A MULTINOMIAL MODELLING OF THE DETERMINANTS OF CHILD LABOUR IN NAMIBIA USING THE 2018 NAMIBIA LABOUR FORCE SURVEY

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ABSTRACT

Child labour has been a serious concern in the world especially in developing countries and it is rapidly becoming a common problem in Namibia. Despite children not allowed to work by law in Namibia, child labour is still being heavily practiced in the country. Hence, this study was aimed at determining the factors contributing to child labour in Namibia, thereby further assisting the Namibian government and relevant stakeholders in the development of necessary procedures to eliminate child labour in country. To this end, the 2018 Namibia Labour Force Survey with a total number of 507,185 children aged 8 to 17 years and 5,136 employed children was analysed using a multinomial logistic regression model. Results of the analysis revealed that the child's residence (urban/rural), region, age, literacy status and educational attainment were all significant determinants of child labour in Namibia. In addition, it was observed that more employed children resided in rural areas due to various farming activities that occurs in these areas. The likelihood of employment for children residing in the urban areas was less compared to being unemployed. Moreover, the odds of being economically inactive for children in the age groups below 15 years was high compared to being unemployed. This was due to the free primary education that was introduced by the Namibian government in 2013. The results also indicated that the educational status of the children was significant to child labour and the odds of employment for children with no education attainment was higher compared to being unemployed while the odds of being economically inactive was lower. This emphasizes the imperative need for urgent intervention to address the issue of employing children which are mainly necessary to enlighten the programme developers and policy makers in the fight against child labour in Namibia.

Key Words: Child Labour, Employment, Economically inactive, Multinomial logistic regression, Namibia

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CRC	Convention on the Rights of the Child
CSO	Central Statistics Office
EA	Enumeration areas
FAO	Food and Agriculture Organization
ILO	International Labour Organization
IPEC	International Programme on the Elimination of Child Labour
LFS	Labour Force Survey
LL	Log-likelihoods
NCAS	Namibia Child Activity Survey
NLFS	Namibia Labour Force Survey
NSA	Namibia Statistics Agency
PHC	Population and Housing Census
PSU	Primary Sampling Units
SPSS	Statistical Package for Social Sciences
UNAM	University of Namibia
UNICEF	United Nations Children's Fund
UREC	University of Namibia Research Ethics Committee

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DEDICATION

This study is wholeheartedly dedicated to our late mother, Eva K. Shilongo who was my inspiration, pillar of strength and believed in me academically.

I also dedicate this work to my two (2) beloved aunties (Anneli-Liina Dama and Karolina Kautondokwa) and sister (Shekupe A. Keheumbo) who unconditionally love and personally sacrifice for me by taking over the role of motherhood in my life.

Lastly, I dedicate this work to my partner (Pinehas N. Iipinge) and our children (Gabby and Wetupa), for the strength and thought of not giving up.

DECLARATION

I, Anna- Lisa N. Shilongo, hereby declare that this study is my own work and is a true reflection of my research, and that this work, or any part thereof has not been submitted for a degree at any other institution.

I, Anna-Lisa N. Shilongo, grant The University of Namibia the right to reproduce this thesis in whole or in part, in any manner or format, which The University of Namibia may deem fit.

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Name of Student	**Signature**	**Date**

CHAPTER 1: INTRODUCTION

1.1 Background

Child labour can be defined as the event where children below the age of 18 years are involved in any kind of employment in any industry or business that deprives them of their childhood, interferes with their ability to attend school, and that is mentally, physically, socially or morally dangerous and harmful (International Labour Organization [ILO], 2004). It is work that is exploitative, hazardous and inappropriate for the child's age. This in turn affects the development of the child. However, not all works for a child are regarded as harsh, exploitative, and hazardous since some works includes household chores that children do, provided that it does not interfere with their health and development. Any work that violate the rights and hinders the mental, physical and social wellbeing of a child describes child labour (ILO, 2004).

Child labour has been a serious concern in the world especially in developing countries and Africa (region with most developing countries) has the highest percentage of children in child labour of which one-fifth of children were involved in child labour, as shown in the Global estimates of child labour from the ILO 2017 report. According to the ILO (2017), on a global level, an estimate of about 152 million children aged 5-17 years are in child labour, accounting for almost one in ten children worldwide. Africa ranks highest in the number of child labour with 72 million children followed by Asia and the Pacific with 62 million working children. In the 2015 South Africa Survey of Activities of Young People report approximately 5.2 percent of children aged 7-17 years were involved in child labour, a decline of 1.9 percent compared to 2010. Hence the number of children who were involved in child labour in South Africa declined with an estimated number of 202,000 (from 779,000 in 2010 to 577,000 in 2015). In 2011, for a one-week period in Botswana, out of the total number of children aged 7-17 years, 8.5 percent were found to be working children, with 6.6 percent of them being primary school aged children (aged 7-13 years), while 12.3 percent were aged 14 to 17 years (United Nations Children's Fund [UNICEF], 2011). Of these working children 3.5 percent had worked in the profitable enterprise sector (with majority been below the age of 14 years), while 5.5 percent had worked in the agriculture sector (majority been below the age of 14 years). Some children worked in both sectors at the same time (UNICEF, 2011).

According to the Bureau of International Labour Affairs (2015), children in Zimbabwe were engaged in child labour, mostly in the agriculture and mining sectors. They further indicated that the Zimbabwe government’s 2014 Child Labour Survey report, released in 2015, determined that the number of children engaged in child labour between the ages of 5 and 17 years increased from 341,000 in 2011 to 1.6 million in 2014. In Zambia, one out of every three children aged 7-14 years were in child labour, which translates to some 950,000 children who were at work in employment in the country (Inter-agency country report of Zambia, 2012). Furthermore, child labour in Malawi continues to be dominance. A total of almost 2.1 million children aged 5-17 years were involved in child labour which translates to 38 percent of this age group and out of the total working children in Malawi about 81 percent were aged 5-13 years while 19 percent were aged 14-17 years (Understanding Children’s Work, 2018). These numbers indicated clearly that efforts in this regard need to be intensified and accelerated in order that the goal of child labour elimination is reached in the nearest possible future.

Child labour is rapidly becoming a common problem in Namibia. According to a survey done on the Namibia Child Activity Survey (NCAS) in 2010, about 60.8 percent of children aged 6 to 17 years were found to be working in Namibia. The survey results also indicated that the participation rate of working children were higher in the rural areas compared to the urban areas. It was further revealed that private households were the main industry for working children, with 97.9 percent children working in private households, followed by agriculture (with 0.7 percent children) and wholesale and retail trade, repair of motor vehicle (0.5 percent children). However, industries such as public administration, defence and social security, followed by manufacturing, and hotels and restaurants, had the least number of working children in Namibia (NCAS, 2010).

The engagement of a child in unpleasant activities is unacceptable according to section 3 of the Namibia's Labour Act of 2007, unless the work is light and in accordance with accepted international standards. However, the Constitution of the Republic of Namibia (1990) stated that such light work should not interfere with the child's health, education, welfare and development. In every community the importance of child welfare requires attention, as the future well-being of a nation depends on development of children. Thus, all children are entitled to be protected from economic exploitation and should not be employed or perform work that is likely to harm them. For this reason, the Namibian government need to do more to develop and introduce certain procedures to get children out and prevent them from being involved in any forms of child labour activities. Hence this study determined the factors contributing to child labour in Namibia that may in turn assist the government in the development of the necessary procedures to eliminate or minimize child labour in the country.

1.2 Statement of the problem

Despite children not allowed to work by law, child labour is still being practiced in developing countries. Underage children are usually involved in all sorts of employment because their families are extremely poor and experiencing (extreme) financial difficulties. Every child has the rights to be protected from economic exploitation and should not be employed to perform work that would hinder their education, health and development. In Namibia the engagement of children aged 15 years and above in employment is regarded as legal as long as it does not interfere with their education, health and physical, mental, spiritual, moral or social development. Namibia's Labour Act of 2007 states that nobody may employ a child under the age of 14 years but allows light work during the day for children aged 14 years in accordance with accepted international standards. Notwithstanding, children continue to work as labourers in sectors, to financially assist their parents, families, siblings or to earn income for themselves to disentangle them out of poverty. For planning purposes, to address child labour in Namibia, there is a critical need for policies implementation and reviewing as well as the development programmes aimed at improving child labour. This critical need in turns requires study evidences to determine the socioeconomic factors as well as sociodemographic factors that significantly contribute to child labour across all 14 regions in Namibia. For this reason, this study was to investigate the contributing factors to child labour in Namibia.

1.3 Objectives of the study

The main objective of the study was to determine the factors contributing to child labour in Namibia. This was accomplished by the following specific objectives:

(a) Determining the trends of child labour in Namibia, by looking at the past five national labour force surveys (2012, 2013, 2014, 2016** and 2018).

(b) Establishing association between child labour and background characteristics.

** *No labour force survey was conducted in 2015 & 2017 due to financial reasons.*

1.4 Significance of the study

This study identified the contributing factors of child labour in Namibia as well as provide the necessary statistical information regarding the determinants of child labour. These determinants can later be used in the development of programmes and policies for children in Namibia. In addition, this study is most significant to all organisations that deals with children's well-being and protection (such as the Ministry of Labour, Industrial Relations and Employment Creation, Ministry of Gender Equality and Child Welfare and International Labour Organization), as well as programme developers and policy makers.

1.5 Outline of the Study

Chapter one presents the background, problem statement, objective, research questions, significance and outline of the study. Chapter two reviews some of the relevant literature related to the study, while Chapter three describes the methodology applied to the study. Chapter four presents detailed data analysis, while the discussion of key findings, conclusions and recommendations of the study are presented in Chapter five.

CHAPTER 2: LITERATURE REVIEW

2.1 Definition of Child labour

Child labour has been a serious concern in the world especially in developing countries as it damages the children's health and development. However, not all work done by children should be classified as child labour rather work which involves children being enslaved, separated from their families, exposed to serious hazards and illnesses at a very early age is child labour. As stated by ILO (2019), Child Labour refers to work that deprives children (any person under 18) of their childhood, their potential and dignity, and that is harmful to their physical and/or mental development. Work that is mentally, morally dangerous and harmful to children and/or interferes with their schooling by depriving them of the opportunity to attend school, obliging them to leave school prematurely or requiring them to attempt to combine school attendance with excessively long and heavy work is also classified as child labour (ILO, 2017).

The International Labour Organization's (ILO) convention on child labour was both an advance and a strategic retreat from the minimum age standards set by its 1973 Convention No. 138 which states that, all children under 18 years of age, should not be engaged in economic activities (ILO, 1999). But Convention No. 182 also signals a retreat from the ILO's offensive against child labour (Comparative Education Review). In Conversion No. 182, work preventing school access or success is not, in itself, viewed as inherently intolerable, nor is it to be prioritized for immediate eradication.

Children starts being involved in working activities within the family and this kind of labour is seen as the process of socialization and training them for adulthood responsibilities. According to

Mends et al. (1988) research work on the native and problems of child labour stated that children's involvement in work roles form part of their training into adulthood. Child training begins at a tender age, as they are introduced to various occupations like farming and domestic duties as their major work. Boys are taught to pursue farming activities such as animal herding while girls on the other hand, assist in female occupations like housekeeping. Previously, participation of children in the workforce was on the increase in many parts of the world particularly in the developing countries (Pinto, 1989).

Oheneba (2015) declare that child labour is much more common in the rural informal sector and statistics in Ghana and other developing countries also reveal that a vast majority of working children are employed in domestic service where children perform household chores such as fetching water, collecting firewood, cooking and taking care of younger siblings. According to ILO Child Labour (2004), allowing children to work means stealing their childhood forcing them to become subjects of economic exploitation as they are most often paid at the lowest rates, and sometimes not at all. Child labour perpetuates poverty by depriving children of education and subsequently renders these children without the skills needed to secure the future of their countries (ILO, 2013).

2.2 Global and Regional trends of child labour

The publication of the ILO report in 2017 global estimates of child labour indicated that child labour declined during the period from 2012 to 2016 globally. Since 2000, there has been a net reduction of 94 million in children in child labour as there were almost 134 million fewer children in employment in 2016 than in 2000 (ILO, 2017). However, at regional level ILO (2013) indicated that the highest number of child labourers in 2012 was found in the Asia and the Pacific region while ILO (2017) indicated that the highest number of child labourers in 2016 was found in the Sub-Saharan Africa. According to the ILO report in 2013, 168 million children aged 5-17 years worldwide were engaged in child labour in 2012 and the involvement was much higher among boys than girls (99.8 million boys versus 68.2 million girls). The Asia and the Pacific region ranked highest with 78 million child labourers followed by the sub-Saharan African region with about 59 million engaged as child labour in 2012. Moreover, on a global level, the ILO report in 2017 estimated that in 2016 there were about 152 million children aged 5-17 years in child labour of which 64 million were girls and 88 million were boys, accounting for almost one in ten children worldwide. Africa ranks highest in number of child labour with 72 million children followed by Asia and the Pacific with 62 million working children.

As mention by Burrone (2019), although the number of child labourers has declined by one third since 2000 in the world, the problem of child labour remains a serious concern for the international organizations. In 2008 ILO estimated 215 million of child workers all over the world, with more than half of them employed in hazardous (and unfavourable) work conditions. In accordance with Burrone, child labour is not a homogeneous phenomenon: children are employed in various kinds of work, in very different social, hygienic and moral context: in addition, not all forms of child labour are considered harmful, especially in the developing countries, where the first issue is to survive and where some activities could be considered an apprenticeship dimension or a part of the development process of children.

2.3 Known factors of child labour

Various studies on child labour have been published with interest on the kinds of work children do, that could physically and psychologically harm them. Several studies (such as Okurut (2009), Oheneba (2015), Khakshour et al. (2015), FAO (2017) and ILO (2018)) identified some contributing factors of child labour and some of them are discussed below.

2.3.1 Household poverty and income

Household poverty and income are the known contributing factors of child labour and children involve themselves in working activities to ensure the survival of their families and themselves. However, children work for a variety of reasons. Blanchard (1983) state that child labour is rooted where households are suffering of low income, poor living conditions, high unemployment rate and insufficient opportunities for education. Based on the Food and Agriculture Organization (FAO) report (2013), the main push factors contributing to child labour generally include poverty (poor and marginalized families), the need to pay off debt with an employer (especially in situations of bonded labour), absence of parents/carers, migratory developments, vulnerability to shocks, urbanization, inadequate education systems (lack of access to schools, poor quality of schooling, lack of safety in schools, irrelevant and unattractive school curricula, inflexibility in the school system and belief systems about the value of children working and of schooling.

According to Cockburn & Dostie (2007), it is not always the poorest households that engage in child labour. While household income draws children out of school, the productivity effect of underlying greater asset holdings does the contrary. Beegle, Dehejia and Gatti (2006) found out that there is a positive and significant relationship between the level of household assets and the use of child labour. Poor households need money to survive and children are the only one to do that even though not well paid, they serve as contributors to family income in many parts of the world. Some children work as a result of poverty and employers prefer them because they would be cheap to pay and docile. Thus, the use of child labour may result in lower wages which some of these employers find more beneficial.

2.3.2 Traditional/Culture beliefs

Traditions/culture has been identified as one of the contributing factors of child labour. In many societies, some cultures introduce children to work at a very young age such as those related to traditions and cultural factors. Families assume that children require to learn skills that can benefit them in the future. Makwinja (2010) stated that, some of the international documents, especially the Convention on the Rights of the Child (CRC), depart from the universal conception of childhood, making children all over the world the same and deserving similar treatment, more so claiming their rights. Employing the cultural politics of childhood, Makwinja (2010) also argues that childhood on which child rights are founded is a contested notion. Children are valued differently in all societies across the world and the work they are involved in differs with regards to sex. Male children tend to be involve in hard work which requires physical power while females mostly involve in soft job that requires light strength such as household chores like cooking, washing and care for babies and elderly people (ILO, 2015). However, some children are more involved in hidden activities which result to some underreported forms of child labour.

According to Avis (2017), girls are considered to be particularly vulnerable to worst forms of child labour such as commercial sexual exploitation and to hidden forms of child labour such as domestic work in third-party households. Avis (2017) estimated that girls make up roughly 90 per cent of children involved in domestic work and the specific conditions in which child domestic work is performed, and the specific vulnerabilities to serious physical, emotional, and sexual abuse these can create. On the other hand, boys account for nearly two-thirds of all children in hazardous work according to ILO (2015). Boys in farming activities are often responsible for operating machinery, using sharp tools, spraying chemicals, which expose them to amputations, cuts and burns, pesticide poisonings, and other adverse health impacts (ILO, 2015). In addition, boys are involved in livestock herding which put them at risk of animal attacks and when fishing they are at risk of drowning, hypothermia.

UNICEF (2005) indicated that, girls often start working at an earlier age than boys, especially in the rural areas where most working children are found. According to ILO (2015), of all children in hazardous work, majority were older children in the age group of 15-17 years, in which boys account for 81 per cent. As age increases, work activities are often, but not always, differentiated along gender lines according to FAO (2013) as base on literature encountered, boys were generally more involved with herding activities while girls were more involved with household chores.

2.3.3 Agriculture, construction and manufacturing

The growth of the agricultural, construction and manufacturing sectors could also be the common reasons of child labour. Most of the labour in agricultural, construction and manufacturing sectors are handy, easy to do and do not require qualifications to operate, which is why children tend to work in those sectors. In agriculture, construction and manufacturing sectors, children are usually paid lower salaries and they are more efficient in certain types of work than adults and they hardly demand workers' rights, hence, these could be the reasons why employers in such sectors tend to prefer child workers to adults. Khakshour et al. (2015) revealed that, children worked in agriculture, home-based assembly operations, factories and mining sectors, and most of them worked night shifts lasting 12 hours. In other words, a child is a cheap labourer, obedient and less likely to strike as an adult could do.

Some agricultural goods such as pesticides and other chemicals, are being produced under hazard environments and exploitative forms of labour practices. ILO (2017) estimated that Out of these children, 73 percent worked in the agricultural sector while 69 percent worked within their own family unit. In the agricultural sectors where most of these children were employed, the children's work duties involved handy work that could be hazardous, thereby endangering their health and development. ILO further stated that, the vast majority of these working children are unpaid family workers, involved in agricultural work, predominantly on farms operated by their families.

Food and Agriculture Organization of the United Nations (FAO, 2017) revealed that Food security, agriculture and child labour are closely linked. FAO estimated that there were168 million child labourers worldwide, 98 million (i.e. nearly 60 percent) of whom work in agriculture. The majority work as unpaid family members, often starting at an early age. About 70 million (59 percent) of all children in hazardous work aged 5–17 are in agriculture. According to Oheneba (2015), the highest proportion of child labourers in Ghana is found in agriculture/fishing/forestry (57.0%), followed by sales (20.7%), production (9.5%). The rest were engaged throughout the text as truck-pushers, porters, labourers, driver-mates (11.0%). FAO (2017) further stated that agriculture can involve many hazards, such as exposure to pesticides, dangerous machinery, heavy loads, long hours and hostile environments, where children are more at risk than adults.

2.3.4 Education status of parents/guardians

The education status of the parents is another important child labour contributor. The more educated the parents, particularly mothers, the less likely to let their children work. International Programme on the Elimination of Child Labour (IPEC, 2008) pointed out that nearly every study on the relationship between child labour and education compares the educational outcomes of children who don't work, or who work less, and those who do work, or work more. Education is measured in a form of school attendance, school performance or skill acquisition, and each of these can be approached in more than one way. IPEC identified the ways in which child labour influences education outcomes, but the relationship is hardly simple. Firstly, it is clear that educational opportunities are a major influence on child labour and the decision of families to involve children to work should logically be affected by the opportunity cost of work, which may be time spent in school. IPEC then indicated that this can be expected to show up at the level of individual choices, since children who do poorly in school or appear to benefit little from it are likely candidates for early entry into the labour force.

Oheneba (2015) stated that in developing countries, the decision to send children to school or to work is likely to be based on the relative rate of each return and illiterate or low educated parents may not be aware of the importance of educating their children. Oheneba (2015) further indicated that, these parents are more interested to send their children to work rather than to school because their contribution to household income is highly needed, since the illiterate parents are usually unskilled people with low income. Thus, with illiteracy among adults, child labour tends to increase. The costs of education are relatively very high for poor households sometimes preventing them from sending their children to school and consequently leading to high rates of child labour

(Addison et al., 1997). Another confounding factor is that child labour may affect a child's years of schooling completed, and education has been shown to positively affect adult health. Studies have consistently found a large positive correlation between education and health. (O'Donnel et al., 2002).

2.3.5 School attendance by the child

According to Ravallion and Wodon (2000), less is known about the relationship between child labour and school attendance because it is more difficult to elicit information on school attendance from household surveys. Parents' impressions of their child's attendance record are likely fraught with error. It is possible to integrate official attendance records from the school with household survey data, but this has not been done frequently in practice (Dustmann et al., 1996). In the end, time spent in school, which is an input into the educational production process is no more a measure of schooling outcomes than is child labour. Evidence of the impact of child labour on schooling attainment is mixed with some studies finding negative effects (Psacharopoplous, 1997**)** while other findings such as Patrinos and Psacharopoulos (1997) and Ravallion and Wodon (2000) found that schooling and work were compatible. There is stronger evidence that child labour lowers test scores, presumably because it makes time in school less efficient (Orazem et al., 2004).

2.4 Theoretical/ Conceptual framework of child labour

One of the best ways to quantify child labour is by identifying characteristics of child labour which concerns policy-makers and researchers. This can be referred to as the conceptual level. Among all the characteristics that causes child labour, poverty and a need for income are usually the most common indicators on why children work. Thus, children who lives in poverty have a greater risk of being involved in child labour. Johansson (2009) stated that poverty is one of the most common theories that results in underage children working, especially in developing countries where poor families put their children in child labour more often than families in a better economic situation. Johansson (2009) further indicated that child labour is an important source of income for poor families and their survival depends on the cash and in-kind income generated through it.

Other factors which play a role in child labour as shown in Figure 1 includes, culture beliefs, agriculture, construction and manufacturing, school attendance by the child and education status of parents/ guardians. According to Kazeem (2010), cultural beliefs are another indicator why households or families make the decision to send their children to school or not, with the latter resulting into child labour. Kazeem (2010) also indicated that the urban-rural residence is another significant factor for child labour. In the rural settings, schools are often not available, are of poor quality, or they are out of reach for many children because they have to travel long distance in order to attend school daily. For these reasons, such children rather stay home and (forcibly) engage in work, especially in agricultural activities which are mostly practiced in the rural areas. Also, some children who do not attend school, but instead work, do so because of their families' or households' economic needs, as these families or households cannot afford to pay the costs of schooling for their children. Children whose parents/guardians have a secondary or higher education are reportedly to have a lower risk of being involved in child labour compared to those whose parents/guardians have no education (Kazeem**,** 2010).

Moreover, Kazeem (2010) pointed out that characteristics such as having parents with little or no education, household socioeconomic status, and family size of the children's families/households, have major consequences on whether children will be able to attend and remain in school, which in turns have an indirect effect on whether children participate in child labour or not.

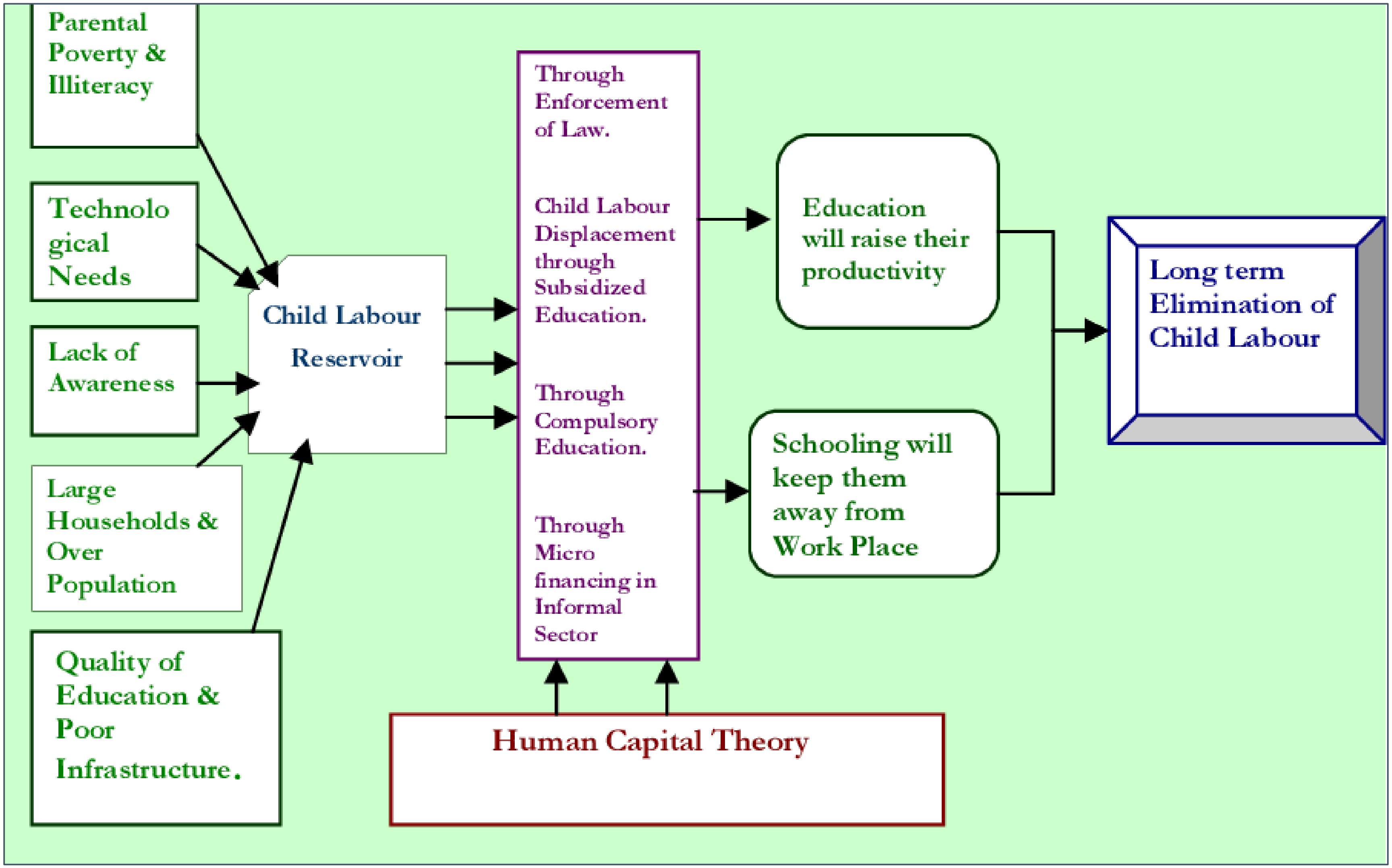

Figure 1: Conceptual framework of child labour according to Mazhar (2008).

2.5 Empirical findings of child labour

A study by Kazmi (2015) analysed the socio-economic factors that force children into child labour. In order to find out the key factors of child labour, the techniques of univariate analysis and bivariate analysis were used in the study. Pearson Chi Square Test and Spearman Rank Correlation were also employed to check the significant association between the factors. After the identification of significant factors, probit model was carried out so as to find out the probability and whether the identified factors belong to child labour or not. The results of the Kazmi (2015) study showed that the socio-economic factors like poverty, parents' low level of education, poor livelihood conditions, education being costly, and inaccessible, lack of awareness about child labour, hazardous working conditions and parental occupation significantly correlate with child labour.

Nkamleu (2009) analysed the determinants of child labour participation in the cocoa farming sector of Côte d'Ivoire using a multinomial logit model, an issue of special interest because the country accounts for approximately 40% of the world's cocoa production. The empirical findings from the study provided evidence that child labour in cocoa farms and non-enrolment in schools are significant. Moreover, many children are involved in potentially dangerous and/or harmful tasks. Data also highlight gender and age dimensions in the participation of children in tasks and the way labour is allocated. Econometric results generally indicated that the gender and age of children, whether or not the child is the biological child of the household head, parents' education, the household dependency ratio, the farm size, the cocoa productivity level, the number of sharecroppers working with the household head, agro ecological zone and communities' characteristics are all pertinent in explaining the child work/schooling outcome.

Okurut & Yinusa (2009) used the Botswana's Labour Force Survey (LFS) 2005/06 data from the Central Statistics Office (CSO) and the multinomial logit model to simultaneously analyse child employment and child schooling in an upper middle-income country in Botswana. Their results concluded that the probability of children working while schooling is negatively and significantly influenced by the age of the child, being from a female headed household and employment status of the household head. However, the probability of child labour and schooling is positively and significantly influenced by child education level, the number of children in the household, and the household head being engaged mainly in the agricultural sector.

Ari (2016) study aimed to examine the relationship between children's work status and their demographic characteristics using multinomial logistic regression. The validity of the model in the study was examined using maximum likelihood estimation, and the model was significant. Odds ratios of the variables in the model were calculated, and two category comparisons were made on the basis of the reference category using odds ratio coefficients. Ari (2016) further indicated that, in comparisons 1 and 2, odds ratio coefficients for the variables rural/urban, gender, age group, household size, literacy, school attendance, and level of education of the head of household were significant.

Patrinos and Psacharopoulos (1995) used multiple regression to show that factors predicting an increase in child labour also predict reduced school attendance and an increased chance of grade repetition. Akabayashi and Psacharopoulos (1999) showed that, in addition to school attainment children's reading competence decreases with child labour hours. These papers examine the correlation, rather than the relationship between child labour and schooling outcomes. However, Cavalieri (2002) used propensity score matching and finds a significant, negative effect of child labour on educational performance. Ray and Lancaster (2003) quantified child labour using the household measures of income, assets and infrastructure, and used it to analyse its effect on several school outcome variables in seven countries.

The NCAS (2010) examined children from the ages of 6 to 17 years who were working, of which majority were found to be working in private households followed by agricultural sectors, with widespread reasons such as the loss of parents, illness of parents, forced to work, to earn money, drop out of school and no support from parents. Agriculture was the predominant occupation of many families with large number of children and child labour was a pre-requisite in the family's farm and since poor people could not afford to hire a labourer due to poverty, this resulted in the engagement of children in agricultural activities (Herath & Sharma, 2007). The NCAS (2010) indicated that out of all the children who worked in Namibia, majority of them spent 1 hour to 7 hours at work per week followed by those who spent 8 to 14 hours. A few children worked the longest hours of 85 to 92 per week. It was also indicated that out of the total remunerated children, the most prevalent type of income received by most children was cash followed by those in kind.

2.6 Summary

Despite reports of a slight reduction in child labour within the Southern Africa regions, the challenge of child domestic labour still remains very high in Southern Africa countries like Zambia. Chanda (2014) concluded that children in Zambia were often forced out of school and into labour in order to assist their families to make ends meet. This in turn denies such children (proper and adequate) opportunities to acquire the knowledge and skills needed to acquire gainful employment later in their lives, thereby perpetuating the cycle of poverty in their families. Although some of these children are working under family supervision, full-time work can deter them from attending school, and many home-based activities can be as harmful as work performed outside the home. Chanda (2014) further concluded that child labour not only violates children's rights, but also has consequences for social development in Zambia.

Child labour is particularly dangerous because it involves the sacrifice of a child's future welfare in exchange for immediate benefit, and difficult to combat because it involves questions of agency and power within households. Moreover, ILO (2017) stated that child labour remains endemic and its elimination requires both the economic reform and the social reform as well as governments, workers' and employers' organizations, enterprises, international organizations, and civil society at large. Addressing the thorny issue of child labour is vital to the development of many of Africa's youngest citizens. The existence of the worst forms child labour often involves violations of laws and regulations, including serious criminal violations. Information on all forms of child labour may be difficult to gather and intentionally suppressed. Additionally, the victims of the worst forms of child labour may be vulnerable politically underrepresented or marginalised and therefore unable to claim their rights or communicate their situations.

CHAPTER 3: RESEARCH METHODOLOGY

This chapter demonstrates the methodology used in this research study. It describes the methods that were used in the modelling procedure, which included the selection techniques used to identify the most important predictors and models to be used in order to achieve the intended research objectives.

3.1 Research Design

A quantitative cross sectional research design was used for the purpose of this study. This research design was selected since it allowed the researcher to determine the socio-economic factors that contributes to children engaging in working activities. Furthermore, it allowed for the investigation of possible associations between working children and socio-economic indicators. Secondary data obtained from the Namibia Labour Force Survey (NLFS) conducted by the Namibia Statistics Agency (NSA) in 2018 was used for the analysis purposes of this study. The NLFS is conducted every year since 2012 to provide labour force information on all persons aged 8 years and above living in households in Namibia. However, it was not conducted in 2015 and 2017 due to financial reasons. All NLFS reports are freely available online at www.nsa.org.na.

3.2 Source of Data

The main source of data for this study was the Namibia Labour Force Survey (NLFS, 2018), administered by Namibia Statistics Agency (NSA).

3.3 Description of Data

The NLFS 2018 used the National Sampling Frame that has been developed as a general-purpose household survey frame that can be used by all other NSA household-based surveys. National sampling frame is a list of small geographical areas called Primary Sampling Units (PSU) that were created using the enumeration areas (EA) of the 2011 Population and Housing Census (PHC). The frame units were stratified first by region, and then by urban/rural areas within each region. According to NSA (2018), the sample design for the NLFS 2018 was a stratified two-stage cluster sample design with probability proportional to size sampling of the primary sampling units (PSUs) at the first stage, and sampling of households within the sampled PSUs at the second stage.

The target population for the NLFS 2018 were the non-institutional population residing in private households in the country. Therefore, people who were residing in hospitals, hostels, old age homes, orphanage homes, police barracks, military barracks and prisons etc., were not considered for NLFS 2018. However, private households within institutional settings such as teachers' houses, hospital matrons in schools and health centres' premises were covered. The questionnaire collected information on labour, demographic and socio-economic indicators at national, national urban, national rural and regional levels.

3.4 Population

The population of this study was all 507,185 children who were living in households in 2018 in Namibia. These included both male and female children between the age group of 8 to 17 years.

3.5 Sample

The study sample were all 5136 employed children between the age group of 8 to 17 years in 2018.

3.6 Research ethics

The data used for this study was obtained freely from the NSA website (www.nsa.org.na) and treated with confidentiality. In addition, the data was used for nothing else but for the purpose of the study and the information was not revealed to any other party without the consent of the NSA. Ethical clearance to conduct this research work was obtained from UNAM's Research Ethics Committee (UREC).

3.7 Data Analysis

Labour force consists of all persons of either sex who furnish the supply of labour for the production of economic goods and services during a specified time-reference period as defined by the United Nations systems of national accounts. It was grouped into three categories: (i) the employed category, (ii) the unemployed category, and (iii) the economically inactive category, as defined in Table 1.

From the NLFS (2018), the variable labour force status was used as the response variable in this study. The NLFS (2018) also collected information on the indicators of educational status (such as literacy status and education attainment of a child), employment characteristics (such as occupation, sector, employment status, type of employer, type of employment, entitled to annual leave, type of payment, gross income per month) and indicators of socio-demographic status (such as sex, age, region, and area (urban/rural)).

These socio-economic indicators together with the socio-demographic indicators were used as the predictor variables in this study. Table 1 give the description of these variables.

Table 1: Description of the study variables

Variable	Description
Area (urban/ rural)	Geographical classification of an area: urban locality or rural locality
Region	There are fourteen regions in Namibia: !Karas, Erongo, Hardap, Kavango East, Kavango West, Khomas, Kunene, Ohangwena, Omaheke, Omusati, Oshana, Oshikoto, Otjozondjupa and Zambezi
Sex	Male or Female
Age group	Age (group) in years at last birthday before reference night based on the number of completed years lived by a person: 8-9, 10-14 and 15-17
Literacy Status	Ability to read and write in any language with understanding, a person can either be Literate or Illiterate
Educational Attainment	Highest level of education completed such as: None, Primary, Junior secondary and Senior secondary
Labour Force Status	As defined by NSA (2018)

	1. Employed category comprises of all persons of working age who during a specified brief period, such as one week or one day, were in paid employment (whether at work or with a job but not at work) or self-employment (whether at work or with an enterprise but not at work) and temporary absence from work with reasons such as illness, maternity and parental leave, holiday, training, and industrial disputes. 2. Unemployed category is all persons of working age who were without work during the reference period, (were not in paid employment or self-employment) and currently available for work (were available for paid employment or self-employment during the reference period). 3. Economically inactive category on the other hand comprises of all persons of working age who are not in employment and not available for work since they are full-time learners or students, homemakers (people involved only in unpaid household duties), ill, disabled or on early retirement.

All the statistical data analyses of this study was done using STATA (version 13) as well as SPSS (version 22) software.

3.7.1 Descriptive Analysis

To describe the characteristics of the study variables, descriptive statistics was performed. This was done using frequencies and cross tabulation to show the proportion of the working children by their educational characteristics, employment characteristics and socio-demographic characteristics as shown in Section 3.7.

3.7.2 Pearson's Chi-Squared test

To assess for possible association between the socio-economic and socio-demographic indicators and (child) labour force status, chi-square test for association was performed. Chi-square test for association is used for exploring possible relationships between categorical variables. Since all the socio-economic and socio-demographic indicators, were all categorical in nature as shown in Table 1, a chi-square test for association was appropriate to use to explore (for any) association between child labour and the socio-economic and socio-demographic indicators.

The Pearson's chi-square test statistics test statistic (Gingrich, 1992) is obtained as

$$\chi^2 = \sum_{i=1}^{n} \frac{(O_i - E_i)^2}{E_i} \qquad (1)$$

Where χ^2 is the Pearson's cumulative test statistic (which asymptotically approaches a chi-square distribution); O_i is the number of observations of type i; E_i is the expected (theoretical) frequency of type i and n is the number of possible outcomes of each events.

Several key assumptions of the Pearson's chi-square test includes: Data are a random sample from the population about which inferences are to be made, while observations must be independent hence each subject must give one and only one data point (i.e., they must contribute to one and only one category). Problems arise when the expected frequencies are very small. As a rule of thumb, Chi- Square should not be used if more than 20% of the expected frequencies have a value of less than 5 (it does not matter what the observed frequencies are). The data in the cells should be frequencies, or counts of cases rather than percentages or some other transformation of the data. (McHugh, 2013).

3.7.3 Multinomial Logistic Regression Model

To identify the factors which are influencing child labour in Namibia as well as their effects, the multinomial logistic regression analysis was performed. Sandro (2014) defined logistic regression as a statistical method that analyses data with one or more predictor variables that determine an outcome. Sandro also indicated that, logistic regression is used to fit the best model that describes the relationship between the response or outcome variable and a set of predictor or explanatory variables. For a response variable y_i and predictor variable x_i, the logistic model (Hyeoun-Ae, 2013) can be specified as:

$$\log p_i = \ln\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 x_i + e_i \qquad (2)$$

for $i = 1,2, \ldots$ and where p_i is the probability that the response variable equals a case, given some linear combination of the predictors; ln denotes the natural logarithm; β_0 is the intercept; β_1 is the regression coefficient; x_i is the predictor variable and e_i is the error term.

Logistic regression can either be binomial or multinomial. Binomial or binary logistic regression consider situations in which the observed outcome for a response variable can have only two categories. Multinomial logistic regression on the other hand consider situations where the outcome can have three or more categories. Since the response variable of this study (labour force status) has three categories as describe in section 3.7 and Table 1, a multinomial logistic model is adequate to identify the factors that influences child labour in Namibia as well as their effects.

Consider p predictors $X_1, X_2, X_3 \ldots X_p$ and a response variable Y with K nominal categories. The multinomial logistic regression model (Milewska et al., 2015) is presented as:

$$\operatorname{logit}(Y_k) = \ln\left[\frac{P(Y = k)}{P(Y = k')}\right] = \beta_{k0} + \beta_{k1}X_1 + \beta_{k2}X_2 + \cdots + \beta_{kp}X_p + \in_k \qquad (3)$$

Where k is the identified category, k' is the reference category, $\in_k$ is the error term and

$k = 1, 2 \ldots p,\ K - 1.$

The response variable (Y_k), used in this study was labour force status whilst urban/rural, regions, literacy, school attendance and educational attainment for children and heads of household were children resides were the explanatory variables X_s.

Several assumptions of the multinomial logistic regression include those by Starkweather and Moske (2011) stating that the choice of or membership in one category is not related to the choice or membership of another category (i.e., the dependent variable) and the assumption of independence can be tested with the Hausman-McFadden test. Furthermore, multinomial logistic regression also assumes non-perfect separation. In addition, Starkweather and Moske (2011) indicated that, if the groups of the outcome variable are perfectly separated by the predictor(s), then unrealistic coefficients will be estimated and effect sizes will be greatly exaggerated. The multinomial logistic model assumes that the dependent variable cannot be perfectly predicted from the independent variables for any case. Hence, there is no need for the independent variables to be statistically independent from each other, collinearity is assumed to be relatively low, as it becomes difficult to differentiate between the impacts of several variables if this is not the case.

3.7.3.1 Likelihood Ratio Test

The likelihood test is based on deviance test. The likelihood ratio test is a test of the significance of the difference between the likelihood ratio for the fitted model and the likelihood ratio for a null or reduced model. This difference is called "model chi-square". The likelihood ratio is used to test the null hypothesis that;

$$H_0: \beta_1 = \beta_2 = \cdots = \beta_p = 0 \qquad (4)$$

The likelihood-ratio test is the ratio of the maximized value of the likelihood function for the null model (L_0) to the maximized value of the likelihood function for the fitted (full) model (L_1). The likelihood-ratio test statistic is then given by

$$-2\log\left(\frac{L_0}{L_1}\right) = -2[\log(L_0) - \log(L_1)] = -2(L_0 - L_1) \qquad (5)$$

This log transformation of the likelihood functions yields a chi-square statistic. This is the recommended test statistic to use when building a model through backward stepwise elimination.

3.7.3.2 Model parameters

Each individual predictor was examined, after fitting the model, to assess the contribution on the model. The regression coefficients were then considered to represent the change in the logit for each unit change in the predictor. According to Oheneba (2015), the logit is not intuitive, we focus on a predictor's effect on the exponential function of the regression coefficient – the odds ratio. To assess the significance of an individual predictor, several tests were designed for evaluation most notably the likelihood ratio test and confidence interval estimation.

3.7.3.3 Confidence Interval Estimation

The basis for construction of the interval estimators is the same statistical theory used to formulate the tests for significance of the model. The confidence interval estimators for the slope and intercept are based on their respective Wald tests. The endpoints of a $100(1-\alpha)\%$ confidence interval for the slope coefficient are given as:

$$\beta_1 \pm Z_{1-\frac{\alpha}{2}} SE\left(\hat{\beta}_1\right) \qquad (6)$$

where $Z_{1-\frac{\alpha}{2}}$ is the upper $100\left(1-\frac{\alpha}{2}\right)$ % point from the standard normal distribution and

$SE\left(\hat{\beta}_1\right)$ denotes a model-based estimate of the standard error of the respective parameter estimator.

3.7.4 Limitation

Acquiring reliable child labour data is difficult. The results of this is that, not all households with child labour were reached out during the survey and among the households that where interviewed, stigma and illegality of child labour prompts them to deny its existence.

This study used the 2018 Namibia Labour Force Survey (NLFS) dataset. Since this is the only latest (survey) data with child labour information in Namibia, it might not necessarily reflect the current situation presently being experienced currently. Moreover, the survey collected data about the labour information for all persons in households who were 8 years and above. Thus, homeless persons and those in institutions such as hospitals, hostels, barracks and prisons were excluded. The NLFS also collected information based on the last 7 days prior to the survey reference night, hence it is difficult to obtain all children that engaged in economic activities due to seasonal period.

Most of the countries used age 7 as the starting point for their child labour analysis. Hence, this study was not comparable at lower ages with other countries data, due to the survey using age 8 years as its starting point. Likewise, the errors that occurred during the data collection phrases might not have been corrected. Furthermore, some of the head of households were the focal persons giving out information about their household members in these surveys and not necessarily the individual child/children involved in child labour, thus leading to under-reporting of some details which were impossible to verify. The survey relied on the recall memory of the responded, hence it is possible that there has been systematic under-reporting of some work-related and family socio-economic characteristics.

Even though the survey attempted to identify a representative sample of the population, it is likely that the sample does not fully represent the extent of child labour since many children engaged in agricultural activities which mostly occurs during rainy seasons. Seasonal period was another difficulty when collecting information on child labour. NLFS 2018 data was collected during dry season and some children who get recruited as agricultural labourers could be missed as most of the agricultural activities were on a break.

CHAPTER 4: RESULTS

This chapter presents results analysis of child labour in Namibia using the 2018 labour force survey data. The methods discussed in chapter three were applied to construct a model for this study. The results were divided into two components which were the descriptive analysis, and model fitting.

4.1 Descriptive Analysis

This section provides information on the descriptive statistics analysis by looking at the frequencies, proportions, means and chi-square test statistics between labour force status and socio-economic indicators. In addition, it also discusses the trends of children and child employment in Namibia between 2012 and 2018. This study used a minimum age of 8 years and a maximum age of 17 years, which was considered as the cut-off age for children in the labour force survey. Hence, the age range of 8 – 17 years was selected for this analysis.

4.1.1 Trends of children

Overall, the number of children in Namibia has been growing steadily since 2012, however there was a slight decline between 2013 and 2014. Table 2 shows the percent distribution of the number of children aged 8-17 years by sex between the 2012, 2013, 2014, 2016 and 2018 labour force year. Due to financial reasons, the labour force survey was not conducted in 2015 and 2017. From Table 2, it can be seen that the latest labour force survey (2018) a total of 507,185 children of which 49.9 percent were males while 50.2 percent were females. A similar trend is also observed in the year 2013 and 2014, with slightly more female children than males.

Table 2: Percent distribution of children aged 8-17 years by labour force survey year and sex

Year	Total	Male (%)	Female (%)
2012	476 314	50.0	50.0
2013	484 897	49.2	50.8
2014	481 982	50.0	50.0
2016	498 343	50.5	49.5
2018	507 185	49.8	50.2

With this study focusing on child labour, Table 3 presents the percent distribution of employed children by labour force survey year and sex. The results show that the total estimated number of the employed children in Namibia had decreased between 2012 and 2018, from 9,626 children to 5,136 respectively. However, the estimated number of employed children slightly increased between 2013 and 2014. It is also worth noting that the estimated number of employed male children were higher compared to the employed female children between the years of 2012 to 2014 while more female children were employed between the years of 2016 to 2018.

Table 3: Percent distribution of employed children aged 8-17 years by labour force survey year and sex

Year	Total	Male (%)	Female (%)
2012	9626	68.3	31.7
2013	7345	58.9	41.1
2014	7700	69.3	30.7
2016	6210	33.1	66.9
2018	5136	47.4	52.6

Figure 2 shows the trend of employed children by survey year. Overall, the number of employed children had decreased from 2012 to 2018. However, there was a slight increase between 2013 and 2014. This trend shows a drop between 2012 and 2018 from 2.0 percent to 1.0 percent children employed respectively.

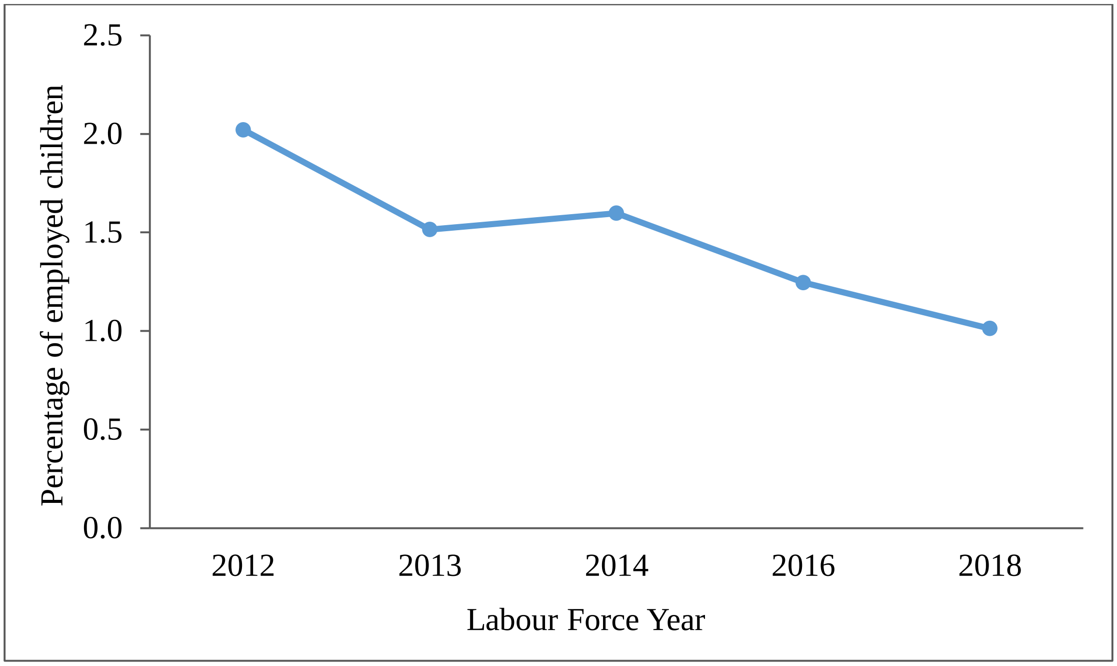

Figure 2: Percent of employed children by survey year.

Table 4 shows the proportion of children aged 8 to 17 years living in rural and urban areas as well as in the 14 regions in Namibia during the past five labour force years. Although the high proportions of children reside in rural areas, the result shows that the estimated number of children living in urban areas has been increasing from 34.2 percent in 2013 to 37.3 percent in 2018, while in the rural areas it decreased from 65.8 percent in 2013 to 62.7 percent in 2018. This illustrate a high number of children moving from rural to urban in Namibia. According to the 2011 Namibia

Population and Housing census (2013), large portion of migration involves that from rural to urban areas which often leads to urbanization. Urbanization is defined as the shift of the population from a rural to urban environment which predominantly results in the physical growth of urban areas (2011 Namibia Population and Housing census, 2013). Movement from rural to urban areas is always associated with higher levels of education, better health infrastructures, greater access to social services and opportunity of employment.

At regional level, Ohangwena region accommodated 13.9 percent of the total estimated children in Namibia for the year 2018 and has had the largest share since 2012, followed by Omusati (13.6%) and Khomas (12.6%). Only 3 percent of the total estimated children in 2018 lived in !Karas region, taking over from Kunene with 3.1 Percent children which has been the smallest in its relative share for the past survey years. A map of Namibia showing all the regions is given under Appendix C**.** As observed, the share of the children in certain regions, especially those with large rural populations, has declined whereas populations have increased in regions such as Khomas and Erongo due to rapid urbanisation. Internal migration varies across regions. The 2011 Namibia Population and Housing census (2013) indicated that over 40 percent of the population residing in Khomas and Erongo in 2011 were born outside those regions and come from all corners of rural areas in the country.

Table 4: Percentage of children aged 8-17 years by labour force survey year and area

Area	Labour force year				
	2012	2013	2014	2016	2018
Total	476 314	484 897	481 982	498 343	507 185
Urban	34.2	34.4	35.1	35.8	37.3
Rural	65.8	65.6	64.9	64.2	62.7
!Karas	2.8	3.1	3.0	2.8	3.0
Erongo	4.7	5.5	5.2	5.2	6.1
Hardap	3.2	3.2	3.1	2.8	3.4
Kavango East**	13.0	12.6	7.3	7.5	7.4
Kavango West**			5.1	5.5	5.1
Khomas	11.9	11.7	12.0	12.0	12.3
Kunene	3.3	3.1	4.1	3.9	4.8
Ohangwena	16.4	15.6	15.6	15.4	13.9
Omaheke	2.5	2.4	2.3	2.3	3.1
Omusati	14.0	14.6	13.8	14.0	13.6
Oshana	8.5	7.6	8.0	7.6	7.5
Oshikoto	10.5	10.0	10.0	10.0	9.3
Otjozondjupa	4.5	5.7	5.3	6.0	6.4
Zambezi	4.7	5.0	5.1	5.1	4.4

***Kavango region was demarcated in two regions (Kavango East and Kavango West) in 2013 and only from 2014 Labour Force Survey collected information for the two regions.*

Table 5 shows the proportion of employed children aged 8 to 17 years living in rural and urban areas as well as in the 14 regions in Namibia during the past five labour force years. The result indicates that among number of employed children in Namibia, 86.3 percent in 2018 resided in rural areas. This has been the highest percentage since 2012 compared to the urban areas. This high trends of employed children in rural areas is due to farming activities where most of the children are engage in. At regional level, it is observed that the share of employed children is high in certain regions, especially those with large rural populations as a result of farming activities which are practiced at these regions such as Omusati, Kunene, Ohangwena, Oshikoto and Kavango West.

Table 5: Percentage share of employed children aged 8-17 years by labour force survey year and area

Area	Labour force year				
	2012	2013	2014	2016	2018
Total	9 626	7 345	7 700	6 210	5 136
Urban	15.2	40.4	16.5	31.7	13.7
Rural	84.8	59.6	83.5	68.3	86.3
!Karas	1.5	1.7	1.7	3.8	2.6
Erongo	1.9	5.4	1.8	5.0	1.0
Hardap	3.9	3.3	1.9	2.3	1.3
Kavango East**	6.6	9.5	4.8	7.2	4.9
Kavango West**			4.8	9.9	10.1
Khomas	4.7	16.9	3.1	12.1	5.8
Kunene	31.4	15.9	36.4	5.0	13.4
Ohangwena	10.0	3.9	6.2	7.2	11.9
Omaheke	3.2	3.3	8.2	6.7	2.2
Omusati	11.2	3.9	7.0	11.3	18.3
Oshana	5.1	6.0	6.0	3.3	3.5
Oshikoto	9.0	10.6	8.0	9.5	10.2
Otjozondjupa	8.8	9.8	5.7	10.7	7.9
Zambezi	2.7	9.9	4.5	5.9	6.9

***Kavango region was demarcated in two regions (Kavango East and Kavango West) in 2013 and only from 2014 Labour Force Survey collected information for the two regions.*

4.1.2 Geographical Characteristics of Children

This sub-section presents information on the characteristic of the target (children aged 8-17 years) and sample population (employed children). In addition, it provides the rural-urban and regions distribution of children which is necessary in understanding the differences in child labour. The reasons for this differential are based on the resources distribution and behavioural practices in the areas. Hence, some areas are exposed to relatively poor living conditions and consequently child labour experiences. Figure 3 shows the distribution of employed children by regions in Namibia. The map indicates that the employed children were more prominent in the northern regions.

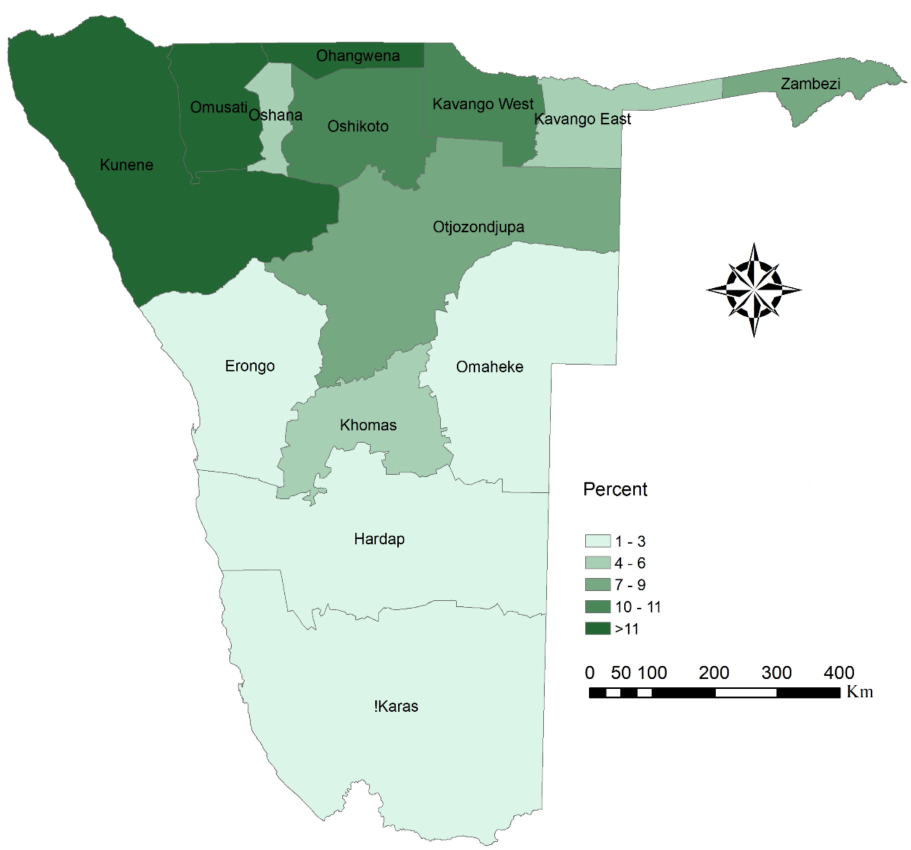

Figure 3: Distribution of employed children aged 8-17 years by regions in 2018

Table 6 shows the percent distribution of children aged 8-17 years by sex, regions as well as by urban and rural areas. The results indicate that both males and females represent half of the overall estimated children in Namibia. However, it can be observed that more females (51.6%) children reside in the urban areas whereas more males (50.6%) children reside in rural areas. Some regions had similar proportions of both males and females representing half of the overall estimated children in the region, as that of the national level such as Erongo, Hardap, Kavango West and Oshikoto regions. Kavango East is characterised by a greater number of female children (52.9%) whereas more male children (53.4%) were found in Kunene region.

Table 6 further presents the proportion of employed children by sex, regions as well as by urban and rural areas. The results show that, out of the total number of the employed children in Namibia, more males (52.6%) were employed compared to the females (47.4%). It is worth noting that more female children (51.7%) compared to males (48.3%) were employed in the urban areas while more male children (53.3%) were employed in rural areas. These deductions are similar to those made at the national level for all children.

Table 6: Percent distribution of children aged 8-17 years and employed children by sex and area

Area	Children 8-17 years			Employed children		
	Total	Male (%)	Female (%)	Total	Male (%)	Female (%)
Total	507 185	49. 8	50. 2	5 136	52.6	47.4
Urban	189 250	48. 4	51. 6	704	48.3	51.7
Rural	317 935	50. 6	49. 4	4 432	53.3	46.7
!Karas	15 051	51. 8	48. 2	135	57.4	42.6
Erongo	30 718	50. 2	49. 8	50	100.0	0.0
Hardap	17 066	49. 6	50. 4	69	86.6	13.4
Kavango East	37 421	47. 1	52. 9	253	69.5	30.5
Kavango West	25 837	50. 3	49. 7	517	41.0	59.0
Khomas	62 253	48. 3	51. 7	296	44.6	55.4
Kunene	24 567	53. 4	46. 6	690	60.3	39.7
Ohangwena	70 232	49. 5	50. 5	613	71.2	28.8
Omaheke	15 610	51. 3	48. 7	111	89.9	10.1
Omusati	68 882	51. 1	48. 9	938	31.9	68.1
Oshana	37 768	48. 6	51. 4	181	54.6	45.4
Oshikoto	47 014	50. 1	49. 9	523	75.1	24.9
Otjozondjupa	32 327	50. 7	49. 3	406	31.9	68.1
Zambezi	22 439	48. 5	51. 5	353	34.0	66.0

4.1.3 Economic conditions for employed children

This subsection describes the characteristics of the employed children such as occupation and employment sectors in which they were engaged, as well as conditions of employment and average wages/salaries. The distribution of employed children by occupation, industry and employment status is presented in Table 7. It is observed that in Namibia the largest proportion of employed children were employed in the Elementary occupations (Street vendors, domestic or related helpers, cleaners or launderers, building caretakers, window or related cleaners, messengers, porters, doorkeepers and related workers, garbage collectors and any other related general labourers) with 66% followed by skilled agriculture occupations with 18.3% and clerks as the least occupation for children. In terms of the economic sector, the Agriculture, forestry and fishing sector was the highest employment sector in Namibia accounting for 48.9 percent of the employed children followed by Activities of households sectors with 30.2 percent.

The survey questionnaire distinguishes the own account workers, self-employed and unpaid family workers between those who were working in subsistence agriculture and those who were working in other employment. Hence, table further reveals that 32.9 percent of all employed children were employed as other employee (a person other than a domestic worker who, for at least one hour during the reference period worked for pay in government or private employer) followed by, Domestic worker (31.1%) and Unpaid Family Worker (Subsistence/communal) (13.5%).

Table 7: Percent distribution of employed children aged 8-17 years by occupation, industry and employment status

Employed Children	5136
Occupation	
Clerks	1.2
Service workers & sales	7.6
Skilled agriculture	18.3
Craft & related trade	6.9
Elementary Occupation	66.0
Industry	
Agriculture, forestry and fishing	48.9
Manufacturing	1.4
Construction	2.6
Wholesale and retail trade	1.9
Accommodation and food service activities	13.3
Administrative and support service activities	0.2
Other service activities	1.6
Activities of households as employers	30.2
Employment Status	
Subsistence/ Communal Farmer (with paid employees)	4.8
Subsistence/ Communal Farmer (without paid employees)	2.7
Other Own Account Worker (without paid employees)	5.4
Domestic worker	31.1
Other employee	32.9
Unpaid Family Worker (Subsistence/communal)	13.5
Unpaid Family Worker (other)	9.6

4.1.4 Working conditions for employed children

With regards to the paid employees, additional information was collected about the conditions of work. Paid employees were asked to indicate where they were employed (type of employer), whether they were employed based on a written or oral contract and if they were entitled to paid annual and sick leave. The information of payment received was collected only in respect to the paid employees. In addition, the paid employees were asked to specific their gross income per month (before any deductions). Table 8 shows that more than half of the paid employed children (50.6%) were found to be working in Private household (subsistence farm) followed by those who worked in Private household of non-farm (28.4%) and commercial farm (11.6%). The table further shows that the majority of paid employed children (95.2%) were on Verbal contracts and 82.5% of the children were not entitled to any annual leave.

Moreover, Table 8 presents a summary information on the type and amount of payment received by paid employed children. The table shows that the majority of paid employed children received wage or salary (91.3%) as the type of payment method. It also shows that gross income per month for employed children which indicated that 39.7 percent of the children received between N$500 to N$600 gross incomes per month followed by those who received N$700 to N$800 with 21.7 percent.

Table 8: Percent distribution of employed children aged 8-17 years by type of employer, contract type, annual leave, type of payment and gross income per month

Employed Children	3284
Type of employer	
A private enterprise (formal)	2.4
A Private enterprise (informal)	6.7
Private household (subsistence farm)	50.6
Private household (commercial farm)	11.6
Private household (non-farm)	28.4
Don’t know	0.4
Contract Type	
Written	1.2
Verbal	95.2
Don’t know	3.7
Entitled to annual leave	
Total	
Yes	15.5
No	82.5
Don't know	2.0
Type Of Payment	
A wage or salary	91.3
Profits from the business	2.6
Other cash pay such as commission, tips, etc.	5.1
Any other In kind payments such as food, Housing, etc.	1.1
Gross Income per Month	
0	1.1
10 - 50	4.5
50 - 100	2.6
250 - 350	1.5
400 - 450	6.0
500 - 600	39.7

(cont"d.)

Gross Income per Month	
700 - 800	21.7
1000 - 1200	17.0
2000+	2.1
Don't know	4.0

4.2 Bivariate analysis

4.2.1 Labour force status and Area and region of Children

The rural-urban and regions distribution of labour force status for children is presented in Table 9. This table reveals that 86.3 percent of the children who were employed resided in rural areas whilst 13.7 percent were in the urban areas. A Pearson Chi-square test was performed to test for association between areas, regions and labour force status of children. A significant association exists if the P-value is less than a 5% level of significance. With a $\chi^2 = 1635.361$ and $P < 0.001$ for areas and a $\chi^2 = 10813.453$ and $P < 0.001$ for the regions, it can be concluded that there is a significant association between labour force status of children and their areas, as well as a significant association between labour force status of children and their regions.

Table 9: Percent Distribution of children aged 8-17 years by labour force status and area

Area	Total	Employed	Unemployed	Economically inactive	Non-response	chi-square value	P-value
Total	507 185	5 136	13 917	487 895	237		
Area						1635.361	<0.001*
Urban	37.3	13.7	38.3	37.5	100.0		
Rural	62.7	86.3	61.7	62.5	0.0		
Region						10813.45	<0.001*
!Karas	3.0	2.6	0.8	3.0	0.0		
Erongo	6.1	1.0	2.7	6.2	0.0		
Hardap	3.4	1.3	5.4	3.3	0.0		
Kavango East	7.4	4.9	14.5	7.2	1.5		
Kavango West	5.1	10.1	6.8	5.0	0.0		
Khomas	12.3	5.8	11.7	12.3	33.0		
Kunene	4.8	13.4	12.9	4.5	0.0		
Ohangwena	13.8	11.9	6.7	14.1	0.0		
Omaheke	3.1	2.2	4.5	3.0	0.0		
Omusati	13.6	18.3	4.5	13.8	0.0		
Oshana	7.4	3.5	2.2	7.6	0.0		
Oshikoto	9.3	10.2	6.1	9.4	0.0		
Otjozondjupa	6.4	7.9	13.5	6.1	65.5		
Zambezi	4.4	6.9	7.5	4.3	0.0		

** Significant at a 5% level of significance*

4.2.2 Labour force status and Sex and Age of Children

The sex distribution of employed, unemployed and economically inactive children is represented in Table 10. As mentioned earlier male children are more employed (52.6%) than their female counterpart (47.4%). This shows the same trend as for the unemployed children however for the economically inactive children there were more females than males. From the performed Pearson Chi-square test with a $\chi^2 = 98.461$ and $P < 0.001$, it can be concluded that there is a significant association between the labour force status and sex of the children.

The percentage distribution of children by age group and labour force status is also represented in Table 10. Majority (67.2%) of the employed children were in the age group of 15 to 17 years with followed by those who were in the age group of 10 – 14 years with 31.9 percent respectively. On the other hand, employed children age of 10 and below were less than 1 percent and this because the children were very young to engage in any economic activity.

A Chi-square test performed on a table for age group distribution and labour force status gave a $\chi^2 = 26096.494$ and $P < 0.001$, this shows that a very small probability. The Age of the children seems to be related to the labour force status hence, the strength of this association among the labour force status of children is statistically significant.

Table 10: Percent distribution of children aged 8-17 years by labour force status, sex and age group

Indicator	Total	Employed	Unemployed	Economically inactive	Non-response	chi-square value	P-value
Total	507 185	5 136	13 917	487 895	237		
Sex						98.461	<0.001*
Male	49.8	52.6	52.9	49.7	32.8		
Female	50.2	47.4	47.1	50.3	67.2		
Age group						26096.49	<0.001*
8 - 9	22.3	0.8	0.8	23.2	0.0		
10 - 14	49.6	31.9	16.3	50.7	34.5		
15 - 17	28.1	67.2	82.8	26.2	65.5		

** Significant at a 5% level of significance*

4.2.3 Labour force status and Educational attainment and literacy status for children

The survey collected information on the literacy level which was defined as the ability to read and write with understanding in any language. Formal education information was also collected which was defined as a full-time attendance at any regular educational institution, public or private, for systematic instruction. Educational attainment (highest grade completed) were used to determine the level of education for children. Table 11 presents the literacy status for children by their labour force status. Overall, 89.3 Percent of the children aged 8 – 17 years were literate. The table reveals that 30.5 percent of the illiterate children were employed and 69.5 percent were literate. A further test on the data shown in the table gave a Pearson Chi-square statistic of $\chi^2 = 3986.766$ and $P < 0.001$. This shows a significant association between the labour force status of the children and their literacy status.

Furthermore, Table 11 provides information on the educational levels of the children. Majority (77.0%) of the children aged 8 – 17 years were had primary education as their highest level of education followed by 15.2 percent of those in Junior secondary education. Children who completed Primary education made up of almost half a proportion of the employed children, accounting for 48.6 percent, followed by those without formal education with 31.2 percent. A Chi-square test performed gave a $\chi^2 = 334266.381$ and $P < 0.001$. This is evidence that there is a significant association between the labour force status of the children and their educational attainment.

Table 11: Percent distribution of children aged 8-17 years by labour force status and educational characteristics

Indicator	Total	Employed	Unemployed	Economically inactive	chi-square value	P-value
Total	506 948	5136	13917	487 895		
Literacy status					3986.766	<0.001*
Literate	89.3	69.5	78.2	89.8		
Illiterate	10.7	30.5	21.8	10.2		
Educational Attainment					334266.4	<0.001*
None	7.1	31.2	13.9	6.7		
Primary	77	48.6	56.3	77.9		
Junior secondary	15.2	19.4	28	14.8		
Senior secondary	0.6	0.7	1.8	0.6		

** Significant at a 5% level of significance*

4.3 Multinomial modelling

In modelling the predictors of labour force status among children in Namibia, a multinomial logistic regression model was fitted and used to identify the determinants of child labour. This was performed to determine whether the observed pattern in child labour differs significantly among several categories of the socio economic variables. All predictors that were significant at a 0.05 significance level in the Chi-Square tests for association were included in the multinomial modelling. These were the children's areas, regions, sex, age group, literacy status, and level of education. The Statistical Package for Social Sciences (SPSS) version 22.0.0.0 was used to carry out the multinomial logistic regression modelling (IBM Corp, 2013).

The parameters of the multinomial logistic regression model in SPSS were estimated using the likelihood ratio. To assess the goodness of fit for the model, SPSS applies the likelihood ratio test approaches for the constructed models while the validity of the fitted multinomial logistic regression model was examined using the Odds Ratio Test. With the unemployed category of the dependent variable taken as the reference category, the first logit model in this study was for the employed category while the second model fitted was for the economically inactive category.

4.3.1 Model fitting for the employed children

In Logistic regression the null model (i.e. model without the coefficients) is compared with a model with all the predictor coefficients and intercept (i.e. final model) to determine whether the final model is more appropriate to use. According to IBM Corp (2013), chi-square tests can be used to see if there is a significant difference between the Log-likelihoods (-2LLs) of the null model and the final model. If the final model has a significantly reduced -2LL value compared to the null model, then it suggests that the final model is explaining more of the variance in the outcome and more appropriate to use. Table 12 shows various indices for assessing the null model (intercept only) and the final model which included all the predictors and intercept. As the multinomial logistic regression model is examined the final model was found to be significant with $\chi^2 = 42995.453$ and $P = 0.001$, which indicates that the final model predicts more accurately than the intercept only.

Table 12: Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	DF	P-value
Intercept Only	74548.516			
Final	31553.063	42995.453	50	<0.001*

** Significant at a 5% level of significance. DF = Degrees of Freedom.*

In Table 13, each predictor of the final model is compared to the full model to determine which predictors contributed meaningfully in the final model. The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. Hence, the reduced model is formed by omitting an effect from the final model. In addition, the null hypothesis is that all parameters of that effect are 0. Since all the predictors of interest had significant p-values ($P < 0.001$), as seen in Table 14, it can be concluded that they contributes significantly to the final model at a 5% level of significance. Hence, it is important to keep all these predictors in the fitted multinomial model.

Table 13: Likelihood Ratio Tests for model

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	DF	P-value
Intercept	31553.063[a]	0.000	0	
Area	32135.31969	582.257	2	<0.001*
Region	39363.7248	7810.662	26	<0.001*
Sex	31582.58417	29.521	2	<0.001*
Age	58716.98925	27163.926	4	<0.001*
Literacy Status	32804.29191	1251.229	2	<0.001*
Educational Attainment	33410.95792	1857.895	14	<0.001*

[a] *This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom. * Significant at a 5% level of significance. DF = Degrees of Freedom.*

Table 14 shows the resulting output from the fitted multinomial logistic regression for the employed children. The unemployed category was taken as the reference category to compare categories of the employed and economically inactive. From this table, it can be seen that the area where the children lived was a significant determinant of child labour with $P = 0.001$ for the urban areas. The odds of child employment for children living in the urban areas was 0.439 less compared to the odds of being unemployed. The results also showed that most of the regions where the children were located were significant determinants of child labour among the employed children except for the Erongo ($P = 0.214$) and Khomas ($P = 0.291$) regions. The odds of child employment for children living in !Karas and Omusati regions were 4.836 and 4.377 respectively higher compared to the odds of being unemployed, while the odds of child employment for children living in the Hardap region was 0.378 lower compared to the odds of being unemployed.

Furthermore, from Table 14, the sex of the children was seen to be an insignificant determinant of child labour among employed children with $P = 0.103$ for the males. With respect to the children's age, it can be observed that age group 10 – 14 years was a significant determinant of child labour among the employed children with $P = 0.001$ while age group 8 – 9 years was not a significant determinant with $P = 0.844$ as seen in Table 14. Thus, the odds of child employment for children aged 10 – 14 years was 2.856 higher compared to the odds of being unemployed. The table further showed that literacy of the children was a significant determinant of child labour among the employed children with $P = 0.001$ for literate children. Therefore, the odds of child employment for children who were literate was 2.319 higher compared to the odds of being unemployed.

Regarding the highest level of educational attainment of the children, no education and junior secondary education attainment of the children were significant determinants of child labour both with $P = 0.001$ among the employed children while senior secondary was not a significant determinant with $P = 0.243$ as seen in Table 14. Thus, the odds of child employment for children with no education attainment and those with junior secondary was 5.962 and 1.318 respectively higher compared to the odds of being unemployed.

Table 14: Parameter estimates for employed children using multinomial logistic regression

Labour Force Status - Employed	Unadjusted Estimate	Adjusted Estimate	Standard Error	P-Value	Odds Ratio	95% Confidence Interval for Odds Ratio	
						Lower Bound	Upper Bound
Intercept		-2.266	0.091	<0.001*			
Area							
Urban	-1.364	-0.823	0.059	<0.001*	0.439	0.391	0.493
Rural	0^{b}	0^{b}					
Regions							
!Karas	1.231	1.576	0.143	<0.001*	4.836	3.656	6.398
Erongo	-0.903	-0.208	0.167	0.214	0.813	0.586	1.127
Hardap	-1.304	-0.972	0.144	<0.001*	0.378	0.285	0.502
Kavango East	-0.984	-0.767	0.092	<0.001*	0.465	0.388	0.556
Kavango West	0.478	0.514	0.083	<0.001*	1.673	1.420	1.970
Khomas	-0.617	0.106	0.100	0.291	1.112	0.913	1.353
Kunene	0.130	-0.263	0.080	<0.001*	0.768	0.657	0.899
Ohangwena	0.671	0.686	0.081	<0.001*	1.986	1.693	2.330
Omaheke	-0.628	-0.389	0.122	<0.002*	0.678	0.533	0.862
Omusati	1.483	1.476	0.081	<0.001*	4.377	3.732	5.133
Oshana	0.552	0.657	0.112	<0.001*	1.929	1.547	2.404
Oshikoto	0.613	0.640	0.084	<0.001*	1.896	1.609	2.234
Otjozondjupa	-0.444	-0.516	0.086	<0.001*	0.597	0.504	0.706
Zambezi	0^{b}	0^{b}					

(cont"d.)

Labour Force Status - Employed	Unadjusted Estimate	Adjusted Estimate	Standard Error	P-Value	Odds Ratio	95% Confidence Interval for Odds Ratio	
						Lower Bound	Upper Bound
Sex							
Male	-0.012	-0.054	0.033	0.103	0.947	0.887	1.011
Female	0^b	0^b					
Age Group							
8 - 9	0.167	0.036	0.183	0.844	1.037	0.724	1.485
10 -14	0.880	1.049	0.041	<0.001*	2.856	2.638	3.092
15 - 17	0^b	0^b					
Literacy Status							
Literate	-0.453	0.841	0.064	<0.001*	2.319	2.045	2.630
Illiterate	0^b	0^b					
Educational Attainment							
None	0.152	1.785	0.068	<0.001*	5.962	5.219	6.810
Primary	0^b	0^b					
Junior secondary	-0.035	0.276	0.046	<0.001*	1.318	1.204	1.443
Senior secondary	-0.111	0.211	0.181	0.243	1.235	0.866	1.760

** Significant at a 5% level of significance and ^{b} parameter set to zero because it is redundant.*

4.3.2 Model fitting for the economically inactive children

Table 15 shows the resulting output from the fitted model for the economically inactive labour force status. This table indicated that the area where the children resided was a significant determinant of child labour among the economically inactive children with $P = 0.001$ for the urban areas. The odds of being economically inactive for children living in the urban areas was 1.334 higher compared to the odds of being unemployed.

The table also revealed that, Hardap and Kavango East regions were not significant determinants of child labour among the economically inactive children with $P = 0.709$ and with $P = 0.183$ respectively. Therefore, the odds of being economically inactive for children living in Omusati region was 8.014 higher, compared to the odds of being unemployed, followed by Oshana, !Karas and Ohangwena regions with 6.671, 5.810 and 5.419 respectively higher. Children from the Oshikoto (3.942) and Erongo (3.716) regions also had higher odds of being economically inactive compared to the odds of being unemployed. However, the odds of being economically inactive for children living in Kunene and Zambezi regions were 0.774 and 0.794 respectively lower compared to the odds of being unemployed as seen in Table 15.

Table 15 further showed that the sex of the children was a significant determinant of child labour among the economically inactive children with $P = 0.001$ for the males. The odds of being economically inactive for male children was 0.907 low compared to the odds of being unemployed. Likewise, the age groups of the children were significant determinants of child labour among the economically inactive children with $P = 0.001$. Thus, the odds of being economically inactive for children aged 8–9 years was 195.380 higher and 15.714 higher for children aged 10–14 years, compared to the odds of being unemployed.

Literacy status of the children was also a significant determinant of child labour with $P = 0.001$. The odds of being economically inactive for children who were literate was 3.583 higher compared to the odds of being unemployed. The odds of being economically inactive for children with no educational attainment was 0.822 less compared to the odds of being unemployed. Moreover, the odds of being economically inactive for children with junior secondary educational attainment was 1.627 higher compared to the odds of being unemployed.

Table 15: Parameter Estimates for economically inactive children using Multinomial Logistic Regression

Labour Force Status – Economically inactive	Unadjusted Estimate	Adjusted Estimate	Standard Error	P-Value	Odds Ratio	95% Confidence Interval for Odds Ratio	
						Lower Bound	Upper Bound
Intercept		0.247	0.048	<0.001*			
Area							
Urban	-0.035	0.288	0.025	<0.001*	1.334	1.269	1.402
Rural	0^b	0^b					
Regions							
!Karas	1.838	1.760	0.100	<0.001*	5.810	4.775	7.071
Erongo	1.409	1.313	0.065	<0.001*	3.716	3.269	4.223
Hardap	0.070	0.020	0.054	0.709	1.020	0.918	1.135
Kavango East	-0.139	-0.056	0.042	0.183	0.946	0.871	1.027
Kavango West	0.245	0.446	0.049	<0.001*	1.563	1.421	1.719
Khomas	0.613	0.356	0.047	<0.001*	1.427	1.301	1.565
Kunene	-0.491	-0.257	0.045	<0.001*	0.774	0.709	0.845
Ohangwena	1.303	1.690	0.048	<0.001*	5.419	4.935	5.951
Omaheke	0.180	0.209	0.057	<0.001*	1.232	1.103	1.377
Omusati	1.670	2.081	0.053	<0.001*	8.014	7.224	8.890
Oshana	1.793	1.898	0.067	<0.001*	6.671	5.853	7.603
Oshikoto	0.996	1.372	0.049	<0.001*	3.942	3.580	4.340
Otjozondjupa	-0.234	-0.231	0.044	<0.001*	0.794	0.728	0.866
Zambezi	0^b	0^b					

(cont"d.)

Labour Force Status – Economically inactive	Unadjusted Estimate	Adjusted Estimate	Standard Error	P-Value	Odds Ratio	95% Confidence Interval for Odds Ratio	
						Lower Bound	Upper Bound
Sex							
Male	-0.128	-0.098	0.018	<0.001*	0.907	0.875	0.940
Female	0^b	0^b					
Age Group							
8 – 9	4.469	5.275	0.094	<0.001*	195.380	162.466	234.960
10 -14	2.286	2.755	0.025	<0.001*	15.714	14.956	16.510
15 – 17	0^b	0^b					
Literacy Status							
Literate	0.894	1.276	0.034	<0.001*	3.583	3.351	3.832
Illiterate	0^b	0^b					
Educational Attainment							
None	-0.087	-0.196	0.042	<0.001*	0.822	0.758	0.892
Primary	0^b	0^b					
Junior secondary	-0.078	0.487	0.023	<0.001*	1.627	1.556	1.701
Senior secondary	-0.154	0.028	0.071	0.693	1.028	0.895	1.181

** Significant at a 5% level of significance and ^{b} parameter set to zero because it is redundant.*

CHAPTER 5: DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

This chapter discusses the key findings of the study and recommends rational measures for all organisations that deals with children's well-being and protection (such as the Ministry of Labour, Industrial Relations and Employment Creation, Ministry of Gender Equality and Child Welfare and International Labour Organization), as well as programme developers and policy makers.

5.1 Discussions

This study revealed that the children's characteristics such as area (Urban or Rural), region, sex, age, literacy and educational attainment were the contributing factors of child labour in Namibia for employed children as well as for the economically inactive children. Moreover, characteristics such as school attendance were found not to be contributing factors of child labour in Namibia for the employed children.

5.1.1 Areas

This study showed a high proportion of employed children residing in the rural areas of Namibia. This revealed that child labour was more common in the rural areas of the country since that is where most of the agriculture activities occurs and the agricultural sector accommodates majority of the employed children, with about 62 percent of the children working in private households farming activities. This is not surprising as one of the main reasons why children in rural areas engage in economic activity is to assist them (and their families) out of poverty, while some key indicators of poverty that contributes to child labour in rural areas includes low family incomes, few livelihood alternatives, poor access to education and limited labour law enforcement. For both the employed and economically inactive, this study showed that, the area where the children lived was a significant factor to child labour in Namibia. The likelihood of child employment for children living in the urban areas was lower compared to the likelihood of being unemployed while the likelihood for economically inactive was higher. This finding is similar to the conclusion made by Ari (2016) who concluded that the rural/urban distinction variable was a contributing factor that forced children to work.

5.1.2 Regions

The likelihood for child employment for children living in !Karas and Omusati regions were higher compared to the likelihood of being unemployed while the likelihood of being economically inactive for children living in Omusati region was higher, followed by children in the Oshana, !Karas and Ohangwena regions. However, the two urban town regions (Erongo and Khomas) in Namibia were found not to be significant determinants of child labour among the employed children. This finding is in agreement with the finding by Kazmi (2015) who concluded that the (rural) locality (region) was positively related to child labour, which means that the probability of child labour increases among rural regions. The reason for this may be the fact that children in urban regions preferred going to school than working, while children in rural regions prefer to work due to several reasons such as the lack of schools, the long distance to school and combining schooling with various income earning activities, perhaps to provide them with income to cater for their schooling fee and family upkeep.

5.1.3 Sex

From this study, it was revealed that more male children were employed compared to the females in rural areas while in the urban areas more female children were employed. This is not surprising as boys prefer to work on the farms tending to livestock with little or no pay while the girls are occasionally hired as domestic workers (cooking, cleaning, washing etc.) or caretakers (for children or elderly persons) which are mostly practiced within the urban areas. In addition, this study showed that male children were less likely to be economically inactive compared to those who were unemployed. However, the sex of the children was not a significant determinant of child labour among the employed children. This finding contradicts Oheneba (2015) who concluded that the sex of a child was a significant contributor to child labour, with the female children less likely to work and rather attend school than their male counterparts.

5.1.4 Age

From this study, it was observed that children in the age group of 15 – 17 years (67.2%) were the most employed, while children aged 14 years and below had low engagement in economic activities. This may be due to the free and compulsory primary education that was introduced in Namibia in 2013 for children aged 14 years and below at government schools. This finding is in agreement with Kazmi (2015) who indicated that the age of the child was positively related to child labour, in that as the child increase in age, the probability of engagement in child labour rises.

Contrariwise, children who were aged 10-14 years were more likely to be employed compared to those who were unemployed, while children aged 8-9 years and 10-14 years were more likely to be economically inactive. However, the age group 8-9 years was not a significant determinant of child labour among the employed children.

5.1.5 Education attainment

From this study, the likelihood for children with no education attainment to be employed was higher compared to the likelihood of being unemployed, while the likelihood was less for economically inactive children with no education attainment. However, secondary school education was not a significant determinant of child labour among the employed and economically inactive children. This finding agrees with the conclusion made in Okurut & Yinusa (2009) where they concluded that the higher the education level of the child, the lower the probability of engagement in child labour. The intuition of this result could be that children with a relatively higher level of education are more likely to have a better understanding of the potential benefits from education and therefore less likely to engage in child labour economic activities, while children with no educational attainment perhaps never went to school and preferred working rather than getting an education

5.1.6 Trend

One of the objectives of this study was to determine the trends of child labour in Namibia. From this study, it was observed that, the number of employed children aged 8 – 17 years in Namibia dropped from 2 percent in 2012 to 1 percent in 2018. The contributing factors to the reduction of child labour could be the effective measures in place for child labour eradication in Namibia and the implementation of the existing national laws that consists of the necessary legislation and policies to prevent and eliminate all forms of child labour. The Constitution of the Republic of Namibia (1990) prohibits children under 16 years to be employed or perform work that is likely to be hazardous or interfere with their education or wellbeing and development. The Labour Act (No. 11 of 2007) prohibits persons from employing children under the age of 14 years, however, permits the employment of children between the ages of 14 and 18 years in circumstances subjected to any conditions or restrictions that is likely to be hazardous or interfere with their education or wellbeing and development.

5.2 Conclusions

Even though Namibia has experienced a minor reduction in the incidence of child labour, the improvement is still not enough to eliminate child labour in the country. As a national issue, child labour affects the economic growth and development of the child in the immediate and long term. Even with the best laws and policies that prohibit child labour a substantial number of children are still engaged in economic activities. Hence, significant additional policy measures will be necessary to eliminate child labour in the country.

From this study, it was revealed that the majority of children exposed to child labour resided in rural areas of the country as a result of several farming activities that occurred there and due to the poverty indicators which are more experienced there. Overall there were more male children employed in the country. With regards to the location areas, there were more male children employed in the rural areas, while there were more female children employed in the urban areas of the country.

The main objective of the study was to determine the factors contributing to child labour in Namibia. To determine these factors, a multinomial logistic regression analysis was performed. The result showed that the area where the children were residing was a significant determinant of child labour with a low likelihood of child employment for children living in the urban areas and a high likelihood of being economically inactive in the urban areas. Likewise, most of the regions where the children were located were significant determinants of child labour, except for the (urban) Erongo and Khomas regions among the employed children and the Hardap and Kavango East regions among the economically inactive children. Children living in !Karas and Omusati regions had the highest odds of child employment compared to the odds of being unemployed than in all other regions. The results also showed that the sex of the children was not a significant determinant of child labour among the employed children, but was a significant determinant among the economically active.

With respect to the children's age, age groups 8-9 years and 10-14 years were significant determinants of child labour among the economically inactive children, while only age group 10-14 years was a significant determinant among the employed children. Moreover, the child's literacy status was a significant determinant of child labour among the employed children and economically inactive children while the no education and junior secondary education attainments of the children were significant determinants. Even though literate children were likely to be employed, the odds for children with no education attainment was high compared to the odds of being unemployed.

5.3 Recommendations

Child labour is a complex issue that has no simple solution and requires intervention from all government and non-governmental organizations that deals with children's rights and wellbeing, in order to create a network that fight toward eliminating child labour. Despite laws and regulations in place and efforts in implementation of policies and programmes along with eliminating primary school fees, children are still engaged in child labour economic activities. Children do not work because they want to, but life circumstances such as household poverty pushes them. One possible way of eliminating child labour is to educate both the victims and those affected by it through improving educational systems and encouraging children to go to school. In addition, developing rural areas, increasing efforts in poverty reduction and equal distribution of resources should be strengthened to discourage child labour, especially in rural areas.

When attempting to solve the issue of child labour, one should keep in mind the root causes behind it and recommend the best possible methods to minimize/eliminate them. Although Namibia has laws and policies in place that prohibit child labour, there is still a substantial number of children engaged in economic activities. Thus, it is recommended that the existing policies and measures to combat child labour should be reviewed and reinforced, while significant additional policy measures and by-laws should be introduced to eliminate child labour.

This study showed that child labour was more practiced in rural areas as most of the regions in Namibia that are predominantly rural had high number of child labour cases. Child labour in rural areas is mostly associated with poverty and lack of essential services. Thus, it is recommended that the Namibian government should constantly engage and collaborate with rural based organizations such as churches, traditional authorities, local authorities and regional councils to assist with improving the living standards of people in rural areas, thereby eradicating child labour. This improvement can be achieved through the creating of decent employment and adequate number of productive and quality jobs for the children's caretakers, parents, and guardians, that can provide decent income to cover at least the basic needs of the children's households, extending the rural communities access to social grants and protection, such as old-age pensions, child grants, social assistance and public work programmes as well as increasing the access of rural services such as basic health services and educational facilities.

With regards to the age of the child, the existing Namibian law prohibits persons from employing children under the age of 14 years, however, permits the employment of children age 15 years and above. Although, a number of children under the prohibited age are still being employed in Namibia as seen in this study's findings, this should be a good motive for the Namibian government to review and improve the existing laws prohibiting child employment in order to eradicate child labour in the country. In addition, government should strictly put up harsher fines (fines exceeding the already proposed amount, or imprisonment period exceeding the already proposed years) that will discourage people or companies from employing children below the age of 17 years. Likewise, people and companies should be encouraged to only employ adults instead of children and importantly consumers must also be encouraged not to buy goods produced through child labour.

In Namibia, education is compulsory and free up to primary school level but unfortunately from secondary school is only compulsory but not free. Children dropping out from school is quite common once a child completes primary school due to the difficult economic status of their parents/guardians who cannot afford the expense of their children's education after primary school. A possible solution would be for the Namibian government to also provide free secondary school and tertiary education to vulnerable children at risk. Although, the re-enforcement of law in Namibia and the improvement of education alone cannot eliminate child labour in the country, making schools easily available at all educational levels and constructing more schools within the communities to prevent children walking long distances to their respective schools would be a good start.

Hence, it is recommended that the Namibian government, policymakers as well as non-government organizations that deals with children’s rights and wellbeing collaborate to improve the standard of living in households in rural areas, with children aged 8-9 years and 10-14 years, having no education and junior secondary education attainments, as these were identified as the significant determinants of child labour in the country. Additionally, all communities in the country need to be educated on child labour issues, while Namibia needs to support and accept a culture of zero tolerance against child labour and discourage parents or guardians from allowing children aged 17 years and below into child labour economic activities.

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APPENDIX A

Percent Distribution of children aged 8-17 years by labour force status and area (Urban/Rural)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1635.361[a]	3	<0.001
Likelihood Ratio	1903.766	3	<0.001
Linear-by-Linear Association	753.560	1	<0.001
N of Valid Cases	507185		

[a] *0 cells (0.0%) have expected count less than 5. The minimum expected count is 88.43.*

Percent Distribution of children aged 8-17 years by labour force status and Regions

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10813.453[a]	39	<0.001
Likelihood Ratio	9596.265	39	<0.001
Linear-by-Linear Association	63.628	1	<0.001
N of Valid Cases	507185		

[a] *0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.00.*

Percent Distribution of children aged 8-17 years by labour force status and Sex

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	98.461[a]	3	<0.001
Likelihood Ratio	99.079	3	<0.001
Linear-by-Linear Association	67.692	1	<0.001
N of Valid Cases	507186		

[a] *0 cells (0.0%) have expected count less than 5. The minimum expected count is 118.56.*

Percent Distribution of children aged 8-17 years by labour force status and age

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26096.494[a]	6	<0.001
Likelihood Ratio	24571.121	6	<0.001
Linear-by-Linear Association	16549.034	1	<0.001
N of Valid Cases	507186		

[a] *0 cells (0.0%) have expected count less than 5. The minimum expected count is 52.86.*

Percent Distribution of children aged 8-17 years by labour force status and Literacy

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3986.766[a]	2	<0.001
Likelihood Ratio	3027.238	2	<0.001
Linear-by-Linear Association	3969.107	1	<0.001
N of Valid Cases	506947		

[a] *0 cells (0.0%) have expected count less than 5. The minimum expected count is 551.49.*

Percent Distribution of children aged 8-17 years by labour force status and Education Attainment

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	334266.381[a]	21	<0.001
Likelihood Ratio	9846.444	21	<0.001
Linear-by-Linear Association	745.238	1	<0.001
N of Valid Cases	507185		

[a] *12 cells (37.5%) have expected count less than 5. The minimum expected count is .02.*

APPENDIX B

Distribution of children age 8-17 years by Demographic and socio-economic indicators, 2018 NLFS

Indicators	Total	Percentage
Total	506 948	100.0
Labour Force Status		
Employed	5 136	1.0
Unemployed	13 917	2.7
Outside Labour Force	487 895	96.2
Urban/Rural		
Urban	18 9013	37.3
Rural	31 7935	62.7
Regions		
!Karas	15 051	3.0
Erongo	30 718	6.1
Hardap	17 066	3.4
Kavango East	37 418	7.4
Kavango West	25 837	5.1
Khomas	62 175	12.3
Kunene	24 567	4.8
Ohangwena	70 232	13.9
Omaheke	15 610	3.1
Omusati	68 882	13.6
Oshana	37 768	7.4
Oshikoto	47 014	9.3
Otjozondjupa	32 172	6.3
Zambezi	22 439	4.4

(cont‘‘d.)

Indicators	Total	Percentage
Sex		
Male	252 580	49.8
Female	254 368	50.2
Age Group		
8 - 9	113 123	22.3
10 -14	251 234	49.6
15 - 17	142 591	28.1
Literacy Status		
Literate	452 513	89.3
Illiterate	54 436	10.7
Educational Attainment		
None	36 000	7.1
Primary	390 458	77.0
Junior secondary	77 072	15.2
Senior secondary	2 970	0.0
Technical / Vocational Certificate/Diploma	123	0.0
Currently at University	42	0.0
University Certificate, Diploma or Degree	151	0.0
Don't know	132	0.0

APPENDIX C

Regional boundary map of Namibia