It is noteworthy to mention that the authorities were inconsistent with their questioning practices. In certain instances, information was only recorded for the adult male population and thus duplicated for women.

The explanatory variables included in the regression function are whether or not the region had a mission station, race, gender, if the region was urban or rural, and lastly, the types of schools and attendance levels of the inhabitants. If an area formed part of a mission station, the dummy variable would equate to 1, and if not, it would equate to 0. Literature suggested that missionary education brought about the first cohort of literate-Coloured residents in South Africa. The results of which are still perceptible today. In 1865, only two racial categories were defined, if an inhabitant was White and belonged to any other racial group other than White. As previously mentioned, I follow suit over any other racial category other than White forms part of the Coloured racial group. Regarding the race dummy variable, if an inhabitant belonged to the White race, the variable would equate to 1, and if the individual belonged to the Coloured race, it would equate to 0.

Regarding the gender dummy variable, if an inhabitant belongs to the male category, the dummy would equate to 1. If an inhabitant belongs to the female category, the dummy would be equated to 0. The urban dummy variable is defined by whether or not a district contains a municipality.

I follow the notion that an urbanised area contains a municipality and, in the regression, the dummy would be equated to 1. If a district does not contain a municipality, the dummy is equated to 0. Lastly, the explanatory variable school attendance defines the levels of attendance and the type of school inhabitants attended. At the time of the census, two types of schooling institutions were defined: if an inhabitant attended Sunday school and if they attended day school or any other form of schooling. Thus, the explanatory variable, school attendance, is

defined as the proportion of inhabitants in the colony that attend both "Sunday school only" and "day school or other".

Therefore, regression one is as follows:

$$Literacy_{1865} = \beta_0 + \beta_1 Mission\ Station + \beta_2 Race + \beta_3 Gender + \beta_4 Urban + \beta_5 Attendance + \varepsilon$$

The second regression function analyses the 1865 and 1875 census periods, emphasising the minority groups, namely the Coloured and female populations. In this regression function, a different approach is taken to test for literacy rates. I now use the proportion of inhabitants that can neither read nor write to determine illiteracy rates as a percentage of the entire population within a district. This is to emphasise the illiteracy experienced between the two census periods. The second regression function refers to literacy rates recorded at a regional level instead of the first regression that focuses on the district level. The same explanatory variables are taken into account with this function except for school attendance which is only appliable to the 1865 dataset, with the addition of the age dummy variable. This dummy variable is only applicable to the 1875 dataset and thus curtails the sample size in half (from 90 to 45). With the addition of this variable, we can assess the literacy rates of the age group, 5-15 years and determine the effect of the type of school and the educational reform at the time of the census.

I assume that the mission stations and municipalities mentioned in the 1865 census remain the same in 1875.[13] Since 34.44% of the sample contains mission stations, this is enough incentive to include this variable in the econometric model. In terms of the racial categories, we follow the suit that these racial categories other than White, as mentioned in section 3.2, compromise the greater Coloured racial group.

The racial dummy variable is equated to 1 if the individual is Coloured and equated to 0 if the inhabitant belongs to the White population to emphasise the Coloured racial group in the econometric model. Gender is now equated to 1 if an inhabitant is female and 0 if the individual is male. The urban dummy variable still follows the suit that if a district contains a municipality. We can differentiate between inhabitants younger than 15 years old and 15 years and older in

[13] The only exception is the three additional districts that came into existence in 1875, namely, Wodehouse, King William's Town and East London.

terms of age. Thus, if the dummy variable is requested to 1, this indicates the proportion of the children population (5-15 years of age).

The second regression is, therefore:

$$Illiteracy_{1865,1875} = \beta_0 + \beta_1 Mission\ Station + Race + Gender + Urban + Age + \varepsilon$$

Dummy variables are helpful because they enable us to use a single regression equation to represent multiple groups, whereas general data statistics provide an overview of aggregate results. Furthermore, using the OLS method, we can test for the inclusion and absence of essential variables.

3.4 Limitations

A limitation of this study would be that panel data methodologies such as propensity score matching, instrumental variables or geographic analysis would have been more effective in tracking literacy and school attendance over time. However, because of the nature of the census data, this would be not easy. Propensity score matching, as an example, is a statistical method that attempts to estimate the effect of a treatment, policy or type of intervention by accounting for covariates to predict receiving the treatment. Bias might arise because of the difference in treatment outcome between treated and untreated groups. In this case, the treatment effect was used by comparing those who attended private schools instead of public schools to determine educational outcomes. This would be biased by any factors that predict educational outcomes. For example, in colonial South Africa, race, gender, age, geographical location and monetary status were significant determinants of schooling and educational attainment levels.

There are data quality issues with estimates in the 1865 data set. These estimates are not entirely consistent with the 1865 data values estimates as presented in the 1875 data set. It is also important to note that authorities were inconsistent in questioning practices and would record information for adult males and account for females. Additionally, we do not have records of literacy for Coloured individuals, in 1875 from the ages of <5-15 years of age and no records for Malay, Fingo and Kafir and Bethusana inhabitants between the ages of 60 and upwards. Thus, values determined for the Coloured populace might be underexaggerated. Finally, it is evident that these values were manually generated and are prone to error.

4 EMPIRICAL FINDINGS

4.1 Introduction

This chapter discusses the various factors contributing to literacy and school attendance during the late nineteenth-century, deriving the descriptive and econometric results from the 1865 and 1875 census datasets. Section 4.2 indicates the descriptive statistics and graphs of the literacy, illiteracy and school attendance experienced separately for each period and concurrently over the ten years. Section 4.3 depicts the regression analysis applied to test the relationships of variables that affected literacy with specific emphasis on school attendance and various dummy variables as indicated in section 3.3.3.

4.2 Descriptive data statistics

The number of residents that formed part of the 1865 census equated to 493 873. Ten years later, in 1875, the number of residents surveyed almost doubled to a value of 778 590. The graphical representations in this section depict literacy rates for the White and Coloured racial categories, the percentage change in degrees of literacy between the census data years and the school attendance applicable to 1865. Table 1 presents the raw numbers of the population and their literacy for 1865 and 1875.

Table 4.1: Descriptive statistics from nineteenth-century census

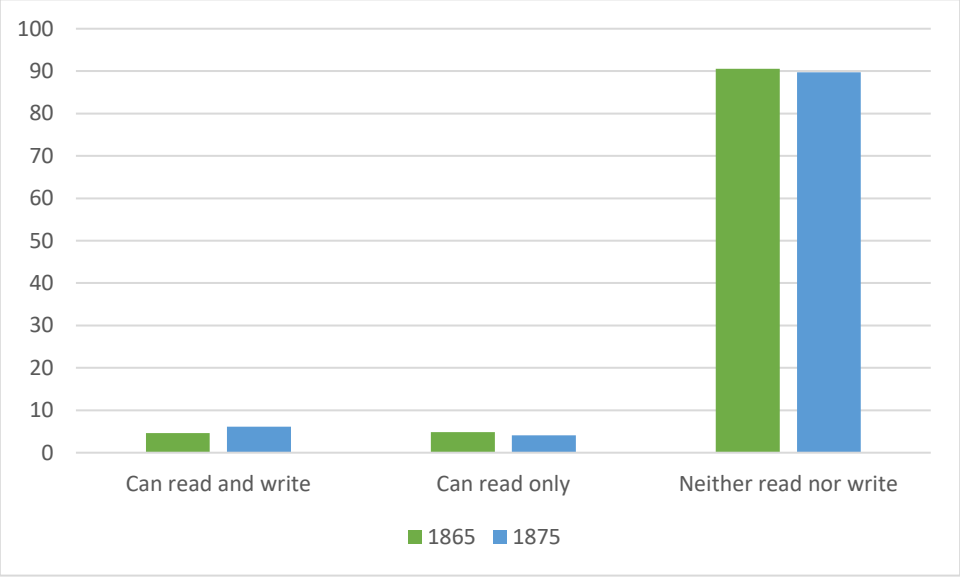
	Coloured		**White**	
	1865	1875	1865	1875
Population	313294	484237	180579	294353
Literacy				
Can read and write	14482	29864	109761	205197
Can read	15098	19775	7664	9298
Neither read nor write	283714	434598	63154	79858
Populations at mission stations	92091	146898	53038	71732
School attendance				
Day school	17582	N/A	19228	N/A

	Coloured		White	
Sunday school	6621	N/A	1993	N/A
No school	290448	N/A	160292	N/A

Source: Own calculations from a census of 1865 and 1875

Figure 4.1 depicts the degree of literacy between 1865 and 1875 for Coloured residents in the Cape Colony. The racial category, Coloured, contributes to 63.44% of the number of residents surveyed in 1865. For the year 1865, 9.44% of Coloured inhabitants were literate ("Can read and write" and "can read-only"). The latter, 90.5%, are illiterate. In 1875 aggregate-Coloured residents rose to 484 237. The portion of literate individuals of the new sample size contributed to 10.25%, and residents that could neither read nor write consisted of 89.75%. It is evident from the graph that although the number of Coloured residents rose drastically between the census periods, we do see a slight increase in the number of literate individuals. However, there is an immense increase in the number of illiterate individuals from 283 714 in 1865 to 434 598 recorded ten years later. One possible explanation for this could be the Education Act of 1865. This act's purpose was to restrict Coloured residents from pursuing a career, i.e., only performing manual labour. Alternatively, British authorities surveyed more areas with Coloured individuals.

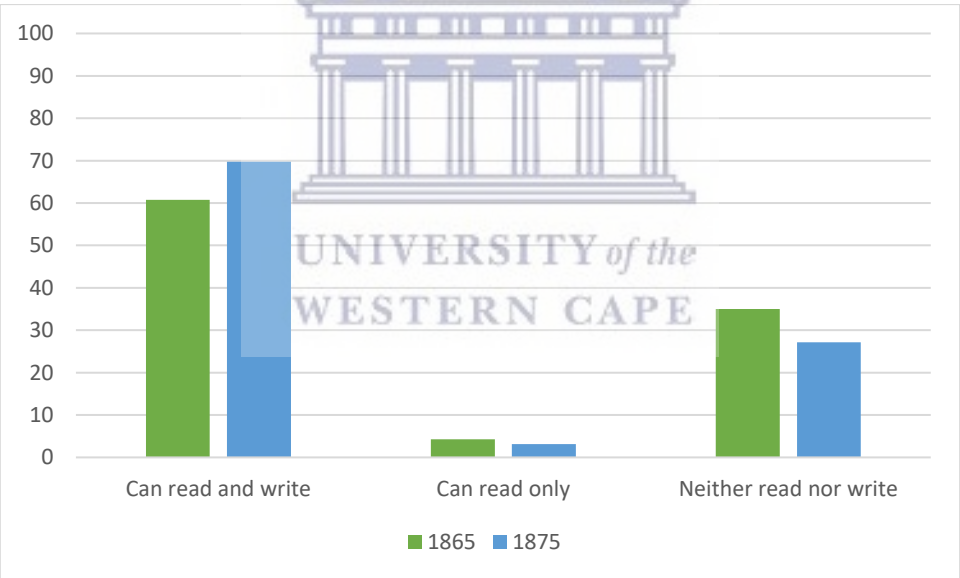
Figure 4.1: Degree of literacy for the Coloured population



Source: Own calculations from a census of 1865 and 1875

Figure 4.2 displays the literacy rates for White residents for the census periods. In 1865 the White population only accounted for 36.56% of the total number of residents surveyed. 65.02% of White residents accounted for the literate population, whereas 34.97% could not read or write. Between 1865 and 1875, the number of White inhabitants rose to 294 353. Contrastingly, the increase in White inhabitants between the periods is now accompanied by a more significant increase in literacy rates than illiteracy. For 1875 approximately two-thirds of the population was deemed literate, and only 27.13% could neither read nor write. Although Coloured residents formed part of the majority of the inhabitants of the Cape Colony, over the ten years, Coloured literacy increased by approximately 0.81% compared to the 10% increase depicted in the White populace. In terms of illiteracy, the Coloured population had experienced a 0.75% increase in illiterate inhabitants, whereas the White residents experienced an approximate 7.84% decrease in illiteracy.

Figure 4.2: Degree of literacy for the White population



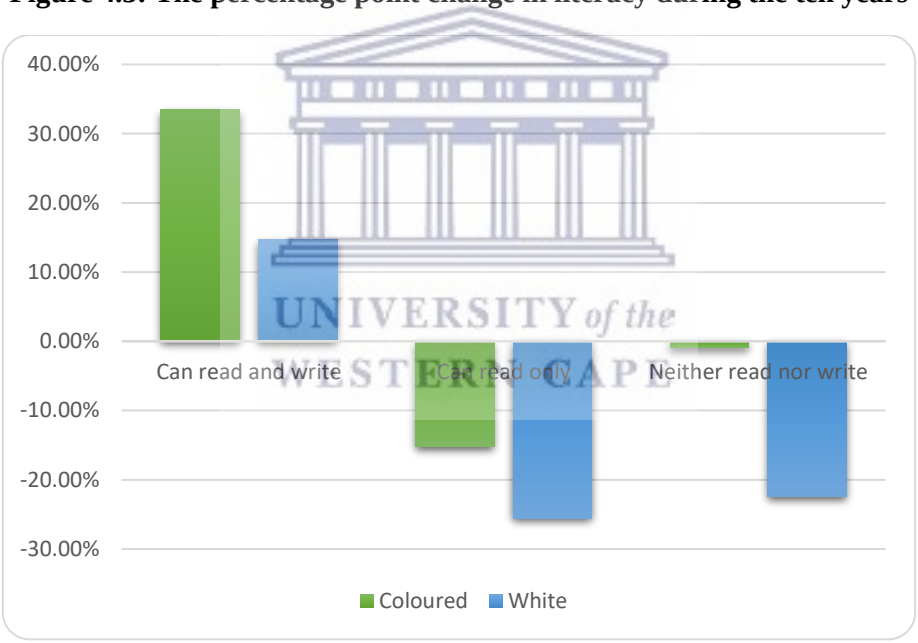
Source: Own calculations from 1865 and 1875 census.

Figure 4.3 incorporates the percentage point changes in literacy for the two racial classifications in the ten years. This graph depicts the percentage point change and considers the increased number of inhabitants in each racial category over the ten years. It is evident from the graph that there has been an improvement in literacy for both races and a decrease in illiteracy with time. Regarding the read and write category, the Coloured population dominated the literacy improvement between the censuses with an approximate positive change of 30 percentage points, instead of the White population that depicted an increase of 15 percentage

points. On the other hand, concerning residents that can only read, the White populace dominated, decreasing the category by almost 26 percentage points compared to a 15 percentage points change for Coloured. This category is essential to note because it can either depict an inhabitant's movement from "can read-only" to "can read and write" or the respective movement from "can read-only" to "neither read nor write".

For this reason, we are required to perform an econometric analysis. If we only compare Figures 4.1 and 4.2, overemphasis on the White population's literacy might be depicted. In terms of inhabitants that can neither read nor write, the White populace dominated, decreasing illiteracy rates by 22 percentage points compared to the Coloured group, only able to lessen the illiterate by 0.89 percentage points.

Figure 4.3: The percentage point change in literacy during the ten years



Source: Own calculations from census data

Figure 4.4 depicts the literacy rates for the racial categories in 1875. It is evident from the graph that the most literate group is the White population, and the most illiterate group is the Kafir population. These results are derived from the 1875 dataset, which also constitutes the 1865 literacy rates. Comparing the White population's literacy and illiteracy levels in Figure 4.4 with what has been found in Figure 4.2 shows us that the accounts as indicated in the 1875 census dataset are exceedingly accurate. The information for 1865 combined all races other than White into the Coloured category. Of this category, 9.44% of the populace were literate. If we assess

all racial groups in 1875 that is not White, literacy increased by approximately 49% overall. As we do not indicate what groups (racial or cultural) were assessed in 1865, we cannot accurately use this value to represent the Coloured racial category. For example, there is no indication in the 1875 census dataset for how inhabitants were categorised as "Other". Disparities in the 1865 data might lead to overemphasis on the values above. For example, the racial group Coloured might have only included one racial category or all the categories relating to the data in 1875.

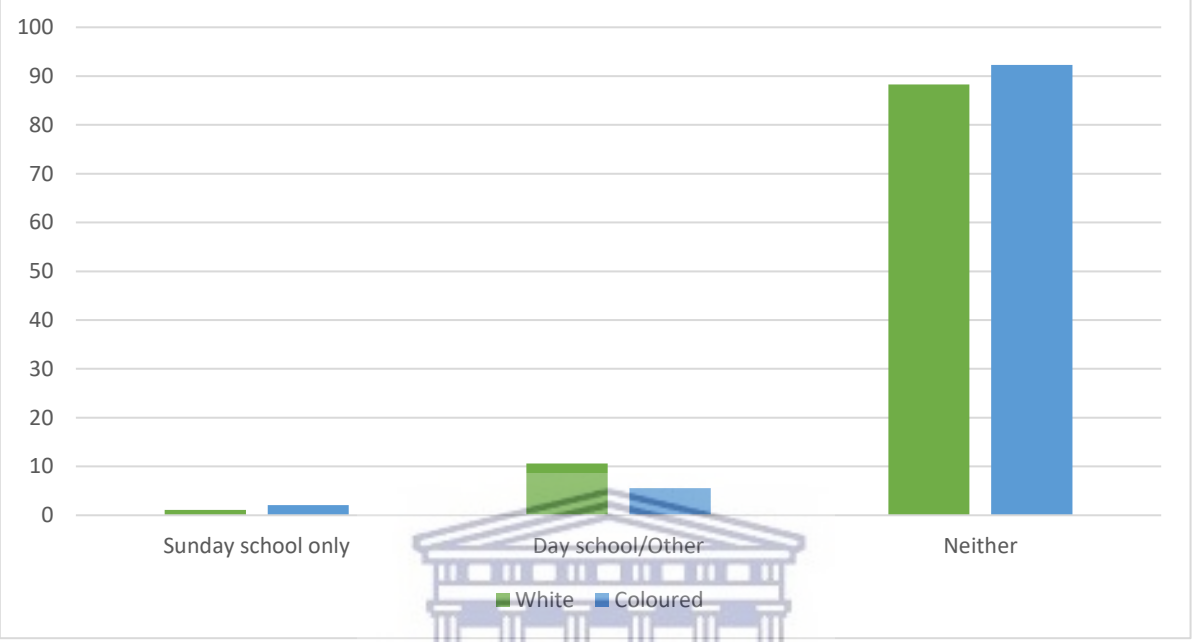
Figure 4.4: The percentages of literacy and illiteracy for racial groups in 1875

Source: Own calculations, Excel Data

Figures 4.5, 4.6 and 4.7 are graphical representations of the school attendance rates collected during the 1865 census. Firstly, Figure 4.5 is a comparison of the school attendance between the White and Coloured racial groups. Sunday school attendance accounts for the lowest rates of school attendance. In terms of the racial categories, attendance by the Coloured race was 1% more than the White category. The other form of schooling was attending day school or any other form of schooling other than Sunday school. The White racial group dominated the attendance for this type of schooling, having 5% more attendance than the Coloured population. The previous empirical literature has found that missionaries and mission stations accounted for higher literacy rates within the Cape Colony. These results suggest that the type of schooling impacted the literacy rates recorded during the two census periods. It is also

important that there were differences in the curriculum taught between racial groups (Malherbe, 1925; Le Roux, 1998).

Figure 4.5: The percentage of school attendance in 1865



Source: Own calculations from 1865 census

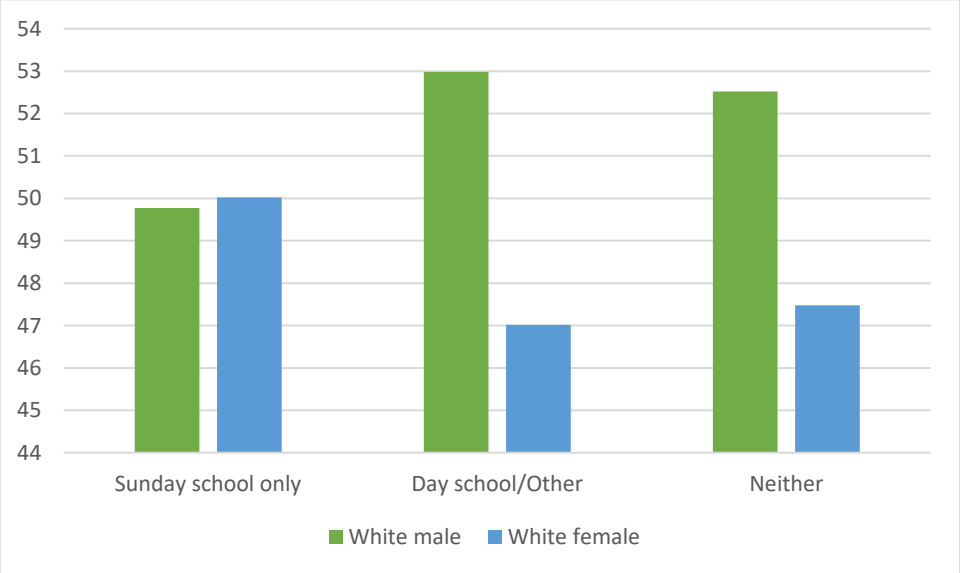
Figure 4.6 and Figure 4.7 indicate the school attendance for the White and Coloured population recorded in 1865, emphasising the attendance between males and females. The results show that school attendance was not yet compulsory or a priority in the White populace; refer to section 2.3.2. This was prevalent in 1833 when approximately 80% of its children were neither going to Sunday school nor day school. Figure 4.6 indicates that 51% of the inhabitants who attended Sunday school were White females, dominating attendance to the male group. Contrastingly, White males had 6% more-day school/other attendance than the female population.

Regarding neither attending Sunday nor day school, the White male population had approximately 5% more individuals not receiving any form of schooling than the female group. Missionary education benefitted from the grant aid system, and indigent children were also provided with free education. It is important to note that missionary education in the Coloured population thrived due to African missionaries. Each type of school was dependent on the respective teachers. (Malherbe, 1925; Le Roux, 1998; Frankema, 2012).

More Coloured inhabitants had higher rates of Sunday school attendance. In Figure 4.7, Coloured males experienced a shortfall of attendance to a Sunday school of approximately 2% compared to the White male populace. However, this shortfall is compensated by the attendance of the Coloured female populace, which allowed for the Coloured populace to dominate Sunday school attendance. In terms of daily school attendance, the Coloured populace experienced lower attendance rates than the White populace. Nonetheless, the Coloured population experienced an equal attendance between males and females.

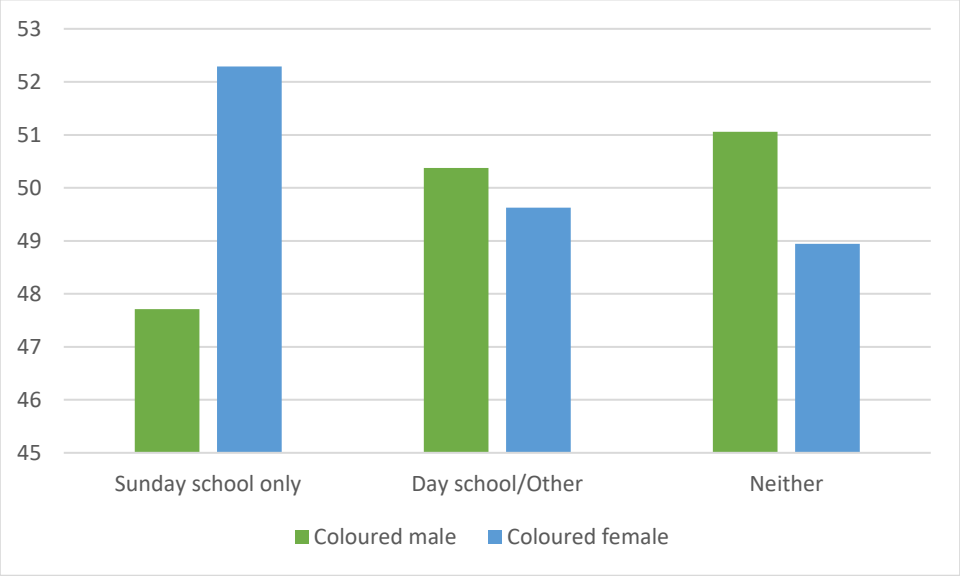
In contrast, the White populace had a 5% difference in attendance between males and females. Consistent with the nonattendance of the White populace, Coloured males account for the majority of nonattendance of both forms of schooling. In terms of females that do not attend any form of schooling, the Coloured population dominates nonattendance by approximately 3% to that of the White female populace. Overall, females in both the White and Coloured racial category experienced more Sunday school attendance and less nonattendance than the male category. Males in both racial categories had greater attendance to day school and or any other forms of schooling. Both Decker (2010) and Duff (2011) explain that the education and the maintenance of White control were not only seen in the Cape Colony or the period. Mission schools were mechanisms for providing African children with enough skills to fulfil the position of civilised subjects.

Figure 4.6: The percentage of school attendance for White males and females in 1865



Source: Own calculations from 1865 census data

Figure 4.7: The percentage of school attendance for Coloured males and females in 1865



Source: Own calculations from census data

Table 4.2 depicts the literacy rates amongst males and females belonging to the racial categories as indicated in the 1875 Census. The census conducted in 1865 only included the racial groups, White and Coloured. Ten years later, the census expanded to include five racial categories, which make up the Coloured populace. The majority of the racial categories experienced females as the more literate gender. Malay and Other females recorded the highest literacy rates across the racial categories.

Additionally, White and Other males recorded the most individuals that could neither read nor write. The census document does not indicate whom comprises of the "Other" racial category. However, it is essential to note that there was an inquiry from the Church of England regarding White poverty at the time of the census. In 1878 approximately 80% of rural White children could not read nor write, and more than half of the colony's White children were not in school. Thus, the census data provided crucial information for policy changes to promote White education in the Cape Colony.

Table 4.2: The degrees of literacy for gender and racial categories in 1875

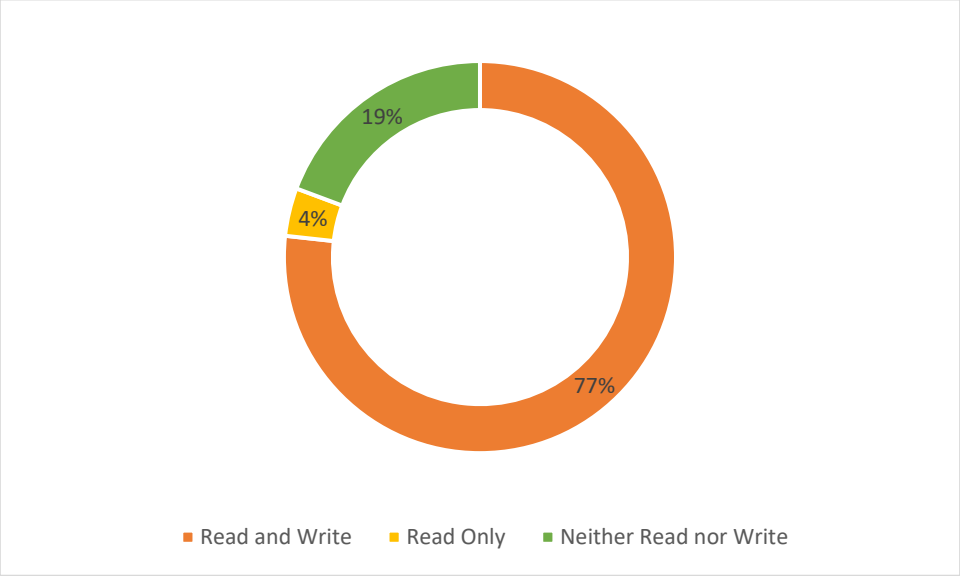
Race and Gender	Read and write	Read Only	Neither Read nor Write
White female	51.45%	49.33%	46.65%
White male	48.55%	50.67%	53.35%

Race and Gender	Read and write	Read Only	Neither Read nor Write
Malay female	57.34%	53.17%	49.34%
Malay male	42.66%	46.83%	50.66%
Hottentot female	55.57%	54.25%	49.29%
Hottentot male	44.43%	45.75%	50.71%
Fingo female	47.96%	48.16%	50.18%
Fingo male	52.04%	51.84%	49.82%
Kafir female	45.82%	42.97%	50.19%
Kafir male	54.18%	57.03%	49.81%
Other female	56.80%	53.39%	48.16%
Other male	43.20%	46.61%	51.84%

Source: Descriptive statistics from the 1875 census on literacy among races.

Figure 4.8 indicates the White populace residing inside cities in 1875. The 1870s was a crucial decade in terms of education in the Cape. Disparities in education were experienced between metropolitans and rural areas. Charity schools allowed indigenous children to receive an education presided by Churchwardens in each parish (Le Roux, 1998). Farmers took it upon themselves to hire private teachers. This could explain part of the significant disparities between interior and coastal regions literacy and enrolment rates. The focus was primarily on White poverty and illiteracy. White farmers were encouraged to open schools, but this was unsuccessful. Efforts were already in place to encourage White education and hinder Coloured education. It is important to note that approximately 30% of the Colony's inhabitants were White. In terms of the White populace residing in the cities, approximately 80% were literate.

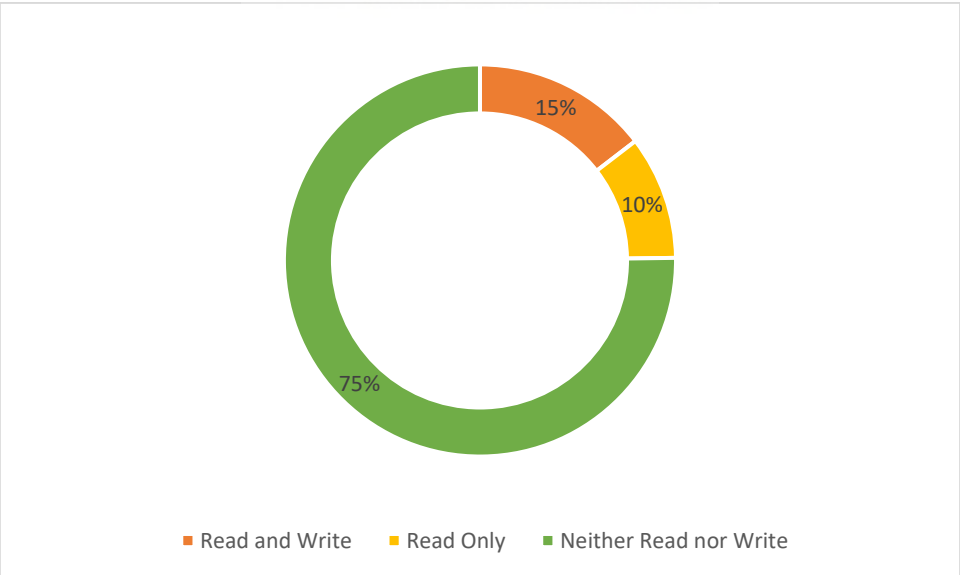
Figure 4.8: Literacy of White populace residing in cities



Source: Own calculations from census data

Figure 4.9 indicates the literacy of Coloured residents in cities. Regarding literacy rates, the literate inhabitants inside cities amounted to 25%, and three-quarters of the populace residing in cities are illiterate.

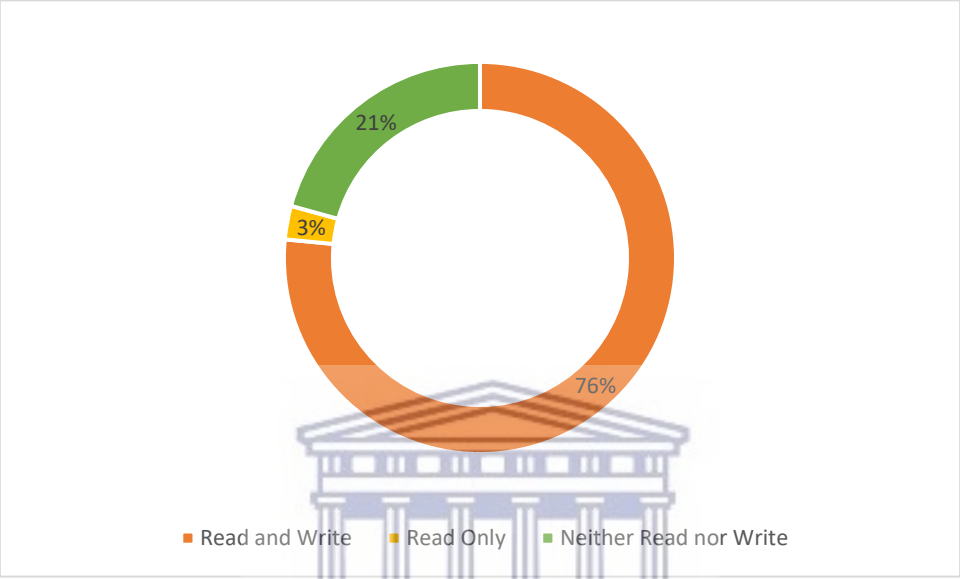
Figure 4.9: Literacy of Coloured populace residing in cities



Source: Own calculations from census data

Figure 4.10 shows the literacy rates of White inhabitants living outside cities. The difference between living inside a city versus outside a city for the White populace did not have a tremendous effect on the literacy rates of the inhabitants. Nevertheless, a 2% decrease in literacy rates are experienced and a 2% increase in illiteracy rates.

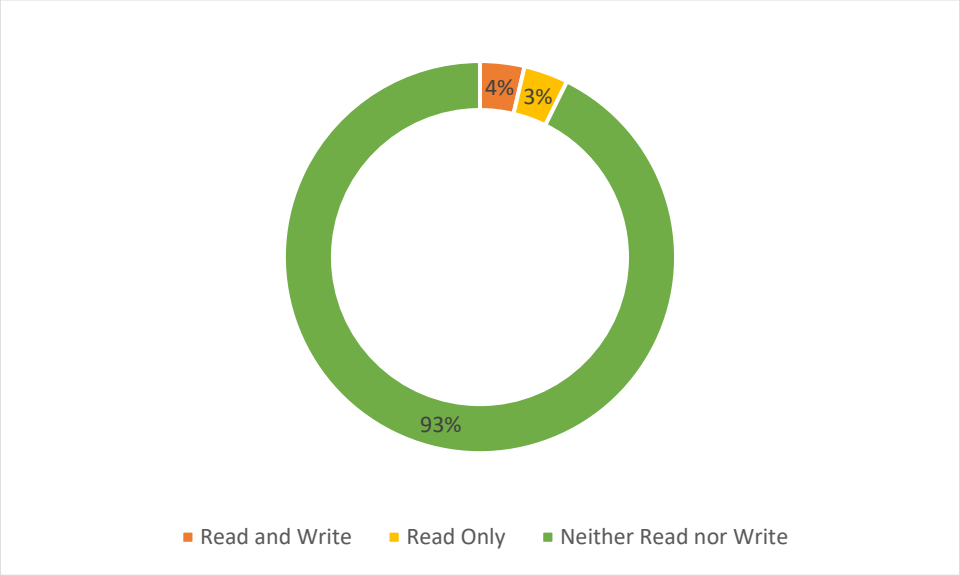
Figure 4.10: Literacy of White populace living outside cities



Source: Own calculations from census data

Figure 4.11 indicates the literacy of the Coloured populace residing in rural areas. If we compare this to the literacy rates of those living in cities, illiteracy rates have increased by 18%. The effect of living outside a city had an impact on the literacy rates of the minority. Coloured children accounted for most school-goers ten years earlier, but advancements in policy changes prohibited Coloured education. It is also important to note that the White populace only accounted for a third of the colony, and values attributed to the White were not better than that of the Coloured population. Because of the inquiry from the Church of England, values were amended to portray an adequate level of literacy for the White populace.

Figure 4.11: Literacy of Coloured populace living outside cities



Source: Own calculations from census data

4.3 Econometric analysis

The descriptive statistics, as indicated in the previous section, allow for a simplistic analysis of the raw data. The modest graphical representations and tabulations restrict a well-rounded analysis of all the variables in question, working in conjunction with one another to meet the desired outcome. Econometric analysis is a method to test the effects of these variables simultaneously with one another. Hence, to determine the efficacy of the type of schooling on literacy on educational attainment level, an OLS regression is run. The models in question are log-log functions used to test the type of schooling during the census period. It must be noted that the attendance levels recorded at the two types of schools, as mentioned in section 3.3.1, are only applicable to the dataset from 1865. The second regression function on the 1865 and 1875 datasets allows for comparing the literacy rates over the ten years. With the addition of this to the dataset, we can assess the literacy rates of the age group, 5-15 years, and determine and or compare the data between the two census periods and whether or not it could be inferred that a type of school affected literacy ten years later, not ignoring the educational reform at the time of the census.

Table 4.3: OLS regressions on literacy rates for 1865

	Model 1	Model 2	Model 3	Model 4
Sunday school only	-0.0397			

	Model 1	Model 2	Model 3	Model 4
	(0.1348)			
School attendance		0.6224***	0.4856***	0.4545***
		(0.0529)	(0.0195)	(0.0204)
Mission station			0.0230***	0.0137**
			(0.0053)	(0.0059)
Race			0.5295***	0.5300***
			(0.0052)	(0.0052)
Gender			0.0035	0.0044
			(0.0052)	(0.0052)
Urban			0.0350***	0.0321***
			(0.1165)	(0.0116)
School attendance*MS				0.0005***
				(0.0001)
Constant	0.3680**	0.3098**	0.0513**	0.0520**
	(0.0079)	(0.0087)	(0.0052)	(0.00520
R^2	0.0000	0.0812	0.8799	0.8835
N	1570	1570	1570	1534

Source: Own calculations using census data. Significance levels: ***p<0.01, **p<0.05, *p<0.1.

As indicated in Table 4.3, the results indicate the coefficients of each explanatory variable, their respective standard errors, R2, number of observations, and statical significance. It should be noted that the amalgamation of the literacy recorded and school attendance in 1865 resulted in 4.6% of the observations diminishing due to matching issues. An additional Generalised linear model test was conducted, and the results showed that there was no difference in the regression output obtained from the OLS regressions. Please refer to Table A2 in the appendix section for the results.

The first model in question only tests the relation of the explanatory variable, only Sunday school attendance to literacy. This model is insignificant, and there is a negative relationship between the variables. This is somewhat of an unusual result. Nevertheless, we will assess the relationship once additional variables are included in the regression function. The R^2 of 0 indicates that only Sunday school attendance cannot sufficiently explain the variation in literacy rates. If Sunday school attendance increases by 1%, then literacy decreases by 3.97%.

In the second model, we incorporated a new variable, attendance, to determine the interdependence with literacy rates. This includes both Sunday school and day/other school attendance. The model is positive and significant at all significance levels, indicating a strong relationship between school attendance and literacy. The addition of both types of schooling increases the R^2 to 8.12%. Although this is a substantial increase from the first model, school attendance can explain only 8.12% of the variation in literacy. If school attendance increases by 1%, then literacy increases by 6.224%.

The remaining two models include the dummy variables: whether or not a region is a mission station, race in terms of White and Coloured, gender, and if a region is urban. In Model 3, all explanatory variables except for the gender dummy variable are significant. Thus, if an individual resided in a station and contained a municipality, this accounted for higher literacy rates. Regarding race, if you belonged to the White populace, this accounts for higher literacy rates and attending Sunday school and day/other schools. It is important to note that the gender dummy variable is insignificant, indicating that the data cannot sufficiently indicate whether or not belonging to the male or female category accounts for higher literacy rates. The R^2 significantly increases to 87%, indicating a strong relationship between the explanatory variables and literacy rates. If you resided in a mission station, this accounted for an increase of 2.30% in literacy rates. A White individual contributed to a 52.95% increase in literacy. Thus, there is a positive relationship between gender and literacy rates; however, this variable is insignificant to the model.

Additionally, if a region formed part of a municipality, this contributed to a 3.50% increase in literacy rates. Therefore, it can be assumed that the urban zone indicated a stronger relationship to that of a rural area. Fourie et al. (2014) experienced similar results in their analysis of mission stations residents in the 1849 census. Age, gender, duration of residence, whether an individual was a Cape born slave or emancipated slave, and the type of missionary society affected literacy rates.

The addition of explanatory variables invariably lowers the coefficient for school attendance, as expected. However, the variable remains positive and significant, indicating that if an individual attended both Sunday school and day/other schools, this contributed to an increase of 48.56% in literacy. Model 4 embodies all the explanatory variables as mentioned in model 3 with the addition of the interaction dummy variable school attendance and a mission station, representing school attendance at a mission station. Although the coefficient is small, it is positive and significant. The coefficients for all other explanatory variables saw a slight decrease; however, this is to be expected with an addition of an explanatory variable. It must also be noted that all variables are still significant, excluding the gender dummy variable. The R^2 had shown an approximate 1% increase with the addition of the attendance mission station dummy variable.

The second regression results are tabulated in Table 4.4. As mentioned previously, school attendance is excluded from this regression as there is only data for 1865, and the age variable is added to this regression function. This regression function looks at literacy rates between both census periods at a district level, whereas in regression one, we assess literacy rates at a regional level. Based on the categories depicted for schooling, we know that Sunday school was an integral type of school in this period. Hence, this regression function starts with the first model assessing the relationship between mission stations and illiteracy. While the model is insignificant and the R^2 is exceptionally high, it is vital to note a negative relationship between mission stations and illiteracy. Signifying that if a region forms part of a mission station, illiteracy decreases by 1.98%. The introduction of the race dummy variable in model two increases the value of the R^2 to approximately 65%. The mission station and race dummy variables are now significant. If a region contains a mission station, illiteracy decreases by 4.20%. If you belonged to the Coloured racial group, this contributed to 68.69% of illiteracy.

Table 4.4: OLS regression on illiteracy rates for 1865 and 1875

	Model 1	Model 2	Model 3	Model 4	Model 5
Mission station	-0.0198 (0.0251)	-0.0420** (0.0150)	-0.0384** (0.0164)	-0.0410** (0.0166)	-0.0176 (0.0183)
Race		0.6869** (0.0541)	0.7040** (0.0622)	0.6935** (0.0628)	0.7125** (0.0743)

	Model 1	Model 2	Model 3	Model 4	Model 5
Gender			-0.2497	-0.1787	-1.7350**
			(0.4418)	(0.4455)	(0.5450)
Urban				0.0330	-0.0159
				(0.0291)	(0.0272)
Age					1.1809**
					(0.3298)
Constant	0.6765**	0.2551**	0.36203*	0.3051	0.5518**
	(0.0147)	(0.0344)	(0.1928)	(0.1990)	(0.1947)
R^2	0.0070	0.6516	0.6529	0.6581	0.8368
N	90	90	90	90	45

Source: Own calculations using census data. Significance levels: ***p<0.01, **p<0.05, *p<0.1

The gender dummy variable is introduced in model three. Mission stations and the race dummy variable are still significant; however, the gender dummy variable is insignificant. There is also a slight increase of 13% to the $R^{2,}$ indicating that the addition of this dummy variable does not have a significant change in variation of the regression. If you reside in an area with a mission station, this lowers illiteracy rates by 3.84%. In terms of race, if you belonged to the Coloured racial category, this contributed to 70.40% of illiteracy – a slight increase from the previous model. Consequently, if a resident was female, she is prone to 24.97 % fewer illiteracy rates than males.

As with the first regression, urban indicates whether or not a region contained a municipality or not. With the inclusion of this dummy in model four, mission stations and race are still significant variables, whereas the gender and urban dummy variables are insignificant. If you now belonged to a mission station, this would decrease illiteracy rates by 4.10%. Up until model four, the dummy variable mission stations coefficient has gradually increased with the addition of explanatory variables. The racial dummy variable slightly decreases but still indicates that the Coloured population accounted for higher illiteracy rates. Although insignificant, if you were female, you were less likely to be illiterate. The urban dummy

variable is not only insignificant but positive. The literature suggests that higher literacy rates were experienced in urban areas due to access to schools and churches. In this model, if you belonged to an urban area, the results have shown that this contributed to illiteracy. There has also been a slight increase in the $R^{2,}$ indicating the significance of the explanatory variables in explaining variation in illiteracy rates.

Lastly, model five includes the last dummy variable, age. This dummy variable shows the proportion of the population that are minors (specifically aged 5-15 years). With the introduction of the age variable, mission stations and the urban variable are now insignificant. Race, gender and age are now significant. The mission station variable is insignificant but still indicates a negative relationship with illiteracy rates, indicating that illiteracy still decreases if an inhabitant lives in an area that contains a mission station. A reason for this has recently been brought to attention by Becker (2021). Although previous literature has indicated that residing near a mission station contributes to higher literacy rates, this was unequal for most Sub-Saharan Africa. Africans were not passive recipients of mission schooling. The expansion of missionary education relied on their personal and family choices.

The Coloured racial group still accounts for higher illiteracy rates. Interestingly, the gender dummy variable is now significant, indicating that this reduced illiteracy rates by 1.73% if you were a female. Although the urban dummy variable has been insignificant previously, it is now negative. Indicating that if you belonged to an urban area, this accounted for 1.59% less illiteracy. Finally, the age dummy variable indicates a significant positive relationship to illiteracy rates. This indicates that you accounted for higher illiteracy rates if you were a child aged 5-15. In terms of the $R^{2,}$ model 5 had shown an increase of almost 20%. This is a good indication that the final model explains the variation in illiteracy. Further analysis of the interaction dummy (Model 5 and Model 6) mission station is recorded in Table A1 in the appendix section.

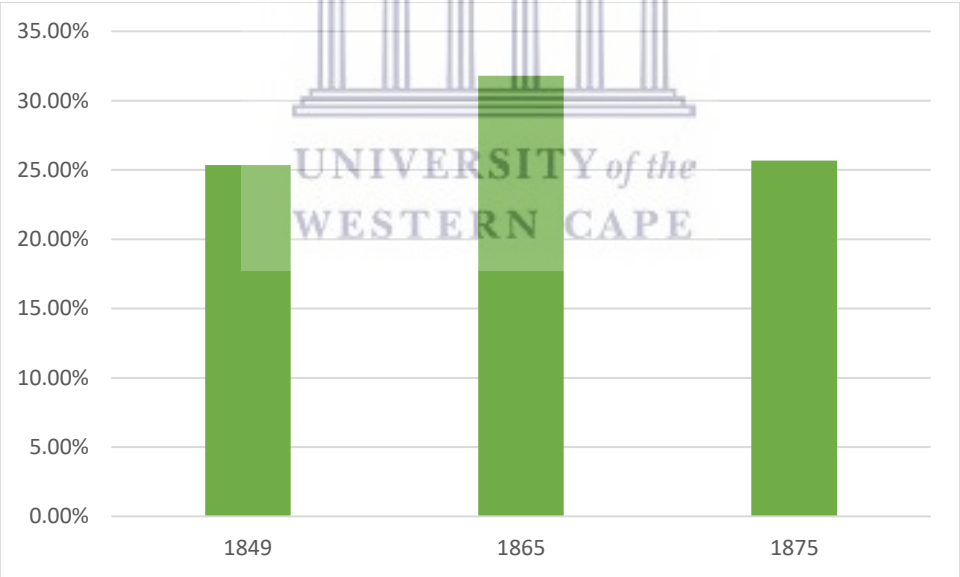
Another objective is to investigate literacy rates at mission stations over the nineteenth-century and how they changed. Table 4.5 and Figure 4.12 compares the literacy rates at mission stations recorded for Fourie et al. (2014) using the 1849 census with the results retrieved from this study for census periods 1865 and 1875. Over 16 years, the literacy rates at mission stations increased by approximately 6%. Thereafter, during the ten years between the two census periods in question, it decreased by approximately 6%. Although the decrease in literacy rates was smaller than the initial increase during 1865 and 1875, the momentum obtained from educating

individuals at mission stations was revered. This can be attributed to the various policies as referred to in section 2.3.2.

Table 4.5: Comparison of literacy rates at mission stations

	Literacy rates
1849 – census of mission stations Source: Fourie et al. 2014	25.36%
1865 Source: Own data collection	31.79%
1875 Source: Own data collection	25.67%

Figure 4.12: Comparison of literacy rates at mission stations over the nineteenth-century



Source: Own calculations from census data

5 CONCLUSION

5.1 Introduction

The advent of revived interest in economic history in South Africa and sparse local empirical literature provided the ideal climate to pursue an analysis of the census data of the late nineteenth-century. Studies to date have focused primarily on White education, bridging a gap for the analysis of the Coloured population. This is the first study that generated results based on the 1865 and 1875 Cape Colony census datasets. Considering factors such as types of schools, geographical positioning, racial groups, religious denominations, and gender, we could supplement existing information with descriptive and regression analysis relating to educational attainment and types of school attendance.

5.2 Review of findings

5.2.1 Descriptive statistics

The study investigates the educational attainment level of White and Coloured residents of the Cape Colony during the two census periods, 1865 and 1875. The descriptive statistics point out the necessity to delve into further regression analysis. When comparing the literacy rates between the Coloured and White populations over the ten years, it is evident that the White population experienced a far greater enhancement in literacy rates. In terms of the Coloured population, not only was the literacy improvement minuscule, but the results had shown that illiteracy rates have also increased. Notwithstanding the evidence, mention must be made of the colony's composition at the time of both censuses. In 1865, of the number of residents surveyed, Coloured inhabitants constituted approximately 63% of the total residents in the colony. This value climbed to 70% ten years later. Hence, the analysis of literacy rates with general summary statistics might overemphasise the severity of the Coloured populations' poor literacy rates.

Furthermore, the analysis of the percentage changes in literacy (as depicted in Figure 4.3) over the ten years provides a more well-rounded view of the colony's literacy rates. These summary statistics consider the various increases in the levels of inhabitants belonging to each racial category. Now we can see a far more significant improvement of literacy rates for the Coloured population, and interestingly this racial category dominates in the improvement of individuals that "can read and write". As previously mentioned, I follow the suit that literacy is defined as "can read and write" and "can read-only". Nonetheless, if we assess the "can read only" subset,

White residents dominated in decreasing this category. The decrease in “can read-only” is of importance to note as it cannot sufficiently attest to the movement of inhabitants between “can read-only” to “can read and write” or “neither read nor write”. Moreover, the White category once again dominated in reducing illiteracy, but now Coloured residents experienced a decrease in illiteracy, whereas the findings in Figures 4.1 and 4.2 suggest that Coloured illiteracy rates increased. The differences experienced whilst specific summary statistics are performed provide an ideal climate for econometric analysis.

Interestingly, in 1875 the authorities that surveyed the colony expanded to include various racial and or cultural groups. Whilst assessing the statistics for these racial groups, it is noted that the White category was the most literate and the Kafir category was the most illiterate. To test for the reliability of the 1875 census, we compared the literacy rates expressed in the census relating to the 1865 data set. The rates for 1865 as depicted in the 1875 dataset is exceedingly accurate to the original 1865 dataset. This substantiates our notion that all racial categories indicated in 1875, except for Whites, constitute the Coloured racial group. Since we do not have an accurate account of how inhabitants were racially categorised and no indication of the composition of the “Other” racial category, it must be mentioned that disparities between the two periods can lead to over or underemphasis of the marginalised group.

One of the study's specific aims is to evaluate the significance of educational attainment and types of schooling provided to the Coloured racial category. Regarding school attendance, we can only measure attendance and the type of school during the 1865 census. Although a more concise representation of types of schools and their effect on literacy would be achieved if the data for 1875 supplemented 1865, we can infer if the types of schools and attendance rates of 1865 had an effect, if any, on the literacy rates experienced in 1875. The two types of schools that were indicated in 1865 were Sunday school and day school. Sunday school attendance was dismal towards the end of the nineteenth-century for a colony that stemmed from missionary education and the conversion of indigenous folk. The Coloured populace accounted for only one per cent more attendance than that of the White group. The other form of schooling was in the form of day school and any other form of schooling. The attendance for this type of schooling was dominated by the White category experiencing fiver per cent more attendance than that of the Coloured category.

Additionally, if we filter the summary statistics into White and Coloured male and female inhabitants, the results show that schooling was not yet compulsory in the colony towards the

end of the nineteenth-century. Surprisingly, White females were at the forefront of Sunday school attendance, whereas White males experienced more attendance at day school. Analysing the nonattendance of Sunday or day school, White males experienced approximately five per cent more inhabitants who were not receiving any form of schooling than the female group.

Concerning Coloured inhabitants, this group experienced overall higher rates of Sunday school attendance than their White counterparts. Once again, females dominated in attendance. Whilst comparing day school attendance, Coloured inhabitants were less likely to attend than White inhabitants. A peculiar statistic is to be mentioned; Coloured inhabitants had an equal attendance between males and females, where White inhabitants experienced a five per cent difference in the attendance between males and females. Compatible with the White group, Coloured males accounted for the majority of nonattendance of schooling. Undisputedly, females belonging to both White and Coloured racial categories experienced more attendance whilst having less nonattendance.

Geographically, I was able to draw inferences on the colony's literacy rates inside and outside cities during the 1875 census. I assume that inhabitants residing within or outside cities roughly translates to urban and rural areas. This assumption is based on the notion that cities provided more accessible access to schools, churches, and public services during the late nineteenth-century. Areas outside cities were further and far from schools' churches and were less likely to constitute a municipality. The further an inhabitant was from a school or church, the more difficult it was to receive any form of schooling. With only approximately 30% of the colony's inhabitants belonging to the White racial category, 80% of inhabitants living inside cities were literate. The colonial authorities encouraged White farmers to open boarding schools in rural areas. Despite this being unsuccessful, a mere 76% of White inhabitants residing in rural areas were literate. Although Coloured inhabitants experienced similar tares of literacy inside cities, inhabitants residing outside cities constituted the majority of illiteracy for the racial group.

The vast differences between racial and gender categories associated with literacy rates and school attendance provide an incentive for a clearer understanding of how various factors manipulated literacy rates and school attendance during the nineteenth-century. As a result of the findings depicted above, an econometric analysis must be performed.

5.2.2 Econometric analysis

Reviewing the econometric analysis, the results of regression one indicates that school attendance exhibits a positive effect on literacy rates recorded during 1865. Although schooling was not compulsory at this time, tied in with low attendance rates to Sunday school, the overall attendance to both types of schooling allowed for greater literacy rates.

Now it might seem unusual that Sunday school attendance is insignificant whilst previous literature has found mission education to be of importance to literacy rates of the colony. This is a result of the policy implementation at the time and the fact that schooling was not compulsory for White residents, and the role that Sunday school had in the accumulation of literacy. Bearing in mind that Sunday school in conjunction with day school attendance had a positive effect on literacy. During this period, vast differences between schooling and literacy resulted in the Destitute relief bill being implemented in 1890, after the inquiry from the Church of England regarding impoverished White residents and the implementation of stricter legislation about the grant aid system and education act.

If an inhabitant resided in a mission station and attended either form of schooling, this also played a crucial part in literacy rates.

Furthermore, if you were a White inhabitant and resided in an urbanized area, you were more likely to be literate. In terms of gender, the regression function accentuates what was depicted in the descriptive statistics. Although females are domineered in Sunday school attendance for both racial categories, we cannot explicitly infer that gender plays a role in the literacy of inhabitants. The school attendance rates recorded for females do not elucidate the type of instruction received, nor does it consider that schooling was not extremely important during this stage in the colony.

The second regression function accounts for illiteracy for both census periods. The variable school attendance is excluded, and the age variable is included. The addition of the age variable altered the role or significance of residing in an urban area that contained a mission station. These variables become insignificant, indicating that although there is a relationship between these explanatory variables and illiteracy, it cannot sufficiently explain variation in illiteracy over the census periods. As with the findings in regression one, if you were a Coloured inhabitant, you were less likely to be literate. An interesting finding with regression two is that ceteris paribus accounted for reduced illiteracy rates if you were female. This result reveals

that females account for higher literacy rates in regression two, but one gender cannot explicitly attest to higher literacy rates when school attendance is included. An important variable to note is that age exhibits higher illiteracy rates defined as children in regression two. This can be explained by the fact that children are still in the developmental stage of acquiring literacy skills.

5.3 Conclusion and avenues for future research

This study is the first to analyse the literacy rates recorded for the two census periods econometrically. Previous analysis by Christopher (2015) summarised the literacy recorded for the two periods. It is evident that during the late nineteenth-century, the colony experienced profound policy changes. The Act of 1862 was officially passed in 1864, stipulating the process of conducting a Blue Books census, of which the census was officially conducted in March of 1865. Shortly thereafter, The Education Act of 1865 was declared on the 10th of October, 1865. Given the school attendance and literacy rates recorded for a colony, this Act had the sole purpose of remodelling the educational system. It is evident that colonial authorities were threatened by the proactiveness of the Coloured populations' involvement in educating the minority. Stricter legislation coupled with a mandate for the grant aid system was instilled to curb the education of the minority. The Act designated schools into public schools, mission schools and aboriginal schools, and English had to be the primary language of instruction. There remains very little research on the schools' curriculums in the Cape Colony and how this impacted the inhabitants' labour outcomes. Although mission schools were the first to benefit from the grant, a drawback of the aid was that it was entirely left to the community to provide educational needs, as seen with what was found by Sokoloff and Engerman (2000).

The Acts passed in the late nineteenth-century portrayed the ideology that it would create a better educational system. However, a sixth of school-going children had erratic attendance and inferior education. Females residing in mission stations were more literate (Nunn, 2012; Fourie and Swanepoel, 2015). Although White inhabitants accounted for one-third of the population, they experienced greater nonattendance of schooling. The 1870s had colonial authorities questioning the colony's productivity, morale, social, racial and economic order. Colonial authorities were intimidated by the White impoverished and the effect this might have on White supremacy. Hence, the Destitute Children Relief Act was introduced in the late 1890s. This bill had the sole purpose of providing African children with satisfactory skills to fulfil the

role of civilised inhabitants performing menial jobs and allowing White inhabitants to pursue further education.

The policies implemented after the first census, coupled with the Inquiry from the Church of England, aided White education. This could explain the slight decrease in literacy rates recorded in 1875 and the poor increase in literacy rates recorded between the census periods for the Coloured population. The change in the types of schooling between the census periods and the legislation could also be attributed to staggering literacy rates for the Coloured populace.

As indicated by Le Roux (1998), schools for indigenous children relied on education from Churchwardens. The content taught related solely to spiritual education, whereas White farmers were granted funds to hire private teachers and open rural schools. This can explain the vast differences experienced in literacy and enrolment rates recorded for Coloured and White inhabitants residing inside and outside cities. One possible way of exploring this is for future research to focus on investigating farm schools outside of cities more and their impact on educational outcomes of both White and Coloured pupils.

This study supplements sparse literature indicating that schooling and educational systems during the late nineteenth-century became increasingly important towards growth within the colony. These two censuses conducted were crucial for the remodelling of the educational system in colonial South Africa. An avenue of future research could be to also incorporate the Blue Books of the colony for information between 1850 and 1860. This will further overcome the compression of South African economic history. Although the Acts and policies were grounded on ensuring proper quality education, they also aimed at hindering the progression of Coloured education. This was the earliest emergence of discriminatory education which became prevalent with the establishment of the Bantu Education Act in the early 1900s.

Whilst the educational climate in South Africa today resembles a democratic system, the educational policies are still rooted in Acts passed during the colonial era. Although the educational system today requires much-needed reconsideration of policies to correct previous imbalances, as a descendant of the oldest mission station in South Africa, Genadendal, I can attest to the importance of colonial schooling on the proficiency of a previously marginalised family.

6 REFERENCES

Primary data sources:

Cape of Good Hope (Colony). Colonial Office. *Census of the Colony of the Cape of Good Hope, 1865*. Cape Town: Saul Solomon.

References:

Acemoglu, D., Gallego, F.A. and Robinson, J.A., (2014). *Institutions, human capital, and development.* Annual Review Economics, 6(1): 875-912.

Acemoglu, D., Johnson, S., and Robinson, J.A. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review*, 91(5): 1369-1401.

Austin, G. and Broadberry, S., (2014). Introduction: The renaissance of African economic history. *Economic History Review*, 67(4): 893-906.

Austin, G. (2008). The 'Reversal of Fortune' Thesis and the Compression of History: Perspectives from African and Comparative Economic History. *Journal of International Development*, 20: 996-1027.

Baderoon, G. (2007). *The Provenance of the term "Kafir" in South Africa and the notion of the Beginning.* Retrieved form http://www.cilt.uct.ac.za/usr/cci/publications/aria/download_issues/2004/2004_MS4.pdf

Baten, J. and Cappelli, G. (2017). European Trade, Colonialism and Human capital accumulation in Senegal, Gambia and Western Malawai, 1770-1900. *Journal of Economic History*, 77(3): 950-951.

Baten, J. and Cappelli, G. (2016). *The Evolution of Human Capital in Africa, 1730 – 1970: A Colonial Legacy?* CEPR Discussion Paper DP11273. Tuebingen: University of Tuebingen.

Baten, J., de Haas, M., Kemptner, E. and Meier zu Selhausen, F. (2019) "Gender Inequality in Education in Africa: a long-term perspective." Unpublished manuscript, University of Sussex.

Baten, J. and Fourie, J., (2015). Numeracy of Africans, Asians, Europeans during the early modern period: new evidence from Cape Colony court registers. *Economic History Review*, 68(2): 632-656.

Bates, R.H., A. Greif, Levi, M., Rosenthal, J-L and Weingast, B. (1998). *Analytic Narratives.* Princeton, New Jersey: Princeton University Press.

Becker, B. (2021). *Mission education left an uneven legacy: an analysis of 26 African countries*. Retrieved from https://theconversation.com/mission-education-left-an-uneven-legacy-an-analysis-of-26-african-countries-166315.

Becker, G. (1967). *Human Capital and the Personal Distribution of Income.* Ann Arbor: University of Michigan Press.

Becker, G. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. New York: Columbia University Press.

Becker, S.O., Cinnirella, F. and Woessmann, L., (2012). The effect of investment in children's education on fertility in 1816 Prussia. *Cliometrica*, 6: 29–44.

Becker, S.O. and Woessmann, L., (2009). Was Weber Wrong? A Human Capital Theory of Protestant Economic History. *Quarterly Journal of Economics*, 124(2): 531–596.

Bezemer, D., and Bolt, J. (2009). Understanding long-run African growth: Colonial institutions or Colonial education? *Journal of Development Studies*, 45(1):24-54.

Bickford-Smith, V. (1995). *Ethnic pride and racial prejudice in Victorian Cape Town.* Johannesburg: Wits University Press.

Boshoff, W. and Fourie, J. (2010). The significance of the Cape trade route to economic activity in the Cape Colony: a medium-term business cycle analysis. *European Review of Economic History*, 14(3): 469-503.

Boston College, (2021). *TIMMS AND PIRLS INTERNATIONAL STUDY CENTER.* Available online at: https://timssandpirls.bc.edu/. [Accessed on: 7 September 2021]

Boppart, T., Falkinger, J., Grossmann, V., Woitek, U. and Wuthrick, G., (2013). Under Which Conditions Does Religion Affect Educational Outcomes? *Explorations in Economic History*, 50(2): 242-266.

Bundy, C. (1984). Vagabond Hollanders and runaway Englishmen: White poverty in the Cape before poor Whiteism in Beinart et al. (1986). *Putting a plough to the ground:*

accumulation and dispossession in rural South Africa 1850-1930. Johannesburg: Ravan Press.

Caicedo, F.V. (2018). The Mission: Human capital transmission, economic persistence, and culture in South America. *Quarterly Journal of Economics*, 134(1): 507-556.

Cappelli, G. and Baten, J, (2017). *European trade, colonialism and human capital accumulation in Senegal, Gambia and Western Mali, 1770-1900*. Munich Society for the Promotion of Economic Research (No. w6468).

Cappelli, G., (2016). One size that didn't fit all? Electoral franchise, fiscal capacity and the rise of mass schooling across Italy's provinces, 1870–1911. *Cliometrica,* 10(3): 311-343.

Castelló, A. and Doménech, R., (2002). Human capital inequality and economic growth: some new evidence. *Economic Journal*, 112(478): C187-C200.

Chisholm, L. (1986). The pedagogy of porter: The origins of the reformatory in the Cape Colony, 1882-1910. *Journal of African History*, 27(3):483.

Christopher, A.J. (2015). Educational attainment in South Africa: a view from the census 1865-2011. *History of Education*, 40(4):503-522.

Cilliers, J. and Fourie, J. (2012). New Estimates of Settler Life Span and other Demographic Trends in South Africa, 1651-1948. *Economic History of Developing Regions*, 27(2): 61-86.

Decker, C. (2010). Reading, writing and respectability: How schoolgirls developed modern literacies in Colonial Zanzibar. *International Journal of African Historical Studies*,43(1):89-114.

De Haas, M. and Frankema, E., (2016). Tracing the uneven diffusion of missionary education in colonial Uganda: European influences, African realities, and the pitfalls of church record data. *African Economic History working paper* 25/2016. Available at: [Accessed on:]

De Kiewiet, C. (1941). *A History of South Africa: Social and Economic.* Oxford: Clarendon.

De Zwart, P. (2011). South African Living Standards in a Global Perspective, 1835-1910. *Economic History of Developing Regions*, 26(1):49-74.

Dell, M. (2010). The persistent effects of Peru's mining mita. *Econometrica*, 78(6): 1863-1903.

Duff, SE., (2011). Saving the Child to Save the Nation: Poverty, Whiteness and Childhood in the Cape Colony. *Journal of Southern African Studies*, 37(2): 229-245.

Du Plessis, A., (2020). The emergence of decentralised centralism in the South African education governance system. *Journal of Southern African Studies*, 46(1): 1-19.

Du Plessis, S., Jansen, A., and von Fintel, D. (2015). Slave prices and productivity at the Cape of Good Hope from 1700 to 1725: Did all settler farmers profit from trade? *Cliometrica*, 9: 289-330.

Du Plessis, S. and Du Plessis, S. (2012). Happy in the service of the Company: the purchasing power of VOC salaries at the Cape in the 18th century. *Economic History of Developing Regions*, 27(1): 125-149.

Dyer, C., and Rose, P. (2005). Decentralisation for educational development? An editorial introduction. *Compare: A Journal of Comparative and International Education*, 35(2):105.

Easterlin, R.A., (1981). Why isn't the whole world developed? *Journal of History*, 41(1): 1-17.

Ekama, K., Fourie, J., Heese, H. and Martin, L. (2021). When Cape Slavery Ended: Introducing a New Slave Emancipation Dataset. *Explorations in Economic History*, 81: 101390.

Ekama, K. and Ross, R. (2021). The Emancipation of the Enslaved in the Cape Colony: Historiography and Introduction. *Journal of Southern African Studies*, 47(3): 405-416.

Engerman, S.T. and Sokoloff, K.L. (2000). History Lessons Institutions, Factor Endowments, and Paths of Development in the New World. *Journal of Economic Perspectives*, 14(3): 217-232.

Fourie, J. and Swanepoel, C. (2018). 'Impending ruin' or 'remarkable wealth'? The role of private credit markets in the eighteenth-century Cape Colony. *Journal of Southern African Studies*. 44(1): 7-25.

Fourie, J. and Green, E. (2015). The Missing People: Accounting for the productivity of indigenous populations in Cape Colonial history. *Journal of African History*, 56: 195-215.

Fourie, J. and Swanepoel, C. (2015). When selection trumps persistence, the lasting effect of missionary education in South Africa. *Tijdschrift Voor Sociale En Economische Geschiedenis*, 12(1): 1-29.

Fourie, J., Ross, R. & Viljoen, R. (2014). Literacy at South African Mission Stations. *Journal of Southern African Studies*, 40(4): 781-800.

Fourie, J. and Mariotti, M. (2014). The economics of apartheid: An introduction. *Economic History of Developing Regions*, 29(2): 113-125.

Fourie, J. and Von Fintel, D. (2014). Settler skills and colonial development: the Huguenot wine-makers in eighteenth-century Dutch South Africa. *Economic History Review*. 67(4): 932–963.

Fourie, J. (2013). The remarkable wealth of the Dutch Cape Colony: Measurements from eighteenth century probate inventories. *Economic History Review*, 6(2): 419-448.

Frankema, E. H. (2013). Why was the Dutch legacy so poor? Educational development in the Netherlands Indie, 1871-1942. *Masyarakat Indonesia*, 39(2): 307-326.

Frankema, E. H. (2012). The origins of formal education in Sub-Saharan Africa: was British rule more benign? *European Review of Economic History*, 16(4): 335-355.

Furnivall, J.S. (1943*). Educational progress in Southeast Asia*. New York: Institute of Pacific Relations.

Gallego, F.A. and Woodberry, R. (2010). Christian Missionaries and Education in Former African Colonies: How Competition Mattered. *Journal of African Economies*, 19(3): 294-329.

Giliomee, H. (2009). A note on Bantu Education, 1953 to 1970. *South African Journal of Economics*, 77(1): 190-198.

Gujarati, D.N and Porter, D.C., 2009. *Basic Econometrics*. 5th edition. Boston: McGraw-Hill Irwin.

Gwaindepi, A. and Siebrits, K. (2020). 'Hit your man where you can': Taxation strategies in the face of resistance at the British Cape Colony, c.1820 to 1910. *Economic History of Developing Regions*, 35(3): 171-194.

Hanushek, E.A. and Woessmann, L., (2012). Do better schools lead to more growth? Cognitive skills, economic outcomes, and causation. *Journal of economic growth*, 17(4): 267-321.

Harmon, C., Oosterbeek, H. & Walker, I. (2003). The Returns to Education: Microeconomics. *Journal of Economic Surveys*, 17(1): 115-155.

Henn, F.J. (2018). *What was the educational attainment level in the Cape Colony for the nineteenth-century Century?* (Unpublished honours paper). University of the Western Cape, Bellville.

Herranz-Loncan, A. and Fourie, J. 2018. "For the public benefit?" Railways in the British Cape Colony. *European Review of Economic History*, 22(1): 73-100.

Huillery, E., (2009). History matters: The long-term impact of colonial public investments in French West Africa. *American economic journal: applied economics*, 1(2): 176-215.

Jedwab, R., Moradi, A., and Meier zu Selhausen, F.M. (2017). *The Economics of Missionary Expansion and the Compression of History*. Sussex: University of Sussex.

Lauglo, J. (1995). Forms of Decentralisation and their implications for education. *Comparative education*, 31(1):9.

Le Roux, C.S. (1998). *A historical-educational appraisal of parental responsibilities and rights in formal education in South Africa (1652-1910)*. The University of South Africa, Pretoria, South Africa.

Links, C., Fourie, J. and Green, E. (2020). The substitutability of slaves: Evidence from the eastern frontier of the Cape Colony. *Economic History of Developing Regions*, 35(2): 98-122.

Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22: 3-42.

Magee, G.B., Greyling, L. and Verhoef, G., (2016). South Africa in the Australian mirror: per capita real GDP in the Cape Colony, Natal, Victoria, and New South Wales, 1861–1909. *Economic History Review*, 69(3): 893-914.

Malherbe, E.G. (1925*). Education in South Africa, 1652-1922*. Cape Town: Juta

Martinez-Fritscher, A., Musacchio, A., and Viarengo, M. (2014). Colonial Institutions, Trade Shocks, and the Diffusion of Elementary Education in Brazil, 1889–1930. *Journal of Economic History*, 74(3): 730-766.

Meier zu Selhausen, F., (2019). *Missions, education, and conversation in colonial Africa*. African Economic History working paper 48/2019. Available at https://www.researchgate.net/publication/336817041_Missions_Education_and_Conversion_in_Colonial_Africa: [Accessed on: November 2020]

Meier zu Selhausen, F., van Leeuwen, M.H.D., & Weisdorf, J.L. (2018). Social mobility among Christian Africans: Evidence from Anglican marriage registers in Uganda, 1895–2011. *Economic History Review*, 71(4): 1291-1321.

Meier zu Selhausen, F. and Weisdorf, J.L. (2016). A Colonial Legacy of African Gender Inequality? Evidence from Christian Kampala, 1895–2011. *The Economic History Review*, 69(1): 229-257.

Meier zu Selhausen, F. (2014) Missionaries and female empowerment in colonial Uganda: New evidence from Protestant marriage registers, 1880-1945. *Economics History of Developing Regions*, 29(1): 74-112.

Mincer, J. (1974). *Schooling, Experience, and Earnings*. Human Behaviour and Social Institutions No. 2.

Mouton, N., Louw, G.P. and Strydom, G.L. (2012). A Historical Analysis of The Post-Apartheid Dispensation Education in South Africa (1994-2011). *International Business and Economics Research Journal*, 11(11): 1211-1222.

Nunn, N. (2010). Religious conversion in Colonial Africa. *American Economic Review, 100(2): 147-152.*

Nunn, N. (2007). Historical legacies: A model linking Africa's past to its current underdevelopment. *Journal of Development Economics* 83: 157–175.

North, D. (1990). An introduction to institutions and institutional change. Institutions, institutional change and economic performance. Cambridge: Cambridge University Press.

Oreopoulos, P. and Salvanes, K.G., (2011). Priceless: The nonpecuniary benefits of schooling. *Journal of Economic Perspectives 25(1):159-184.*

Ricart-Huguet, J. (2021). Who governs? Colonial education and regional political inequality in Africa. SSRN electronic journal, doi: 10.2139/ssrn.3568416

Romer, P.M. (1989a). *Human capital and growth: theory and evidence.* National Bureau of Economic Research (No. w3173).

Romer, P.M. (1989b). *Endogenous technological change*. National Bureau of Economic Research (No. 3210).

Sayed, Y. (1997). Democratising educational governance in South Africa: policy problems and prospects. *Economic and Political Weekly*, 32(14):722.

Sokoloff, K.L. and Engerman, S.L., (2000). Institutions, factor endowments, and paths of development in the new world. *Journal of Economic Perspectives*, 14(3): 217-232.

Solow, R.M. (1957). Technical change and the aggregate production function. *Review of Economics and Statistics*, 1:312-20.

Spaull, N. and Kotze, J. (2015). Starting behind and staying behind in South Africa: The case of insurmountable learning deficits in mathematics. *International Journal of Education Development*, 41: 13-24.

van der Berg S., and Gustafsson M. (2019). Educational Outcomes in Post-apartheid South Africa: Signs of Progress Despite Great Inequality. In: Spaull N., Jansen J. (eds*) South African Schooling: The Enigma of Inequality*. Policy Implications of Research in Education, vol 10. Cham: Springer, 25-45.

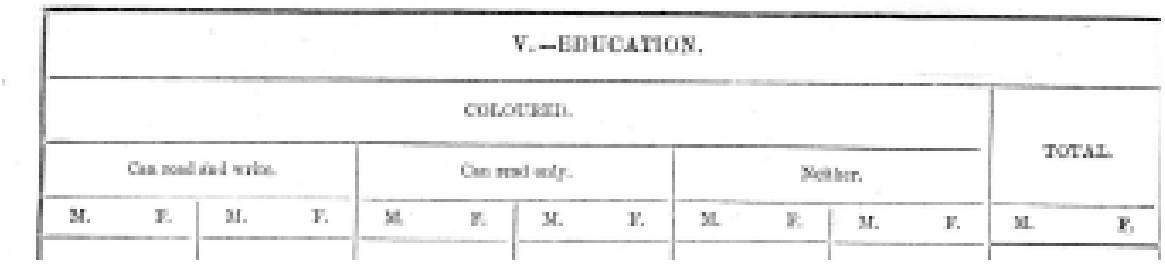
Van der Berg, S. and Bhorat, H. (1999). The Present as a Legacy of the Past: The Labour Market, Inequality and Poverty in South Africa. *DRPU Working Paper Series, No. 01/29.* Available at: https://open.uct.ac.za/bitstream/handle/11427/7242/DPRU_WP99-029.pdf?sequence=1. [Accessed on 10 September 2021].

Wantchekon, L., Klašnja, M. and Novta, N., (2013). Education and human capital externalities: evidence from colonial Benin. *Quarterly Journal of Economics*, 130(2): 703-757.

White, B. (1996). Talk about School: Education and the Colonial Project in French and British Africa (1860-1960). *Comparative Education* 32(1): 9-25.

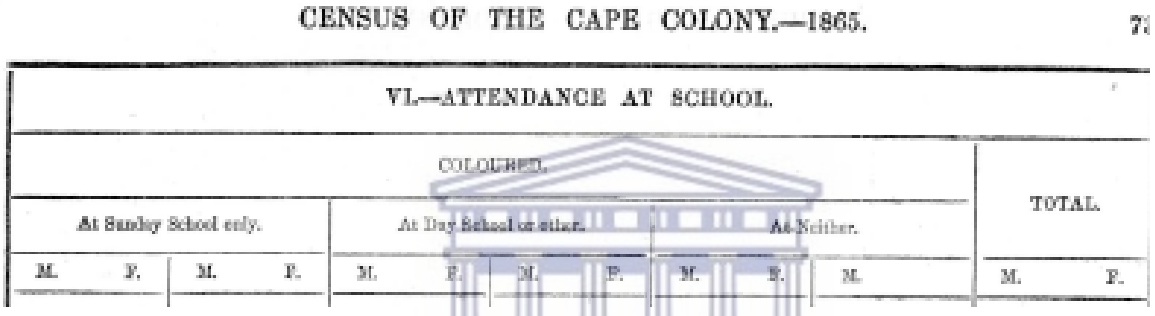
7 APPENDIX A

Figure 7.1: Education information in 1865 census



V.—EDUCATION.													
COLOURED.												TOTAL.	
Can read and write.				Can read only.				Neither.					
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.

Figure 7.2: School attendance as shown in the 1865 census



CENSUS OF THE CAPE COLONY.—1865. 7

VI.—ATTENDANCE AT SCHOOL.													
COLOURED.												TOTAL.	
At Sunday School only.				At Day School or other.				At Neither.					
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.		M.	F.

Table 7.1: Regression results using an interaction dummy variable

	Model 5	Model 6
MSrace	0.6738**	0.7376**
	(0.1300)	(0.1340)
MSgender	-1.0432**	-0.9150**
	(0.1761)	(0.2009)
MSurban		-0.0861
		(0.0741)
Age	1.6338**	1.6713**
	(0.3010)	(0.3104)
Constant	-0.0656	-0.0821
	(0.1340)	(0.1382)
R^2	0.6779	0.6726
N	45	45

Source: Own calculations using census data. Significance levels: ***p<0.01, **p<0.05, *p<0.1

Table 7.2: GLM results for Models 1 and 3 of regression one

	Model 1	Model 3
Sunday school only	-0.0397	
	(0.1348)	
School attendance		0.4856***
		(0.0195)
Mission station		0.0230***
		(0.0053)

	Model 1	Model 3
Race		0.5295*** (0.0052)
Gender		0.0035 (0.0052)
Urban		0.0350*** (0.1165)
School attendance*MS		
Constant	0.3680** (0.0079)	0.0513** (0.0052)
Log likelihood	-314.8442	1349.0321
N	1570	1570

Source: Own calculations using census data. Significance levels: ***p<0.01, **p<0.05, *p<0.1