The Influence of Matrilineal Family Lineage Descent System on Intrahousehold Decision-Making Power and Intergenerational Education Persistence in the Democratic Republic of Congo

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The Influence of Matrilineal Family Lineage Descent System on Intrahousehold Decision-Making Power and Intergenerational Education Persistence in the Democratic Republic of Congo

(コンゴ民主共和国における世帯内意思決定権限と世代間学歴継承への母系による家系継承制度の影響)

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ABSTRACT

In today's society, acquiring a decent education is one of the most crucial factors to lead a successful life. However, the likelihood of receiving a good education varies greatly in many countries, including the Democratic Republic of Congo (the DRC), depending on family background. Since the DRC's independence in 1960, its education policy has focused on eradicating illiteracy and ensuring that all children have access to quality primary, secondary, and tertiary education. However, the outcomes have not always been as successful as expected. For example, the DRC is now listed as having one of the world's highest proportions of out-of-school children. Despite government efforts, UNESCO estimates that more than 36% of school-age girls and 29% of boys in the DRC are out-of-school. Similarly, rural areas have 38% more out-of-school children than urban.

While the exact number of out-of-school children is unknown, the government has been working to address issues related to educational access, quality, governance, and equity. However, additional effort on the demand side, for instance from the families, is still required to enroll and ensure that all children of school age, both boys and girls, attend school on a regular basis: despite the free education, some parents still choose to keep their children at home. Regular school attendance is now well established as not only important, but also required, because school attendance is directly related to increased performance, which leads to greater learning opportunities and better employment alternatives. According to the World Bank (2022), an estimated 86% of 10-year-old children in the DRC are in "learning poverty"; this means they are unable to read and comprehend a simple paragraph. Consequently, educational mobility will spiral downward between generations. Understanding the causes underpinning lower educational mobility, which relegates children from disadvantaged families and social and economic groups to non-schooling status, is critical to ensure that policy initiatives are effectively targeted.

Previous study on the decline in intergenerational educational transmission has identified three major causes: (i) biological, related to the hereditary transmission of

ability, which is frequently measured by IQ; (ii) economic, related to the socioeconomic condition of the parents and their children's schooling; and (iii) direct education-to-education, related to a greater return on education for children with highly educated parents. However, another possible explanation for low education mobility through generations not yet investigated in great detail by researchers may be the influence of intrahousehold decision-making power caused by the family-lineage-descent system. For two reasons, the DRC is one of few countries in the world to offer an outstanding case study of intrahousehold decision-making power and intergenerational education mobility. The first reason is the active systems of family-lineage descent, notably patrilineal in which male dominance is stronger, and matrilineal in which male dominance is weaker. The second aspect is the country's reputation for patriarchy (Carlsen, 2009). This means that the father is the central authority in the DRC and that the country is ruled by principles of male control.

Given this context and the significant gap in previous literature, three main research questions were developed for this study: 1) How is educational attainment transmitted across generations in the DRC? 2) How does intra-household decision-making power influence children's school attendance in the DRC? 3) How does the family-lineage system environment in which a person is raised affect the school attendance of their offspring in the DRC? The main objective of this study was to examine how educational attainment is transmitted across generations in the DRC, specifically by estimating how educational mobility has evolved over time and across generations, and by investigating how intergenerational educational attainment is transmitted between genders as well as among lineage groups. Based on the six sub-questions of the study, the following three hypotheses were formulated: 1) In general, intergenerational education persistence has been increasing in the DRC, implying a decrease in education mobility. When data is disaggregated, intergenerational education persistence will decline and education mobility will increase for males, and for those in matrilineal and patrilineal lineage groups; 2) Children from households in which women can influence decisions

that affect family daily life, particularly of girls, are more likely to attend school in the DRC; 3) Matrilineal-family-lineage descent has a positive effect on children's school attendance, particularly of girls in the DRC.

The study used both the transition matrices and the regression coefficient or intergenerational persistence (IGP) methods with OLS to answer the first main research question and test the hypothesis. For the second main research question, the study employed probit regression and marginal effects. For the third main research question, the study applied the treatment-effect estimator technique, focusing specifically on the treatment effects of membership in a family matrilineal group. The study used the augmented inverse probability weighted (AIPW) estimator to calculate the average treatment effects (ATEs). The data for this study came from Survey 1-2-3 on Employment, a repeated, cross-sectional and retrospective survey of the informal economy and household living conditions in the DRC conducted in 2012. The quantitative data included 21,454 households, 111,679 individuals, and 8,727 informal production units. In addition to the quantitative data, the study gathered its own qualitative data to explain some of the quantitative analysis conclusions.

The results from the first main research question indicated that, intergenerational persistence in educational attainment has been decreasing in the DRC, indicating an increase in educational mobility in the country. Males in the most recent data cohorts revealed a large decline in intergenerational persistence in educational attainment, but females demonstrated a minor gain in this regard, indicating that education mobility has been increasing for males but decreasing for females. Similarly, intergenerational persistence in educational attainment has been decreasing in matrilineal-descent groups while growing in patrilineal-descent groups, indicating that education mobility is increasing in the matrilineal group while decreasing in the patrilineal group. Given the lack of prior literature on intergenerational education mobility in the DRC and the enormous number of previous research studies revealing low education mobility in many parts of the world, this is a fascinating finding.

The results of the second main research question of the study indicated that an increase in women's bargaining index increases the probability for their children to attend school, even in households headed by men. In a similar vein – and this finding is extremely significant – the results revealed that an increase in women's decision-making power increases the probability of their daughters attending school in the DRC, even in households where male children are prioritized for schooling. These findings are highly encouraging and may have significant consequences in the context of the DRC, a country where male heads of households always have the final say in decisions about family life and, most importantly, about investments in children's education.

The study's third research question suggested that, while the average for school attendance in matrilineal group is 64.4%, being from a matrilineal-lineage group causes children's school attendance to increase by an average of 1.79%, as compared to the average of 62.6% for children who come from patrilineal-lineage groups. Possibly the most notable finding from the study was, when the data is disaggregated by the gender of children, being from a matrilineal-lineage group generates an increase in female children's school attendance of 26.7%, compared to the average of 62.6% for children from patrilineal-lineage groups. In the context of the DRC, the findings of this main research question 3 could be interpreted as the effects of the matrilineal kinship system on the increased likelihood of female children attending school. These effects are more accurately described as the outcome of a broader set of social and cultural practices observed in the majority of matrilineal societies. Co-residence, which often requires the husband to live with, or near, his in-laws in matrilineal descent, and the daughter's succession of parental property, which involves the family property being passed down from mother to daughter, are two examples of such customs. If the married couple lives near the wife's family, her brother can more readily and financially support the education of her children. Inheriting family property may also encourage the daughter to pursue higher education.

This study demonstrates how intricate and dependent on multiple mechanisms the transfer of educational attainment from one generation to the next can be. If earlier research focused on the biological, economic, and education-to-education channels, this study provides further insights, demonstrating that, in the DRC, family lineage descent systems could be the denominator of the aforementioned channels. Nevertheless, the study provides some important conclusions about the power structure in Congolese households as follows: 1) Despite the fact that educational mobility has increased across the country, female children born into families where their parents, most commonly the father, have no education have a lower probability of receiving any education or of completing university than male children growing up in the same household; 2) Younger married women lacking any education were unable to have sufficient bargaining power to influence the schooling of their children. This is an especially dramatic finding given that any female children living with them will similarly not receive a chance to go to school.

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Finally, I would like to express my gratitude and dedicate this dissertation to my father, who has been on my mind a lot throughout this journey. Despite the fact that it has been years since he passed away, I continue to carry his lessons with me every day.

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LIST OF ACRONYMS AND ABBREVIATIONS

AGE	Awareness of Gender Equality
AFAM-PE	Asignaciones Familiares-Plan de Equidad
AIPW	Augmented Inverse Probability Weighted
AME	Average Marginal Effects
ATEs	Average Treatment Effects
EDP	Education Development Project
ESD	Explanatory Sequential Design
BMD	Bachelors-Masters-Doctorate
CAP	Certificate of Professional Aptitude
CCT	Conditional Cash Transfer
CDF	Cumulative Distribution Function
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CFS	Congo Free State
COVID	Coronavirus Disease
DES	Diplôme d'Études Supérieure
DHS	Demographic and Health Survey
DRC	Democratic Republic of Congo
EEPs	Extra-Environmental Factors
GDP	Gross Domestic Product
GGC	Great Gatsby Curve
GSS	General Social Survey
HCI	Human Capital Index
HDI	Human Development Index
IGC	Intergenerational Correlation
IGE	Estimated Intergenerational Elasticity
IGM	Intergenerational Mobility
IPU	Informal Production Units
IV	Instrumental Variables
LPM	Linear Probability Model
MEPSP	Ministry of Primary, Secondary, and Vocational Education
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MICS	Multiple Indicator Cluster Survey
NKPS	Netherlands Kinship Panel Study
OLS	Ordinary Least Squares
PCA	Principal Component Analysis
PANES	Plan de Atención Nacional a la Emergencia Social
PI	Individual Participation Indices
PNAD	Brazilian National Household Sample Survey
PROGRESA	Programa de Educación, Salud y Alimentación
POmeans	Potential Outcome Means

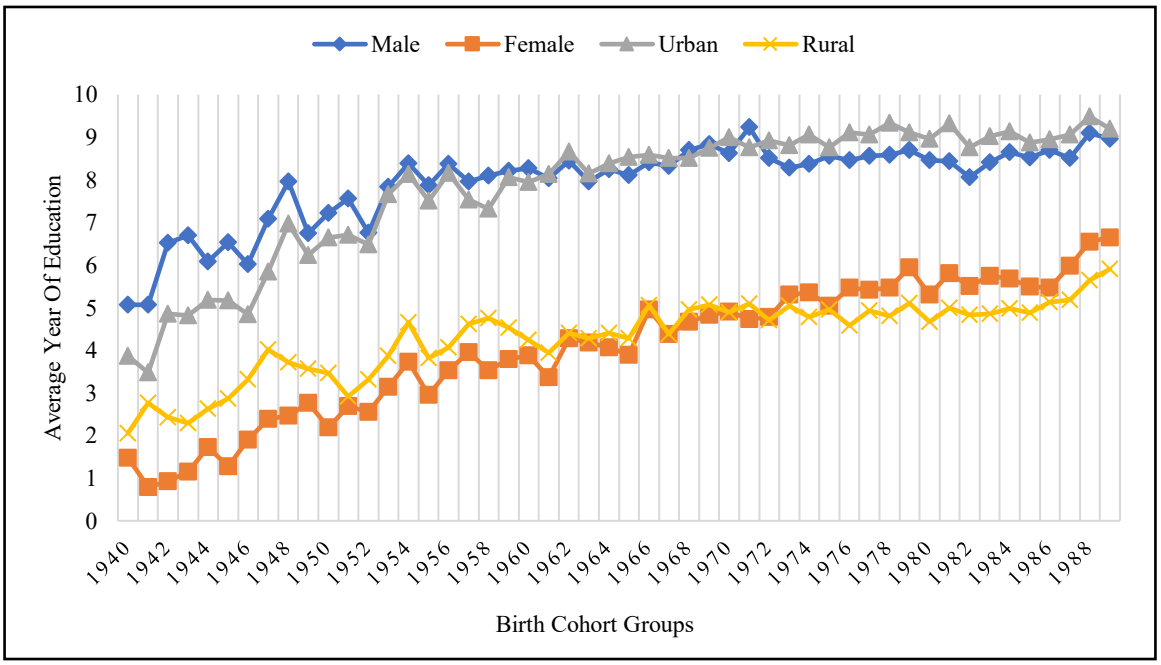
RSM	Modeling the Treatment Assignment Mechanism
SC	Scheduled Castes
SLS or 2SLS	Two-Stage least squares
SSD	Social Statistical Datasets
ST	Scheduled Tribes
SUTVA	Stable Unit Treatment Value Assumption
TENAFEP	Test National de Fin d'Etudes Primaire.
UIS	UNESCO Institute for Statistics
UNDP	United Nations Development Program
UPE	Universal Primary Education

CHAPTER 1: INTRODUCTION

1.1 Background

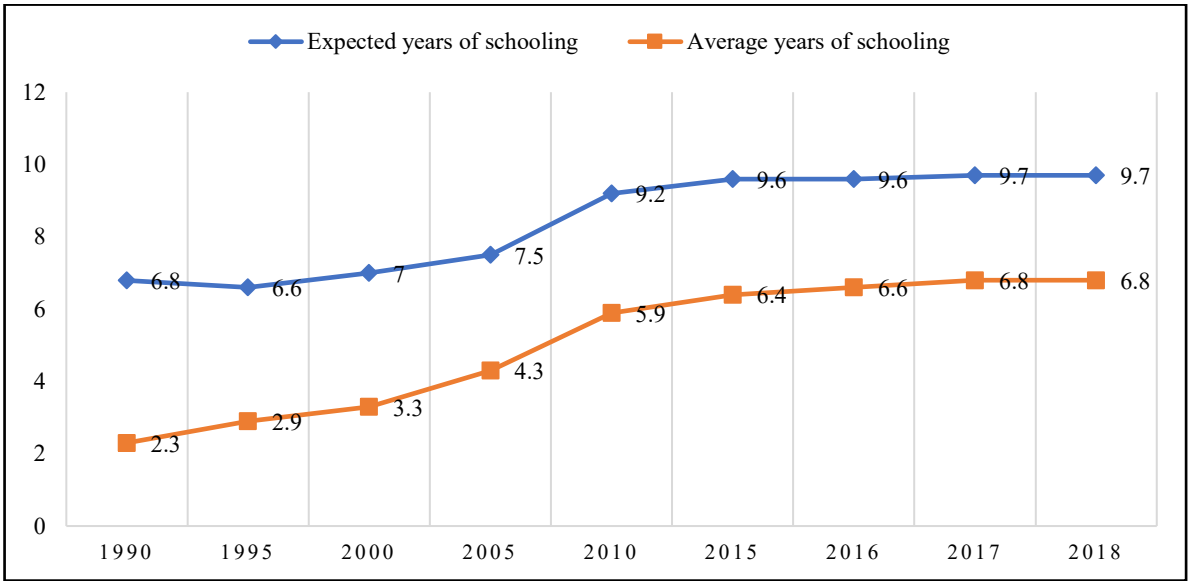
Since the foundation of the Democratic Republic of Congo (the DRC), the concept of equal opportunity, which guarantees people the right to equal possibilities for education and work regardless of gender or socioeconomic background, has been a source of concern. Since the country's independence in 1960, education policy has focused on eliminating illiteracy and providing all students with access to high-quality primary, secondary, and postsecondary education in order to equip them with the social and economic skills necessary for success. However, the results have not always been as anticipated. For example, educational achievement has traditionally been very low in the nation, particularly among females and those living in impoverished rural areas (see Figure 1.1). Moreover, it is often difficult for individuals to stay at school for more than seven years in the DRC, even though Figure 1.2 suggests that mean years of schooling in the DRC have been increasing since 2010.

Figure 1. 1: Average year of schooling by gender and place of living (1940-1988)



Source: Created by the author based on 1-2-3 data (2012)

[1]Figure 1.2: Estimates for mean years of schooling and expected years of schooling in the DRC



Source: Created by the author based on UNDP data.

Additionally, the recent progressive implementation of a fee-free primary education policy in September 2010 was intended to further promote good access to education, particularly for children from poorer households, and to contribute to the reduction of gender disparities in the country. Despite government efforts, the fee-free policy only went into effect in late 2019. Quality indicators, on the other hand, show conflicting trends. As an example, Figure 1.3 shows that only half of those enrolled in primary school will complete the cycle, with just 25% likely to enroll in secondary education.

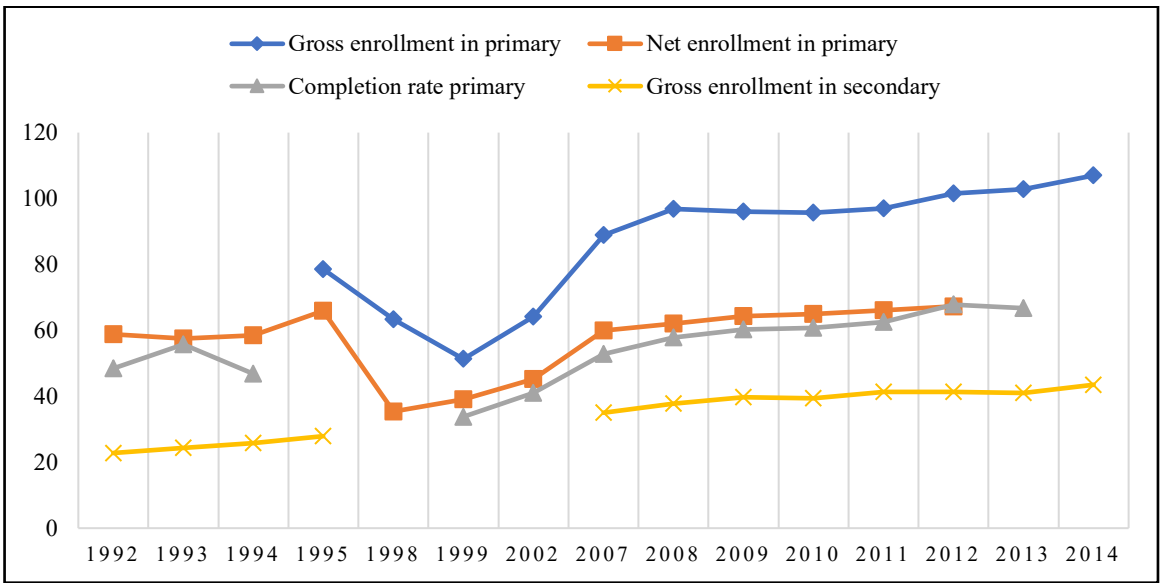
To address long-standing issues that have always hampered educational advancement in the DRC, the government has put in place a five-year strategy to improve basic, secondary, and vocational education (2010-2015). The first objective of that strategic plan was the implementation of the Education Development Project (EDP)[2] in

[1] Note: according to the UIS, mean years of education are estimates for persons aged 25 and older, and the predicted years of schooling for school-age children. The length of schooling at each level of education is used to estimate the mean years of schooling. Estimated years of schooling are based on two factors: enrollment by age at all levels of education and the population of children of school age for each level of education.

[2] Government of the DRC: The Education Development Project is a component of the DRC Plan for Primary, Secondary, and Vocational Education Development. The DRC has revised its 2016-2025 Education Sector Plan, with a continued emphasis on extending access and equality, boosting learning quality, and strengthening sector governance and administration.

2009 with the original objective of establishing universal primary education (UPE) progressively by 2015. The goal was for a more progressive UPE, particularly through the promotion of compulsory and free primary education. That priority revolved around: (1) the gradual abolition of school fees; (2) the identification and integration of children who have been excluded from the school system; (3) the reduction of geographical disparities and gender inequalities; (4) expansion of schools' reception's capacities; and (5) support to local communities for the development of pre-school education, with a view to facilitating the transition to primary education.

Figure 1.3: Schooling in the DRC as percentage of school population (1992-2014)



Source: Created by the author based on UIS (UNESCO Institute for Statistics)

Keeping children in school, especially girls, is the most challenging impediment to expanding access to and quality of education. The DRC survival rate to the final grade of primary school is crucial for monitoring universal primary education, a fundamental goal of "Education for All" and SDG 4.1, which states that by the end of year 2030, we must ensure that all girls and boys have had the opportunity to receive a primary and secondary education that is both free and equitable, and of sufficient quality to provide meaningful and useful learning results.

The Global Partnership for Education considers the large number of out-of-school children and adolescents in the DRC, most of whom are girls, one of the main problems in the country's education system. In 2010, among 23,530,409 children aged 6-17 in surveyed households, 33% were out of school according to the Multiple Indicator Cluster Survey (MICS). Another survey on the situation of out-of-school children conducted by UNESCO in 2014 indicates that over 36% of girls were out-of-school compared to 29% of boys. Rural areas have 38% more out-of-school children and teens than urban areas (21%). This raises questions about the complex issue of human progress in Congolese society.

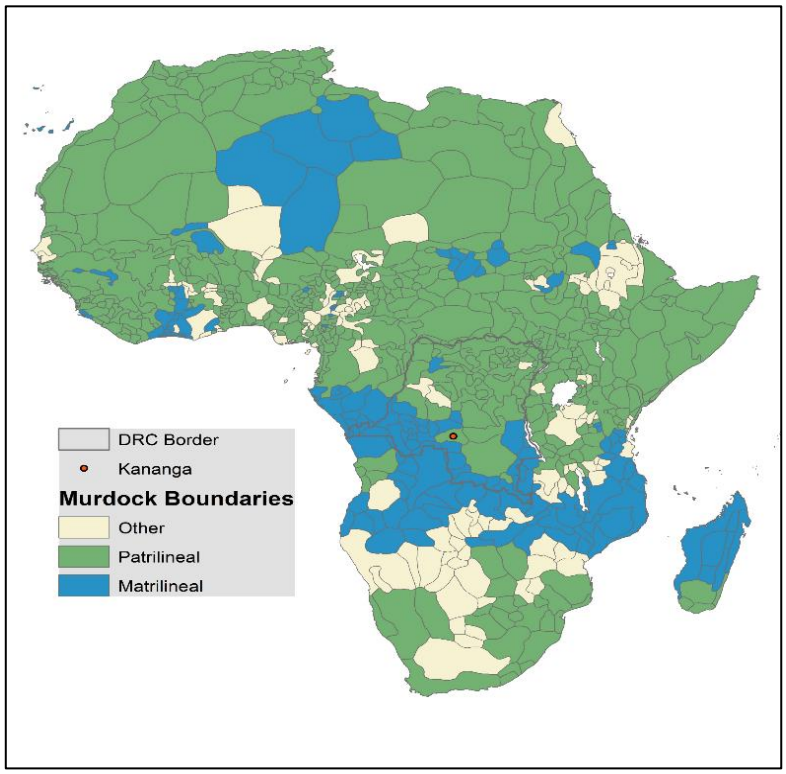
It also shows a need to be explicit about exactly what is meant by the phrase "intergenerational education persistence". Economic mobility between generations, often known as "intergenerational mobility" (IGM) in economics, is a key feature of human development. In the DRC, parents want their children to have a higher standard of living and, consequently, a better life than they have had. Additionally, the majority of individuals would like the opportunity to climb higher on the economic ladder than the position in which they were born. Mobility appears to be a problem in too many parts of the world, according to the evidence. Ascending the economic hierarchy is a major issue for all countries, but especially developing ones. Several types of mobility exist, such as social, income, and so forth. This study focuses on mobility in education, which is important and is an essential element of economic mobility. Previous studies mostly defined intergenerational-education persistence as the coefficient measured from the regression of children's years of schooling on the years of schooling of their parents (Azam & Bhatt, 2015). Consequently, lower relative intergenerational educational mobility is related with higher persistence, and conversely. Exploring additional factors of poor intergenerational transfer of educational achievement, despite simple and open access to education, is vital, according to Agupusi (2019), and would lead to more focused policy development.

The effect of intrahousehold decision-making power caused by the family-lineage-descent system in the DRC may be one plausible reason for the low education rate through generations. The term "intrahousehold decision-making power" is used here to refer to a spouse's ability to influence the household decision-making process, mainly in relation to children's schooling. Intrahousehold decision-making power is an important aspect of family economics and determines the way people make decisions on saving, spending, working, or investing in the education of their offspring. Hence, it is important to analyze the extent to which intrahousehold decision-making through family-lineage descent influences the intergenerational transmission of education from one generation to the next in developing countries (Haddad et al., 1997). This is because the gender of the individual with the decision-making power in the household affects the way the resources are allocated (Azam & Bhatt, 2015; Nandanan & Fernandez, 2017). In the same vein, recent research has suggested that households in which mothers have more power over decision-making may spend relatively more on goods and services correlated with the education and achievement of their children (Lefebvre & Merrigan, 1998).

The DRC is an excellent case study on intrahousehold decision-making power and education mobility across generations for two reasons. First, the presence of family-based inheritance structures. The DRC is one of the most ethnically varied countries in Africa, with an estimated population of around 89 million (United Nations Population Fund, 2020). Family institutions continue to play a significant role in the lives of the population amid rising urbanization. In other words, the country is still home to hundreds of tribes that unite families via shared social, economic, religious, and cultural customs, as well as language. According to Loleka (2021), in Congolese societies, the lineage descended from a common ancestor functions as an often-unnoticed decision-making unit in matters of production, consumption, inheritance, childrearing, succession, and authority. Furthermore, Lowes (2018) believed that the DRC is a perfect location to study how family-lineage descent systems affect the persistence of schooling through generations

since it is at the junction of the "matrilineal belt.", which provides information on the distribution of patrilineal and matrilineal ethnic groupings across central Africa as well as the method of inheritance, (see Figure 1.4).[3]

Figure 1.4: Distribution of patrilineal & matrilineal kinship groups across Africa



Source: Lowes (2018, P. 7)

The topic is justified in the DRC since traditional or tribal law serves as an additional foundation of the judicial system in the country, despite the fact that the DRC professes to be a civil-law nation. Local customary laws, for example, govern both personal-status rules like marriage and divorce, as well as property rights, notably inheritance and land tenure systems throughout the country's numerous traditional groups. Customary law still settles 75% of conflicts in the DRC (Zongwe et al., 2015). According to a widely held view, the majority of the country's ethnic groups are made up of no less

[3] Double descent system or bi-lineal descent is essentially a combination of matrilineal and patrilineal descent.

than 450 different tribes (Zongwe et al., 2015). These ethnic groups are subsequently subdivided into family-descent groups that follow patrilineal, matrilineal, double, or bi-lineal descent systems. For a more comprehensive but not exhaustive list of factors explaining the difference between patrilineal and matrilineal systems in the DRC, see Figure 1.5 below which provides a comparison, a topic that will be covered in more depth in Chapter 2.

Figure 1.5: Conceptual differences between patrilineality & matrilineality in the DRC

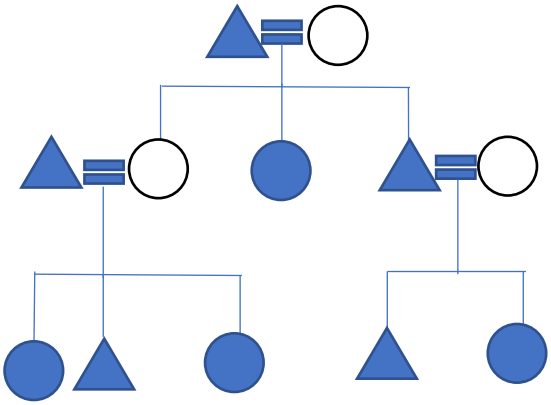


Figure 1.5.1 Patrilineal Kinship Diagram

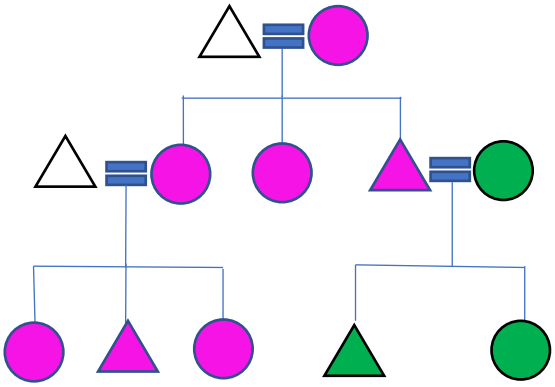


Figure 1.5.2 Matrilineal Kinship Diagram

Source: Created by the author based on Lowes (2016; 2018); Legend: △=Males; ◯= Females

The second reason that makes the DRC an excellent case study for intrahousehold decision-making power and education mobility across generations, is the fact that the country is also known to be highly patriarchal (Carlsen, 2009). This means that in the DRC, the father is the central authority of the family, and the country operates on principles of male dominance and control. Moreover, despite the fact that people have equal rights and obligations under the law (Constitution of the DRC, 2011), The state's family law defines the husband as the household's leader, so obligating the woman to submit to her husband (Art. 444). Furthermore, members of the house are frequently kept

together by the father's surname, establishing a group that he connects to his ethnic group of origin or community networks. Figure 1.5.1 shows the patrilineal-descent system. As shown in the diagram, males and females belong to the kin group of their father, but not their mother. However, only men can transmit family identity to their children. The children of a woman are members of her husband's patrilineal line. The blue members in the diagram 1.5.1 above are linked to each other patrilineally. On the other hand, Figure 1.5.2 shows the matrilineal-descent system. Under this pattern, individuals are family members if they can draw the descent through a female ancestor. While male and female children are members of their mother's matrilineal descendants, only daughters can continue the family line to their descendants. The pink and green members in the above figure 1.5.2 are related to each other matrilineally.

1. 2 Problem Statement

All things being equal, the family-lineage system environment in which a person is raised may have important implications for both intrahousehold decision-making power and the intergenerational transmission of schooling in the DRC (Lowes, 2018). The same could be true for its effects on the large number of out-of-school children in the country, especially of girls (Akanle & Olutayo, 2012; Lowes, 2018). However, the impact of family-lineage descent systems on intergenerational mobility is understudied in Africa. Nonetheless, studies over the past two decades have provided important information on family-lineage descent systems. For instance, Song et al. (2015) asserted that where descent is patrilineal, societies may experience the endurance of high fertility, even at the expense of a persistently high mortality rate. As a consequence, high fertility in patrilineal societies puts a strain on the budgets of poor families, reducing available resources to educate children. Anzak and Zulfiqar (2017), in their study on the upbringing of a child in a patrilineal society in Pakistan, found that kinship and cultural traditions were major factors influencing the schooling of the child.

Several aspects of matrilineal societies contribute to the economic and social stability of women and children, according to an additional body of study on family-lineage descent systems (Lowes, 2016; 2018). Quisumbing and Otsuka (2001) argued in a research on land inheritance and schooling in matrilineal communities in Sumatra, Indonesia, that despite the fact that gender bias in land inheritance is either non-existent or low, daughters often experience educational disadvantages. However, the gender gap in education looks to be diminishing for the younger generation of students. Vleuten (2016) discovered that matrilineal and bilateral family types are major predictors of equal gender involvement in school, particularly when they are also the nuclear-family type, in a study examining family lineage systems in 86 developing and middle-income countries. To date, however, research on the effect of family lineage-systems and offspring's schooling remains relatively sparse, and most studies on family-lineage descent systems have only been carried out in uni-lineal societies, where it is not possible to naturally observe the differential treatment of both patrilineal and matrilineal societies.

In terms of intrahousehold decision-making power, its relative importance is debated in the literature regarding children's schooling. For example, Hou (2016) says that several economic theories, like the non-cooperative collective model, suggest that in households where women have more power to make decisions, money is spent more on things like healthy food and education that are good for the household than in households where women have less power to bargain. In the same vein, a study conducted by Afoakwah et al. (2020) on the link between women's bargaining power and children's educational outcomes found that in Ghana, girls tend to benefit more from their mother's decision-making power than boys.

In the same way, a significant analysis and discussion on the subject was presented by Martínez (2013), who demonstrated that female decision-making power changes household economic outcomes in Chile. Specifically, the research indicated that increasing women's decision-making power increases the likelihood of school attendance

for children under the age of 19. Moreover, Ponczek (2011) found that changes in eligibility requirements and pension amounts would alter the balance of power over household-allocation choices after a careful assessment of the effects of the 1991 reform of Brazil's rural pension system on education and health indicators. The findings demonstrated a beneficial and substantial influence on children's education, particularly literacy for females living with a male pensioner. The author believed that these effects might be attributed to gender inequalities in decision-making power within the household.

Furthermore, a small-scale study by Lowes (2016, 2018) in the context of the DRC established that lineage and inheritance systems impact women's decision-making power. The author argued that children from households where women have a stronger bargaining power also have more years of schooling in the country. Although some research has been carried out on the influence of intra-household decision-making power on children's schooling, a systematic understanding of how this plays out differently for women with an extra-household parameter from which they get support, such as family-lineage descent, is still lacking. In addition, it is not clear from the previous literature as to the nature of the mechanisms that support women's decision-making power in a highly patriarchal society where opportunities for women are constrained by family origins.

With regard to intergenerational-education persistence, the debate has gained fresh prominence, with many arguing that intergenerational-education persistence has been rising, but the opinions of others say that there has been a decline overall. For instance, Azam & Bhatt (2015) studied the persistence of intergenerational schooling in India for the various birth cohorts that occurred between the years 1940 and 1985. Findings indicated that during the last 45 years, there has been a considerable decline in the regression coefficient of fathers' education as a predictor of schooling in the next generation. However, when disaggregating the data across socioeconomic groups and states, they found that towards the bottom of the education distribution, the sons of less-educated fathers were more likely to attain a higher level of education than their fathers,

indicating more mobility. The evidence for a decline in sons' educational attainment was strongest near the tail end of the distribution. They also found that sons whose fathers had a lot of education were more likely to have less education than their fathers.

In a similar vein, Hnatkovskay et al. (2013) in their study that tracked intergenerational mobility rates of historically underprivileged scheduled castes and tribes in India, found a decline in intergenerational educational persistence in the first wave of their data, but then a faster rise in the last wave. Neidhöfer et al. (2018) using multiple measures of intergenerational mobility and a pseudo panel for intergenerational-education mobility over 50 years in 18 Latin American countries found that "intergenerational mobility is rising on average, but the results of this study also revealed some substantial immobility at the top of the distribution. In a study examining the trends and patterns of intergenerational mobility in education among new entrants to the labor force aged 16–27 years old between 1992 and 1993 in India, Emran and Shilpi (2015) found that after a decade and a half of high economic growth, educational mobility remained essentially unchanged for a large proportion of young Indian men.

As presented above, to date, in the literature, there have been mixed results concerning intergenerational-education persistence, even for the data used in the same country. Although some research has been carried out on educational persistence in many countries, the channel through which parental-educational inequality is transmitted across generations has remained unclear, especially when interest focuses on the roles of lineage-descent systems.

1.3 Research Questions

1. How is educational attainment transmitted across generations in the DRC?

1.1. How has education mobility evolved over time and across generations?

1.2. To what extent is intergenerational-educational attainment transmitted between genders as well as among lineage groups?

2. How does the intra-household's decision-making power influence children's school attendance in the DRC?

2.1. What is the effect of women's decision-making power on children's school attendance?

2.2. How does women's decision-making power influence their daughters' school attendance?

3. How does the family-lineage system environment in which a person is raised affect school attendance of their offspring in the DRC?

3.1. What is the influence of the matrilineal-family-lineage system on offspring's school attendance?

3.2. What is the role of the matrilineal-family-lineage system on female offspring's school attendance?

1.4 Objectives of the Study

The objective of this study is threefold. First of all, the study analyzes how educational attainment is transmitted across generations in the DRC, particularly by estimating how educational mobility has evolved over time and across generations, and by examining how intergenerational-educational attainment is transmitted between genders as well as among lineage groups. Second, the study investigates how the intra-household's decision-making power influences children's school attendance in the DRC, by evaluating how women's decision-making power affects children's school attendance and by estimating how women's decision-making power affects their daughters' school attendance. Third, the study analyzes how a family-lineage descent environment in which a person is raised affects the school attendance of their offspring in the DRC, specifically by determining how the matrilineal-family-lineage system generally influences school attendance of offspring, and, in particular, of female offspring.

1.5 Significance of the Study

A sizable body of literature has recently developed around the idea of social structure, family-lineage systems, and inheritance. If anthropologists have long studied these concepts, their variation and their implications for social outcomes, the functions and consequences of these as factors for the wellbeing and development of communities, families and children are just now starting to be understood by economists. This study is among the first one to use a mixed-methods approach to analyze the relationships between family-lineage system, intra-household decision-making power, and the intergenerational transmission of schooling.

With respect to the transmission of education from parents to children, while there is a great deal of scholarly interest in examining intergenerational educational mobility across societies (Hnatkovskay et al., 2013; Azam & Bhatt, 2015), there is still conflicting, inconclusive, or uncertain evidence for its determinants (Arenas & Malgouyres, 2018; Agupusi, 2019; Lee & Lee, 2019). Studies on intergenerational education mobility, in general, center on the transfer of economic disparity and poverty from one generation to the next (Lee & Lee, 2019; Black & Devereux, 2011). In addition, research on intergenerational education mobility often places an emphasis on the passing down of abilities (Arenas & Malgouyres, 2018; Hnatkovskay et al., 2013).

This study provides a more in-depth look at how social and cultural factors can explain intergenerational-educational mobility, especially when interest focuses on the roles of lineage-descent systems in Africa. In particular, this study generates evidence to inform how family origins, through parental education, explain intergenerational-education mobility in the second generation of both male and female adults, and in the third generation of offspring. Moreover, this study also contributes to our understanding of intergenerational-education mobility in both patrilineal and matrilineal societies.

Regarding intra-household decision-making power, there has been considerable debate surrounding its relative importance in the schooling of offspring. For instance, Ponczek (2011) argued that changes in eligibility rules and pension amounts might modify the balance of power over allocation decisions and improve girls' schooling.

Martínez (2013) suggested that changes in the law on child-support rights of non-married couples as a source of exogenous variation increase women's bargaining power and increase the probability of school attendance for offspring under 19 years of age. However, most of these studies have only focused on household dynamics (Afoakwah et al., 2020; Lowes, 2016; 2018), while previous studies concentrated on varying degrees of economic production, consumption, inheritance, child-rearing, and shelter (Diego & Quentin, 2010; Piccoli, 2017; Lowes, 2018).

This study contributes in several ways to our understanding of the link between a highly patriarchal society in which the father is the central authority of the family and how this impacts on educational investment. Moreover, this study also provides a comprehensive assessment of how women's age and education can influence the school attendance of children, even in highly patriarchal societies. Furthermore, this study establishes a quantitative framework for detecting how girls may attend school in male- and female-headed households in a highly patriarchal society.

Another significant aspect of this study is that research on intergenerational mobility in education has been primarily characterized by a model based on two generations as an integral unit, limiting, therefore, the definition of "a family" to a simple individual household, rather than broadening it to the extended one. In addition, studies that used three generations of families have found that grandparents had no substantial direct impact on their grandchildren's education. This theory is predicated on the notion that the impact of grandparents is entirely mediated by the middle generation (Bol & Kalmijn, 2015; Moulton et al., 2017; Lehti et al., 2018). However, it should be noted that the bulk of the research has been undertaken in Western societies, and there is little information to make any judgments about whether the impact of grandparents' education on grandchildren's schooling differs between countries (Zeng & Xie, 2014). This study considers family-lineage descent and use a three-generation paradigm to examine how grandparents' education influences their grandchildren's school attendance.

CHAPTER 2: SOCIAL STRUCTURE AND TRANSMISSION OF EDUCATION INEQUALITY IN THE DRC

According to Martin and Lee (2015), the idea of "social structure" was first introduced by the British philosopher Herbert Spencer (1820-1903). He and other social theorists of the 19th and early 20th century claimed that human society had structures like an organism, containing pieces that work together to generate a system that resembles the anatomy of a living organism. Martin and Lee also argued that "while Herbert Spencer was the first to use the English term "social structure," and this is indeed true, it is thought that the German Philosopher Karl Marx and Friedrich Engels used a similar term in German in *The German Ideology*. On the other hand, Karl Marx's approach, in its broadest sense, was to place an emphasis on what he referred to as the "ensemble of society relations" in the *Theses on Feuerbach*. In fact, to Marx, the social relations of paramount interest were economic: more specifically, the social relations of production". This is the framework that social structure studies use to try to explain things like integration and changes in inequality. To date, unfortunately, social structure remains a poorly defined term and one of the most confusing theoretical concepts in the literature (Form & Wilterdink, 2020).

Nevertheless, several definitions of social structure have been proposed in the literature. More broadly speaking, social structure can be defined in sociology as a "distinctive and stable institutional setting where humans in society interact and live together" (Form & Wilterdink, 2020). Additionally, social structure is generally treated as a social change concept, which is related to the power that changes community organizations (Form & Wilterdink, 2020). Glowacki (2020) agrees with this point of view. He says that things like the arrival of new material and cultural technologies, population pressures, or even group conflict can cause new social structures to form.

As may be clear, social structure has been an abstract notion up to this point: the prevalent idea is highly dependent on which elements are included in the structure. In

other words, the greater the social entity under consideration, the more abstract the concept becomes. Despite the varying definitions and terminological confusion that have emerged from the literature on the concept, this study is particularly interested in the ways arrangements within the social structure for reproduction, care, and investment in the education of offspring are decided in the DRC. These arrangements are usually on the basis of the established structural rules of society and collectively bargained at the family and kinship levels.

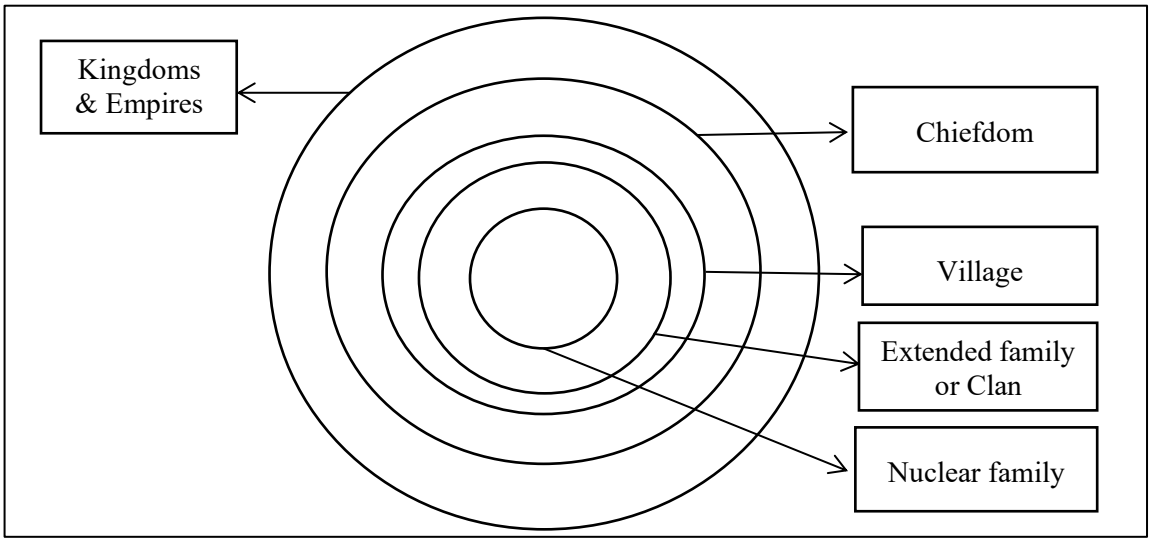
On the question of the transmission of education inequality, much of the literature since the mid-1960s has emphasized the inequality of opportunity arising from children's differential access to quality education, especially considering that many children's outcomes are limited by the same lack of opportunities or constraints faced by their parents. To put it another way, publications on the transmission of education inequality focus more on determining the underlying causes and consequences of the inability, by their own efforts, of children born in poorer families and disadvantaged social groups (such as low castes in countries like India) to exceed the position of their parents in education and on the economic scale (Emran & Shilpi, 2015).

Furthermore, a number of authors' research has focused on methods and measures to reduce intergenerational inequality at all levels of education, particularly between genders and socioeconomic class groups (Magejo et al., 2014; Mulder et al., 2019). It is on this basis that Funjika and Getachew (2019) argued that, in Africa, differences in initial levels of ethnic capital might explain the persistence of ethnicity-based differences in educational attainment over time. In a similar vein, Sena and Clemente (2010) suggested that children born to parents with higher levels of education are likely to attain similar high education levels, while children born to parents with a lower level of education are unlikely to exceed that level. This study intends to examine the parental transmission of inequality by investigating how family-lineage descent systems explain intergenerational transmission of education inequality in the DRC.

2.1 Social structure and education inequality in the DRC

Although a precise definition of social structure has proved elusive, it is believed that for several hundred years before the arrival of the Europeans in Africa in the late 15th century, many societies, ethnic groups and kingdoms, including those that existed in the DRC, were highly organized, and efficient administrators of good neighborly relations and trade (see Figure 2.1). As illustrated in figure 2.1, the family and extended family were the basic units of social structure. Those structures provided many of the welfare functions, such as care for the sick, care for the elderly and children, and redistribution of wealth. Traditional cultural attitudes and kinship ties were strong, especially in rural areas. Individuals were involved in work for the family's survival, regardless of their talent, ability, or age. Many events, including the slave trade, the terrible history of colonization, President Mobutu's neo-patrimonial government, and the contemporary diversity of patrimonial institutions fueled by violence and criminality, have fundamentally transformed the essential elements of social life in the DRC over time. The next sections go over each of these points in depth.

Figure 2.1: Pre-Colonial Society in the DRC [4]



Source: Created by the author based on Gondola (2002) and Mukenge (2002)

[4] The Kongo Kingdom, the Luba Empire, the Lunda Kingdom, the Zande Kingdom, and the Kingdom of Kuba were some of the major kingdoms and empires that existed in the DRC before the colonial period. Chiefdoms, on the other hand, emerged within the rainforests.

2.1.1 Social structure and slavery trade in the DRC

Slavery was one of the most appalling violations of fundamental rights experienced by Congolese people in their history. The territory that would become the DRC[5] is said to have first come into regular contact with the non-African world in the 15th century. The DRC opened in the first instance to embrace Christianity, and this led later on to naive acceptance of the European slave trade that lasted from the 16th to the 19th centuries. It is thought that throughout the 19th century, the increase in the worldwide demand for slaves triggered violence between ethnic groups in what is now the DRC, as European slave-traders kidnapped people and encouraged Congolese men to capture members from other ethnic groups in exchange for iron, guns, gunpowder, mirrors, knives, cloth, and beads (Alpern, 1995). Overall, it is believed that an estimated 5 million slaves were captured from the DRC and forced onto ships bound for Europe and the Americas. This had a profound effect on the traditional social structures and family-support systems in the country.

In terms of the precolonial educational system, new historical-anthropological literature in the DRC suggests that, contrary to popular perception, there were many different types of initiation into the cults of the dead, long before the Europeans came. The initiates of those cults were thought to gain knowledge, talents, and power through this experience. It has been stated that young individuals approaching adulthood, both male and female, were abducted from their homes and frequently taken far from their villages to be sequestered in jungle camps for up to five years under such type of educational system. The majority of those young people were initiated into at least one cult, the cults collectively serving the functions of education, social control, and also

[5] Throughout its history, the DRC has changed its name numerous times. Congo Free State was the name of the nation from 1885 to 1908. Between 1908 and 1960, it was known as the Belgian Congo; then, from 1961 to 1968, as the Republic of Congo. The Democratic Republic of Congo was the name used from 1968 until 1974. From 1974 until 1997, it was known as Zaire, and from 1997 to the present, it has been known as the Democratic Republic of Congo. Throughout this dissertation, the designation "Democratic Republic of Congo (the DRC)" will be used, referring to the pre-colonial, post-colonial, and current-day DRC.

economic redistribution by preserving and passing on information. While this initiation was sometimes required, it was not always free. Thus, items gathered from the slave trade were sometimes used as emblems of status to pay ceremonial expenses.

2.1.2 Social structure in the DRC during the colonial period

Colonialism was another important episode with a significantly negative impact on the social structure of the DRC. The boundaries of the DRC were defined during the Berlin Conference in 1884 and 1885, where the division of Africa was sanctioned arbitrarily in ways that benefited European colonial powers, with little consideration for existing social structures, tribal systems, ethnic, or linguistic groupings. This arbitrary demarcation of boundaries divided families and shattered the fabric of traditional Congolese culture in certain cases, while individuals who had never met before suddenly became part of one country, increasing ethnic tensions.

According to Lowes and Montero (2021), central Africa, including the current DRC, was a territory with no promise of immediate profit for the Europeans, and therefore remained largely unexplored until around the mid-19th century. King Leopold II of Belgium persuaded other European colonial powers of his humanitarian aims in the DRC, including his mission to put a stop to the slave trade, in an effort to make Belgium a colonial power, according to Lowes and Montero (2021). Leopold's interest in the DRC was accepted by the governments of Britain, France, and Germany in order to prevent confrontation over their own colonial ambitions. Thus, the King Leopold II established the Congo Free State (CFS) in 1885 as his own possession.

However, the aim of King Leopold II's project was to force men, women, and children to labor for his lucrative ivory and rubber business. In this environment, and in light of the hardships faced by the Congolese people, Vansina (2010) claimed that King Leopold II's rule of the DRC from 1884 to 1906 had disastrous consequences for Congolese society and the local populations. As an illustration, an estimated 10 million

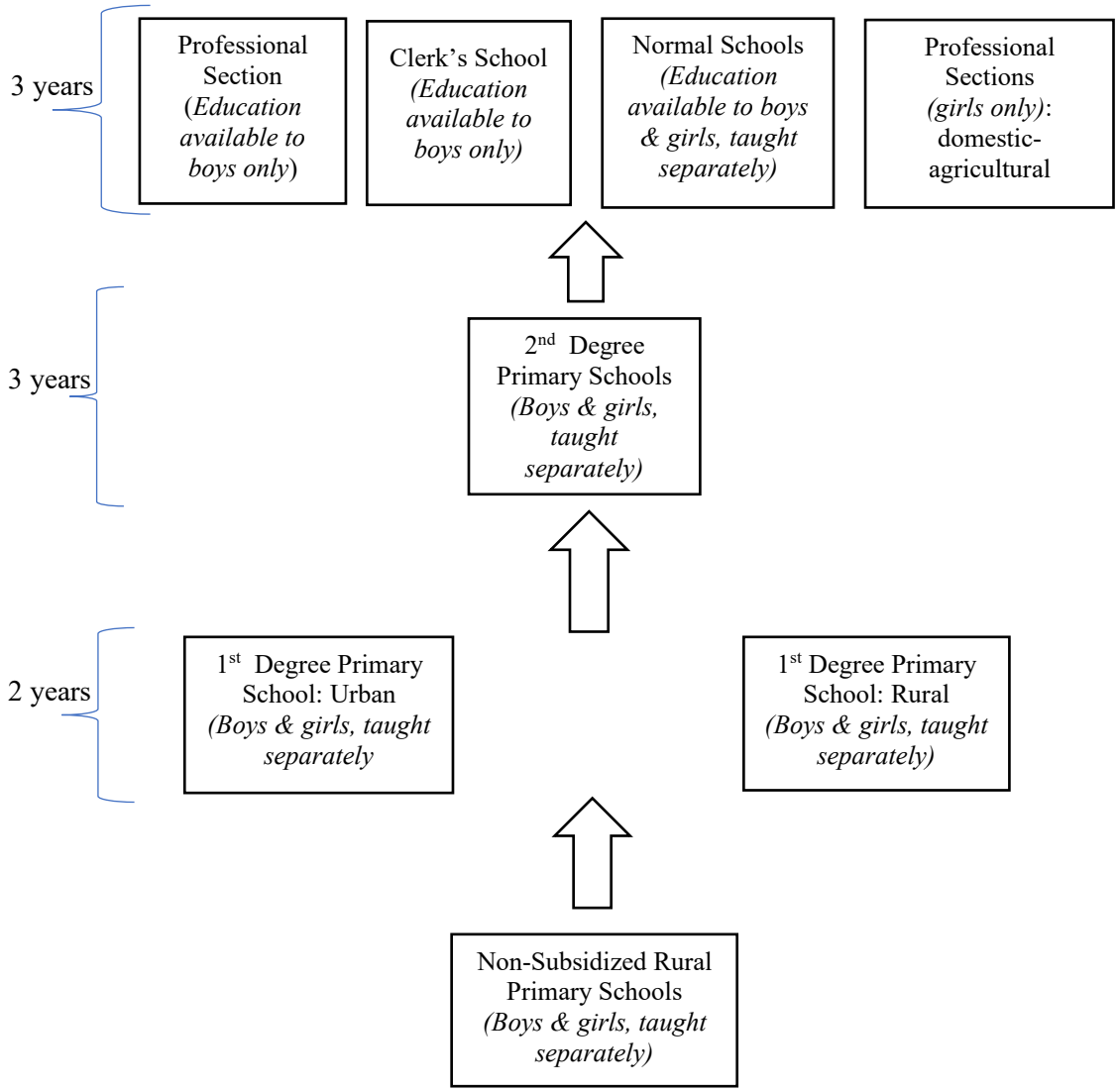
individuals, which is about equivalent to half of the total population of the CFS, died (Vansina, 2010). The annexation of the DRC by Belgium in 1908 was prompted by mounting international condemnation of alleged human-rights abuses of the Congolese people. Up until 1960, the DRC was a colony of Belgium.

As a result of colonial expansion in the DRC, missionaries from various countries began to arrive in various regions of the country, and defined school policies were launched. Protestant and Catholic missions in particular created these schools. It has been reported that schools were naturally and easily operated at minimum expense in connection with the missions' religious work. This is how the notion of western-style education was introduced to the country's indigenous people. However, it is thought that one of the distinguishing features of the colonial education systems developed after 1908 was to instruct the Congolese population solely for the purpose of fulfilling specific roles and responsibilities for the colonial power, with a focus on agricultural and manual skills training, and with rather limited pedagogical and academic content. It should also be mentioned that it took nearly two decades for the colonial power to create and implement an organized educational system after King Leopold II handed the DRC to Belgium. The organization of education in the early colonial period is seen in Figure 2.2.

According to Dunkerley (2009), there were only three degrees of schools available in the subsidized education system, as depicted in Figure 2.2 below. First-degree was considered primary schools available to both boys and girls in both urban and rural areas for at least two years. The goal of this degree was to teach children fundamental literacy skills as well as to give them practical skills, notably in agricultural labor. Children in rural areas, on the other hand, were to be taught in their original languages by Congolese instructors who had been trained in the subject. As presented in Figure 2.2, selected children from the first-degree primary schools were allowed into the second-degree primary schools depending on their ability to learn. Additionally, the curriculum delivered in these second-degree schools was for three years and included French as well as a broader range of other subjects. Moreover, the primary goal of these second-degree

institutions was to prepare children for the highest level of the educational system, called 'the special sections', with the distinguishing feature that these second-degree institutions were managed by a missionary. These second-degree schools highlighted the importance of interaction with Europeans as a means of instilling respect for the colonial authorities. However, there was still a focus on labor. Agriculture was emphasized once more, and it was intended that those schools contain workshops where children could acquire skills like woodworking or bricklaying, etc. (Dunkerley, 2009).

Figure 2.2: Education system introduced in the DRC from 1925



Source: Created by the author based on Dunkerley (2009, P. 42)

Furthermore, as indicated in Figure 2.2, domestic agricultural schools for girls were officially part of the same professional sector as professional agricultural schools for boys. Students could train to be elementary-school teachers in normal schools, which were operated separately for both genders. In addition, males chosen for the special sections went to either professional or clerk's schools. Those special-section schools provided three years of additional education.

To sum up, while over one-and-a-half centuries of colonialism helped in establishing an educational system in the DRC, it also left Congolese people in a condition of severe weariness and emptiness, irreversibly altering the country's social fabric in several ways. For example, the colonial power's selection of chiefs destroyed the notion of the ancestral line linking the clan chief to the past, severely undermining the credibility of traditional Congolese leadership. There was no longer a patriarchal or matriarchal family structure in such a society, resulting in a great deal of friction between those who governed and those who were dominated. There were no mechanisms in place to solve the conflicts that arose as a result of the clan head's loss of authority. Surprisingly, elections held one month before the country's independence in June 1960 indicated that the DRC's familial social system had survived the colonial era, and that the votes of the populace were in line with tribal loyalty.

2.1.3 Social structure in the DRC under the neo-patrimonial regime

Between 1960 and 1964, the DRC suffered a period of political instability defined by coups, secession, and mercenary-led rebellions over most of its territory. In 1965, Mobutu Sese Seko Kuku Ngbendu Wa Za Banga took control of the military and declared himself President of the Second Republic, a position he held for more than three decades. On the other hand, his neo-patrimonial[6] rule had a considerable and negative impact on the DRC's social structure. As an illustration, during his presidency, inequity between ethnic

[6] The term "neo-patrimonial" refers to the fact that African political systems can no longer be considered completely traditional once the country has experienced a period of colonial status (Bach, 2011).

groups worsened. When Mobutu took control in 1965, he launched an aggressive nationalization effort, even going so far as to change the country's name from Congo to Zaire in 1971. This policy not only drained the economy, but also destroyed the civil service, which was largely backed by the Church.

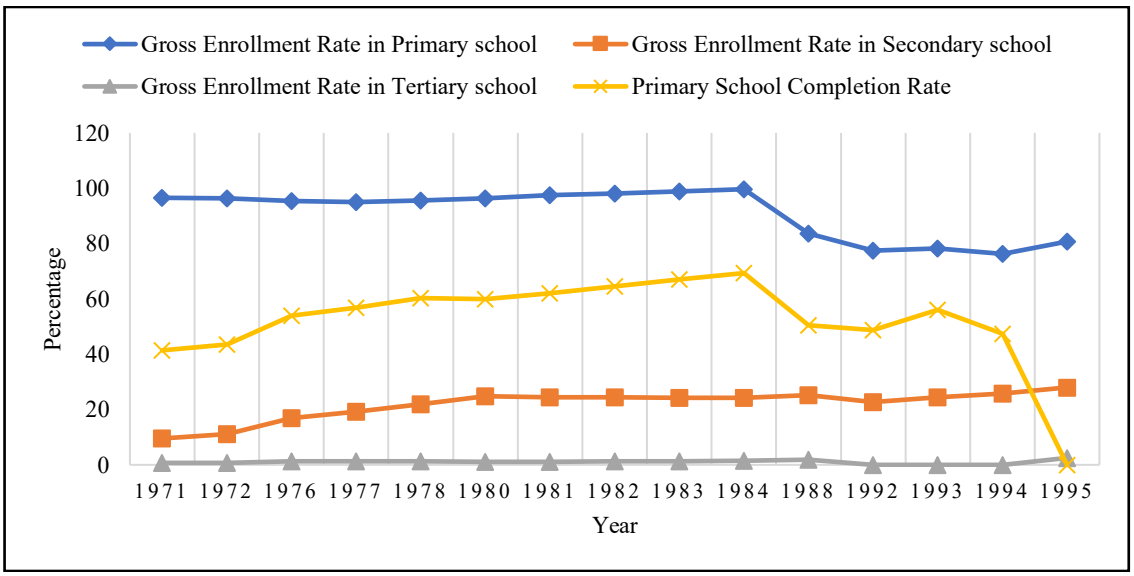
As a result, Poncelet et al. (2010) claim that the 'Zairianization' economic model, which was built on income from mining operations and debt, had become bankrupt by the end of the 1980s. This was followed by an increase in general economic informalization, as seen by the severe reduction of urban wage-earners, rising poverty, and the loss of economic control. In 1982, the DRC was placed under structural adjustment, but extensive looting, pillaging, and ethnic expulsions occurred in the first half of the 1990s, affecting Congolese families, lifestyles, and value systems, and permanently disintegrating the country's economy.

In terms of education, after the DRC gained independence in 1960, postcolonial Belgium continued to support and expand the country's massive educational investment, with the Congolese Ministry of Primary, Secondary, and Vocational Education (MEPSP) budget accounting for roughly 25% of total government spending (Boyle, 1995). The education system, on the other hand, was thrown into disarray in the early 1980s as a result of the Zairianization policy. For instance, under the structural adjustment program imposed on the country by international financial institutions, between 1982 and 1987, public spending per student fell dramatically from $159 in 1982 to $23 in 1987; the monthly salaries of teachers fell from $68 to $27, and the proportion of qualified teachers fell steadily from 64% in 1982 to 31% in 2006. Public investment in education decreased from 25% to 7% in the 1980s, and by the end of the 1990s, it was cut to 2-3%, while the average monthly teacher pay plummeted to $12.90 in 2002. The most startling statistic is that expenditure per student dropped from $159 in 1982 to barely $7 at the conclusion of Mobutu's presidency in 1997. As a result, the power of the MEPSP to control the education sector became almost non-existent (Poncelet et al., 2010).

Despite this, the DRC's education system managed to thrive in a nation that exhibited all of the clinical symptoms of a failed state owing to the perseverance and financial contributions of the pupils' parents. Additionally, even though the material and pedagogical circumstances had highly deteriorated and become corrupt, the intensity and constancy of the parents' demand for education, as well as their ability to pay, were all the more impressive (Poncelet et al., 2010). As an illustration, the gross enrolment rate in primary schools did not fall to the lowest level, as shown in Figure 2.3.

However, the same Figure 2.3 indicates that, due to low completion and survival rates in primary education, the DRC's overall educational performance has been questioned, a subject that will be discussed in more detail in the section on the current situation of education in the DRC. Furthermore, according to Mortensen (2013), despite the fact that Mobutu was largely successful in developing a nationalism that was based on his own personality, links to family and tribe continued to dominate. The State, on the other hand, was unable to sustain itself under Mobutu, illustrating how fast a neo-patrimonial system may lead to economic collapse and breakdown of societal norms.

Figure 2.3: Education in the DRC under the neo-patrimonial regime



Source: Created by the author based on UNESCO (2020)

2.1.4 Social structure in the DRC and the contemporary diversity of patrimonial institutions characterized by violence and criminality

Laurent-Desiré Kabila, with the aid of Uganda and Rwanda, eventually drove Mobutu out of power in 1997 after 32 years in control. Kabila renamed the country the Democratic Republic of Congo. However, fragmentation and foreign intervention resulted in a mutated version of patrimonialism and a diversity of power bases, and neo-patrimonialism remained among the state elite, with Kabila preserving Mobutu's economic monopoly. Kabila was assassinated in 2001, barely four years after overthrowing Mobutu, and was succeeded by his son, Joseph Kabila, leaving the DRC in a state of utter instability, marked by armed-group operations and rebellions and conflicts that have lasted till now. According to Mortensen (2013), the prolonged situation of violence and instability gave rebel groups and militias control of the economy in the areas in which they operated. Rufanges and Royo Aspa (2016) claim that in the years of conflicts, over five million people were killed, about two hundred thousand women raped, and hundreds of thousands of Congolese forced to flee their homes.

All things considered, the DRC is one of the few countries in the world that has never enjoyed lasting peace and stability throughout its history. The country was ruined by slavery and colonization, conditions from which it has never recovered. As a consequence, political turmoil, societal conflicts, and a lack of governance and development presently plague the country. Despite rich natural resources and enormous supply of minerals, the DRC has consistently ranked low in human development indexes. For example, on the Human Development Index (HDI) in 2020, it was placed 175th out of 189 nations. The great majority of the population is impoverished, with inadequate access to essential amenities including primary healthcare, clean drinking water, and education. Furthermore, the country's Human Capital Index (HCI) is currently at 37%. This means that a child born in the DRC today will be only 37% as productive as if he or she had access to a comprehensive education and health-care system. Under these

circumstances, and despite some progress, the stability of the Congolese government continues to be precarious. This is especially true in the education sector, where public investments remain low despite recent budget increases. Moreover, religious organizations continue to run the vast majority of schools, and the government's monitoring and general management of the system is poor.

To end this section on a positive note, after 46 years of independence, eventually, the DRC was able to hold three elections for the presidency and parliament in 2006, 2011 and 2018, resulting in a progressive reassertion of the Congolese State's power over this period. In addition, although the DRC's social structure had been severely damaged by events that occurred in the country from the 16th century, Mortensen (2013) believes that the lineage structure[7] and kinship[8] systems survived pre-colonial, colonial, and post-colonial periods, and continue today.

2.2. Origin and structure of lineage systems in the DRC

This section [of the dissertation], heavily draws on the seminal work of Vansina (2002, 2010) and delves deeper into the origins of family ties, lineage systems, and kinship structure in the DRC. According to Vansina (2002), the DRC is part of a vast area of Africa roughly the size of the United States east of the Mississippi and nearly the size of western Europe that remains uncharted territory for historians. Maps of Africa have traditionally depicted this as a green mass, as the area is largely covered by the rainforests of equatorial Africa. These forests and their approaches extend across southern Cameroon, Gabon, Equatorial Guinea, and Congo, as well as half of the DRC, and into the Central African Republic and Angola's Cabinda province. Today, it is home to more than 75.4 million people and up to 450 ethnic groups, according to ethnologists.

Vansina (2002) argued that the inhabitants of this rainforest region in equatorial Africa continue to live literally in the same way they have for centuries or millennia. He

[7] Lineage is a term used to describe any form of descent from a common ancestor (Bell, 2014)
[8] A kinship, according to Bell (2013), is a person's social link with others that is created by blood (consanguinity), marriage (affinity), adoption, or fictive relationships.

said they "maintained prehistoric civilizations into the modern era." This cliché is particularly prevalent among writers who write about African Pygmies[9], but it is also applied to indigenous farmers. In other words, history is shaped by the environment, and the peoples of this region lack history due to their inability to adapt. Kinship groups' demographic growth defined their history. When a lineage became too large, it split into two or more smaller lineages, a process of quasi-biological growth that continues to this day. This is more likely the origin of all the lineage systems and ethnic groups that exist today in the DRC.

Vansina (2002) similarly argued that the DRC's lineage structure dates all the way back to the ancestral period, when society was organized around three interconnected social groups: district, village, and household. Their interrelationships were highly fluid, resulting in a highly decentralized system. Each household was free to select the village to which its members belonged, and each village was free to form a district by combining with other villages. The relative importance of the groups shifted frequently over time, as one or more fundamental groups surpassed others in prominence. At its pinnacle, one group would absorb another, as when a single household seized control of an entire village or even a district. In some cases, the village or district would vanish entirely. The history of political organizations in the area demonstrates the situation's dynamic potential. The ancestral pattern evolved as new patterns of interlocking ties between the fundamental groups developed.

Indeed, the aforementioned structure, dates from the 11th or 12th century, if not earlier. The household that eventually seized control of an entire village formed a strong bond with the village or district's inhabitants so that they began to view their social relationships with the household and with other villages in the district through the lens of the founding household. The descendants of the founder's household chief, as well as his

[9] In anthropology, a Pygmy is a member of any human group whose adult males grow to an average height of less than 59 inches (150 cm). The Pygmies of Africa are the most well-known Pygmy group and those to whom the term is most frequently applied (Britannica, 2019)

in-laws and allies, became their descendants. Village ties were reclassified as belonging to the village's two founding households. While historically affiliated villages formed a district, the term “alliance” has come to refer to a familial connection established through marriage, or in other words, a lineage. Vansina (2002).

While the exact order in which family lineage systems emerged is still contested, most anthropologists such as Vansina think that in the DRC, patrilineal systems emerged earliest. Based on Charles Darwin’s theory of evolution, certain 19th century scholars, like Johann Jakob Bachofen and Lewis Henry Morgan, thought that matrilineal societies came before patrilineal societies and were an earlier stage of evolution. Vansina’s chronological sequence, however, will be followed in this dissertation.

2.2.1 Structures of patrilineal kinship systems in the DRC

The DRC has a population of approximately 89 million people and, according to the United Nations Population Fund (2020), 50.1% of the population is female while 49.9% is male. The country is divided into 26 provinces, and while each province’s social practices are distinguished by two systems of parental filiation, the patrilineal system and the matrilineal system, the majority of provinces, about 22 in total, practice patrilineal systems, which sometimes coexist with some small matrilineal societies.

There is a cultural mix in the capital city, but the populations develop a strong affinity for the culture of their provinces of origin. Vansina (2002) claimed that the patrilineal kinship system in the DRC is thought to have emerged from the region east of the Doko River in the current Haut-Uélé Province, and as shown in Figure 1.5.1, the structure of the patrilineal kinship system in the DRC is not significantly different from what anthropologists such as Alfred Radcliffe-Brown and Robin Fox have discovered in other societies around the globe.

While modernization has weakened cultures and traditions by promoting development, patrilineal customary practices continue to prevail in the DRC in social practices, sometimes even above the law, as seen even in the country’s capital city, which

is supposed to be an extra-customary agglomeration. The use of these patrilineal customary practices is much higher in provinces, and they are mostly seen in action in relation to socio-demographic phenomena such as the death of a spouse, inheritance sharing, the payment of the bride price[10], betrothal and marriage rituals.

2.2.1.1 Patrilineal system and traditional practices in the DRC

There is permanent antagonism in the DRC between two different legal orders, customary law and modern or state law, particularly in patrilineal societies where the system of filiation is also an expression of male domination. Children in the patrilineal system, as illustrated in Figure 1.5.1 above, belong to the father's family, which defines their lineage affiliation: as a result, the children share the same surname as their father. Nguebou (2003) argued that the social and cultural life of individuals from patrilineal societies in the DRC, particularly in rural areas, is characterized by masculine privilege. This privilege is reflected in customary law as well as prohibition myths that limit women's roles to procreation and household chores. In addition, women, are not permitted to participate in decision-making bodies considered to be the sole preserve of men.

In this context, Newbury and Bresnihan (2017) argued that many patrilineal societies in the DRC openly support polygamy[11], citing the Budu population from Wamba Territory in the Orientale Province, in which men were known to have up to 12 wives. In patrilineal societies, women's education is typically shaped in a context of submission rather than responsibility, and married women in the community are unable to inherit and own land. In the event of the husband's death, his family members decide the fate of his property and its distribution to children at the expense of his wives. Wills and other bequest documents are torn up in patrilineal families all over the country, even in major cities and towns like Kinshasa, the country's capital.

[10] Bride price is defined by Britannica Encyclopedia (2014) as "money, property, or other kind of wealth given by a groom or his family to the woman or family of the woman he will marry or is about to marry." Bride price is also referred to as bride-dowry, bride-wealth, or bride token.

[11] Polygamy is the simultaneous marriage to more than one spouse, according to the 2017 Britannica Encyclopedia. The two main types of polygamy historically have been polygyny (co-wives sharing a husband) and polyandry (husbands sharing a wife).

Another strong traditional element of most patrilineal societies is the bride price - monetary gift given to the bride by the groom's family. In the DRC, it is commonly assumed that, in the patrilineal system, the payment of the monetary gift for the economic and human enrichment of the spouse's family group, in turn, will compensate for the loss suffered by the bride's group. According to Newbury and Bresnihan (2017), in anthropological literature, this payment has been interpreted as a way for the woman's family or kin group to compensate for the loss of her fertility and potential to contribute to the family. The modest cost serves as a means for the groom to demonstrate that he is committed to and prepared to support his wife. Other customary practices in DRC patrilineal systems, according to Mfoungué (2012), include the requirement for a girl to be a virgin before marriage and the prohibition of premarital sexual relations by women. It should also be mentioned that boys are preferred at birth and have higher educational priorities than girls in this lineage system.

2.2.2 Structures of matrilineal kinship systems in the DRC

Lowes (2018) noted that in matrilineal kinship systems, which are prevalent in the Central Africa region and the DRC, group membership and inheritance are traced through female members, as illustrated in Figure 1.5.2. Individuals are members of their mother's kinship group, and inheritance is only available to children of female group members. It is worth noting that in this lineage system, husbands and wives have different kinship affiliations, whereas children are in the same kin group as their mother. Uncles are important in matrilineal systems because a child often inherits from his mother's brother. According to Lowes (2020), matrilocal residence[12] is practiced by 65% of the 80 matrilineal communities in Africa listed in George Peter Murdock's Ethnographic Atlas, whereas patrilineal societies practice it by less than 1%. Similarly, bride-price payments are less common in matrilineal societies. Women inherit land directly in some matrilineal

[12] The social structure in which a married couple lives with or close to the wife's parents is known as matrilocality, it is also sometimes called "uxorilocality."

societies, rather than passing it on to male relatives who share a female ancestor. There is some evidence that matrilocal residency and enhanced asset ownership through land inheritance may help women more successfully carry out their preferences. Furthermore, possession of property and closeness to family may boost women's negotiating strength by expanding their external alternatives for household bargaining models.

2.2.2.1 Matrilineal system and traditional practices in the DRC

According to Munsi (2016), within the DRC's matrilineal social structure and traditional practices, the father has a special responsibility for overseeing the household. Because status and inheritance are passed down from a mother's brothers to her children, the maternal uncle has the most power and the final say in determining the father's role. One could argue that in this lineage system, the maternal uncle is responsible for protecting social, economic, and legal interests of the lineage, and that the mother's maternal uncle or brother has indirect decision-making authority.

While some of this customary rule appears to be strictly enforced in remote areas, its observance also appears to be growing in importance in urban areas and cities in the DRC as some matrilineal individuals living in urban settings frequently engage in circular migration from rural to urban areas, at the same time, the interrelationships of matrilineal individuals and their degree of cultural emphasis on kinship in a new environment may have facilitated the introduction of modern values in rural areas, Munsi (2016).

While the matrilineal system is widely regarded as protecting women's rights, other significant aspects of the DRC matrilineal systems may include: parents selecting a spouse for their daughter with or without her consent; women being forced to marry their collateral descendants; bride money being paid by both the bride and groom families; husbands relocating to their wives' family; and, when marrying individuals from other lineage groups, such as patrilineal, the requirement that the customary practices of the bride's family be followed.

2.2.3 Features of patriarchy & matriarchy in the DRC

According to Rede (2009), there is sometimes a misunderstanding between filiation (lineage systems) and principles of authority (matriarchy, patriarchy). Thubauville and Gabbert (2014) define patriarchy as "rule of men": this implies that patriarchy is a type of gender relationship in which men wield political, economic, social, and cultural power over women. Badinter (2002) provides a further definition of patriarchy, arguing that the term does not only refer to a type of family based on male kinship and paternal power, but also refers to any social structure that originates in the power of the father.

Hoskins (2022) commonly describes a matriarchal political system as one in which women are the key decision-makers, in contrast to patriarchy, in which males are the sole or principal leaders of families, social organizations, or political states. Hoskins (2022) thinks that the word "matriarchy" has always been divisive since arguments about whether matriarchies are real civilizations or imagined utopias always arise anytime it is brought up, whether they occurred in the distant past or may exist in the future, and how the notions of gendered power itself may have altered in various social and historical circumstances. Campbell (2013) argues that "there is no true matriarchal society in the world", and Rede (2009) claims that no matriarchal society is attested in anthropological literature or history. Therefore, the transmission of property and privileges through women has never prevented the principle of authority in matrilineal groups from resting on men, typically the mother's brother.

Thus, many existing matrilineal societies in the DRC are governed by a patriarchal system in which women remain under the guardianship of men, and, in the country, many harmful practices related to patrilineal, and patriarchy continue to affect women and girls, such as early marriage, polygamy, and levirate marriage[13] (CEDAW, 2013). Particularly prevalent throughout the nation is polygamy, where men are frequently pressured to have relationships with multiple women to demonstrate their dominance.

[13] Levirate marriage is a practice that requires the widow of a man to marry his surviving brother in order to continue the relationship between their respective groups that was established by the initial marriage.

2.1.4 Implications of kinship systems for the well-being of women and children, both in the DRC and elsewhere

Table 2.1: The effects of kinship systems on women's and children's outcomes

	Patrilineal	Countries	Matrilineal	Countries
Women's preference for competition	Men are far more likely to compete than women.	Tanzania (Gneezy et al., 2009)	Men are not as competitive as women.	India (Gneezy et al., 2009)
Women's preference for risk	Patrilineal women are significantly less risk-averse than their matrilineal counterparts.	DRC (Lowes, (2018)	Matrilineal women exhibit similar preference for risk taking	DRC (Lowes, 2018)
Women's preference for political participation	In patrilineal communities, men are more likely than women to participate in politics and support a leaner welfare state.	India (Brulé & Gaikwad, 2021)	In matrilineal tribes, women are more involved in politics at the grassroots level than men.	India, (Brulé & Gaikwad, 2021)
Exposure to domestic violence	Patrilineal culture appears to be more violent towards women than matrilineal culture.	Bangladesh (Karim et al., 2021)	Women experience less domestic violence.	Bangladesh (Karim et al., 2021)
Health	Gender disparities in health are directly correlated with cultural influences on health, such as inequalities in autonomy and access to resources.	China (Reynolds et al., 2020)	Children of matrilineal women are 8% less likely to have been sick than those of patrilineal women.	DRC (Lowes, 2018)
Education	Patrilineal Palawan in the Philippines have a lower education level than matrilineal Teop in Papua New Guinea.	Philippines & Papua New Guinea (Pondorfer et al., 2014)	The education level of Matrilineal Teop in Papua New Guinea is higher than that of Patrilineal Palawan in the Philippines.	Philippines & Papua New Guinea (Pondorfer et al., 2014).
Bride-price/dowry	Practice bride-price, which may encourage the earlier marriage of daughters.	Sub-Saharan Africa, India (Corno et al., 2019)	Matrilineal societies are significantly less likely to pay bride-price.	DRC (Lowes, 2020)
Gender norms	Women have limited access to and control over resources, limited inheritance rights, and men manage their sexuality.	Sub-Saharan Africa (Chigbu, 2019)	Women have more choice with regards to marital partners, marital residence, divorce.	India (Abraham, 2017)

Source: Created by the author

There is a growing body of literature that acknowledges the increasing significance of cultural practices, particularly kinship systems, in determining the outcomes for women and children, and a large number of works have been written about the DRC within this context. As indicated in Table 2.1 above, the vast majority of research on the effect of kinship on women and children focuses on women's preferences, domestic violence exposure, and the health and education of children. However, other studies have

investigated the effect of these cultural practices on variables such as bride price and gender norms.

Gneezy et al. (2009) conducted a controlled experiment in two distinct societies, the Maasai of Tanzania and the Khasis of India, to determine how the kinship system influences women's preference for competition. The Khasi culture is matrilineal, whereas the Maasai culture is patrilineal. In patrilineal societies, the study revealed that women are less competitive than men. In a matrilineal society, however, women are more competitive than men. The findings were attributed to three possible explanations, including nature, in which an environmental factor may have caused matrilineal women to follow a different evolutionary path and, as a result, have different psychological profiles than other women. The difference in competitiveness may also be due to nurture, which is consistent with the hypothesis that it is caused by culture rather than biological or evolutionary factors. Finally, the difference may be the result of the co-evolution of nature and nurture, which means that females' preferences for competition may be determined by cultural or environmental factors rather than biological or evolutionary factors.

Lowes (2018) investigated how gender differences in willingness to take risks are affected by kinship structure among individuals from 27 different ethnic groups living along the matrilineal belt in Central Africa, with a focus on the DRC. According to her research, matrilineal women are more likely to engage in risky gambles, whereas patrilineal women are less likely to do so. It is possible that the fact that women in matrilineal societies enjoy higher levels of prestige and respect than women in patrilineal societies is one of the factors contributing to this phenomenon of women in matrilineal societies being more willing to take risks. Importantly, they have greater degree of control over their resources and, as a direct result, they are in a better position to protect themselves from possible adverse effects that could result of taking risk, (Lowes, 2018) and Pondorfer, (2014).

Brulé and Gaikwad (2021) conducted a study in northeast India, where matrilineal tribes coexist with patrilineal communities, to identify women's preference for political participation. They identified and tested the influence of cultural norms governing wealth entitlements seen through lineage on the gender gap in political participation and economic policy preferences. In patrilineal communities, their study revealed that men are more likely than women to participate in politics and support a smaller welfare state. In matrilineal tribes, women are more politically active at the grassroots level than men. These findings emphasize the importance of cultural norms in shaping political access and priorities. According to the study, lineage systems define a broader set of norms defining women's financial agency, such as those governing investments in education, skill accumulation, labor market integration, career advancement, and care provision. In other words, a larger tapestry of cultural norms structuring women's access to resources is likely to drive gendered differences in state engagement and policy preferences, shaping the welfare state's very infrastructure.

With regard to the kinship system and women's exposure to domestic violence, Karim et al. (2021) investigated gender differences in marital violence among the matrilineal minority Garo, patrilineal minority Santal, and patrilineal majority Bengali communities in rural Bangladesh. According to the findings of this study, matrilineal Garo women experienced less domestic violence than patrilineal Santal and Bengali women. The study attributed the differences in marital violence to the social organization of the community, and it appears that the patterns and levels of marital violence among the patrilineal Bengalis are more similar to those of the patrilineal Santals than those of the matrilineal Garos. This demonstrates that the roles and power dynamics of men and women vary among these diverse ethnicities.

Regarding the impact of the kinship system on health, Reynolds et al. (2020) argued that women endure more morbidity than males, while living longer. This is commonly attributed to biological differences between the sexes; however, in most societies where these disparities are observed, men are favored by gender norms. To test

the hypothesis that women's autonomy in matrilineal groups may have health advantages, Reynolds et al. (2020) examined the gender disparities in inflammation and hypertension among patrilineal and matrilineal Chinese Mosuo. Matrilineal groupings of the Mosuo, a society with both matrilineal and patrilineal subpopulations, were found to have decreased and even reversed gender inequalities in chronic disease, according to the findings of the research. Thus, cultural factors on health, such as uneven access to autonomy and resources for men and women, may be directly linked to gender inequalities in health and chronic illness. Similar findings were made by Lowes (2018), who found that in the DRC, children of matrilineal mothers had an 8% lower likelihood of experiencing sickness than offspring of patrilineal women.

With respect to level of education, Pondorfer et al. (2014) compared male and female risk preferences and stereotypes in two Pacific Island societies: patrilineal Palawan in the Philippines and matrilineal Teop in Papua New Guinea. During the process of describing the principal socioeconomic and demographic characteristics of the subjects from the two societies, the results revealed that matrilineal Teop women have a higher educational attainment than patrilineal Palawan women. This difference in educational attainment reflects the different social status of women in the two societies. While all Teop women in the sample have formal education, approximately 25% of Palawan women do not. Pondorfer et al. (2014) claimed that the results of their study were influenced by gender stereotypes, which are influenced by either nurture, or a combination of nature and nurture. In a similar vein, Lowes (2018) found that the children of matrilineal mothers in the DRC have 0.15 additional years of schooling compared to children of patrilineal mothers. According to the preceding discussion, every social grouping in the world possesses specific traditional cultural practices and beliefs, many of which are derived from lineage systems. Some of these traditional cultural practices and beliefs are advantageous for all members, while others, such as gender-based discrimination, are detrimental.

2.2.4 Influence of industrialization and modernization on cultural practices in the DRC

Several theories have been proposed regarding the role of industrialization and modernization in cultural practices. Karl Marx and Daniel Bell, both modernization theorists, stated that economic growth causes significant cultural changes. Some, such as Max Weber and Samuel Huntington, however, believe that cultural values have a long-term and independent impact on society. Inglehart and Baker (2000) used data from the three waves of the World Values Surveys, which comprise 65 societies and 75% of the global population, to test the premise that economic progress is associated with systematically changing fundamental values. The results show both a major change in culture[14] and the preservation of various cultural traditions.

These findings are completely consistent with observations in the DRC. In the preceding section "2.1.2 The DRC's Social Structure Throughout the Colonial Period", it was stated that elections held one month before the country's independence in June 1960 demonstrated that the DRC's family social system and traditions had survived the colonial era and that cultural practices based on lineage systems have not only withstood the test of time but are still thriving. While we recognize the adoption of many Western ways of life in the DRC as part of modernization and industrialization, as demonstrated throughout this dissertation, the introduction of those western elements into Congolese society is occasionally causing serious friction and tension with traditional cultures.

2.3 Intergenerational transmission of education in the DRC

Education transfer between generations is seen as an indicator of educational mobility, as covered extensively in this dissertation's "background section." (Huang, 2013). It is

[14] Modernization, as defined by Britannica (2021), is the process by which a civilization transforms from a rural and agricultural to a secular, urban, and industrial condition. Industrialization is directly related to it. Individuals become more significant as cultures modernize, progressively replacing the family, community, or occupational group as society's fundamental unit. As institutions grow more specialized, the division of labor that is typical of industrialization is also implemented. Society gradually evolves to be ruled by abstract concepts established for that goal, rather than by tradition or custom. Traditional religious beliefs, as well as distinguishing cultural qualities, usually lose prominence.

therefore important to determine whether the rise in inequality is the result of an economic structure or merely a reflection of the unequal distribution of opportunities within society, which may be caused by an insufficient chances for schooling or a low level of education across generations (Azomahou & Yitbarek, 2016).

In a study examining how family descent systems affect how generation imparts its knowledge to the next for the DRC cohorts between 1940 and 1989, Loleka (2021) argued that the estimated mean regression coefficient demonstrates a tremendous consistency and persistence in education over a 49-year period. Additionally, the results demonstrate that intergenerational educational persistence has declined for men in recent cohorts while somewhat rising for girls in the DRC, implying that children's prospects in the country are still linked to their parents' socioeconomic status, not to mention that high persistence of educational achievement across generations, as made evident by the findings of this study, (Loleka, 2021), limits opportunities in the labor market and beyond. This topic will be covered in more depth in Chapters 5 and 6 of this dissertation, which will present a more comprehensive picture of the patterns, magnitudes, and process of educational transfer from generation to generation in the DRC.

2.4. Current situation of education in the DRC

2.4.1. Evolution of the current education system in the DRC

As discussed extensively in Sections 2.1.2 and 2.1.3 of Chapter 2, Belgian missionaries introduced an education system to the DRC during the early colonial period around the 1900s. The education sector, however, remained relatively unsophisticated until 1940, as its initial purposes were to teach indigenous people to read and write in the administrative authority's language, and to advance religious agendas. The first secondary schools were built in 1948, and six years later in 1954, the country opened its first university, known at the time as Lovanium University, now the University of Kinshasa. This was also founded by Catholic Christian missionaries. In 1956, the colonial administration established the second university, the Congolese Official University. In 1963, the

Protestant Church established a second private university, the Free University of Congo. Between 1965 and 1966, 14 Higher Pedagogical Institutes and Higher Technical Institutes were established in the country to train teachers and professionals.

As noted in section 2.1.3, after the DRC attained independence in 1960, postcolonial Belgium continued to support and expand the country's massive educational investment, with the Congolese Ministry of Primary, Secondary, and Vocational Education (MEPSP) budget accounting for approximately 25% of total government spending (Boyle, 1995). In 1971, when President Mobutu's government had nationalized schools, the National University of the Congo was established as a coordinating body for all universities in the country, both public and private.

In 1974, the management of all primary and secondary schools was withdrawn from religious groups. Nonetheless, this was only temporary, since in 1977 an agreement was struck between the government and religious groups to restore control of the schools to the local communities, which included members of the Roman Catholic, Protestant, Kimbanguists, and Islamic religions. In 1981, the original universities and institutes that had previously functioned as a unified body under the National University of Congo were allowed to re-establish themselves as different entities. The DRC currently has a total of 922 universities and institutes of higher education, 406 of which are public and 516 private.

2.4.2 The organizational structure of the education system in the DRC

2.4.2.1 Structure of the education system

The overall structure of the DRC's education system is 6-2-4-3-2-4, with 6 years of primary education, 2 years of lower secondary education, and 4 years of upper secondary education. Students then have the option of enrolling in a higher education institution offering a 3-year undergraduate degree (first cycle), or up to 5 years for a licence degree (second cycle), followed by 2 years for the masters and 3 to 5 years for the doctorate, as

per the new Bachelors-Masters-Doctorate (BMD) system adopted in the new 2014 framework law (see Table 2.2)

Table 2.2: The structure of the education system in the DRC

Education levels	Type of educational institution	Theoretical age-specific	Minimum level required for enrollment	Duration (Years)	Title of the credential conferred
Pre-primary (optional)	Early Childhood Education	3-5	None	3	Certificate
Primary	Primary schools	6-11	None	6	Certificate of Primary Elementary Studies
Secondary	General	12-17	Certificate of Primary Elementary Studies	6	high school diploma [a]
	Pedagogical				
	Technical				
	Professional	12-16		5	Vocational training certificate
Higher education institutions	Higher Pedagogical Institute	18-20/22	High school diploma	1st cycle 3 years	Undergraduate degree in applied pedagogical programme [b]
				2nd cycle 2 years	Licence in applied pedagogical programme [c]
	Higher Technical Institute	18-20/22	High school diploma	1st cycle 3 years	Technical engineer
				2nd cycle 2 years	Engineer
University	University	18-20/22	High school diploma	1st cycle 3 years	Undergraduate degree
				2nd cycle 2 years	Licence [d]
				3rd cycle 2 years	Master's degree
		With no obligation	Master's degree	3-4	Doctorate

Source: Created by the author based on the World Bank and the Congolese Ministry of Education

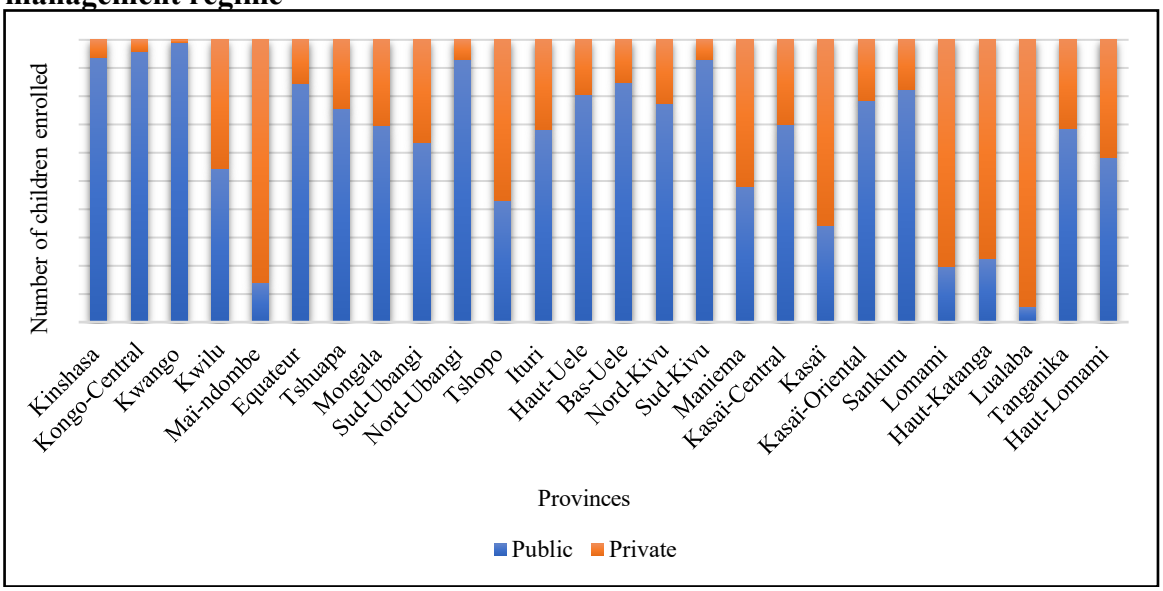
Notes:
a: High school diploma, students who complete the short cycle of teacher training colleges receive the Brevet d'instituteur, while those who complete the long cycle receive the State Diploma in Pedagogy, allowing them to teach in primary schools.
b: Undergraduate degree in applied pedagogical program, qualifies recipients to teach in the first four years of secondary education.
c: Licence in applied pedagogical program, qualifies recipients to teach in the last two years of secondary education.
d: Licence, this cycle lasts three years in human medicine and veterinary medicine and results in the titles of Doctor of Medicine/Doctor of Veterinary Medicine.

2.4.2.2 Pre-primary education

The DRC's pre-primary education cycle, as shown in Table 2.2 above, targets children aged 3-5 years old, but it is non-compulsory, and the trend indicates that the practice is still primarily an urban phenomenon. As illustrated in Figure 2.4 below, the private sector's provision of pre-primary education in the DRC is rapidly expanding. The

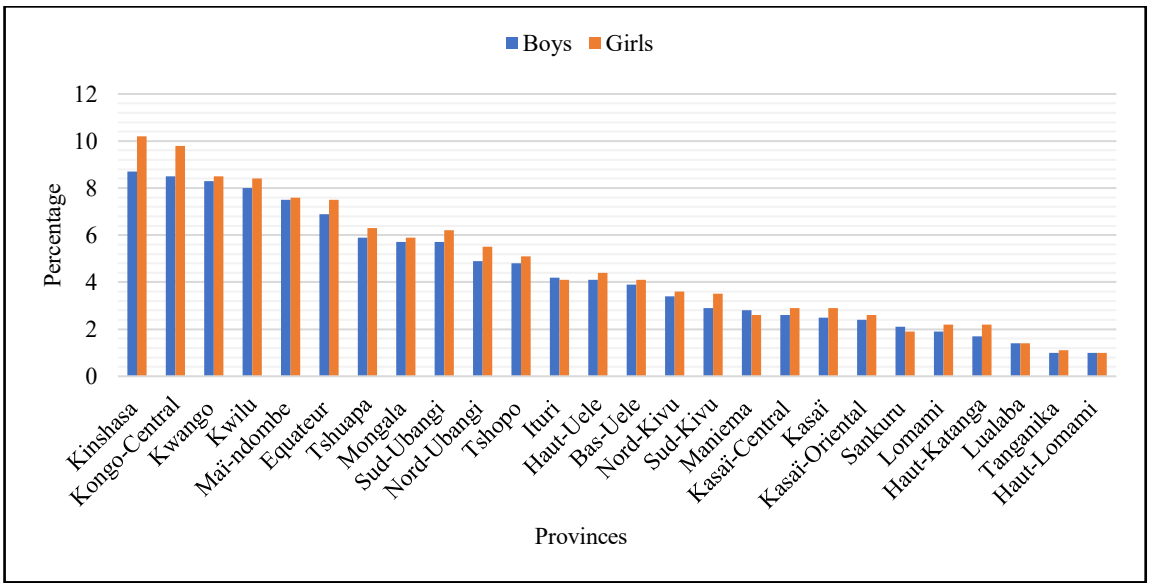
curriculum emphasizes the use of the local languages to help young children develop their motor and learning skills. Pre-primary education is a key part of the education sector's plan to increase enrollment, improve on-time entrance, and get children ready to fully participate in the primary cycle of schooling. Even though participation is still low (Figure 2.5), the gender enrollment gap is getting smaller in all 26 provinces of the DRC.

Figure 2.4: Number of children enrolled in pre-primary by province and management regime



Source: Created by the author based on the DRC's statistical yearbook 2020

Figure 2.5: Gross enrollment rate in pre-primary schools by province and gender

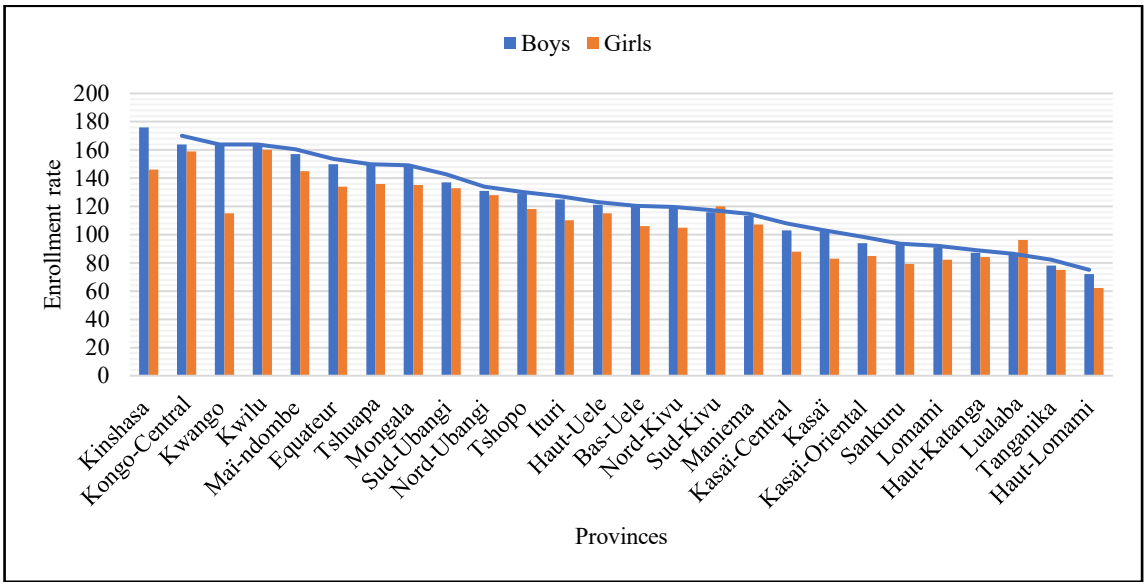


Source: Created by the author based on the DRC's statistical yearbook 2020

2.4.2.2 Primary education

As shown in Table 2.2, official schooling in the DRC begins with the six-year primary education cycle, which is compulsory and free for children aged 6 to 11. Figure 2.6 displays gross enrollment as there are no comprehensive data on primary school net enrollment[15] by province or gender. Gross enrollment data for the DRC portrays ratios greater than 100 %, indicating serious systemic issues, including a sizeable proportion of students who are older than the official age group. This ratio also clearly displays other factors, such as late enrollment, early enrollment, or repetition, which cause the total enrollment to exceed the population of the age group corresponding to the official level of education.

Figure 2.6: Gross enrollment rate by province and gender in primary education



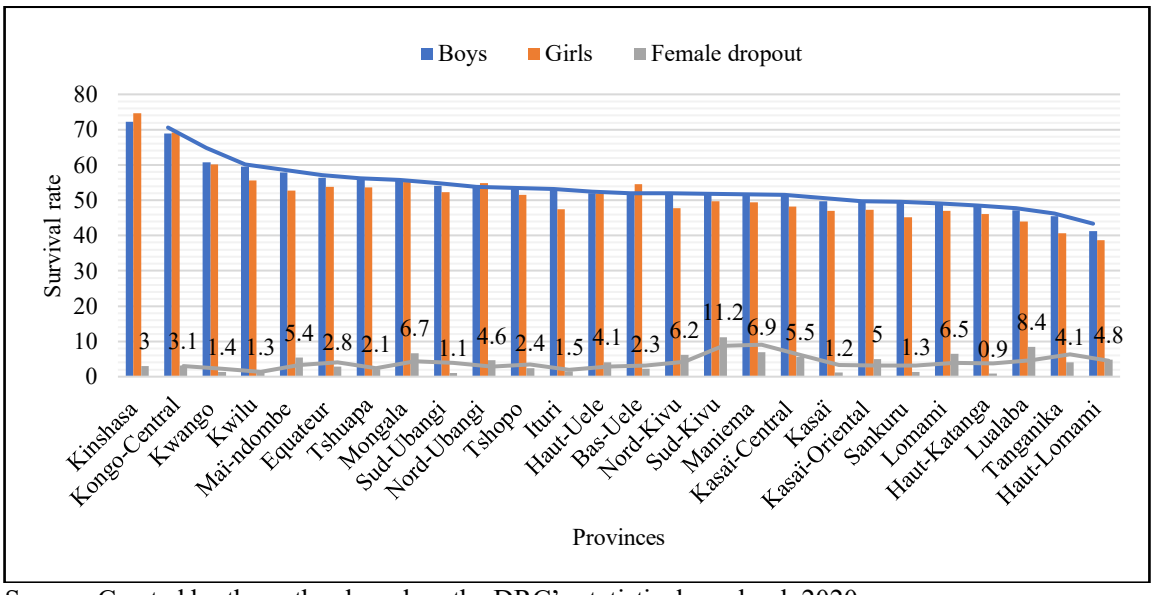
Source: Created by the author based on the DRC's statistical yearbook 2020

This cycle of the education system in the DRC is divided into three levels, each lasting two years: elementary, middle, and terminal. To mark the end of the primary cycle,

[15] **Net enrollment**: only children of the official school age, as defined by the national education system, are included in the net enrollment. Small discrepancies in children's reported ages may occasionally cause net enrollment rates to exceed 100 %. At the time this dissertation was written, the DRC's net enrollment rate was 78 %, with 78.7 % in urban areas and 77.4 % in rural areas. Net enrollment rate more accurately reflects coverage and internal efficiency than gross enrollment ratio because it excludes overage and underage students. It is useful to compare the gross enrollment ratio and the net enrollment rate to capture the incidence of overage and underage enrollments.

all grade 6 students take the national primary school leaving examination called TENAFEP. The national exam is provided by the province's education department and tests students on three subjects: mathematics, French, and general culture. The TENAFEP exam results are combined with the student's school grade to determine whether the student has successfully completed primary school and can obtain a Certificate of Primary Studies and progress to lower secondary school. While the DRC has significantly increased access to primary education, one of the most difficult challenges in its education system is keeping those students in school and having them learn. Figure 2.7 shows that the country's survival rate to primary education is less than 60%, compared to the global average survival rate of 85%. The low survival rate in the DRC also demonstrates the importance of parental education, because evidence suggests that the higher the level of education of the parents, the greater the likelihood that their children will survive this cycle of education; the level of education of the mother is especially important for children's primary school survival (Dubow et al. 2009; Li & Qiu, 2018).

Figure 2.7: Survival rate by province and gender in primary education

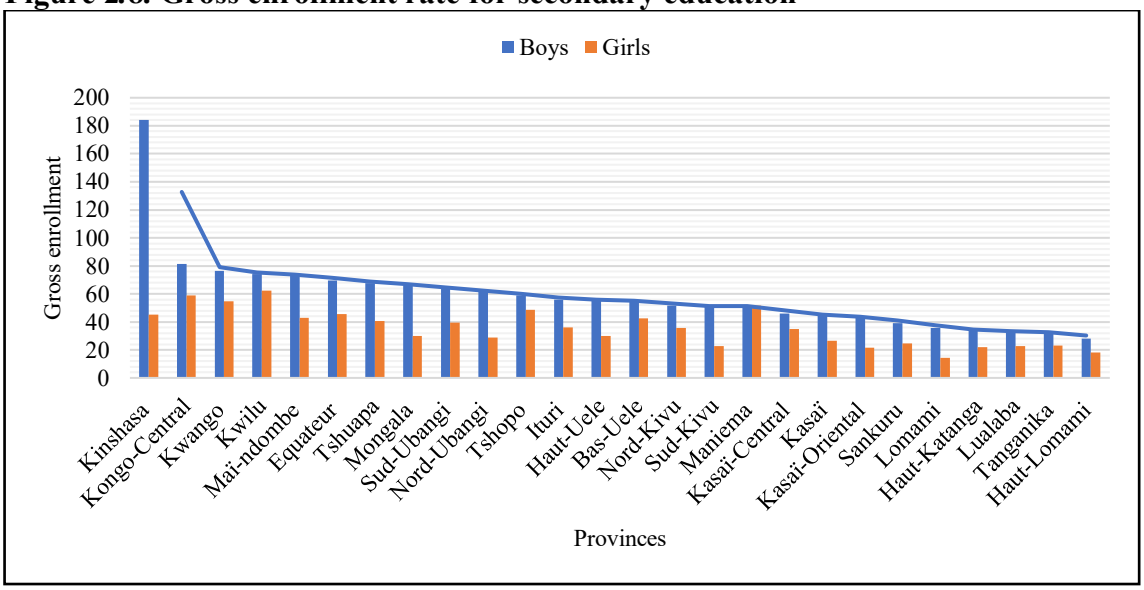


Source: Created by the author based on the DRC's statistical yearbook 2020

2.4.2.3 Secondary education and vocational training

The DRC has two secondary school options as shown in Table 2.2: the long cycle, which offers three streams of education: general, pedagogical and technical, and the short cycle, which offers one stream of education geared toward professional and vocational training. Secondary education is primarily for students aged 12 to 17 and can last up to 6 years, depending on the path chosen by the student.

Figure 2.8: Gross enrollment rate for secondary education

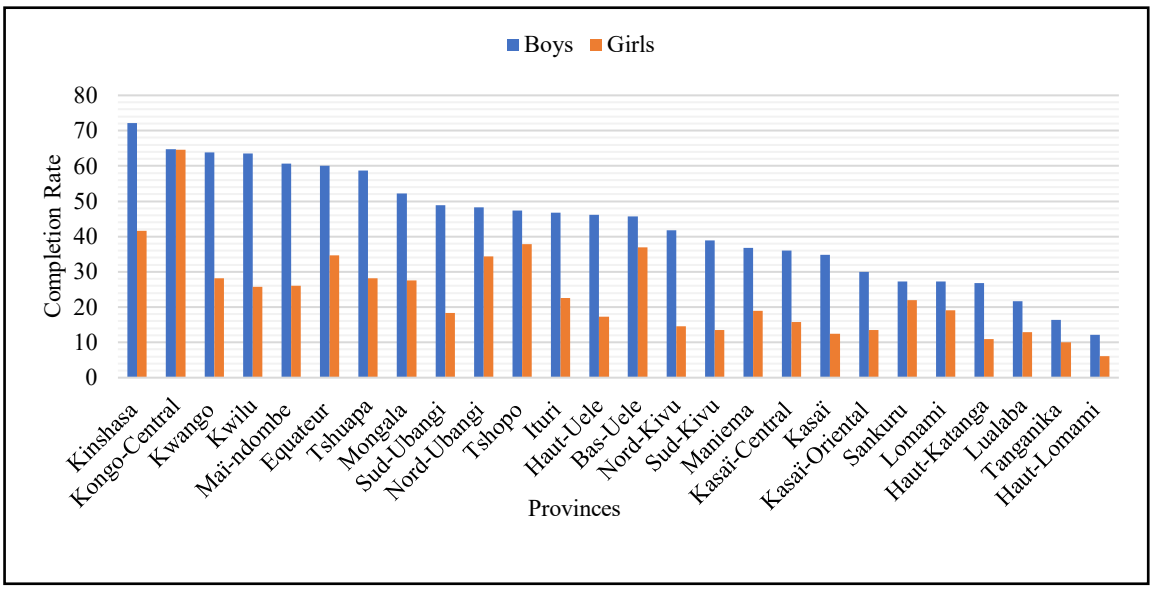


Source: Created by the author based on the DRC's statistical yearbook 2020

Despite the country's remarkably fast expansion of basic education coverage average net primary school enrollment reaching nearly 80%, up from less than 40% in the 1990s, secondary enrollment in the DRC is still very low (around 40%). Even more concerning is the low participation of girls in secondary education across the country's 26 provinces. Similar to the primary level, the end of the first option of secondary education is marked by a national examination prepared and administered by the National Examination office, the MEPSP's coordinating office. The examination result is combined with the student's school grade to determine whether he or she has passed and is eligible to receive a national certificate (high school diploma). Students who complete

the second option receive a Certificate of Professional Aptitude (CAP). Even though it is extremely difficult for families in the DRC to send their children to secondary school, only about half of the students who enroll in this level of education complete it. Figure 2.8 depicts this particular aspect. In all provinces, the percentage of boys who complete secondary education is slightly higher than the percentage of girls, reaching 70% in the capital city.

Figure 2.9: Completion rates in the secondary education in the DRC



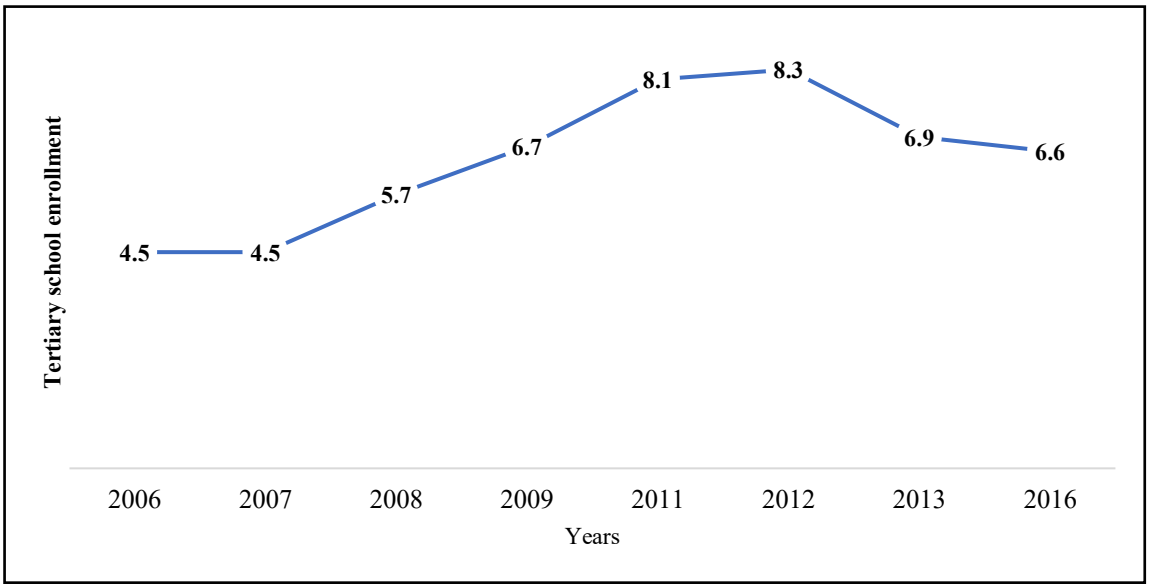
Source: Created by the author based on the DRC's statistical yearbook 2020

2.4.2.4 Tertiary education

In order to be accepted into tertiary education in the DRC, students must first earn the national certificate, which is also referred to as a high school diploma, at the conclusion of the secondary education cycle. However, some institutions in the country will also accept students who have passed the university's common entrance exam. According to Figure 2.9, the average gross enrollment rate in tertiary education is only 10% in the DRC, which is similar to many other countries in sub-Saharan Africa. There are three types of higher education institutions charged with providing tertiary education services:

universities, technological institutes training engineers, and pedagogical institutes in charge of training teachers (see Table 2.2).

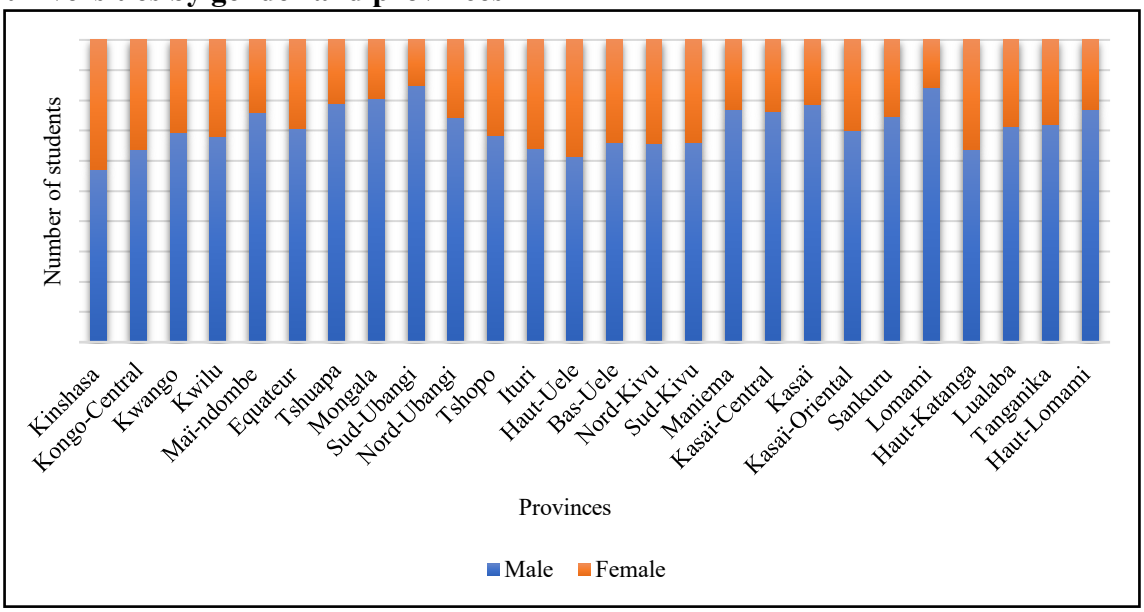
Figure 2.10: Proportion of students enrolled in higher education institutions



Source: Created by the author based on the DRC's statistical yearbook 2020

In addition, the low salaries of faculty, lack of research funding and equipment, as well as limited autonomy, provide disincentives for professors to remain in the universities of the DRC. Fees, as well as the quality and the relevance of education, are among the factors contributing to some of the most significant barriers to enrollment in higher education in the DRC. Moreover, if those institutions of higher education should serve as a vehicle for adult education and vocational training for the workforce, two out of every three graduates of Congolese universities are unemployed. The current structure of higher education includes a 3-year undergraduate degree, a 2-year license, and a 2-year Diplôme d'études Supérieure (DES/DEA). The third cycle of higher education takes 3 years for doctors. After license, the doctor's course may take up to 4 to 5 years (Table 2.2). Figure 2.10 shows that women's participation in higher education is extremely low across the country.

Figure 2. 11: Number of students enrolled in higher education institutions and universities by gender and provinces



Source: Created by the author based on the DRC's statistical yearbook 2020

CHAPTER 3: LITERATURE REVIEW

3.1. Transmission of educational attainment across generations

Education has many benefits, including increasing earnings and promoting the general welfare through positive externalities such as good jobs, as well as increasing the freedom of ordinary people to choose who they want to be, what to do for a living, and how they want to live. Education economists are concerned how much one generation's lack of educational opportunity will harm that generation's offspring. However, while most analyses are unable to distinguish between the effects of parental education or assume that adults who pursue further education would be likely to encourage their children to pursue more education even if they did not have the ability to do so themselves, this dissertation investigates parental transmission of education by comparing the outcomes of lineage group descents with their offspring and grandchildren. Educational attainment, decision-making power, and whether a female child attends school are all outcome measures. The intergenerational education persistence is the coefficient derived from the regression of children's years of schooling on their parents' years of schooling (Azam & Bhatt, 2015). Greater persistence implies lower relative intergenerational education mobility and vice versa.

A growing body of literature recognizes the significance of a convergence consistent with today's estimates and interpretations of father-child income and socioeconomic status correlations, such as Sacerdote (2005) and Borgerhoff Mulder M et al. (2019). With this directive in mind, Funjika and Getachew (2019) conducted a study in eight different African nations, including four colonies that used to be French and four that used to be British, and found that the rate at which parents pass on their education to their children is anywhere from 0.4 to 0.7. This result is the same as what Hertz et al. (2007) and Azomahou and Yitbarek (2009) found for African countries (2016). Moreover, the study's results demonstrate that, particularly in former British colonies, changes in

ethnic capital have a higher influence on children's educational performance than changes in parental capital. The variation in opportunities for advancement across colonies was caused by differences in institutional colonial administrative styles, and this disparity was shown to be ethnically based, demonstrating the importance of ethnicity as a variable in studying the transmission of education between generations in Africa.

In a similar vein, Alesina et al. (2019) found significant heterogeneity both across and within countries in their study mapping and exploring mobility in educational attainment and its correlates across African countries, provinces and districts using matched parents-children census-level data from 23 countries. Their analysis, for example, showed that education mobility is significantly higher in regions and countries with relatively higher literacy levels and lower in regions and countries with relatively lower literacy levels, implying strong persistence. In addition, variation in literacy rates of old generation across regions explains more than half of the observed variability in intergenerational education mobility, implying a significant persistence of initial educational levels across space. Moreover, the analysis showed that persistence in educational attainment is stronger for rural households as compared to urban, which is consistent with rising African urbanization over the last few decades.

The transmission of educational attainment from generation to generation is a strongly debated topic worldwide. Belzil and Hansen (2003) provided another explanation for how educational attainment is passed down through generations by using a structural dynamic programming model and the National Longitudinal Survey of Youth in the United States to examine the relative weight of individual specific abilities and family background variables in explaining cross-sectional differences in educational attainment. According to the authors, each type of ability consists of two parts: one related to family background traits and another to a residual component that is specific to the individual. In light of this, they found that factors related to family-background, particularly parental education, explained about 68% of the variations in cross-sectional

educational attainment. Whereas pure person-specific ability accounted for just 15% of the explained cross-sectional variability in educational attainment. When linked with ability, family background explained 17% of the variation.

Moving the topic on education generational transfer to conservative nations with a very rigid caste structure, such as India, Hnatkovskay et al. (2013) argued in their study that structural changes in the country have resulted in the removal of caste-based impediments to socioeconomic mobility in India over the last 20 years. In terms of educational attainment, the authors compared the intergenerational mobility rates of India's historically deprived scheduled castes and tribes (SC/ST) to those of the rest of the workforce using survey data from consecutive rounds of the National Sample Survey. The authors found that intergenerational education attainment of SC/STs converged to non-SC/ST levels between 1983 and 2005 has been decreasing in the first wave of their data, but then a faster rising in the last wave.

Sato and Shi (2007) investigated the factors influencing the intergenerational linkage of education in rural China using data from a large household survey. Three generations of students who graduated from high school between the pre-1949 era and the start of the 2000s were included in their study on the effect of parental socioeconomic position on children's education. According to the results of the study, the family's socioeconomic condition continues to impact the intergenerational transfer of schooling. Despite similar parental education, family wealth, and other family characteristics, children from landlord or rich peasant homes were more likely to attain a higher degree of education. In the post-reform era, education was passed down from one generation to the next through a family culture that put an emphasis on schooling. This family culture grew out of a reaction to class-based social inequality during the Maoist period.

Wendelspiess Chávez Juárez (2015), who examined three channels, including biological, economic, and education-to-education, in an effort to quantify the relative importance of various transmission channels that generate high levels of intergenerational

correlations in education, particularly in Latin America, is supported by these findings of Sato and Shi (2007). Using a methodology based on simultaneous equations, and data from Mexico. The results of his study indicated that the family's financial position has a stronger impact on cognitive ability than heredity. The long-term economic prognosis appears more significant than present consumption levels. Particularly, the financial condition of the father has a significant impact on the educational performance of the child, both directly and indirectly via parental education.

Van Doorn and Wolbers (2011) studied intergenerational education transfer in 28 European countries. They focused on the development of industry, factors such as gender roles in the workplace, the kind of formal education, and dominant political beliefs. The authors also considered industrialization's rate. Their findings did not support the notion that industrialization alone decreases intergenerational education transmission. Despite being an important factor that positively influences a cohort's overall level of education in a country, the effect of parents' education on their children's schooling decreased due to the interaction of other contextual factors, such as female labor force participation and school system quality.

Dong et al. (2019) employed their own data to investigate how parents' educational levels influenced their children's academic progress in rural China. Interestingly, what has been revealed in the literature for a number of other nations is not necessarily indicative of the reality in China. According to the findings of their research, intergenerational education transfer is less widespread in rural China. Moreover, the data demonstrated that education had a substantial transmission influence among those born in the 1980s but not among those born before 1980. Furthermore, the results pass a variety of tests and robustness checks.

In their research to determine if parents with a higher level of education have children with a higher level of education in Norway, Black et al. (2005) utilized the reform of the education system undertaken in various cities at different dates in the 1960s as an

indicator of parental education. Despite substantial OLS correlations, their study found no evidence of a causal association between parents' education and their children's education. The authors discovered that 2SLS estimates are consistently lower than OLS estimates, with a positive relationship between mother and son education being the only statistically significant impact. These results demonstrated that the substantial connections between parents' and children's educational success are mostly due to family traits and inherited ability, rather than national education spillovers.

Patacchini and Zenou (2011) investigated intergenerational education transmission in Italy, focusing on the dynamic interaction of family and community factors. The authors developed a theoretical model that showed that the quality of the neighborhood and parental effort were important determinants of children achieving a given level of education. According to the findings of their study, the level of parental involvement in their children's educational goals seemed to be linked to the quality of the surrounding community. Unlike other studies done in the United States, this one found that the community, not the family, had a significant impact on how well children from low-income, low-education homes did in school.

3.1.1. Evolution of educational mobility through time and across generations

Intergenerational education persistence is the coefficient determined by regressing children's years of schooling on their parents' years of schooling, according to Azam and Bhatt (2015). Therefore, more persistence indicates less intergenerational schooling mobility, and vice versa. Using globally comparable data for parents' and children's education levels by age cohort for 30 countries, Lee and Lee (2019) assessed the intergenerational persistence of educational attainment and found its causes. The study's findings indicated that in the majority of nations, educational mobility has declined over time and across generations, albeit to various degrees between nations and throughout time. Intergenerational educational mobility increases with per capita GDP and decreases

with educational expansion, wealth inequality, and credit limitations, according to country-cohort panel regressions. In addition, the results highlighted the need for increasing public investment in education to promote intergenerational educational mobility.

Heineck and Riphahn (2009) in their study, examined the evolution of intergenerational education mobility in Germany for the birth cohorts 1929 to 1978 in terms of secondary school attainment. They tested whether the influence of parental educational background on child educational outcomes has changed over time. This was done to see if intergenerational education mobility was rising or decreasing over time. The findings of their research reveal that the educational background of a child's parents has not dropped much over the previous few decades.

Momo et al. (2019) investigated the relationship between environmental factors and intergenerational education transfer in 48 developing countries. They utilized GDP and industrial growth, public spending, the education system, infrastructure, health outcomes, political stability, and accountability as contextual factors, all of which are globally comparable macroeconomic and institutional measures. In terms of educational transmission, their findings bolstered the industrialization effect argument by indicating that the relationship between parents' and children's education is weaker in countries with higher levels of modernization. According to their findings, the relationship between parents' educational attainment and that of their children is less in countries with more access to education. This fits with the thesis on access to and quality of education by Ballarino and Bernardi (2016), which says that more access to and better quality of education make it less likely that educational inequality will be passed down from one generation to the next.

According to the most current results of an investigation done by Neidhöfer et al. (2018), who examined the intergenerational transfer of education in 18 Latin American countries over a 50-year period, mobility across generations in Latin America is

increasing on average. More than half of the people born in the region between 1940 and 1990 had a higher educational degree than their parents. According to the authors, this tendency seems to be driven by the large upward mobility of children from low-education homes, but there is also significant stagnation at the top of the distribution. Large gaps exist across nations with respect to assortative mating, income inequality, poverty, economic development, and public-sector funding.

According to the research presented in this section and in agreement with Mazumder (2015), many cultures seek to provide equal opportunity for achievement regardless of birth circumstances. Despite the challenge of quantifying equality of opportunity, social scientists have created intergenerational mobility indices that may be used as a general guide. Societies with families that are more likely to improve their relative socioeconomic status across several generations are more likely to have higher overall opportunities. There has been a large and expanding body of research on intergenerational mobility in terms of income, education, and profession in recent decades. At the moment, not all nations have access to the data needed for this kind of study. Nonetheless, a few notable outcome patterns have arisen. The Nordic nations seem to have the greatest rates of intergenerational mobility overall. Some criteria indicate that the United States and the United Kingdom have lower rates of intergenerational mobility than other developed countries. Third, emerging economies seem to have lower levels of intergenerational mobility, notably in Latin America and Africa.

Cross-country rankings in intergenerational mobility were examined by Blanden (2013), who found that although mobility was high in the Nordic countries, it was low in South America, countries in southern Europe, France, and other emerging countries. Blanden's research suggests that these disparities remain among social classes because of inherited wealth. He maintained that various calculations of social mobility showed radically different trends. He also found that mobility is positively associated with a country's education spending but negatively related to inequality and educational returns

when studying the factors that contribute to differences in earnings and educational persistence across nations.

Chen et al. (2018) studied the underlying mechanisms of this causal relationship by calculating the effect of parental education on children's education using methodologies developed during the Chinese Cultural Revolution. Their empirical research yielded a number of notable findings. According to their findings, intergenerational school persistence was stronger in urban areas with higher educational levels than in rural areas with lower educational levels. The nurturing effect is stronger and more substantial for dads than for mothers, according to the primary findings of instrumental variable estimation. A closer look at the mechanism behind the nurture effect finds that a father's education is partially conveyed to his children's education through the income channel. Even after controlling for fathers' income, parental education significantly increases children's education via the nurture effect. This suggests that other mechanisms, such as a healthier home environment, may exist and should be investigated further.

Bratberg et al. (2017) performed research on intergenerational mobility disparities in Germany, Norway, Sweden, and the United States. They observed that the United States has far lower intergenerational mobility than the three European nations, and even the most mobile area of the United States is less mobile than those of Sweden and Norway. Their study, which used a linear estimator of income share mobility, found that the four nations had relatively similar rates of intergenerational education transfer and education mobility. Using non-parametric forms of rank and income share mobility, the researchers found that people at the bottom of the income distribution in the United States had less opportunity to move up than people in Norway and Sweden.

Leone (2022) employed univariate econometric approaches to evaluate the variance in intergenerational educational mobility among Brazilian states using data from the 2014 national household survey (PNAD). The findings indicated a large variance in

mobility between Brazil's 27 federated entities as well as a strong relationship between mobility and economic disparity. This research presents empirical evidence for the existence of the so-called "Great Gatsby Curve," which depicts the transmission of economic disparity within a single nation and claims that higher levels of educational persistence over generations are related to bigger income inequalities. Moreover, the study's findings identified a specific rationale for this correlation: socially disadvantaged households may make fewer investments in their children's human capital when economic disparities are bigger. According to the study's convincing findings, children from families where neither parent has completed elementary school have significantly reduced odds of successfully completing any degree of schooling if they are residents of a state where the income difference is very large.

Golley et al. (2013) used the 2008 survey of rural-to-urban migration in China and Indonesia to trace the development of Chinese adults' educational attainment from 1941 to 1990. Their article showed that the connections between generations were weaker in rural and immigrant communities than in urban ones. Most of these children don't even finish junior high school, and some of the youngest groups fall further down the educational ladder than their parents. This means there is more mobility in rural and immigrant communities. Results also showed, though, that urban children seem to keep up with the educational level of their parents. The authors came to the conclusion that China's rural-urban gap is likely to get bigger because of the high rates of passing on education between generations in urban areas and the fact that some people move up or down in rural areas.

Similarly, Zhou and Dasgupta (2017) used the instrumental variable approach to study the intergenerational causality of educational transmission at the senior secondary schooling level among China's major cities. The paper studied senior secondary school closures in urban China between 1966 and 1971 to uncover the causal linkages between education and intergenerational transmission. By controlling for exogenous changes in

parental senior secondary school achievement over time and across places, the authors were able to account for selection bias and pinpoint the educational intergenerational transmission effect. When tested against several identification procedures and data sets, the authors demonstrated that their conclusion was sound.

Even though there have been several studies on the consistent links between parents' and children's educational achievement, Li and Zhong (2017) asserted in their study on intergenerational education transmission in Asia that there are still policy gaps that need to be addressed. The authors concluded that it is crucial to understand the underlying processes that give rise to these correlations. Intergenerational mobility, for instance, may be significantly impacted by changes in educational policy. Globally, higher education has grown significantly during the last several decades. The authors looked at how this growth affected China's intergenerational mobility. Their findings show that the expansion of higher education in China has lessened the advantage experienced by children of cadres in higher education participation and strengthened the connection between educational success levels between generations. The cadre-selection procedure may have given candidates' education and abilities greater weight as economic reform in 1979 progressed.

When discussing educational attainment across generations, it is often assumed that children live with both of their parents, according to the study by Leeuw et al. (2018) on the transmission of educational success between generations. However, fatherhood in non-residential settings is becoming more common in Western countries as the divorce rate rises. Using registration data from the Netherlands Kinship Panel Study (NKPS) and Statistics Netherlands' System of Social Statistical Datasets (SSD), they investigated the differences in intergenerational transmission between residential and non-residential fathers (birth cohorts 1960–1985). They asserted that non-residential fatherhood may impede procedures regarded as essential for passing down educational knowledge across generations. They discovered that, compared to residential fathers, non-residential parents

had less influence on their children's academic progress. The most recent SSD cohorts, however, show that there is no difference between parents who live at home and those who do not. The authors attribute the rise in shared custody agreements that has occurred since the late 1990s to cohort inequalities.

3.1.2. Transmission of intergenerational-educational attainment between genders as well as among lineage groups

The intergenerational-educational persistence is the regression coefficient of children's years of schooling on their parents' years of schooling (Azam & Bhatt, 2015). Therefore, greater persistence indicates less intergenerational education mobility, and vice versa. Emran and Shilpi (2015) examined the rates, tendencies, and process of educational mobility in India during a roughly 15-year period (1993–2006), focusing on possible gender and spatial inequalities (rural-urban, village-fixed neighborhood's impact). In contrast to several earlier studies stating that educational mobility in India has vastly increased over the last few decades, their research revealed no such change. Additionally, they looked at intergenerational correlation (IGC) in educational attainment and sibling correlation (SC) in order to assess the opportunity for upward mobility in post-reform India. Findings indicated that large gender and regional variations are hidden by average measures. They evaluate the associations between SC and IGC from two surveys for the same age cohort, and they find significant persistence, in contrast to Latin America, where there was minimal change in sibling and intergenerational transmission of education from 1991–1992 to 2006. Only urban women saw meaningful advancements, with low-class city women enjoying the greatest advantages.

In a different study about changes in how education is passed down from one generation to the next in Australia, Ranasinghe (2015) used a number of different measures to estimate the effect of parental education on a child's education, correlations between parents and children's schooling, and indexes of mobility for cohorts born from 1942 to 1991. Even though intergenerational education mobility and the average level of

education in Australia have both gone up over time, the statistics show that there are still big differences between regions and between men and women. For example, relative upward mobility was minimal, while immobility and downward mobility have mostly remained consistent over the last 50 years, and girls' educational attainment continues to have a far stronger correlation with their parents than boys. At lower levels of education, relative educational opportunities have increased over time, but at higher levels, the pattern has largely remained unchanged.

Latif (2019) examined patterns in intergenerational persistence in schooling in Canada for the birth cohorts 1940-1989 using data from the GSS 2011. In the study, researchers determined many measures of social mobility, including the Prais-Shorrocks index, the immobility index, the upward mobility index, and the downward mobility index. The results revealed significant gender inequalities in these indicators' patterns. Additionally, the research determined the coefficients of correlation between the fathers' and children's educational years. The findings revealed that although the correlation coefficient for girls somewhat declined during the course of the research, it significantly rose for boys. To separate the various intergenerational mobilities of the population groupings, the research also carried out a correlation decomposition. The findings of the decomposition revealed that, while the total contribution to the correlation of boys with somewhat less educated fathers has declined over time, it is still quite significant at 36% in the birth cohort between 1980 and 1989. Sons with less educated fathers still have a higher likelihood of having less schooling. Daughters with lesser levels of schooling than their fathers exhibit less perseverance. However, the grouping of highly educated fathers accounted for 60% of the correlation coefficient in the daughters' matrix. The likelihood of a son born between 1980 and 1989 earning a "doctorate, master's, or bachelor's" degree is 3.49 times higher than that of a son whose father has just "some secondary education." For the cohort of individuals born between 1980 and 1989, the indicator for girls is 2.81, which shows a declining tendency.

The "compositional effect," which states that social class backgrounds have a direct impact on educational outcomes, is another contribution made by Pfeffer and Hertel (2015). They assessed intergenerational schooling mobility patterns during the course of the 20th and early 21st centuries in the United States, as well as the factors that contributed to those trends, and found that there had been a little but steady rise in social mobility. The authors claim that despite major changes in the distribution of education and the absence of a discernible trend in class returns to education, the compositional effect's supremacy is partly attributable to the stability of class inequality in education. The results also serve as a warning to avoid confusing increased social class mobility with an overall trend toward more fluidity in the US. A long-term trend of increasing disparity in educational attainment connected to parental education is resisted by the compositional impact, referring to the direct relationship between parental education and the son's social-class achievement in this case.

Using information from nationally representative household surveys of parents of adults, Azomahou and Yitbarek (2020) investigated intergenerational transmission of schooling in nine Sub-Saharan African nations: the Comoros, Ghana, Guinea, Madagascar, Malawi, Nigeria, Rwanda, Tanzania, and Uganda. The research contains information on the levels and patterns of how many years of schooling are passed down from one generation to the next over a 50-year period, as well as rankings of the nine countries in relation to other nations. The study's results showed that all of the nations' estimated intergenerational elasticity (IGE), especially during the 1960s, had a diminishing cohort trend, inferring increased educational mobility for future generations. After gaining independence, the area made considerable investments in the growth of its human capital, and the pattern started to change. These changes took place along with significant changes to educational systems. The authors also discussed the diversity of the nations they studied, noting that intergenerational mobility was lowest in Comoros and Madagascar and greatest in Nigeria, Guinea, Ghana, and Uganda. Intergenerational

educational persistence, according to the authors, is falling, but it is stronger in the lower educational tail, suggesting that children of educated parents have access to a better degree of education than their less fortunate classmates. The degree of education of a girl is also more strongly correlated with that of her parents than that of a boy.

Recent research by Louw et al. (2007) looked at whether or not there was an increase in social mobility across generations in South Africa from 1970 to 2001 by analyzing the correlation between parental education and their children's human capital accumulation. As a solution, this study combines a formal assessment of intergenerational social mobility based on indicators developed by Dahan and Gaviria (1998) and Behrman et al. (2001) with a detailed descriptive analysis of the rise in academic attainment across different generations. Based on these measures, it is clear that South African children are now in a better position than most of their peers in similar nations to take advantage of educational possibilities, at least through lower secondary school. Both studies show that, regardless of age group, within-group social mobility has improved over time. Disproportionate racial gaps persist in tertiary education attainment and employment, highlighting a systemic problem. The achievement disparity between races widens at the postsecondary level.

In order to evaluate the causal impact of an extra year of parental education on their children's education, Piopiunik (2014) examined data from all West German states that had undertaken an obligatory schooling reform between 1946 and 1969. The research examined gender differences in intergenerational educational achievement. Even though previous studies showed that the change didn't have much of an effect on incomes, the author noticed that giving women an extra year of school made a big difference in how well their sons did in school. Other combinations of parent and child by gender were unaffected. The author next studied a variety of routes via which the education of mothers may have a good effect. Importantly, the author observed that adults with greater education respect their children's academic performance more.

Using three waves of household survey data (1993, 1998, and 2011) collected in Kyrgyzstan, Brück and Esenaliev (2018) examined trends in the transmission of education between generations in a lower middle-income transition economy to (i) estimate the scope of educational intergenerational mobility in Kyrgyzstan, (ii) look at how the transition has affected mobility in education, and (iii) measure the gender gap in educational mobility. They observed that educational mobility in Kyrgyzstan is comparable to that during the Soviet era. According to the authors, this high mobility was caused by the increase in higher education institutions between 1993 and 2004. According to a survey done in Eastern European countries, parental involvement in their children's schooling grew substantially in 2011. This correlation occurs among those aged 25 to 34, the group most influenced by the change in education and work experience. This suggests that although children with less educated parents have fewer educational opportunities, individuals from wealthier families are more likely to pursue higher education. The authors of the research made a link between the fact that gender disparities in estimates tend to reduce with time and the persistence of gender parity in Kyrgyzstan's educational system after the collapse of socialism.

Silles (2017) used a large sample of American Community Survey data on adoptees from 2008 to 2014 to look at the effect of parental education on children's performance in school for their age. The results revealed that the mother's education is not a significant predictor of the education of adopted children, despite having statistically substantial impacts on children born to her. The results of the study have also shown that for adopted white children, the father's education had a big effect on whether or not they stayed in the same grade, so the results were different for fathers. But it doesn't seem like the education of adoptive fathers has any effect on how well black children do in school. Several sensitivity tests were done to prove that these results are correct. Based on the differences in these patterns between white and black students, there may be racial differences in how education is passed down from one generation to the next.

Azam and Bhatt (2015) employed a state-of-the-art approach to locate unique father-son pairings that were typical of the adult male population throughout India for their research on intergenerational schooling mobility. Using this data on fathers and sons, they analyzed the intergenerational educational mobility in India during the 1940s and calculated India's global standing. They kept an eye on migratory patterns within and between Indian states, as well as the whereabouts of various socioeconomic groups. Finally, they looked at the intergenerational transfer of education to see whether there were any class or geographical inequalities. Their findings show that educational opportunities in India have greatly expanded for people of all ages, income levels, and regions. Despite the fact that most Indian states have become more mobile over time, there is still a significant disparity between the best and worst performing states.

Huang (2013) investigated whether the transfer of educational achievement from one generation to the next depends on how much money a family has, especially how many things they own. He wanted to know if this was a sign of educational inequality and a barrier to fair employment opportunities in the workforce and beyond. He found that the relationship between the number of years of schooling of the parents and the number of years of schooling of their sons is stronger when the family has assets. Using panel research and data on how income changes over time, this conclusion was reached. Also, the data suggest that household assets and parental education work together to affect educational attainment, which can be seen in the rates of female children in the 84 and 94 cohorts who went to college and graduated.

Daouli et al. (2010) in their study, investigated the impact of intergenerational mobility on Greek women's educational accomplishments. The last three Greek censuses as well as data from the Greek Household Budget Survey were used by the authors (1981, 1991 and 2001). They employed mobility indicators, regression analysis, decomposition methods, and traditional discrete choice models for analytical and estimate objectives. The findings of their study revealed that there has been a significant level of educational

mobility between generations during the preceding 30 years. Daughters' educational achievement is nonetheless influenced, although to a lesser extent, by their parents' educational attainment, particularly the educational attainment of mothers.

Bengtson et al. (2009) investigated the transmission of three elements of religiosity from one generation to the next between 1971 and 2000 using triads consisting of a grandmother, a parent, and a grandchild in combination with a generational sequential design. Attendance at religious services, religiosity, and religious ideology were among these factors. Grandparents had a considerable effect on their grandchildren's attendance at religious services and level of religiosity in 1971, but this influence had lessened by the year 2000, according to the research. In contrast, there was a significant grandparent-grandchild effect on the transmission of conservative religious ideas in the year 2000 but not in 1971. Furthermore, grandparents had an impact on all three aspects of their grandchildren's religious upbringing, both individually and collectively. This research supports the idea that religious behaviors and beliefs developed in nuclear and extended families are carried over into adulthood. Furthermore, the authors observed that grandmothers had a particularly strong influence on their granddaughters' religious beliefs and behaviors. If more research is not undertaken, this study may be used to demonstrate the impact of family tradition and descent.

Only one study looked at how different family lineage descent groups affected the way in which education was passed down from generation to generation in the DRC for the cohorts of 1940–1989. According to Loleka (2021), over a 49-year period, the estimated mean regression coefficient demonstrated a clear steady persistence in intergenerational transmission of education. In addition, the study's gender-specific findings showed that intergenerational persistence in education has markedly decreased for males in recent cohorts but slightly increased for females. The findings reveal that in recent cohorts, persistence over generations in educational attainment has risen for patrilineal descent groups while declining for matrilineal descent groups.

3.2. Intrahousehold's decision-making power and its influence on the schooling children

Over the past few decades, development policymakers have become more cognizant of the significance of gender issues for the efficiency of development. One of the most important findings from gender research is that women's ability to negotiate favorable intrahousehold resource allocations appears to be critical for a variety of important development outcomes. The development literature argues that how much power women have in their households affects factors such as children's health and education, as well as the general health and safety of women and girls. Women's bargaining power may affect how housework, farm work, and wage work are divided up, as well as other parts of household production. Since the 1980s, scholars have argued that family decision-making dynamics and resource allocation mediate many policies' effects on the well-being of children and women, according to Doss (2013).

Ponczek (2011) investigated the impact of the rural Brazil pension system, which was implemented in 1991, on measures of education and health in a study evaluating the effects of income and family decision-making on health and education. Making the claim that pensions are the only reliable source of income, particularly in Brazil. Consequently, changes in pension payments and eligibility restrictions may shift the balance of power in favor of the old. Their results indicated that the change has had a beneficial and substantial effect on children's school metrics, especially literacy for females living with a male pensioner. There is continuous evidence in the literature that females are more concerned about their children's quality of life than men are, thus these results are fairly surprising. According to the authors, these effects may be driven by inequalities in bargaining power between men and women in the family. There was no noticeable effect on health indices, according to the data.

Karimli et al. (2021) conducted a random controlled experiment in rural Burkina Faso to examine the effects of an economic-strengthening intervention on women's

agency in the context of monogamous and polygamous family structures and challenges to intra-household gender roles and obligations. The research also explored a particular route to learn more about how improved access to financial resources as a consequence of this intervention influences women's decision-making skills. According to their results, financial independence initiatives boosted women's engagement in making choices about their children's well-being but had no influence on women's participation in other family economic decisions. According to the authors, the majority of impacts were more prominent in the group that received family counseling and economic strengthening, which explicitly addressed normative views about children's well-being and gender norms. Also, they didn't find any evidence that better access to assets would help the intervention improve women's ability to make decisions in a variety of areas.

In their investigation of female household decision-makers, Schneebaum and Mader (2013) looked at how demographic factors like gender played into their subjects' decision-making abilities. According to the findings of their research, although men often make family financial choices, women typically decide on daily spending and child purchases. They also observed that having a housewife, more intrahousehold income, and greater educational disparity were all associated with a decreased chance of couples making choices jointly. There were some notable trends in household decision-making across countries. In southern European countries, for instance, a level of educational accomplishment did not appear to be a strong predictor of decision-making power and responsibility, whereas in countries in eastern Europe, women were more likely to make financial decisions when the household reported experiencing challenging economic conditions.

Tagat (2020) sought to explore objectively the impact of MGNREGS, one of the world's biggest social programs, on rural Indian women's home decision-making. By requiring that one-third of all employment be held by women and immediately depositing their income into their bank accounts, the MGNREGS might result in a favorable

improvement in family outcomes for women. The author used cross-sectional microdata gathered in five states to see whether the expanding deployment of MGNREGS had an effect on the number of female household decision-makers across various decision categories. According to the results, the introduction of the MGNREGS had a significant favorable effect on women's decision-making power regarding patterns of nutrient-rich food intake, children's education, and female labor supply.

Using panel survey data from the 2006 Egypt Labor Market, Roushdy and Namoro (2016) investigated and contrasted the impact of parent-specific characteristics, notably parental educational attainment, and household power dynamics on children's schooling and working hours. The empirical model for this aim was a reduced-form regression model informed by the collective rationality model of household decision-making. According to the findings of the research, fathers and mothers exhibit distinct influences on their children's academic and vocational aptitudes. The parental educational background has more complicated impacts. The findings supported the hypothesis that the mother's and father's relative decision-making abilities had distinct effects on children's well-being, particularly academic performance.

Li et al. (2021) investigated the link between social norms and economic development in China as a consequence of women's negotiating power in their research. The writers also looked at the elements that determine mother's surname inheritance in China and how they affect children's health and education. Mothers who were younger, better educated, and from locations with a lower sex ratio were more likely to name their children after their family names, according to the study. The greater negotiating power of mothers on the development of children's human capital resulted in improved health and educational results for these youngsters.

Annan et al. (2021) examined the influence of the power dynamic on women's health, reproductive outcomes, children's health, and children's education in 23 sub-Saharan African nations. They adopted a non-traditional method of measuring women's

autonomy in the study, which is closely tied to conventional conceptions of power. As in prior studies, the data demonstrated that when a woman's authority was acknowledged by her husband, the well-being results for her and her children were frequently the best. Giving women more decision-making authority than their husbands was also shown to be better for their reproductive health and the health of their children, but worse for emotional violence as compared to husbands having control.

Parada (2022) looked at how the Plan de Atención Nacional a la Emergencia Social (PANES), a cash transfer program for low-income households in Uruguay from 2005 to 2007, affected four different things: the likelihood of divorce, changes in household size, the distribution of household chores, and the likelihood that women will become household heads, a position that involves making decisions. When all beneficiaries were looked at, there were no effects on how likely they were to help out around the house, but there were effects based on gender. Even though most of the program participants were women, there was no change in the likelihood that a woman would become the head of her household.

Irshad et al. (2021) conducted a study that recorded elderly people's engagement in decision-making processes within their own families in India. For this research, data from the India Longitudinal Ageing Study for the years 2017-2018 were utilized to compile a nationally representative sample of 21,662 individuals aged 60 and older. Participation in the decision-making process inside the house was measured by acts such as a daughter or son's marriage, the purchase and sale of property, the giving of a present to the family, the education of a family member, and the administration of social or religious events. According to the study, the involvement rate of elderly individuals tends to decline with age. This research found that male and female older adults, as well as rural and urban older adults, poor older adults, and affluent older adults, all engage in family decision-making activities differently. It has been shown that older individuals who are in great health, are socially active, and lead a healthy lifestyle are more likely to participate in household decision-making.

3.2.1. Effect of women's decision-making power on children's school attendance

Min Soo et al. (2011) examined the notion that the amount spent on each child's education is impacted by power relations within a family in their research. They developed a direct measure of a woman and her husband's bargaining power inside a home based on a direct measure of power voice in household decision-making derived from data from the Indonesian Family Life Survey. A family will spend more money on their children's education if the woman has a bigger voice, according to the results of their research. Other studies found that controlling for the relative power of the woman and husband reduced the marginal effects of a wife's income. The authors concluded that if women had more control over home resources, household income would increase. Alternatively, if power is the only factor that counts, giving women money without altering their bargaining power would fall short of expectations.

In their research on the gender of children, household decision-making power, and family resource distribution in China, Li and Wu (2011) established a unique measure linked to a mother's contribution to a boy in the next generation. The authors say that the long-standing social norm in China is that sons are more valued than daughters. Only sons may carry the family name and inherit the property. As a result, in the country, women who bear sons may be treated with more respect by the elder generations and have a more prominent role within the family. The Chinese one-child policy restricted the number of children a couple may legally have and emphasized the significance of these children's gender. Therefore, the gender of the children may serve as a good indication of the mother's bargaining power and represent her standing in the household. They discovered that a woman with a first-born son had a 3.9 percent stronger influence on family choices than a woman with a first-born daughter, based on data from the China Health and Nutrition Survey. Although the authors felt that intrahousehold bargaining power mediated these effects, they could not rule out the possibility of additional direct impacts of a first-born boy on outcomes, such as educational investment.

Frempong and Stadelmann (2017) used individual information from Ghana and Uganda to examine whether or not women's access to higher education may be used as negotiating leverage to improve their families' chances in six key areas, including fertility rate, school enrollment and child labor, food expenditure and nutrition intake, and female labor-force participation. The empirical data shows that both the wife's and the husband's levels of education are significant determinants of family welfare. However, the wife's relative bargaining position has negligible influence on the analyzed welfare indicators, and her education has no bigger effect than her husband's. Additional robustness analyses substantially validated the conclusions. According to the authors, while female education has the potential to increase family well-being, the benefit does not necessarily translate into a better bargaining position.

Ringdal and Sjursen (2021) conducted a laboratory experiment with Tanzanian married couples in which they manipulated the relative household decision-making power of the spouses to determine if a change in women's household decision-making enabled husband and wife to spend money on their children's schooling. Another objective of the research was to identify any underlying reasons for investing in schooling. The paper disclosed two significant discoveries. First, the wife's greater bargaining power leads to a more equitable distribution of cash for the children's education. However, it has no effect on the growth in education expenditures for children. Second, according to the study's results, the amount of money a family spends on a child's education is dictated by the couples' divergent leisure-time preferences. This suggests that if the woman is the more impatient partner, boosting her negotiating power might lead to less money being set aside for the child's education. The results provide fresh light on the debate over women's equality and bring to light the need for more nuanced studies of intra-family decision-making.

Basu and Maitra (2020) examined the influence of negotiating position within the family on Iranian family spending patterns to see whether women's empowerment may

have the same consequences as it has in other parts of the globe. According to the authors, this research is instructive because it exposes whether or not women in Iran, who have been held back in many ways for so long, both economically and otherwise, will be able to use their newfound power for the sake of their country's economy. Employing a survey conducted by the Iranian Bureau of Statistics on spending and the gender proportion in the married industry, the data was evaluated. The results show that women's increased negotiating power at home improves family expenditure on health and education, possibly enhancing the wellbeing of future generations.

Martnez (2013) explored intrahousehold allocation and bargaining power using a Chilean legislation reform that raised the rights of unmarried couples' children to child support as an external factor influencing family bargaining positions among couples living together. As children normally remain with their mother when a couple divorces, she argued that the change in the legislation would offer women greater negotiating leverage because it would boost the amount of cash available to them. Women's participation in decision-making impacts household economic results in Chile, according to the findings. Children under the age of 19 are more likely to attend school when women have a greater share of decision-making authority, according to the results of the study. This number increases by 3.6 percentage points for 14- to 18-year-olds and by 2.4 percentage points for 0–5-year-old boys in day care.

De Brauw et al. (2014) evaluated the possibility of boosting women's intrahousehold decision-making power in "Bolsa Família" conditional cash transfer programs with female recipients. According to their research, the Brazilian Bolsa Família program has a big effect on how women make decisions, but the effects are very different. Bolsa Família, for instance, considerably enhances women's capacity to make contraceptive choices. The benefit was seen largely in urban households, since the program increases women's decision-making power in areas such as boys' and girls' school opportunities and medical costs. Payments for domestic goods, including

contraceptive use. However, the authors found no statistically significant change in the number of rural households where women made all or most of the decisions.

In her study on Pakistani household intrahousehold bargaining and wives' freedoms and opportunities to enhance their well-being, Hou (2011) utilized two major household bargaining models to examine Pakistani wives' capacity to influence some of the spending decisions made in the family, primarily in regard to their children's education. According to the author, the unitary model fits the country's environment owing to Pakistan's prevalent traditional culture, which gives husbands the last word on family expenditures. Hou found that several direct indicators of decision-making power are compatible with the collective family bargaining model, regardless of whether they are utilized in a culture where husbands have the last word or not. When women in Pakistan have more say in household matters, their families are more likely to invest in women's priorities like clothing and education, increase their consumption of non-grain foods, and enroll more of their children for school.

Emerson and Souza (2002) examined intrahousehold decision-making power, the exploitation of children for labor, and school enrollment in Brazil to determine if the unitary paradigm of decision-making authority in the home is applicable to child labor. Due to variations in children's human capital technologies and parental preferences, the authors developed an intra-household resource allocation model in which fathers and mothers may have varying impacts on their children's educational investment and child labor participation. The authors examined the effects of parental education, non-labor income, and child work experience on their children's labor market position and school attendance using the 1996 Brazilian Household Survey. Findings suggested that children's labor status was affected by their father's education, non-labor income, and age of first employment. The mother's education, non-labor income, and age when she first joined the workforce had a greater impact on daughters' labor status than on sons. Sons were more impacted than daughters by parental education and non-labor income.

Using data from Uruguay's Asignaciones Familiares-Plan de Equidad (AFAM-PE) cash transfer program, Bergolo and Galván (2018) compared men's and women's reactions to the initiative. The research examined its effects on the job market, the dissolution of marriages, and the decision-making process about the usage of money in domestic contexts. There was some evidence, according to the study's findings, that participation in the program increases women's sense of responsibility for decisions regarding specific parts of family spending, such as educational alternatives for their children. This study is among the first to analyze the distributional effects of CCT programs on the behavioral reactions of different family members, particularly married couples, and it does so superbly. It demonstrates how critical it is to develop fresh approaches to assisting those in need of social assistance while minimizing the harmful consequences of formality. It also makes a big contribution to the ongoing discussion about how these kinds of projects affect women's freedom in less-developed countries.

Attanasio and Lechene (2002) investigated intrahousehold decision-making using the Progresa data from Mexico. One of the effects they investigated was the decision to invest in education. The authors used both the experimental aspect of the study and the panel dimension of the data to quantify the impact of exogenous changes on resource allocation decisions made inside households. The research centered on pool resource sharing among households, which corresponds to the unitary model of family decision-making. In this system, only one individual, typically the father, is responsible for making household decisions. Examining various aspects of strategic relationships among family members, the study also included a series of questions pertaining to power dynamics and how decisions were made at home. The results supported the conclusion that neither the income pooling nor the unitary model should be used. The study's findings also make it difficult to conclude that the wife's relative income share is not a significant determinant of her decision-making authority inside the household, with a higher income share being associated with a greater degree of power.

Heggeness (2009) evaluated the effects of exogenous changes in family policy and administrative procedures on a single household spending indicator in Chili: children's schooling. The examination focuses specifically on the legitimacy of divorce as well as the wait times for divorce cases in family court. The findings of this study, which used panel data and a difference-in-difference technique, showed that the passage of pro-female divorce legislation affects bargaining power within married couple homes, as does the speed with which family courts handle divorce cases. The implementation of pro-female divorce legislation as well as the speeding up of the divorce procedure period can be attributed to an increase in the number of children of married couples enrolled in school.

In her research, Goodburn (2020) analyzed how migrant families from rural China and India must deal with their children's insufficient educational opportunities. Between 2007 and 2016, she conducted interviews with over 300 migrants in China and India. She also discovered significant changes inside families in both countries after the initial rural-to-urban shift. According to the results, mothers have assumed increasing responsibilities in the development of family strategy, and children's opinions are being given more weight. Furthermore, the findings suggested that the voices of the elderly are receiving more consideration. Contrary to previous studies on non-migrant populations, increasing levels of mother and child autonomy within migrant households did not invariably result in scholastic advances for either side. Instead, institutional restrictions such as poverty and marginalization, education programs, and gendered social interactions continue to restrict the capacity of individuals to exert agency outside of the family.

Keshavarz Haddad (2017) created a structural empirical model to investigate the notion that child labor is compelled by household poverty and parental bargaining power in the setting of collective choice processes in households. To accomplish this goal, a mechanism for assessing the mother's position inside the home as a bargaining unit was developed. The analysis relied on Iranian Household Income and Expenditure Surveys

(2005 and 2010). The estimating method used in this investigation was multinomial logit. Findings suggested that financial stress at home was not the sole factor influencing the prevalence of child labor. Rather, it was discovered that the mother's bargaining power had a significant impact on the child's employment and school attendance. This was true regardless of other characteristics such as poverty, being an only child, the potential of the local labor market, and gender-defined obligations. The magnitude of its marginal effects, however, varies greatly by gender and place.

3.2.2. Women's decision-making power and its influence on daughters' school attendance

In a study conducted in rural Côte d'Ivoire, Basu et al. (2023) used lab-in-the-field experiments to estimate how parental risk preferences and a unique measure of maternal negotiating leverage over schooling expenses affected the educational progress of both boys and girls. The researchers discovered that fathers' risk aversion is negatively associated with boys' school attendance and lowers the likelihood that both boys and girls will transition from homeschooling to primary schooling. Mothers' risk aversion, on the other hand, has a positive relationship with primary school enrollment and a negative relationship with secondary school enrollment for girls. When mothers are more risk-averse than fathers, their children are less likely to attend school, and vice versa for boys. However, when mothers are more risk-tolerant than fathers, their children are less likely to enroll in primary school. The findings of this study are consistent with circumstantial evidence indicating a preference for current income generated by the employment of boys in the production of high-value cash crops and concern for the safety of girls due to the long distances traveled to secondary schools.

Nordman and Sharma (2016) investigated the influence exerted by women's bargaining power on the proportion of the average Indian family's income that goes toward educational expenses. In the family collective model, the researchers developed

the female household decision-making power mechanism and employed the 3SLS technique to jointly analyze female bargaining power, per capita family expenditure, and budget allocation to education. The results suggested that: (1) female negotiating power seems to have a favorable impact on the proportion of the family budget dedicated to education; (2) this negotiation power is favorably (adversely) related to education expenditures in the city (remote) regions; (3) in urban contexts, the effect of female bargaining power on girls' educational expenditures is universally beneficial across all social strata (castes); nevertheless, it seems that an oppressed social class is responsible for the negative correlations seen in rural areas; (4) there is a gender imbalance in educational expenditure across all age groups, with regional and caste variances.

Using information from a rural household survey collected in southern Mozambique in 2009, Luz and Agadjanian (2015) examined how the autonomy of decision-making for rural women effects the enrollment status of elementary school-aged children residing in their homes, as well as how this connection differs based on the gender of the children being considered for enrollment. Women's autonomy in making decisions is positively connected with girls' probability of attending elementary school, but not with the likelihood of boys attending. According to the authors, the impact of women's autonomy is independent of other women's traits that are often associated with enrollment and does not reduce the effects of such qualities. The results also showed that mothers who have more control over their own lives may care more about their daughters' education and have more say in how their daughters' education opportunities are chosen.

Afridi (2010) investigated the influence of intra-household bargaining power in resource allocation on the prejudice against females attending school. She did this by studying comprehensive Indian household data. She developed an index of women's independence using survey answers from married women regarding their roles in family decision-making and social standing. If the degree of education and relative autonomy are indications of the husband and wife's bargaining power within the home, then gender

variations in resource distribution may suggest differing desires, which may impact boys' and girls' relative schooling results, according to the author. Findings indicated that mothers' autonomy has a substantial effect on India's bias against girls' education. Statistically, the impacts of a mother's education on her daughters are more substantial, despite the fact that both higher-educated moms and dads express a preference for supporting their daughters' education.

Using data from the Ghana Living Standards Survey, Afoakwah et al. (2020) examined the link between women's bargaining power and their children's educational results. The researchers utilized principal component analysis to establish an index evaluating women's bargaining power when a couple's children turned six based on the couple's education and age disparities. The authors then assessed the bargaining power of women by utilizing the age of women at the time of their first marriage. There is no convincing relationship between women's bargaining power and late school enrollment, according to the data. It has a negative and substantial link with the probability and severity of grade repetition (the number of times the same grade is repeated), particularly for firstborn children. Girls profit more than boys on average from their mother's negotiating position. The study also indicates a correlation between women's bargaining power and educational achievement, confirming prior findings.

In her second study on gender equality and its significance in India's educational system, Afridi (2010) said that a reduction in the extent to which boys surpass daughters in terms of educational achievement correlates with an increase in the number of educated and independent Indian women. Increasing a mother's education is connected with a much higher decrease in the achievement gap between sons and daughters, and increasing a father's and mother's education boosts the educational attainment of daughters more than boys. Moreover, the average gap in school years between boys and girls is a third of a year shorter in families where the mother has finished primary school than in households where the mother has a lower level of education. Furthermore, an increase of one standard

deviation in a mother's autonomy is associated with an increase of more than half a month in the length of time a girl spends in school; however, there is no association between mother autonomy and a son's education.

Majeed and Kiran (2019) argued in their study on women's decision-making power and child labor in Pakistan that, while child labor hinders the development of future generations' human capital, women's decision-making power is critical for economic growth by enhancing future generations' human capital. Their study contributes to the body of knowledge by addressing the issues of how women participate in decision-making and how their choices affect their children's education. According to their findings, giving women more power to make important family decisions reduces the likelihood of child labor and increases the likelihood of children attending school in Pakistan. The size of a family has the greatest influence on child labor of any indicator of women's power. Furthermore, there is gender disparity in the fight against child labor because women's decisions affect boys and girls differently, with girls benefiting more.

Song (2008) investigated gender bias in family resource allocation through research in rural China. As part of the research, theories on household decision-making capacity were examined. The first hypothesis investigated whether shifting women's bargaining power had an impact on family spending. The second question was on whether or not parents spend equally on their sons and daughters. The third centered on the question of whether pro-boy bias would decrease if women had greater bargaining power. The study's results show that spending patterns differ depending on indications of women's negotiating power. The study also revealed some evidence of a bias in favor of boys, as shown by: (i) compared to males, females spend less on adult items; (ii) family health expenditure is more sensitive to sons than to daughters; and (iii) the high ratio of men to women. The third hypothesis is not supported by any evidence.

Shahidul (2012) performed a study with the parents of female pupils in the Bangladeshi region of Pirgonj in September 2010. The study's goal was to learn more

about the relationships that exist between mothers and fathers, as well as how this affects their daughters' academic progress while they are in school. Individual participation indices (PI) for fathers and mothers were created and compared for four important household concerns in the study to assess the bargaining power of fathers and mothers. Using logistic regression, the author then investigated the relationship between father and mother participation and the likelihood of females dropping out of school. The mean for the mother's engagement index was low on a 5-point Likert-type scale, while the father's participation index was quite high, showing that moms had less bargaining power than dads in the decision-making process. The logistic regression model found that father and mother engagement had varied impacts on dropout rates. For females, father engagement was a favorable predictor of dropout, but mother involvement was a terrible predictor of dropout.

As an indication of women's economic independence, Hatlebakk and Gurung (2016) studied the landholding patterns of maternal and paternal forebears in a highly multiethnic area in the eastern petrochemical belt of Nepal. The legislation was then used as a tool for female family decision-making authority. The authors wanted to determine if a broad measure of women's decision-making authority affected a particular result, such as children's schooling. Economic empowerment and individual decision-making authority, according to the findings, have distinct effects on children's educational performance. The correlations were complex, suggesting that economic empowerment should not be seen as the main factor in determining female empowerment. This research also found a correlation between female empowerment and both boys' and girls' schooling. In terms of the priority that men and women gave to teaching children of various genders, there were significant differences across social groupings. The main finding was that the mother's relative negotiating power is relevant in many ways and through diverse mechanisms, depending on the child's gender, social group, and educational level.

Saleemi and Kofol (2022) investigated whether homes in which women make educational choices for their children invest equally in the education of boys and girls. To do this, they calculated changes in family expenditure on girls' education due to changes in women's involvement in household decision-making. They collected three waves of longitudinal data from families in rural Pakistan and evaluated the findings to see how women's gender equality awareness (AGE) developed over time. Their results found that homes with children in secondary school of both sexes in which women participate in decision-making spend a greater share of their education budget on females. These shares exceed median household ownership by up to 60%. In addition, the selection of families who choose to enroll their children in school was handled by a Heckman Selection Model that was developed. The proportion of a family's total spending on their children's education that was allocated to a single child served as the dependent variable in the Heckman Selection Model. Their research shows that in AGE families where women take part in decision-making, girls are 12.6% more likely to get a larger percentage of family expenses than boys. Additionally, when commuting time to school is low, women's engagement in home decision-making is positively connected with age and the portion of secondary education financing that is given to females.

Glick and Sahn (2000) used regression models for binary outcome variables with random household-level influences to examine gender disparities in the variables that impact grade level completion, school enrollment, and dropout rates in a low-resource urban context in West Africa. Increases in family wealth were associated with larger investments in educational possibilities for females but had no noticeable influence on educational opportunities for boys, according to the findings. Increases in the father's education boosted schooling for both sons and girls but increases in the mother's education had a substantial influence on schooling for just daughters. Girls' education is severely impacted by family responsibilities, as seen by characteristics including the number of younger siblings, whereas males' education is unaffected by similar conditions.

Brown and Park (2002) analyzed the impacts of poverty, intra-household decision-making, and school quality on educational investments, notably enrollment choices and learning outcomes, using family and school survey data from six poor Chinese areas. Unlike many other studies, this one used direct measurements of credit limits and female empowerment. This research distinguished between the effects of wealth limitations and credit constraints and found that the former increases educational investments while the latter reduces educational expenditures. Furthermore, females with lower academic achievement were more likely to drop out of elementary school, whereas the majority of boys continued on to junior secondary school after finishing primary school. The most important finding, though, was that empowering women cut in half the chance that girls would drop out of school.

3.3. Family lineage environment and its influences on school attendance

Zeng and Xie (2014) studied whether the social status of grandparents affects their grandchildren's socioeconomic prospects. Using information from the Chinese Household Income Project from 2002, the authors studied the direct impacts of grandparents' education on their grandchildren's educational attainment in rural China, adjusting for the middle generation's characteristics. The data indicated that grandparents' impact is modified by living situations. The educational level of grandparents who live with their grandchildren has an effect on their educational success that is similar to that of their own education. However, the educational level of grandparents who do not live with their grandchildren or who have passed away has no effect. According to the authors, these data imply that grandparents may have a direct influence on the educational outcomes of their grandchildren through sociopsychological pathways.

Bol and Kalmijn (2016) used new information from a representative survey of the country and three generations of Dutch people to investigate whether and how three grandparental resources—education, occupational status, and cultural resources—affect

how well their grandchildren do in school. The authors looked at how these effects were different depending on how close the relationship was between the grandparent and grandchild. The study's findings suggested that all three grandparental resources influenced the grandchild's educational attainment. The literature's mixed body of evidence and recent theorization on grandparenting were discussed in relation to these findings. According to recent research (Zeng and Xie, 2014), grandparents have a direct impact on their grandchildren's education outcomes, regardless of parental resources.

Chiang and Park (2015) explored intergenerational impacts of family lineage in Taiwan by determining if grandparents' educational levels affect their grandchildren's progression through secondary school and higher education. Using social capital theory, the authors evaluated the possible heterogeneity of the impact of grandparent education based on parental characteristics and argued that the education of grandparents has varied effects depending on the education of the parents. The authors anticipated that the educational attainment of grandparents exacerbates educational disparity by: (i) Poor parents' education, and (ii) The disparity between children of parents at the top and bottom of the educational hierarchy with regard to their chances of entering high school or college. Results demonstrated contradictory impacts of the grandparents' years of schooling. In addition, the extra year of grandparents' schooling seemed to help children with more educated parents more than those with less educated parents.

Earlier research on the influence of grandparents on the academic achievement of grandchildren, according to Song (2016), ignored the influence of family structure on the direct benefits of having grandparents. Using a survey of intergenerational data and an alternative causality approach, this study examined the direct impact of grandparents' educational attainment on grandchildren's educational attainment and the variety of family structure-related effects. The findings indicated that grandchildren raised in two-parent households benefited the most from their grandparents' influence, followed by those from single-parent homes in which both parents were divorced. The findings were

valid for both blacks and whites in the US. In circumstances where neither parent is married, having just one parent present had little impact.

Hakoyama et al. (2021) investigated the perceived proximity of grandchildren to their focus grandparents according to gender, family history, and degree of intimacy. This was achieved in the case of cross-generational connection throughout three different phases of growth seen in grandchildren (N = 470). In each area, it was established that the values of the grandchildren were more comparable to those of the maternal grandparents than those of the paternal grandparents. Consistent with previous study results This finding was shown to be critical for grandchildren. By far, grandsons were significantly more influenced by their grandparents' family ancestry than granddaughters. The research also found that grandfathers have a substantial influence on the moral conduct and recreational activities of their grandchildren. Also, for granddaughters, the impact of grandparent-grandchild closeness on value similarity was continuous across family lines, but for grandsons, only the proximity of the maternal grandfather to the grandson was a significant predictor of value similarity. This is not true for grandsons, but it is true for granddaughters.

In their research, Angelucci et al. (2010) studied how the existence of several relatives and the characteristics of these relatives might influence the behavior of a household. Using data on last names of both parents of household heads and spouses together with the naming conventions used in Spanish, the research was able to estimate relationships between and within generations. The study's data comes from Mexico's PROGRESA program. The study used a methodology of random assignment to analyze PROGRESA assessment data to evaluate whether the treatment effects of PROGRESA transfers on secondary school enrollment differed by extended family characteristics. According to the findings, PROGRESA was only effective in increasing secondary enrollment in homes with a long-standing familial network. Through the redistribution of resources within the family network from eligible people who get de facto unconditional

cash transfers from PROGRESA to eligible people who are about to enroll children in secondary school, the extended family can influence the household's decisions about the educational opportunities for the children.

Zhang (2022) used family lineage data to examine how typical patrilineal family structures influence women's income in China through reproducing behavior. The study looked at whether a strong family lineage, as defined by genealogy, has a negative impact on women's income because sons are more likely to engage in fertility behavior. In this inquiry, the hypothesis was verified using a difference-in-differences test. In fact, if a woman marries into a family with a history and her first child is a girl, she is more likely to have more children, a lower income, weaker decision-making skills, and a greater risk that her daughters will drop out of school. This is in contrast to mothers who have a boy as their first child. However, this conclusion did not hold true for the male sample in the research. According to the preliminary study, a reduced amount of work time is one probable reason for the results.

3.3.1. Influence of the matrilineal-family-lineage system on offspring's school attendance

Lowes (2020) reviewed a contemporary economics study on how culture affects the well-being of women in underdeveloped countries, which is mostly impacted by anthropological studies. She then discussed the impact of kinship structure, specifically matrilineal vs. patrilineal systems, on women's choices, exposure to domestic abuse, and children's health and education. Using both her own data collection and DHS data. Children of matrilineal mothers are more likely to be educated and healthier, according to the findings. She found that children of matrilineal mothers had 0.4% more education and were 8% less likely to have been sick in the previous month. According to DHS data, matrilineal mothers have 0.12 fewer children who have died than the average of 0.60, and their offspring have 0.15 more years of schooling. In the same vein, she suggested that

children of matrilineal women in the DRC had more years of education than children of patrilineal women in her two prior publications (Lowes, 2016 and 2018).

Gneezy et al. (2009) used an experimental study approach to assess if there are gender disparities in competitive circumstances in two distinct cultures: the Khasi in India and the Maasai in Tanzania. Maasai and Khasi communities vary in that Maasai societies are patriarchal while Khasi societies are matrilineal. Maasai males choose to compete nearly twice as often as Maasai women, which is comparable with the findings of trials undertaken in Western nations. Notably, the findings are inverted among the Khasi, with Khasi women choosing the competitive atmosphere more often than Khasi men and even more frequently than Maasai men. These results provide insight on the underlying processes of the factors thought to influence the observed gender selection disparities. For instance, the Maasai tribe had somewhat older members on average. Average Maasai female and male educational attainment was somewhat higher, indicating education persistence and the potential for investment in offspring.

Using qualitative research approaches, Anzak and Zulfiqar (2017) explored how a child would be nurtured under a patrilineal system that occurs in the Punjabi hamlet of Uberda Tatral in Pakistan. Among the methods used were neighborhood walks, social mapping, meetings with small social groups, in-depth interviews, and focus group discussions. While the authors' ideas focused on child rearing, they sought to emphasize the significance of nurturing in the process of raising girls in particular. In Pakistan, which is mostly patriarchal and patrilineal, their results showed that family and cultural norms made it harder for girls to go to school.

Starkweather and Keith (2019) investigated maternal-uncle investment patterns among the Shodagor people of rural Bangladesh to answer the "matrilineal puzzle," an evolutionary challenge. The authors examined economic and social aspects within the context of matrilineal descent, as well as ecological factors that influence the degree to which a mother's brother assists with the rearing of their nieces and nephews, both in an

intentional and inadvertent capacity. Children may receive direct or indirect investments, which are the two most common types. The term “direct investment” refers to any direct interaction with a child, including holding, feeding, and soothing them, brushing their hair, and other childcare chores. The provision of children is considered an “indirect investment,” as are actions that raise a child’s social status or other quality indicators, such as paying for a child’s education, purchasing clothing or other household items, arranging a marriage, or facilitating life milestones such as getting married and having children. According to the data, only firstborn mothers had a high probability of their children receiving indirect investment, such as education, from a maternal uncle.

The Arsi Oromo of Ethiopia, who practice patrilineal descent, and the Chewa of Malawi, who practice matrilineal descent, were the subjects of Gibson and Sear’s (2010) examination of the influence of resources on educational investment. Their results demonstrated a correlation between rising affluence and more biases in how children are represented in various educational opportunities in both groups. Even though sons are favored in the patrilineal population and daughters are preferred in the matrilineal population, richer households prefer earlier births over later ones. Additionally, despite the fact that impoverished families spend less on schooling, their children are regarded with less bias.

3.3.2. Role of the matrilineal-family-lineage system on female offspring’s school attendance

Quisumbing and Otsuka (2001) utilized a Sumatra case study in Indonesia to statistically evaluate the impact of the transformation transition from shared to private ownership on the distribution of land and educational opportunities between sons and daughters in matrilineal communities. According to the results, the inheritance structure is transitioning from a purely matrilineal system to a more equitable structure in which sons and daughters receive more labor-intensive land. In spite of the fact that inheritance bias in regard to gender is either nonexistent or limited, daughters endure educational

disadvantages on average. Nonetheless, it indicates that the gender gap in schooling is narrowing among the younger generation of students.

Marak (2012) studied if the matrilineal social structure contributes in any way to the son or daughter obtaining preferred treatment, including educational preference. The three features of childrearing covered in this work were influenced by the matrilineal Garos of Bakrapur, a hamlet in the Goalpara region of Assam, India. Parental preference for a certain gender for an unborn child, food and eating concerns, and different school assignments for boys and girls were among the three causes. Depending on the conditions, this research indicated that when parents favored one gender over the other, they favored a female child. Again, depending on home situations, both genders of children were valued.

La Ferrara and Milazzo's (2017) research on societal values, traditions, and education in Ghana looked at the impact of customary practices on land distribution and educational opportunities. The authors used a Ghanaian policy experiment that raised the amount of land that boys and daughters from patrilineal groups could inherit from their dads. The results showed that boys who were exposed to the reform had 0.9 fewer years of schooling than boys who were not subjected to the change; this result was mostly due to the fact that the reform was mandatory for landed families. Girls were shown to be unaffected by the research, suggesting that their inheritance had not changed. By demonstrating that matrilineal societies spent more on education than they otherwise would have in order to replace land inheritance, these trends highlight the importance of cultural norms.

Vleuten (2016) stated in her study that family structures contribute to the difficulties of narrowing the educational success gap between men and women by affecting daily attitudes about women, perceptions of their worth, and choices regarding them. She stressed that the disparity is particularly prominent outside of highly industrialized nations, where accessible mass education is not the norm and gender

variations in educational achievement are strongly impacted by persisting cultural norms. To test her idea, she examined family structures that had had a lasting effect on gender norms. Her study indicated that matrilineal and bilateral family types, especially when they are also nuclear family types, are important predictors of equal gender involvement in schooling in 86 low- and middle-income nations.

By examining data from around Africa, Robinson and Gottlieb (2021) found that matrilineality, or tracing kinship via the female line, is highly related to bridging the gender gap in family decision-making and political engagement. The authors then utilized this technique as a lens to derive more general findings. They utilized quantitative and qualitative data from Malawi to demonstrate that matrilineality's effectiveness in elevating women's standing in society is contingent on its capacity to sustain more progressive standards. Through intergenerational transmission of the practice, the authors also demonstrated how matrilineality consistently builds individual expectations about the gendered attitudes and behaviors of other families in the community. The study examined and uncovered data contradicting two conflicting concepts: (i) that matrilineality only operates through the transmission of material resources; and (ii) that it is effective by enhancing females' education.

CHAPTER 4: METHODS

4.1. Analytical Framework

The main objective of this study is to examine how educational attainment is transmitted across generations in the DRC, specifically by estimating how educational mobility has evolved over time and across generations and by investigating how intergenerational educational attainment is transmitted between genders as well as among lineage groups. While Reggio (2011) argued that it is critical to consider the distribution of bargaining power within the household when studying a household's decisions, early studies of intergenerational transmission of education, according to Epp and Price (2008) and Bird (2003), had a significant problem with a lack of knowledge of internal decision-making processes regarding access to and control of resources for production, consumption, leisure, and employment. These internal household structures are frequently culturally specific, with norms and power dynamics based on socially constructed gender roles, the significance of age and generation, and a person's relationship to the head of the household, among other variables.

The unitary model of the household is the starting point for the analysis of household decision-making. According to Vermeulen (2002) and Adamowicz et al. (2005), the unitary model evolved from Becker's household models of microeconomic (Neo-Classical) theory in the 1960s, which mostly treat households as distinct entities with distinct preferences (Donni & Ponthieux, 2011). That is, either all household members serve the same utility function or household decisions are [made] based on a single household member's preference. As a result, the unitary household model does not consider which family member has the most financial control over the family.

Furthermore, although Beegle et al. (2001), Thomas et al. (2002), Pollak (2005), Friedberg and Webb (2006), and Majlesi (2016) argued that the distribution of power within the household influences household outcomes, in developing countries, a growing

body of evidence contradicts the unitary model of intrahousehold resource allocation. Women are now widely acknowledged to be more frugal with their money than men, according to these studies. Modern cash-transfer programs, for example, reward mothers rather than fathers based on the evidence of children's educational or health outcomes. Women are more likely than men to spend family funds on nutrition, education, and health-related items (Blitstein & Evans, 2006; Flagg et al., 2014; Rahman et al. 2015). Since the above-mentioned neoclassical household theories are insufficient to explain observed consumption and labor-supply decisions in multimember households, they will not be discussed in depth in this study. Numerous alternatives to the unitary model have been proposed by economists over the years, according to Saelens (2019). Two examples are the collective models of Chiappori (1992) and Donni (2008). Chiappori's collective model has sparked a lot of interest. Saelens (2019) declared that "in contrast to the unitary model, Chiappori explicitly acknowledges the multi-person nature of households." The collective model is also useful because, despite having few assumptions, it generates strong testable constraints: the only assumption is that members will cooperate to achieve Pareto-efficient results (Saelens, 2019). While the notion of intra-household bargaining is clear, investigating intra-household resource allocation empirically is difficult owing to the absence of a relevant indicator for the relative negotiating power of women. A good measure of bargaining power must also represent a woman's relative bargaining position and be exogenous to the outcomes under consideration. Wage and nonwage income are the most prevalent indices of negotiating power (Vijaya & Kaltani, 2007; Klawitter & Fletschner, 2011; Breda, 2015). Other research focuses on individual assets at the time of family formation (Quisumbing & Maluccio, 2000). Similar to this dissertation, a second category of research analyzes changes in external variables to monitor adjustments in relative bargaining power (Dito, 2011). Consequently, finding an exogenous predictor of intrahousehold bargaining power would be essential for resolving the endogeneity issue connected with the use of education, income, and age-related indicators.

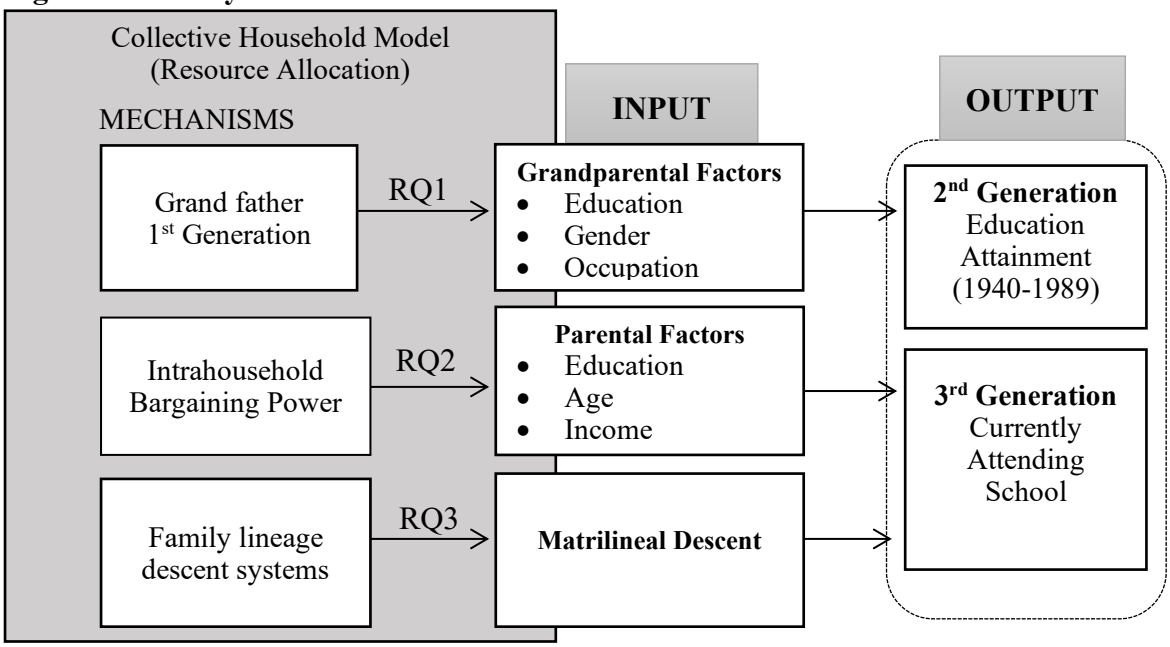
With regard to the conceptual framework and returning to the point of decision-making there are two types of cooperative models, according to the literature review (Bird, 2003). The first presupposes that daily decisions are always made Pareto-efficiently. It is not assumed at first how distribution-related decisions are made. Instead, decisions are estimated using data. The second model assumes that decisions are reached through negotiations. This is modeled (using game theory), with asset division and household dissolution as a backup option. Thus, decisions in this model household are made based on who stands to gain and who stands to lose the most if the household breaks up. This is dependent on extra-environmental factors (EEPs), such as laws governing the use of public property and, in the case of some African countries, family ancestry customs.

Figure 4-1 underpins the theoretical link between the family lineage descent system, intrahousehold decision-making power, and offspring's schooling under the collective household paradigm, which permits both parents to influence resource-allocation decisions within the household. The approach takes into account the fact that households are made up of different members who engage in the intra-household bargaining process over the distribution of resources and decision-making power. This research makes use of the DRC's location at the junction of the so-called "matrilineal belt." This refers to the inheritance system and distribution of patrilineal and matrilineal ethnic groups throughout central Africa. This inheritance system is used as a source of intergenerational exogenous variation in bargaining power within households.

Anthropologists like Hicks and Leonard (2014) and Wagner et al. (2017) have spent years researching the effects of different lineage systems on modern societies. Similarly, Lowes (2016, 2018) argued that in patrilineal systems, a woman is successfully assimilated into her husband's lineage, but in matrilineal systems, husbands and wives retain strong commitment to their own lineages. Since a result, people from matrilineal communities may be less altruistic towards their spouse, as they preserve strong lineage allegiances. Thus, contrasted to patrilineal societies, women exercise higher parental

authority. Consistent with the idea that matrilineal systems limit a husband's control over his wife, having the children as part of a woman's lineage may raise the value of her outside choice and her relative bargaining power (Knight, 2008; Peters, 2010; Lowes, 2016, 2017).

Figure 4.1: Analytical Framework



Source: Created by the author based on Martínez (2013); Lowes (2018; 2020)

More importantly, we follow Martinez (2013) and Lowes (2018, 2020) and present a simple reduced form of a bargaining model in order to examine the channels through which lineage systems affect intrahousehold decision making and offspring schooling. The analytical framework of this study, as shown in Figure 4-1, is based on the collective approach to household-behavior perspective. This is concerned with how knowledge and materials are distributed at the household level in the DRC, as well as how resource distribution affects production, consumption, and other household outcomes. Since the majority of the literature has focused on a two-generation paradigm as an integral unit of the household, the analytical framework of this study has extended intergenerational mobility in education to three generations by including grandparents.

4.2. Hypotheses

In order to investigate how educational attainment is passed down through generations in the DRC, this study identified six hypotheses, one for each of the six sub-research questions listed in Section 1.3. The sub-research questions were as follows: 1.1. How has educational mobility evolved over time and across generations? 1.2. To what extent is intergenerational educational attainment transmitted between genders as well as among lineage groups? 2.1. What is the effect of women's decision-making power on children's school attendance? 2.2. How does women's decision-making power influence their daughters' school attendance? 3.1. What is the influence of the matrilineal family-lineage system on offspring's school attendance? 3.2. How does the matrilineal family lineage system influence female offspring's school attendance? In relation to the four sub-research questions listed above, the following four hypotheses are developed:

Hypothesis 1-1: Intergenerational persistence in education attainment has been increasing in the DRC implying a lower intergenerational education mobility

Hypothesis 1-1 is based on current literature on how educational mobility has changed over time and across generations, not to mention that intergenerational educational persistence is the regression coefficient of children's school years on their parents' school years. Higher persistence implies lower intergenerational education mobility, and vice versa. There have been numerous and expanding studies on the intergenerational persistence of educational achievement (Blanden, 2013; Mazumder, 2015; Neidhöfer et al., 2018; Lee & Lee, 2019; Momo et al., 2019; Leone, 2022). According to Lee and Lee (2019), educational mobility has deteriorated in most countries over generations, but to varying degrees across nations and over time. Unlike Lee and Lee, Neidhöfer et al. (2018) found intergenerational mobility to be increasing in Latin America on average over a 50-year period when they examined the intergenerational transmission of education in 18 Latin American countries. For instance, more than half of those born in the area between 1940 and 1990 were better educated than their parents. According to the authors, this

pattern seems to be driven by the substantial upward mobility of children from low-education households, whereas the top of the distribution exhibits severe immobility.

Chen et al. (2018) took a broader view, claiming that intergenerational educational persistence was greater in urban areas with higher levels of education than in rural areas with lower levels of education. According to instrumental variable estimates, fathers have a greater and more significant nurturing influence than mothers. A deeper look at the mechanism behind the nurture effect reveals that a father's education is conveyed to his children's education via the income channel. Even after controlling for fathers' income, parental education significantly improves children's education via the nurture effect, which is an intriguing conclusion.

There is widespread agreement among researchers that the Nordic countries have the highest rates of intergenerational mobility, a finding supported by research by Chen et al. (2013), Blanden (2013), and Mazumder (2015). Findings suggest that the United States and the United Kingdom have lower rates of intergenerational mobility than most other developed nations. Furthermore, in Latin America and Africa, developing countries often have lower levels of intergenerational mobility. There is a growing body of research comparing the educational opportunities available to different generations in different countries (Hnatkovskay et al., 2013; Azam & Bhatt, 2015), but the evidence for its drivers is unclear (Arenas & Malgouyres, 2018; Agupusi, 2019; Lee & Lee, 2019). For example, Azam and Bhatt (2015) discovered that the proportion of Indian students who finish high school has been declining over time. Emran and Shilpi (2015) found that despite India's high levels of educational persistence, it has stayed relatively unchanged through time. Leeuw et al. (2018) looked at the intergenerational transmission of educational attainment among non-residential fathers and their children in the Netherlands. They found that the relationship between the educational attainment of non-residential fathers and their children is weaker than the relationship between residential fathers and their children.

This study also expects the findings on intergenerational education mobility to show that persistence across generations in educational achievement has been increasing

in the DRC, and greater persistence indicates lower relative intergenerational education mobility. This hypothesis is based on the findings of the study referred to above on intergenerational transmission of education in 18 Latin American countries by Neidhöfer et al. (2018). As in Latin America, more than half of people born in the DRC between 1940 and 1990 had higher educational attainment than their parents. Furthermore, children at the top of the distribution have significant mobility in the DRC today. This is also reflected in the fact that some children from low-income families can move up the social and economic ladder.

Hypothesis 1.2. Intergenerational persistence in educational attainment has been decreasing for males in the DRC: the same is true for both matrilineal and patrilineal lineage groups

Hypothesis 1-2 is based on the most recent research on intergenerational persistence in educational attainment across genders and lineage groups, in which intergenerational education persistence is the regression coefficient between the school years of children and parents (Azam & Bhatt, 2015). Greater persistence is associated with decreased intergenerational educational mobility, and vice versa. A growing body of literature has begun to recognize the importance of measuring education persistence in relation to gender and lineage group (Azam & Bhatt, 2015; Emran & Shilpi, 2015; Silles, 2017; Brück & Esenaliev, 2018; Loleka, 2021). For instance, Emran and Shilpi (2015) studied the levels, trends, and patterns of educational mobility in India from 1993 to 2006, with a focus on potential gender and geographic differences. They found that educational mobility in India has decreased significantly in recent decades. Furthermore, only urban women improved significantly, with lower-caste urban women benefiting the most. Moreover, while intergenerational education mobility and overall education levels in Australia have increased over time, Ranasinghe (2015) found significant regional and gender differences. When compared to sons, for example, daughters' educational attainment continues to have a relatively high correlation with their parents, implying

lower mobility and only modest absolute upward mobility, while immobility and downward mobility have largely remained stable over the past 50 years.

In terms of intergenerational persistence in educational attainment among both matrilineal and patrilineal lineage groups, only one study was found that examined how family lineage descent groups affected the way in which education was passed down from generation to generation in the DRC for the cohorts 1940-1989. According to Loleka (2021), the estimated mean regression coefficient demonstrated a clear steady persistence in education over a 49-year period. Moreover, the study's gender-specific findings revealed that intergenerational persistence in education has decreased for males in recent cohorts but increased slightly for females. Furthermore, the findings suggest that in recent cohorts, intergenerational persistence has increased for patrilineal descent groups while decreasing for matrilineal descent groups.

As can be seen, only a few studies have looked into how social and cultural factors such as family lineage groups can explain intergenerational educational mobility. A systematic understanding of how lineage groups influence educational mobility is also lacking. This study expects the findings on intergenerational persistence in educational attainment to show decreasing persistence for males and both matrilineal and patrilineal lineage groups. This hypothesis is based on previous research by Loleka (2021), which found that intergenerational persistence has been decreasing in recent cohorts for males and individuals of matrilineal descent.

Hypothesis 2.1: Children from households in which women can influence decisions that affect their family's daily lives are more likely to attend school in the DRC

Hypothesis 2.1 is based on research indicating that children from homes where women have a say in decisions affecting their daily lives are more likely to attend school. Over the past two decades, studies have revealed important information about women's decision-making abilities and child education. According to research by Min Soo et al. (2011), for instance, households are more likely to invest in their children's education if

the mother has a prominent role in the household budgeting process. It was found that a wife's financial contributions were mitigated by her husband's power differential. The authors reasoned that mothers would be better able to provide for their families if they were given greater say over household finances. In addition, Li and Wu (2011) discovered that, in China, mothers of firstborn males were more active in decision-making than mothers of firstborn girls by a margin of 3.9%. However, they couldn't rule out indirect consequences of having a son as a firstborn, such as increased parental interest in and spending on their children's education. Instead, they found that intrahousehold bargaining power was critical in bringing about these results.

Despite what Li and Wu found, Martnez (2013) found that female participation in decision-making in Chilean households led to better economic outcomes for those households. According to the study, female decision-makers are associated with higher rates of school enrollment among children under the age of 19. This percentage increases by 3.6 points among 14–18-year-olds and by 2.4 points among 0–5-year-old boys in day care. The results of this study are expected to show that children from households where women have a say in decisions that affect their family's daily lives are more likely to attend school.

This hypothesis is based on previous research that recognizes the critical role of the influence of mothers on children's schooling decisions, such as that of Basu and Maitra (2020), who argued that greater negotiating power for women raises family expenditures on health and education, potentially increasing welfare for future generations. Similarly, while studying intra-household bargaining and women's decision-making power, Hou (2011) employed the unitary model and the collective model, two basic household models. She discovered that, even in a society where males seem to have more authority than women, the collective family bargaining model applied when she employed a set of direct indicators of decision-making power. This is also true in the DRC, which is a highly patriarchal country. However, if women have more domestic decision-

making power, Congolese households will spend more on women's preferred goods and, are more likely to enroll children in school.

Hypothesis 2.2. Women's decision-making power positively affects girls' schooling in the DRC

Hypothesis 2.2 is based on research demonstrating that women's decision-making abilities improve girls' schooling. Several studies have found that, as compared to women with lower levels of decision-making, mothers with higher levels may positively influence their daughters' attendance at school. This is true for Basu et al. (2023), who found that mothers' risk aversion has a positive relationship with their daughters' primary school enrollment. In the same vein, Luz and Agadjanian (2015) found that women's decision-making autonomy is positively correlated with the likelihood of daughters attending primary school, but not of sons. Also, women with higher levels of autonomy may have a stronger preference for their daughters' education and may have more influence over the formulation and implementation of educational decisions than women with lower levels of autonomy.

Although much research has been conducted on women's decision-making power regarding their daughters' schooling, a systematic understanding of how this plays out differently for women who receive support from an extra-household parameter, such as family-lineage descent, remains lacking. Furthermore, the nature of the processes that sustain women's decision-making authority in a very patriarchal society where prospects for women are confined by familial origins is not obvious from previous work.

The results of this study are expected to indicate a favorable influence of women's decision-making power on girls' schooling in the DRC. This hypothesis is based on the findings of a study conducted by Afoakwah et al. (2020), which explored the relationship between women's bargaining power and their children's educational outcomes. The authors found a negative and substantial association between women's bargaining power and the incidence and severity of grade repetition, particularly for firstborn children. More

importantly, the study found that girls profit more from their mothers' bargaining power than boys. The study also discovered a correlation between women's bargaining power and educational attainment, which corroborated earlier studies.

Hypothesis 3.1. Matrilineal family lineage descent has a positive effect on children's school attendance in the DRC

Hypothesis 3-1 is based on research that has shown that the structure of matrilineal kinship systems versus patrilineal kinship systems has implications for the well-being of women and children (Lowes, 2016; 2017; 2018; 2020; Gneezy et al., 2009). Similarly, Starkweather and Keith (2019) examined maternal-uncle investment patterns among the Shodagor people of rural Bangladesh to address an evolutionary difficulty known as the matrilineal puzzle and found that children can receive two types of investment: direct and indirect. A direct investment is any direct involvement with a child, such as holding, feeding, comforting, and combing their hair, as well as other caregiving tasks. Indirect investments include actions that improve a child's social status or other quality indicators, such as paying for a child's education, purchasing clothing or other household items, arranging a marriage, or facilitating life milestones such as getting married and becoming a parent. Unlike Starkweather and Keith, Anzak and Zulfiqar (2017) suggested that in Pakistan, a largely patriarchal and patrilineal society, familial and cultural customs influenced female children's schooling.

The results of this study are expected to show that matrilineal family lineage descent has a positive effect on children's school attendance in the DRC. This hypothesis is based on the findings of a study conducted by Lowes (2020), which indicated that the matrilineal-family-lineage system influences offspring's schooling outcomes such as enrollment, attendance, or attainment. Specifically, Lowes (2020) found that children of matrilineal mothers are more likely to be educated and healthier. Specifically, in her sample, children of matrilineal women were 8 percentage points less likely to have been ill in the previous month and to have had 0.4 more years of education than children of

patrilineal women. These findings stem from her previous two publications (Lowes, 2016, 2018), in which she proposed that in the DRC, children of matrilineal women have more years of education than children of patrilineal women.

Hypothesis 3-2: Matrilineal family lineage descent increases girls' opportunities to attend school at all levels of education in the DRC

Hypothesis 3-2 is based on studies showing that matrilineal and bilateral family types, particularly when also nuclear-family types, are strong predictors of equal gender participation in education (Vleuten, 2016; La Ferrara & Milazzo, 2017; Robinson & Gottlieb, 2021). Likewise, in their study on land inheritance and schooling in matrilineal societies, Quisumbing and Otsuka (2001) found evidence from Sumatra that daughters who used to face educational disadvantages now appear to be doing well, that the gender gap in education appears to be closing for the younger generation of students, and that gender bias in land inheritance is either non-existent or minimal. In a similar vein, Marak (2012), in her paper investigating whether the matrilineal social structure contributes in any way to the son or daughter receiving preferential treatment, including preferential treatment for schooling, found that, in this society, when parents preferred one gender over the other, a girl child was preferred, depending on the circumstances. Again, depending on the circumstances of the family, both genders were preferred.

It is believed that this investigation's findings would show that matrilineal family lineage descent boosts girls' possibilities to enroll in school in the DRC at all levels of schooling. This hypothesis is based on the results of research done by Vleuten (2016), who stated that the matrilineal family structure helps close the gendered educational attainment gap by affecting daily attitudes about women, perceptions of their worth, and choices regarding them. She emphasized that inequality is especially pronounced outside of highly industrialized countries, where universal access to education is not the norm and gender differences in educational achievement are heavily influenced by long-standing cultural norms. In order to test her idea, she looked at family structures that have had a

long-term influence on gender norms. Her research looked at 86 low- and middle-income countries and found that matrilineal and bilateral family types, especially when combined with nuclear family types, are major predictors of both boys and girls going to school.

4.3. Model

4.3.1 Identification strategy

This section outlines the regression models used in this study. The primary goal of this study is to investigate how educational attainment is transmitted across generations in the DRC, specifically by estimating how educational mobility has evolved over time and across generations and by investigating how intergenerational educational attainment is transmitted in the DRC between genders and among lineage groups. In order to achieve the assigned goal, some research questions related to the primary research objectives were developed, as well as some sub-research questions related to the main research questions. The regression coefficient or intergenerational persistence in educational attainment (IGP) method is used in this study to answer the first research questions 1.1 and 1.2 and test the hypotheses 1.1 and 1.2.

However, Azomahou and Yitbarek (2021) argued that up to now, econometric issues caused by unobservable heterogeneity, such as the transmission of genetic endowments like ability and preference across generations, have hampered intergenerational mobility research. The partial correlation in the data could be attributed to parental preference and the transmission of ability to offspring. Interestingly, previous research has linked nature and nurture, as well as other factors, to the partial but significant correlations between parental educational outcomes and their children's educational outcomes (Black & Devereux, 2011; Chen et al., 2018). "Nature," according to Azomahou and Yitbarek (2021), refers to the genetic transmission of a parent's ability to a child. For instance, a more capable parent is more likely to have a more capable child who will be able to pursue higher education without the need for additional parental

support. A child, for example, may acquire skills by observation without the assistance of a parent. “Nurture” refers to parental time and financial commitment to a child’s human capital development.

Given the above, it is typical in econometrics to use instrumental variables when addressing unobserved heterogeneity. It is challenging to identify exogenous factors that affect parental educational performance but have no influence on children’s educational attainment. However, it has been shown that instrumental variables often utilized in research, including family background traits, have an influence on children’s outcomes, including educational outcomes like school achievement, on which this dissertation is focused. Since this study doesn’t have quasi-experimental data and reliable instruments like Azomahou and Yitbarek (2021), the empirical estimate model for research questions 1.1 and 1.2 will only look at the relationship between parental and child educational achievement.

Accordingly, in the literature, the influence of family educational background on children’s educational attainment has been quantified in a variety of ways; for a more in-depth discussion, see Azam and Bhatt (2015); Neidhöfer et al. (2018); Lee and Lee (2019); Momo et al. (2019); Azomahou and Yitbarek (2021). The most widely used metrics are intergenerational correlation and intergenerational elasticity.

To estimate these measures, the conventional ordinary least squares (OLS) regression model, which connects the educational achievement transmission from parents to children may be described as follows:

$$E_{ij} = \alpha + \beta Eparents_i + \varepsilon_{ij} \quad (4.1)$$

For which i=1,…, I indexes households and j =1,…, J for children; E_{ij} denotes years of schooling of a child j and in a household i; $Eparents_i$ is the parental years of schooling in a household i; and β is the intergenerational regression, which is the parameter of interest, and ε is a mean zero error term that is distributed independently and identically across generations and individuals. Following Azomahou and Yitbarek (2021), this study

will estimate equation 4.1, which employs two metrics to assess the impact of parental educational attainment on the number of school years spent by children. The first metric ($\hat{\beta}$) is the intergenerational elasticity. Moreover, the intergenerational elasticity (IGE) depicts the relationship between each additional year of parental education and the offspring's education. Whereas $\hat{\beta}$ measures intergenerational persistence, 1-$\hat{\beta}$ is the measure of intergenerational mobility.

As a result, higher intergenerational elasticity ($\hat{\beta}$) implies lower mobility and higher intergenerational persistence. This dissertation estimates intergenerational education mobility in the DRC using five 9-year birth cohorts from 1940 to 1989 and gender and family lineage systems. Comparisons ($\hat{\beta}$) are made across each birth cohort to assess how intergenerational education persistence has changed over time for both genders and family lineage systems. Another widely used measure of intergenerational elasticity is the correlation of intergenerational education between E_{ij} and $Eparents_i$. The correlation coefficient ($\hat{\rho}$) determines the proportion of observed educational disparities in children that can be attributed to parental education. Higher correlation coefficient values also indicate less intergenerational mobility and more intergenerational educational persistence. The correlation between parent and child educational attainment, weighted by the ratio of educational standard deviations between generations, is defined as "intergenerational elasticity". The correlation and elasticity measurements will be similar since the standard deviation of years of schooling is the same across generations. The two measures have the following relationship:

$$\widehat{\boldsymbol{\beta}} = \frac{\boldsymbol{pc^{\sigma}}}{\boldsymbol{\sigma_p^2}} = \boldsymbol{\rho_{pc}}\frac{\boldsymbol{\sigma^c}}{\boldsymbol{\sigma_p}} = \boldsymbol{\rho_{pc}} = \boldsymbol{\beta}\frac{\boldsymbol{\sigma^p}}{\boldsymbol{\sigma^c}} \tag{4.2}$$

where pc^{σ} is the correlation between parents' and children's educational years; ρ_{pc} is the correlation between parents' and children's years of schooling; σ_p and σ^c are the standard deviation of the years of schooling of parents and children in each 9-year birth cohort. The value of ρ equal to 1 denotes perfect intergenerational immobility, in which case child educational attainment is completely impacted by parents' educational

backgrounds. A value of ρ near zero denotes a society with perfect mobility where parental education has little to no influence on children's educational outcomes. The study models the influence of parents' educational background on their children's education across birth cohorts using the OLS model.

Instrumental variable estimation (IV) is often used to estimate the causal inference since it allows for exogenous variability in parental education to be included while still accounting for differences in parental and offspring ability. An accurate IV estimate was not possible due to a lack of instrumental factors in the data utilized in this investigation. Therefore, OLS is used to assess the connection between parental and offspring schooling in this research. This is enough since, like Magejo et al. (2014), the emphasis of this investigation is on how the association changes over time. If the variables that may skew the estimates are time-invariant, our examination of variations in intergenerational transmission of schooling across time is still instructive without discriminating between parts of nature and nurture. The research uses the following model to explain how parental education might affect children's schooling at home:

$$\boldsymbol{educ_{ij} = \beta_0 + \beta_1 faeduc_{ij} + \beta_2 X_i + \varepsilon_{ij}} \quad (4.3)$$

where $educ_{ij}$ is the level of education for individuals i in household j, and $faeduc_{ij}$ refers to the level of education of parents (father). X_i represents a vector of covariates for an individual i. To answer the second research question and the sub-research questions 2-1 and 2-2, a probit regression analysis is used. When y is a binary response with values 0 and 1 indicating whether or not an event occurred, the Probit regression model is used. Because the response probability is so important in binary response models, we have the following specification:

$$p(\boldsymbol{X}) \equiv \mathbf{P}(y = 1|\boldsymbol{X}) = \mathbf{P} = (y = 1|x_1, x_2, \ldots x_K) \quad (4.4)$$

The specification (4.4) implies that for various values of $\boldsymbol{X}$, when y is an indicator of school attendance, $\boldsymbol{X}$, for example, may include various personal characteristics such as

gender, age, place of residence, and other elements that influence school attendance. For a continuous variable, x_j, the partial effect of x_j on the response probability is:

$$\frac{\partial \mathbf{P(y=1|X)}}{\partial \mathbf{x_j}} = \frac{\partial \mathbf{p(X)}}{\partial \mathbf{x_j}} \tag{4.5}$$

The equation (4.5) provides an approximation of the change in $\mathbf{P}(y = 1|\mathbf{X})$ when x_j increases by Δx_j, when multiplied by Δx_j while holding all other variables constant. If x_K is a binary variable, interest lies in:

$$\boldsymbol{p(x_1, x_2, \dots, x_{K-1}, 1) - p(x_1, x_2, \dots, x_{K-1}, 0)} \tag{4.6}$$

which is the variation in a response's likelihood when $\boldsymbol{x_{K-1} = 1}$ and $\boldsymbol{x_{K-1} = 0}$. The partial effect of a variable x_j on a variable $p(\mathbf{X})$ is affected by all of the models considered, regardless of whether the variable x_j is continuous or discrete.

In the same vein, some studies use the linear probability model for binary response to achieve the same goal, the **LPM** is specified as:

$$\boldsymbol{p(y = 1|X) = \beta_0 + \beta_1 x_1 + \beta_2 + \cdots + \beta_K x_K)} \tag{4.7}$$

$$\text{If } \boldsymbol{x_j = \beta_j \cong \beta_1 = \partial P(y = 1|X)/\partial x_1} \tag{4.8}$$

When using functions such as quadratics, logarithms and so on among the independent variables, there are no new issues. It is critical that the explanatory variables x_j are now measured by the β_j on a specific probability. Therefore, obtaining the conditional mean and variance of y helps in the selection of an appropriate estimation method; because y is a Bernoulli random variable, these are simply:

$$\mathbf{E(y|X) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_K x_K} \tag{4.9}$$

$$\mathbf{Var}(y|\mathrm{X}) = X\boldsymbol{\beta}(1 - \boldsymbol{X\beta}) \tag{4.10}$$

where $\boldsymbol{X\beta}$ is the shorthand for the right-hand side of the equation (4.9). According to equation (4.9), the OLS regression of y on 1, $\boldsymbol{x_1, x_2, \dots, x_K}$ yields consistent and even unbiased estimators of the $\boldsymbol{\beta_j}$. Additionally, the heteroskedasticity exists unless all of the slope coefficients $\boldsymbol{\beta_1, \dots, \beta_K}$ are zero for the equation (4.10). Following up on equation (4.10) will facilitate to have the binary response models of the form:

$$\mathbf{P}(\boldsymbol{y} = \mathbf{1}|\mathbf{X}) = \boldsymbol{G}(\boldsymbol{X\beta}) \equiv \boldsymbol{p}(\mathbf{X}) \quad (4.11)$$

where $\mathbf{X}$ is $1\times \mathbf{K}$, and $\boldsymbol{\beta}$ is $\boldsymbol{K}\times 1$

$\mathbf{G}$ is a cumulative distribution function (cdf), whose specific form can sometimes be derived from an underlying economic model. The probit model is the special case of the equation (4.11) with:

$$\mathbf{G}(\mathbf{z}) = \boldsymbol{\phi}(\mathbf{z}) \equiv \int_{-\infty}^{\boldsymbol{z}} \boldsymbol{\phi}(\boldsymbol{v})\boldsymbol{dv} \quad (4.12)$$

where $\boldsymbol{\phi}(\mathbf{z})$ is the standard normal density

$$\boldsymbol{\phi}(\mathbf{z}) = (\mathbf{2}\boldsymbol{\pi})^{-\mathbf{1/2}}\mathbf{exp}\ (-\boldsymbol{Z}^{\mathbf{2}}/\mathbf{2}) \quad (4.13)$$

The probit model can be derived from the formulation of the latent variable when e has a conventional normal distribution. However, if the coefficients produced in a simple linear model are understandable results. It is more difficult when there are non-linear terms, such as equations (**4.11**). It is even more complicated with interactions. As a result, using the analytical derivative greatly simplifies interpretation. It is one of the reasons a logistic model, such as the probit, is used in this study to introduce marginal effects that are obviously applicable to any other model.

Given the binary nature of the independent variable for this study, a probit model is used. The model is completed by the interaction terms of intrahousehold bargaining power and the matrilineal descent group, and a jointly significant coefficient vector β_4 which suggests that the influence of intrahousehold bargaining power indeed varies depending on the matrilineal ($\boldsymbol{matrilineal_{ij}}$) family descent group, which is our treatment group, or the patrilineal ($\boldsymbol{patrilineal_{ij}}$) family descent group, which is our control group:

$$\mathbf{Pr}(\boldsymbol{y} = \mathbf{1}) = \int_{\infty}^{\boldsymbol{x}} \frac{\mathbf{1}}{\sqrt{\mathbf{2}\boldsymbol{\pi}}}\boldsymbol{e}^{\frac{-\boldsymbol{x}^{\mathbf{2}}}{\mathbf{2}}}\boldsymbol{dx} \text{ (probit).} \quad (4.14)$$

$$\frac{\boldsymbol{\partial}\mathbf{Pr}\ (\boldsymbol{y}=\mathbf{1})}{\boldsymbol{\partial x_k}} = \boldsymbol{\phi}(\boldsymbol{x\beta})\boldsymbol{\beta_k} \text{ (Average Marginal Effects).} \quad (4.15)$$

$$\boldsymbol{attnd_{ij}} = \boldsymbol{\beta_0} + \boldsymbol{\beta_1 bargain_{ij}} + \boldsymbol{\beta_2 X_i} + \boldsymbol{\beta_3 Sch_i} + \boldsymbol{\beta_4 barg} * \boldsymbol{matril_{ij}} + \boldsymbol{\varepsilon_{ij}} \quad (4.16)$$

where $attnd_{ij}$ is the school attendance for children i in household j; $bargain_i$ refers to parents (mother) bargaining power, and X_i represents a vector of covariates for individuals i, including his/her grandfather's socioeconomic situation. Sch_i controls for school attributes such as school type and parents' satisfaction for books and supplies. $\boldsymbol{barg * matril_{ij}}$ the interaction term for bargaining power and matrilineal system.

This study used the treatment-effect estimator technics to answer the third research question and sub-research questions 3.1 and 3.2, with a particular focus on the treatment effects of "belonging or not in a family lineage descent group". Although many human experiments are impractical or unethical, studies that randomly assign participants to treatment or control groups are ideal for investigating the effects of treatments. This ensures that comparable groups are compared when competing treatments are used. As a result, most analyses are built on data from observations. The augmented inverse probability weighted (AIPW) estimator was used in this study to estimate average treatment effects (ATEs). Kurz (2022) argued that "despite the fact that the AIPW has been in existence for 20 years, the majority of social and behavioral science analyses still use the regression estimator, or the traditional inverse probability weighted (IPW) estimator"(p.156). The AIPW estimator includes two essential actions: the first is fitting a propensity score model and the second is fitting two models that forecast results under both treatment and control circumstances. The weighted average of the two outcome models is then calculated by applying the propensity score from the preceding step to each outcome. The estimator software STATA, however, makes it simple to expedite and complete each of these steps:

Suppose $\boldsymbol{N}$ individuals, represented by the indexes $n = 1, \dots, N$ being randomly sampled from a given population and suppose the individuals being assigned in a binary treatment represented by $\boldsymbol{A} \in \{\boldsymbol{0}, \boldsymbol{1}\}$, $\boldsymbol{X_n}$ a set of observed independent variable and $\boldsymbol{Y_n}$ a dependent variable. In this case, $\boldsymbol{Y_n^{(1)}}$ represents the outcome if the individual $\boldsymbol{n}$ had received treatment, and $\boldsymbol{Y_n^{(0)}}$ represents the alternative. Given that neither X nor Y can be

observed for the same individual, these quantities are commonly referred to as "potential" outcomes. In other words, a causal exposure variable, $\boldsymbol{A_n}$, with two possible values is specified for a binary cause with two causal states and associated potential outcome variables $\boldsymbol{Y_n^{(1)}}$ and $\boldsymbol{Y_n^{(0)}}$:

$$\boldsymbol{Y_n^{A_n}} = \begin{cases} \boldsymbol{Y_n^{(1)}} \text{ if } \boldsymbol{A_n = 1} \\ \boldsymbol{Y_n^{(0)}} \text{ if } \boldsymbol{A_n = 0} \end{cases} \tag{4.17}$$

The distinction between the possible outcomes $Y_n^{(1)}$ and $Y_n^{(0)}$ can be used to represent the treatment's causal effect. Assuming that the relationship between the observed and potential outcomes is:

$$\boldsymbol{Y_n = Y_n^{(1)} A_n + Y_n^{(0)}(1 - A_n)} \tag{4.18}$$

With a probability distribution of $Y_n^{(A_n)}$ computed from the equation (4.18):

$$\mathbb{E}\left[\boldsymbol{Y_n^{(1)}}\right] \text{ and } \mathbb{E}\left[\boldsymbol{Y_n^{(0)}}\right] \tag{4.19}$$

According to Kurz (2020), the research concentrated on estimating well-specified aggregate causal effects since it is often difficult to calculate individual-level causal effects. In aggregate causal effects, which are often described as averages of these individual-level effects, the difference in probable outcomes is utilized to characterize the individual-level causal impact. The largest possible average impact is the ATE across the whole population, with an ATE causal analysis of:

$$\boldsymbol{^{T}ATE} = \mathbb{E}\left[\boldsymbol{Y_n^{(1)} - Y_n^{(0)}}\right] \tag{4.20}$$

The distribution of the data for the study will then have to be limited. First, by making the stable unit treatment value assumption (SUTVA) that no individual's potential outcomes are affected by the treatment status of another individual. It is a basic tenet of causal effect stability that is frequently supported by careful study design. Second, the study assumes exchangeability also known as "selection on observables", given $\boldsymbol{X}$ which means that all causes of the treatment and the outcome have been identified and quantified:

$$\left\{\boldsymbol{Y_n^{(1)}, Y_n^{(0)}}\right\} \perp\!\!\!\perp \boldsymbol{A_n | X_n} \tag{4.21}$$

where the symbol ⊥⊥ denotes statistical independence. A crucial third assumption from the equation (3.20) is positivity (or overlap), which states that each person has a positive nonzero probability of receiving treatment, represented in the equation (4.22).

$$\mathbf{0} < \mathbb{P}(\boldsymbol{A_n} = \mathbf{1}|\boldsymbol{X_n}) < \mathbf{1} \tag{4.22}$$

$$\mathbb{E}[\boldsymbol{Y^1} - \boldsymbol{Y^0}|\boldsymbol{X}] = \boldsymbol{C}(\boldsymbol{X}) = \mathbb{E}[\boldsymbol{Y}|\boldsymbol{A} = \mathbf{1}, \boldsymbol{X}] - \mathbb{E}[\boldsymbol{Y}|\boldsymbol{A} = \mathbf{0}, \boldsymbol{X}],$$

$$^{\boldsymbol{T}}\boldsymbol{ATE} = \mathbb{E}[\mathbb{E}[\boldsymbol{Y}|\boldsymbol{A} = \mathbf{1}, \boldsymbol{X}] - \mathbb{E}[\boldsymbol{Y}|\boldsymbol{A} = \mathbf{0}, \boldsymbol{X}]] \tag{4.23}$$

$$\mathbb{E}[\mathbb{E}[\boldsymbol{Y}|\boldsymbol{A} = \mathbf{1}, \boldsymbol{X}]] - \mathbb{E}[\mathbb{E}[\boldsymbol{Y^{(1)}}|\boldsymbol{A} = \mathbf{1}, \boldsymbol{X}]]$$

$$= \mathbb{E}\big[\mathbb{E}[\boldsymbol{Y^{(1)}}|\boldsymbol{X}]\big]$$

$$= \mathbb{E}\big[\boldsymbol{Y^{(1)}}\big]$$

$$^{\boldsymbol{T}}\boldsymbol{ATE} = \mathbb{E}[\boldsymbol{f}(\mathbf{1}, \mathbf{X}) - \boldsymbol{f}(\mathbf{0}, \boldsymbol{X})]$$

and each method that permits flexible estimation f yields the ATE estimator listed below:

$$\hat{\boldsymbol{\tau}}_{\boldsymbol{ATE}}^{\boldsymbol{RSM}} = \frac{\mathbf{1}}{\boldsymbol{N}}\sum_{\mathbf{1}-\boldsymbol{n}}^{\boldsymbol{N}}(\hat{\boldsymbol{f}}(\mathbf{1}, \boldsymbol{X_n}) - \hat{\boldsymbol{f}}(\mathbf{0}, \boldsymbol{X_n})) \tag{4.24}$$

$$\hat{C}_{RSM}(X_n) = \hat{\boldsymbol{f}}(1, X_n) - \hat{\boldsymbol{f}}(0, X_n) \tag{4.25}$$

$$e(X) = \mathbb{E}[\boldsymbol{A} = \mathbf{1}|\boldsymbol{X}],$$

$$^{\boldsymbol{T}}\boldsymbol{ATE} = \mathbb{E}\left[\frac{\boldsymbol{AY}}{\boldsymbol{e(X)}} - \frac{\boldsymbol{(1-A)Y}}{\boldsymbol{1-e(X)}}\right] \tag{4.26}$$

$$\widehat{\boldsymbol{C}}_{\boldsymbol{IPW}}(\boldsymbol{X_n}) = \frac{\boldsymbol{A_n}\,\boldsymbol{Y_n}}{\hat{\boldsymbol{e}}\,\boldsymbol{X_n}} - \frac{\boldsymbol{(1-A_n)Y_n}}{\boldsymbol{1-}\,\hat{\boldsymbol{e}}(\boldsymbol{X_n})} \tag{4.27}$$

$$\hat{\boldsymbol{\tau}}_{\boldsymbol{ATE}}^{\boldsymbol{IPW}} = \frac{\mathbf{1}}{\boldsymbol{N}}\sum_{\boldsymbol{n}=\mathbf{1}}^{\boldsymbol{N}}(\frac{\boldsymbol{A_nY_n}}{\hat{\boldsymbol{e}}(\boldsymbol{X_n})} - \frac{\boldsymbol{(1-A_n)Y_n}}{\boldsymbol{1-}\hat{\boldsymbol{e}}(\boldsymbol{X_n})} \tag{4.28}$$

$$\hat{C}_{AIPW}X_n = (\frac{A_nY_n}{e(X_n)} - \frac{A_n - e(X_n)}{e(X_n)}f(1, X_n) - (\frac{(1-A_n)Y_n}{1-e\,(X_n)} - \frac{A_n - e(X_n)}{1-e(X_n)}f(0, X_n))$$

$$\hat{\boldsymbol{\tau}}_{\boldsymbol{ATE}}^{\boldsymbol{IPW}} = \frac{\mathbf{1}}{\boldsymbol{N}}\sum_{\boldsymbol{n}=\mathbf{1}}^{\boldsymbol{N}}\widehat{\boldsymbol{C}}_{\boldsymbol{AIPW}}(\boldsymbol{X_n}) \tag{4.29}$$

According to Kurz (2022) AIPW is referred to as 'doubly robust' because of its consistency when either the outcome model or the treatment assignment mechanism is properly specified. For example, if the propensity score $\boldsymbol{e}(\boldsymbol{X_n})$ is very effective at predicting whether the patient will receive the desired treatment, $\boldsymbol{A_n} - \boldsymbol{e}(\boldsymbol{X_n})$ in

expectation will change to 0, AIPW will be condensed to the IPW estimator. The estimator similarly reduces to the RSM model if the propensity score is erroneous. The augmentation term once again has expectation zero if both RSM and propensity score are substituted with their genuine equivalents.

Assuming that lineage as well as binary variable "matrilineal" or "patrilineal" are created from ethnic groups, let Y be the school attendance for individuals aged 6 to 25, which is an outcome at some fixed time. Then we may make an assumption of a law for Y of the form:

$$Y = f(lineage,\ parental\ education, grandparent\ education, x_4, \dots x_n) \quad (4.30)$$

where x_1 denotes family lineage, x_2 denotes parental education, x_3 denotes grandparent education and $x_4, \dots x_n$, denote a potentially wide range of factors that are all assessed at the moment of conception, including parental age, wealth, and a great deal more. We might outline the typical impact of family history on Y as:

$$E[f(1, x_1, \dots x_n)] - E[f(0, x_1, \dots x_n)] \quad (4.31)$$

We let $A = X_0$ denote family lineage and we could define for each individual $\omega, Y_\alpha(\omega) = f(\alpha, X_1(\omega), \dots X_n(\omega))$. Irrespective of the form that the law f takes because, ethnic groups and de facto lineage systems are randomized at conception, we have $Y_\alpha \perp\!\!\!\perp A$ and thus we have:

$$E[f(1, x_1, \dots x_n)] - E[f(0, x_1, \dots x_n)] = E[Y_1 - Y_0] \quad (4.32)$$

$$E[Y|A = 1] - E[Y|A = 0] \quad (4.33)$$

After then, it is possible to assess the overall impact of family lineage by simply adding all the differences in Y between those with patrilineal family descent systems and those with matrilineal family systems. Despite the absence of any attempts to alter it, we can identify the overall impact of familial lineage because the lineage itself is randomized at conception. If lineage is genuinely randomized at conception, it will be unaffected by parental education, wealth, or gender, as well as by all other elements of the starting state

at time 0 in the model law f for Y. Thus, to measure the effects of matrilineal system on children school attendance, this study estimates the following specifications:

$$attnd_{ije} = \beta_0 + \beta_1 matrilineal_{je} + \beta_2 X_i + \varepsilon_{ije} \quad (4.34)$$

where $attnd_{ije}$ is the school attendance for children i in household j and from ethnic group e; $matrilineal_{je}$ is a binary variable referring to 1 if household j, from ethnic group e, practices matrilineal system; and X_i represents a vector of covariates for individuals i, including his/her parents' and grandfather's socioeconomic situation, school attributes such as school type and parents' satisfaction for books and supplies.

As in Lowes (2016, 2018), one concern with the specification (4.34) is that $matrilineal_{je}$ may capture the effect of something other than just the practice of the matrilineal system. In that context, the causal inference would be overly complex. From the perspective of the individual, although ethnic groups and de facto lineage are randomized at conception and therefore make an individual's assignment to treatment or/and control group exogenous, individuals are instead assigned an ethnicity based on their parents' ethnic group membership. This means that the impact of a matrilineal variable alone does not make it possible to identify the causal effect of belonging to a matrilineal ethnic group on behavior in the household for several reasons.

First of all, the omitted variable bias might be a problem. Matrilineal system can be correlated both historically and presently with a number of traits. For example, the matrilineal system may only be practical in certain ecological environments. Thus, the matrilineal variable would capture the effect of some other social, historical, and ecological factors. Secondly, reverse causality can also be a problem. In fact, the literature on African kinship suggests that some ethnic groups had changed their lineage, therefore, patrilineal ethnic groups that were initially defending women's rights could be more likely to adopt matrilineal kinship systems and vice versa (Mtika et al., 2002). In that case, the matrilineal variable would be capturing the effect of having this initial vision of being more favorable towards women.

Now, assuming that the above-mentioned unobserved factors affect both the assignment to matrilineal lineage system and children's school attendance, we have an endogeneity problem, and we cannot obtain accurate estimates of effects using conventional treatment-effects estimators. Therefore, endogenous treatment estimators such as ATE may address such cases.

4.4. Data

4.4.1. Data description

This analysis relied on quantitative data from the most current surveys 1-2-3 on employment, the informal sector, and home living conditions. These surveys were repeated, cross-sectional and retrospective data collected in the DRC in 2012. The 1-2-3 survey is so named because it is made up of three nested surveys that encompass many statistical populations, including individuals, production units, and households. The first phase of this survey was a survey of household employment, unemployment, and living conditions (phase 1: employment survey). The second stage was to interview the leaders of informal production units about their working conditions, economic performance, how they fit into the production system, and their future expectations (phase 2: survey on the informal sector). The last phase was a survey of people's spending habits. It attempted to determine how much money individuals made, how much the official and informal sectors contributed to their spending, and what variables influenced people to shop in various regions (phase 3: survey on consumption, places of purchase, and poverty).

In terms of the scope, phase 1 covered economic activity, employment, unemployment, social and occupational mobility, prospects, and income. In addition, it dealt with socio-demographic factors such as education, migration, habitat characteristics, heritage characteristics, and access to basic infrastructure. Phase 2 included IPU characteristics, work performed within the IPU, production, charges, capital, investment, loans, and institutional problems. Finally, phase 3 included spending. The survey was

conducted by the Congolese National Institute of Statistics in collaboration, and with funding from these organizations: Afristat, the French Cooperation, the United Nations Development Programme, the African Development Bank, the Department for International Development, and the World Bank.

In terms of sampling design, the first phase of the survey was conducted in two stages: in Kinshasa, and throughout the country. In Kinshasa, because there was no current sampling frame, several files were used, including files from the MICS2 and Habitat surveys, as well as files from the Congolese National Institute of Statistics, which were updated in the field with the help of the Ministry of the Interior. The sampling frame was stratified by standard of living and population size in the neighborhood. The survey was divided into two parts: first, a draw of 50 neighborhoods, and second, a systematic drawing of households after enumerating households in the 50 sampled neighborhoods.

In the rest of the country, there was a draw in provincial urban areas, and the draw was conducted in each stratum of study as follows:

(a) neighborhoods with probabilities proportional to population size were drawn at the first level of statutory cities. In order to organize the field, it was necessary to draw four neighborhoods per city. The number of households in each sample neighborhood was counted. In each sample neighbourhood, 30 households were drawn at random and in a systematic manner:

(b) the first degree, with probabilities proportional to population size, of drawing two cities in each province. Draw four neighborhoods in the second degree with proportional population probabilities. After enumerating all households in the neighbourhood, the third degree drew 30 households with equal probabilities in each sample neighbourhood.

A draw was conducted in the more rural parts of the provinces. In the first degree, two districts were selected using probabilities that were proportional to their total area in each district. In every community that served as a sample, the towns and their populations were arranged by area. In the second degree, six villages were chosen using probabilities

that were proportional to the number of people living in each sector from the first degree. This was done to maintain the same level of accuracy. The number of households in each sample village was tallied. In the third degree, 15 households from each village were randomly selected with equal probabilities, and their inhabitants were counted (systematic draw). Using the data collected in phase 1, an informal production unit frame, also known as "IPU" frame, was established for phase 2.

The phase 1 subsample was collected in Kinshasa, with phase 2 taking place one month later. The stratification of IPUs was based on two criteria: the status of the IPU's head (patron or own account) and the industry, which was aggregated into ten sectors. As a result, about 1,000 IPUs were chosen. In contrast to Kinshasa, in other cities all three phases of the survey were conducted concurrently. As a result, all IPUs encountered during phase 1 should have been interviewed thoroughly. Unfortunately, a number of IPUs were lost as a result of the difficulties encountered (funding issues, refusals, misidentification in phase 1, and so on). In the area outside of Kinshasa, 3,000 IPUs were interviewed.

For phase 3, some households were drawn from the initial sample. In Kinshasa, 1,050 households were surveyed for phase 3, a subsample of the 2,000 households surveyed in phase 1. In the rest of the country, 11,688 households from the phase 1 sample were surveyed in phase 3. Each stratum of study in the provinces' urban areas was drawn as follows:

(a) the statutory cities were divided into districts with probabilities proportional to population size in the first stage. In order to organize the field, it was necessary to draw four neighborhoods per city. The number of households in each sample neighborhood was counted. In each sample neighbourhood, 30 households were drawn at random and in a systematic manner. (b) the first degree, with probabilities proportional to population size, two cities were drawn in each province. Four neighborhoods were drawn in the second degree with proportional population probabilities. After enumerating all

households in the neighbourhood, the third degree drew 30 households with equal probabilities in each sample neighbourhood.

In the rural areas of the provinces, in the first degree two sectors were drawn with probabilities proportional to their size per district. Villages and populations were listed in each sample community (area). In the second degree, 6 villages were drawn with probabilities proportional to the size of the population in each sector retained in the first degree. The number of households in each sample village was counted. In the third degree, 15 households were drawn and enumerated with equal probabilities in each village (systematic draw).

The overall response rate to the survey was 80.7%. The data set included 21,454 households, 111,679 individuals, and 8,727 informal production units. The use of the 1-2-3 data for research on family descent and intergenerational transfer of schooling has three significant benefits. The data included extra retrospective questions, to begin with. These questions enable us to determine the father's level of education for every adult born between 1940 and 1989. Second, the data includes information on years of real education. Having data on years of schooling prevents discontinuities in the education distribution caused by the imputation of years of schooling for the categorical variable representing the amount of schooling completed. Thirdly, the data offer abundant information on more than 300 ethnic groups, making it simple to build the binary variable "patrilineal" or "matrilineal" – equal to 1 if an ethnic group employs patrilineal or matrilineal family lineage descent systems, and 0 otherwise.

4.4.2. Variables

Tables 4.1 and 4.2 present the definitions and statistics for the variables used in this study's analyses. The primary goal of this research is to investigate how educational attainment is transmitted across generations in the DRC, specifically by estimating how educational mobility has evolved over time and across generations, and by investigating

how intergenerational educational attainment is transmitted between genders as well as among lineage groups.

Table 4.1, for example, shows the summary statistics of main variables disaggregated by birth cohort and restricted to the 1st and 2nd generations of individuals in the sample to answer research question 1 and the sub-research questions 1-1 and 1-2. The total number of observations in the sample for the Table 4.1 is 39,556. The sample was then divided into five 9-year birth cohorts from 1940 to 1989. Table 4.1 presents the weighted values for each variable. Given data limitations, only first-generation fathers are included. The outcomes that are relevant to this study determine the types of variables used as dependent and independent variables. The factors chosen were based on the evidence from the literature; the dependent variable in terms of education transmission is the offspring's years of education, along with many other predictor variables measuring parental proxy for education, a binary kinship systems variable, parental occupations, as well as district dummies and the standard of local educational facilities.

The main variables for school-age children aged 6 to 25 are summarized in Table 4.2. The variables help answer research questions 2 and 3, as well as sub-questions 2-1, 2-2, 3-1, and 3-2. There are 42,689 observations in the sample. The dependent variable for this phase is education attendance, which is a binary variable that takes 1 if the individual attends school and 0 if they do not. Table 4.2 also includes a slew of other predictor variables, such as the bargaining index proxy, household consumption, and other independent variables, such as the number of siblings and the matrilineal system for a descendant traced through women lineage.

Table 4.1: Summary statistics of main variables by birth cohort restricted to the 1st and 2nd generations of individuals in the sample to answer research question 1 and the sub-questions 1.1 and 1.2

	1940-1949				1950-1959				1960-1969				1970-1979				1980-1989			
Definition of variables	M	SD	Min	Max	M	SD	Min	Max	M	SD	Min	Max	M	SD	Min	Max	M	SD	Min	Max
Dependent Variables																				
Offspring's years of education	4.06	4.71	0	19	5.54	5.08	0	21	6.15	5.10	0	21	6.67	5.10	0	21	6.89	5.06	0	21
Parental proxy for education																				
Father's years of education	2.25	3.43	0	21	2.93	3.56	0	21	3.68	4.08	0	21	4.41	4.40	0	21	5.25	4.81	0	21
Kinship Systems																				
1 if descendant is traced through male lineage.	0.75	0.42	0	1	0.74	0.43	0	1	0.74	0.43	0	1	0.75	0.43	0	1	0.77	0.42	0	1
Other Individual Characteristics																				
1 if gender is female	0.51	0.50	0	1	0.47	0.49	0	1	0.50	0.50	0	1	0.50	0.49	0	1	0.55	0.49	0	1
Number of siblings	2.33	1.26	0	10	2.32	1.14	0	10	2.22	.93	0	10	2.19	1.00	0	10	2.17	1.28	0	10
Individual's occupation																				
1 if executive	0.06	0.23	0	1	0.06	0.24	0	1	0.04	0.21	0	1	0.04	0.20	0	1	0.04	0.19	0	1
1 if qualified staff	0.13	0.33	0	1	0.13	0.34	0	1	0.13	0.34	0	1	0.15	0.36	0	1	0.15	0.35	0	1
1 if unskilled worker	0.04	0.18	0	1	0.03	0.16	0	1	0.03	0.18	0	1	0.03	0.18	0	1	0.04	0.19	0	1
1 if employer	0.02	0.12	0	1	0.01	0.12	0	1	0.02	0.15	0	1	0.02	0.15	0	1	0.02	0.14	0	1
1 if self-employed	0.64	0.48	0	1	0.64	0.48	0	1	0.63	0.48	0	1	0.60	0.49	0	1	0.56	0.50	0	1
1 if Paid domestic worker.	0.11	0.32	0	1	0.12	0.32	0	1	0.13	0.34	0	1	0.14	0.35	0	1	0.19	0.39	0	1
Father's occupation																				
1 if executive	0.06	0.24	0	1	0.07	0.26	0	1	0.07	0.26	0	1	0.08	0.28	0	1	0.10	0.30	0	1
1 if qualified staff	0.23	0.42	0	1	0.24	0.42	0	1	0.25	0.43	0	1	0.24	0.43	0	1	0.23	0.42	0	1
1 if unskilled worker	0.09	0.29	0	1	0.10	0.29	0	1	0.08	0.27	0	1	0.07	0.26	0	1	0.06	0.25	0	1
1 if employer	0.02	0.14	0	1	0.01	0.12	0	1	0.02	0.15	0	1	0.02	0.16	0	1	0.02	0.16	0	1
1 if self-employed	0.53	0.49	0	1	0.53	0.49	0	1	0.52	0.49	0	1	0.52	0.49	0	1	0.54	0.49	0	1

1 if Paid domestic worker.	0.04	0.20	0	1	0.03	0.19	0	1	0.03	0.18	0	1	0.03	0.18	0	1	0.04	0.20	0	1
Household Characteristics																				
Household size	4.81	3.20	1	20	5.27	2.92	0	20	6.09	2.84	0	20	6.11	2.71	0	20	5.67	2.87	0	20
Area Characteristics																				
1 if lives in rural	0.61	0.48	0	1	0.64	0.47	0	1	0.62	0.48	0	1	0.59	0.49	0	1	0.59	0.49	0	1
[16]***District dummy***																				
Kinshasa	0.14	0.34	0	1	0.11	0.31	0	1	0.13	0.34	0	1	0.14	0.34	0	1	0.13	0.34	0	1
Kongo Central	0.09	0.28	0	1	0.09	0.29	0	1	0.07	0.26	0	1	0.07	0.26	0	1	0.05	0.22	0	1
Mai-Ndombe	0.01	0.12	0	1	0.02	0.13	0	1	0.02	0.14	0	1	0.02	0.14	0	1	0.02	0.14	0	1
Kwilu	0.06	0.24	0	1	0.06	0.24	0	1	0.07	0.24	0	1	0.07	0.25	0	1	0.06	0.23	0	1
Kwango	0.03	0.17	0	1	0.03	0.16	0	1	0.03	0.17	0	1	0.03	0.16	0	1	0.02	0.15	0	1
Equateur	0.02	0.13	0	1	0.02	0.15	0	1	0.02	0.15	0	1	0.02	0.14	0	1	0.03	0.15	0	1
Sud-Ubangi	0.02	0.14	0	1	0.03	0.16	0	1	0.03	0.18	0	1	0.03	0.17	0	1	0.03	0.17	0	1
Nord-Ubangi	0.02	0.13	0	1	0.02	0.14	0	1	0.02	0.12	0	1	0.02	0.13	0	1	0.02	0.13	0	1
Mongala	0.01	0.10	0	1	0.01	0.10	0	1	0.01	0.11	0	1	0.01	0.11	0	1	0.01	0.11	0	1
Tshuapa	0.01	0.11	0	1	0.02	0.12	0	1	0.01	0.12	0	1	0.01	0.11	0	1	0.01	0.12	0	1
Tshopo	0.04	0.20	0	1	0.03	0.18	0	1	0.04	0.19	0	1	0.04	0.19	0	1	0.04	0.19	0	1
Bas-Uele	0.01	0.10	0	1	0.01	0.11	0	1	0.01	0.11	0	1	0.01	0.11	0	1	0.01	0.09	0	1
Haut-Uele	0.03	0.17	0	1	0.02	0.16	0	1	0.03	0.15	0	1	0.02	0.15	0	1	0.03	0.16	0	1
Ituri	0.03	0.18	0	1	0.04	0.19	0	1	0.04	0.19	0	1	0.03	0.17	0	1	0.04	0.18	0	1
Nord-Kivu	0.06	0.24	0	1	0.06	0.25	0	1	0.07	0.26	0	1	0.08	0.26	0	1	0.08	0.27	0	1
Sud-Kivu	0.07	0.26	0	1	0.07	0.26	0	1	0.06	0.24	0	1	0.07	0.26	0	1	0.08	0.26	0	1
Maniema	0.02	0.14	0	1	0.02	0.14	0	1	0.02	0.15	0	1	0.02	0.15	0	1	0.03	0.17	0	1
Lualaba	0.03	0.16	0	1	0.03	0.15	0	1	0.02	0.15	0	1	0.02	0.15	0	1	0.03	0.16	0	1
Haut-Lomami	0.03	0.18	0	1	0.03	0.18	0	1	0.04	0.18	0	1	0.03	0.17	0	1	0.03	0.17	0	1

[16] Note: The DRC originally had 11 provinces, however, a constitutional change to divide the country into 26 provinces was enacted on June 30, 2015, upgrading all the districts cited in this paper into provinces.

Tanganyka	0.01	0.08	0	1	0.01	0.11	0	1	0.01	0.10	0	1	0.02	0.12	0	1	0.02	0.12	0	1
Haut-Katanga	0.06	0.24	0	1	0.07	0.25	0	1	0.06	0.23	0	1	0.06	0.24	0	1	0.06	0.24	0	1
Kasai-Oriental	0.04	0.18	0	1	0.03	0.16	0	1	0.03	0.16	0	1	0.03	0.16	0	1	0.03	0.16	0	1
Sankuru	0.02	0.12	0	1	0.01	0.12	0	1	0.02	0.13	0	1	0.02	0.13	0	1	0.02	0.14	0	1
Lomami	0.05	0.21	0	1	0.04	0.20	0	1	0.05	0.21	0	1	0.04	0.20	0	1	0.05	0.22	0	1
Kasai	0.02	0.14	0	1	0.03	0.16	0	1	0.03	0.15	0	1	0.03	0.16	0	1	0.02	0.15	0	1
Kasai-Central	0.04	0.18	0	1	0.04	0.18	0	1	0.03	0.18	0	1	0.03	0.18	0	1	0.03	0.17	0	1
Quality of local educational facilities																				
1 if went to public school	0.25	0.43	0	1	0.26	0.43	0	1	0.25	0.43	0	1	0.26	0.44	0	1	0.27	0.44	0	1
1 if denominational school	0.61	0.48	0	1	0.61	0.48	0	1	0.60	0.48	0	1	0.59	0.49	0	1	0.59	0.49	0	1
1 if went to private school	0.13	0.33	0	1	0.12	0.32	0	1	0.13	0.34	0	1	0.14	0.35	0	1	0.13	0.34	0	1
N	**2,230**				**4,685**				**7,495**				**10,319**				**14,827**			

Source: Author's estimation based on datasets 1-2-3 (2012)
Note: The total number of observations is 39,556 in the sample. It was then divided into five 9-year birth cohorts from 1940 to 1989. Table 2 presents the weighted values for each variable. Given data limitations, only first-generation fathers are included.

Table 4.2. Summary statistics of main variables for school-age children aged 6-25 to answer research questions 2 and 3 and the sub-questions 2-1, 2-2; 3-1 and 3-2

Variables	Definition of variables	Obs.	Mean	SD	Min	Max
Dependent Variable						
attnd	1 if individual is attending school	42689	0.636	0.481	0	1
Individual's characteristics						
Age	Individual's school-age	42689	14.045	5.660	6	25
agesq	Squared of individual's age	42689	229.29	171.9	36	625
female	1 if individual is female	42689	0.509	0.499	0	1
no_sibling	Number of siblings	42689	3.776	2.010	1	14
Household head's education						
fatheduc	father' s years of education	42689	8.351	4.583	0	21
motheduc	mother' s years of education	42689	4.289	4.683	0	21
Household Head father's education						
grandfaeduc	grandfather's years of education	42689	5.497	4.682	0	21
Family lineage descent group						
matrilineal	1 if descendant is traced through women lineage.	42689	0.472	0.499	0	1
Proxy for bargaining outcomes						
bargaining index	Principal component analysis index created with [education and age] variables.	42689	0.0518	1.001	-0.86	3.410
Household head's occupation status						
Executive	1 if executive	42689	0.039	0.196	0	1
Qualified staff	1 if qualified staff	42689	0.134	0.341	0	1
Unskilled worker	1 if unskilled worker	42689	0.038	0.191	0	1
Employer	1 if employer	42689	0.018	0.134	0	1
Self-employed	1 if self-employed	42689	0.576	0.494	0	1
Paid domestic workers	1 if Paid domestic workers	42689	0.194	0.395	0	1
Household head's father occupation status (grandfather)						
Executive	1 if executive	42689	0.081	0.273	0	1
Qualified staff	1 if qualified staff	42689	0.246	0.430	0	1
Unskilled worker	1 if unskilled worker	42689	0.064	0.246	0	1
Employer	1 if employer	42689	0.022	0.146	0	1
Self-employed	1 if self-employed	42689	0.558	0.497	0	1
Paid domestic workers	1 if Paid domestic workers	42689	0.029	0.168	0	1
Other household's characteristics						
hhsize	Household size	42689	7.062	2.934	1	20
lntotalexp	Household consumption	42689	63.91	4.534	49.37	82.86
rural	1 if household lives in rural area	42689	0.506	0.499	0	1
District dummy						

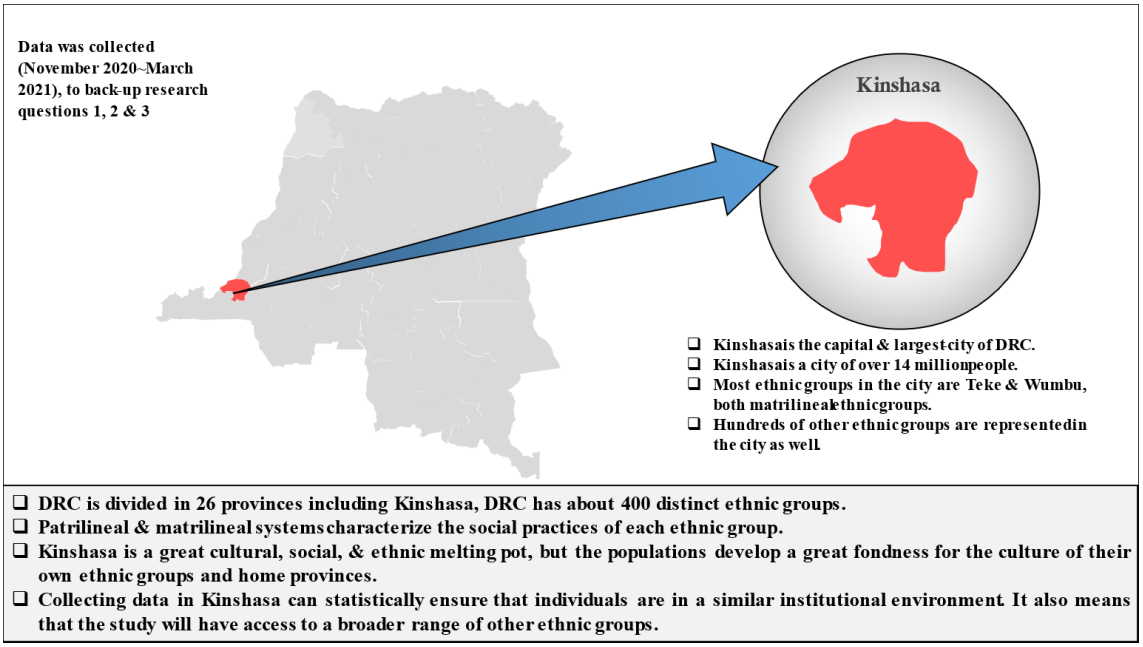
Kinshasa	1 if district is Kinshasa	42689	0.081	0.273	0	1
Kongo Central	1 if district is Kongo Central	42689	0.046	0.209	0	1
Mai-Ndombe	1 if district is Mai-Ndombe	42689	0.020	0.139	0	1
Kwilu	1 if district is Kwilu	42689	0.045	0.208	0	1
Kwango	1 if district is Kwango	42689	0.029	0.169	0	1
Equateur	1 if district is Equateur	42689	0.043	0.204	0	1
Sud-Ubangi	1 if district is Sud-Ubangi	42689	0.038	0.192	0	1
Nord-Ubangi	1 if district is Nord-Ubangi	42689	0.044	0.204	0	1
Mongala	1 if district is Mongala	42689	0.037	0.188	0	1
Tshuapa	1 if district is Tshuapa	42689	0.029	0.167	0	1
Tshopo	1 if district is Tshopo	42689	0.041	0.198	0	1
Bas-Uele	1 if district is Bas-Uele	42689	0.017	0.129	0	1
Haut-Uele	1 if district is Haut-Uele	42689	0.021	0.143	0	1
Ituri	1 if district is Ituri	42689	0.026	0.158	0	1
Nord-Kivu	1 if district is Nord-Kivu	42689	0.057	0.231	0	1
Sud-Kivu	1 if district is Sud-Kivu	42689	0.042	0.200	0	1
Maniema	1 if district is Maniema	42689	0.036	0.186	0	1
Lualaba	1 if district is Lualaba	42689	0.030	0.169	0	1
Haut-Lomami	1 if district is Haut-Lomami	42689	0.027	0.159	0	1
Tanganyka	1 if district is Tanganyka	42689	0.014	0.118	0	1
Haut-Katanga	1 if district is Haut-Katanga	42689	0.078	0.268	0	1
Kasai-Oriental	1 if district is Kasai-Oriental	42689	0.047	0.211	0	1
Sankuru	1 if district is Sankuru	42689	0.019	0.138	0	1
Lomami	1 if district is Lomami	42689	0.049	0.215	0	1
Kasai	1 if district is Kasai	42689	0.045	0.207	0	1
Kasai-Central	1 if district is Kasai-Central	42689	0.041	0.199	0	1
Quality of local educational facilities						
public school	1 if public school	42689	0.271	0.444	0	1
denominational school	1 if denominational school	42689	0.607	0.488	0	1
private school	1 if private school	42689	0.123	0.329	0	1

Source: Estimated by the author based on 1-2-3 data (2012)

4.5. Qualitative approach of the study

4.5.1 Semi-structured interviews

Figure 4.2: Qualitative data collection in Kinshasa (the DRC)



Source: Created by the author

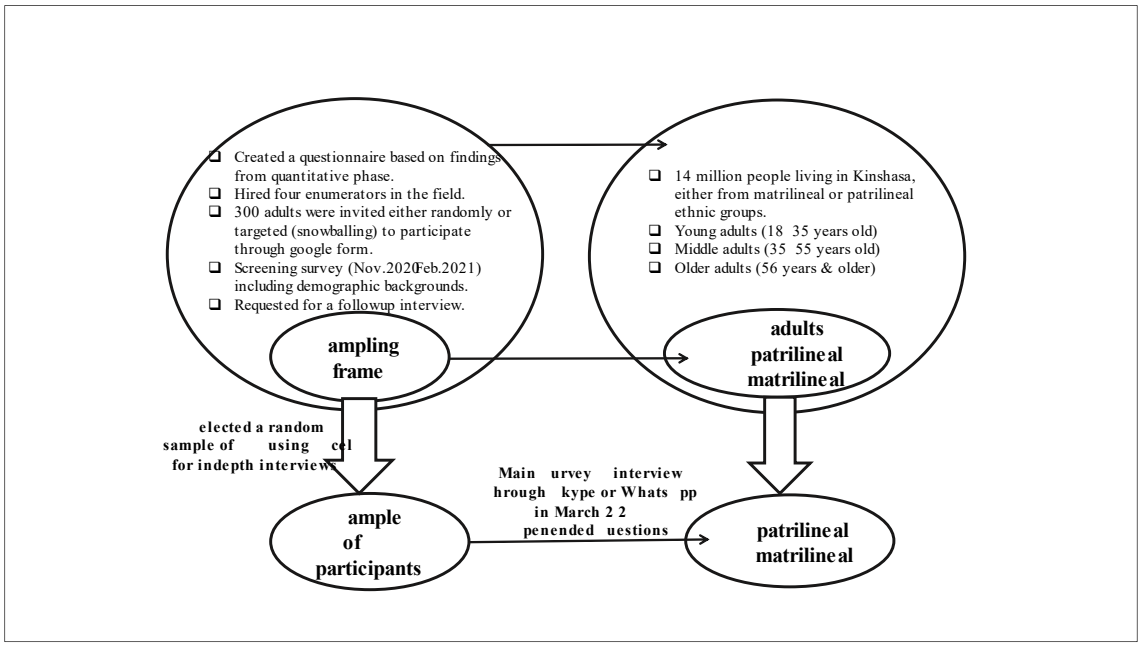
The current study also used a qualitative methodology to collect data that was used to explain the results of the quantitative analysis described above. The qualitative analysis improved and clarified the results of the quantitative findings by examining the demographic backgrounds of the participants, their perception of the transmission of educational attainment across generations, their knowledge about intrahousehold decision-making power and its influence on children's schooling, and their thoughts about the family lineage environment as well as its influences on the educational attainment in the DRC. Semi-structured interviews with the DRC participants were conducted virtually from Japan in Kinshasa, the DRC's capital and largest city, between November 2020 and March 2021 to back-up quantitative research questions 1, 2, and 3. The qualitative approach's steps are outlined below.

Qualitative data was collected in Kinshasa between November 2020 and March 2021, as shown in Table 4.3. As shown in Figure 4.1, Kinshasa has a population of over

14 million people. The city's two most populous ethnic groups are Teke and Wumbu, both matrilineal ethnic groups. Hundreds of other ethnic groups are also represented in the city. The study was able to statistically ensure that individuals are in a similar institutional environment today by collecting data in the capital city rather than in other provinces and villages. It also meant that the study had access to a broader range of other ethnic groups in Kinshasa, both urban and rural.

4.5.2. Sampling method and sample size

Figure 4.3: Qualitative data sampling



Source: Created by the author based on Marfai et al. (2008), Lowes (2016, 2018) & Anwar et al. (2020)

Due to the extremely difficult situation created by the COVID-19 health crisis at the time of data collection, a comprehensive community-based survey was not feasible. The questionnaire was divided into four sections that address the participants' demographic backgrounds, perceptions of educational attainment transmission across generations, knowledge of intrahousehold decision-making power and its influence on children's schooling, and thoughts on family lineage environment and its influences on educational attainment (see ANNEX 1 for more details about the questionnaire). As

presented in Figure 4.2 and in accordance with the framework established by Lowes (2016, 2018) and Anwar et al. (2020), 300 adults were randomly invited to participate in this research through Google Forms, a web-based application and tool for collecting data. Those who accepted to take part in the first phase were contacted through WhatsApp, Zoom, and Skype for a follow-up, structured, in-depth interview. The final sample included 100 people from 100 different tribes (see Table 4.4); 59 of these people came from patrilineal families, while the remaining 41 came from matrilineal families.

Table 4.3. Phases for the virtual collection of qualitative data in the DRC

Names	Period	Methods	Location	Total survey	Total selected	Matrilineal Tribes	Patrilineal Tribes
Screening survey	(Nov.2020 Feb.2021)	Simple Random Sampling using Google Form	All the 24 communes of Kinshasa	300	300		
						Matrilineal	Patrilineal
Main Survey & interview	March 2021	Random purposive sampling (Through WhatsApp, Zoom and Skype)	All the 24 communes of Kinshasa		100	41	59

Source: Created by the author

As shown in Tables 4.3 and 4.4, the goal of this qualitative data collection was to conduct the semi-structured interview with 50% of the participants from matrilineal families and 50% of the participants from patrilineal families. However, it transpired that only 41 individuals were matrilineal. Nevertheless, of all the different ethnic groups that were interviewed, the Luba, who follow a patrilineal family structure, appear to have most of the observations in the sample. The remaining ones have anywhere from one to 10 observations each. The total number of participants was 100, with 62 being male and 38 being female. The vast majority of those who were surveyed were unmarried, with approximately 54 out of 100 individuals falling into this category. Of the remaining individuals, 33 were married in monogamous marriages, 2 were married in polygamous

marriages, 4 were divorced, 4 were widows, and 3 were living in common law marriages. Because the majority of respondents did not have spouses, approximately 36 respondents were discovered to be living in households with four or fewer people. Of the other respondents, 29 lived in households with more than 5 people, 13 in households with more than 6 people, 8 in households with more than 7 people, 4 in households with more than 8 people, 3 in households with more than 10 people, and 2 in households with more than 10 people.

Another feature of the qualitative data was that it revealed the majority of respondents to be of a younger age, with 64 of them falling in the age range of 25 to 49 years old. In addition, 21 of the respondents were between the ages of 16 and 24, 10 between the ages of 50 and 69, and 5 were older than 65. The data also showed that the majority of respondents had a very meager income on a monthly basis, with 79 of the respondents claiming that they make less than $500 each month. Twenty-two of the respondents reported a monthly income of between $500 and $1500 dollars; 4 a monthly income of approximately $1500 to $2500; and 3 a monthly income of more than $2500.

Questions about education level were asked to ascertain how well educated the respondents were in terms of being able to improve their chances of better job opportunities and opening new doors for themselves. We discovered that approximately 78 out of 100 respondents had either completed a tertiary education level or were currently studying at a university level. This was true for the vast majority of those interviewed. Sixteen respondents had completed secondary education, 3 had completed non-formal education, 2 had completed primary education, and 1 had completed graduate level education, indicating that this sample of respondents had some level of education.

In the same way, we asked questions about the educational background of the father, and the data collected indicated that 53 out of 100 respondents came from families in which the father had a university degree. Twenty-eight of the respondents came from households in which the father had completed at least some secondary education; 8 from

families in which the father had completed post-secondary education at the master's or doctoral level; and 5 from families in which the father had an informal education. Only one of the respondents came from a family in which the father had never attended school while the other four came from families in which the father had completed at least some level of primary education.

An interesting result was that a large number of respondents came from households in which the mothers held very advanced degrees. As an illustration, 49 out of 100 respondents came from families in which the mother had completed at least some level of secondary education. Twenty-eight were from homes in which the mother had earned a degree from a college or university; 10 came from households in which the mother had completed at least some level of primary education; 8 from families in which the mother had some form of education other than a formal schooling, and 5 were from families in which the mother had never attended school. We were also interested in finding out whether any of the respondents came from families in which at least one of their grandparents had been given the opportunity to receive an education. According to the results of the survey, the majority of respondents, 56 out of 100, came from families in which none of the grandfathers had ever attended school and had not completed any education training. Twenty-three came from families in which both sets of grandparents had completed some level of schooling, whether elementary or tertiary; 20 of the respondents were unsure whether or not their grandfathers had a college degree, and 1 of the respondents opted not to answer that question.

The majority of respondents, approximately 71 of the 100 respondents, stated that they had a job: 29 respondents were managers, 22 were self-employed, 6 were executives in companies, 1 was a domestic worker, and 23 were skilled workers. In comparison, the data showed that the majority of the respondents – 45 of the 100 respondents – came from families where the father was a manager, indicating a decline in occupational mobility for this category.

Table 4.4: Sampled ethnic groups that participated at the semi-structured interview

Matrilineal Groups		Patrilineal Groups	
Names of ethnic groups	Count	Names of ethnic groups	Count
Banza Manteke	1	Bangala	1
Dinga	3	Bangu-Bangu	2
Hungana	1	Bakwa kalonji	1
Kongo	8	Bashi	1
Lunda	2	Bemba	1
Manyanga	10	Besi Ngombe	2
Mbala	1	Bira	1
Mboma	1	Boa	1
Ntandu	2	Dembo	1
Pende	2	Kanioka	2
Sakata	2	Kuba	1
Suku	1	Kusu	2
Teke	1	Luba	12
Wumbu	1	Lugbala	1
Yaka	1	Lulua	1
Yansi	2	Lunda	1
Yombe	2	Mbuja	1
		Mongo	5
		Nande	1
		Ngbandi	3
		Rega	3
		Shi	2
		Songye	4
		Tetela	7
		Tshokwo	1
		Twa	1
Total	41	**Total**	59

Created by the author based on own collected data (2021)

Thirty-one respondents came from families where the father was a skilled worker; 16 from families where the father was self-employed; 4 from families where the father was an executive, and 2 from families where the father was an unskilled worker.

Concerning the jobs held by mothers, 24 of the 100 respondents came from households in which the mother held a self-employed position. Twenty-one of them came from families in which their mothers held jobs in the domestic service, and an astonishing 18 came from families in which their mothers held jobs in the qualified service. Twelve of the respondents came from families in which the mother held a managerial position, while 5 of the respondents came from families in which the mother held an executive position.

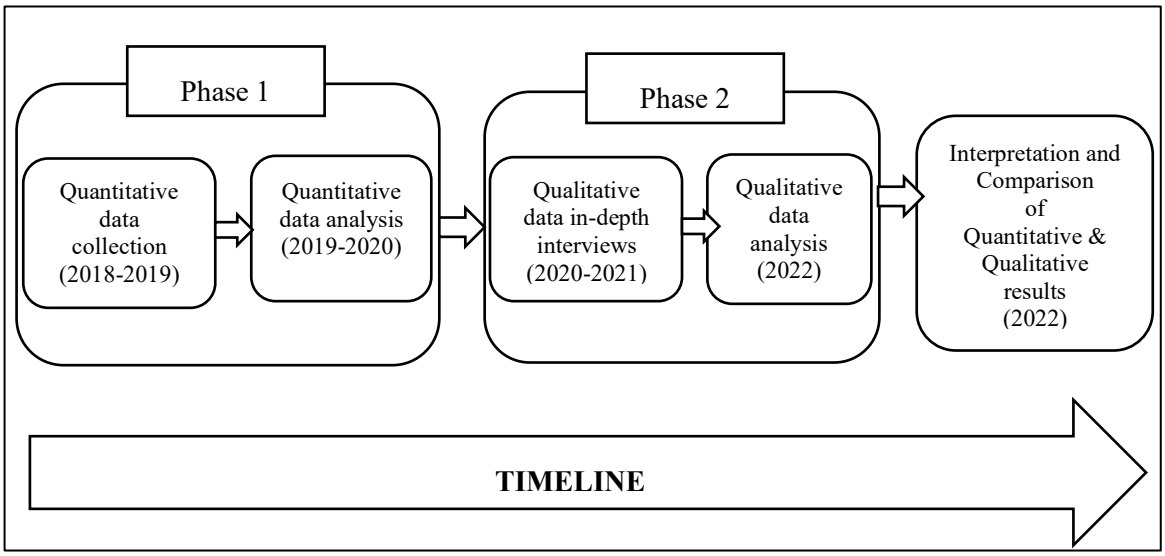
To get a sense of educational investment, respondents were asked what types of schools they attended between the ages of 11 and 16 – a period critical for the development of children's skills and preparation for employment. Furthermore, the types of schools attended during this time period are decisive in their success. For example, it is a widely held view that in the DRC, public schools are typically under-resourced and lack adequate teaching staff and equipment, and that wealthy parents are unlikely to enroll their children due to the poor quality of public education. However, according to the data collected, 49/100 respondents said they had attended public schools between the ages of 11 and 16. Only 26 respondents went to private schools, while 25 went to denominational schools.

4.5.3 Integrating quantitative and qualitative data in mixed methods research

Mixed methods research is used in this study to combine and integrate qualitative and quantitative research methods into a single research study. It was necessary to collect and analyze both quantitative and qualitative data in order to better understand how educational attainment is transmitted across generations in the DRC, specifically by estimating how educational mobility has evolved over time and across generations, and by investigating how intergenerational educational attainment is transmitted between genders as well as among lineage groups and providing answers to research questions.

The key reason for employing mixed methods research in this study is that it optimizes the benefits of each data source while limiting its drawbacks. It also mixes qualitative and quantitative approaches to improve evidence, raise the credibility of the conclusions, and aid in the comparison of one method's results with the results of the other. Based on three well-established fundamental mixed-methods research designs—the convergent design, the explanatory sequential design, and the exploratory sequential design—the exploratory sequential design was applied in this work. Explanatory sequential design (ESD) is a sort of mixed-methods study in which researchers gather and evaluate quantitative data before moving on to a qualitative phase (Newman et al., 2006; Molina-Azorin, 2016; Johnson & Schoonenboom, 2017). This approach was employed in this investigation. Researchers do the qualitative phase in order to offer a more detailed explanation of the preliminary quantitative data. Combining qualitative and quantitative methodologies, according to Kelle (2006), should reduce their weaknesses. According to Wong and Cooper (2016), the reliability and validity of research for both quantitative and qualitative research must be re-examined for mixed-techniques research in order to represent the diverse methods of establishing research credibility.

Figure 4. 4: Visual model for this study's mi e d-methods sequential explanatory design procedures



Source: Created by the author based on Wariri et al. (2020)

CHAPTER 5: RESULTS

5.1. Transmission of educational attainment across generations in the DRC

5.1.1. Progress in education mobility over time and across generations in the DRC

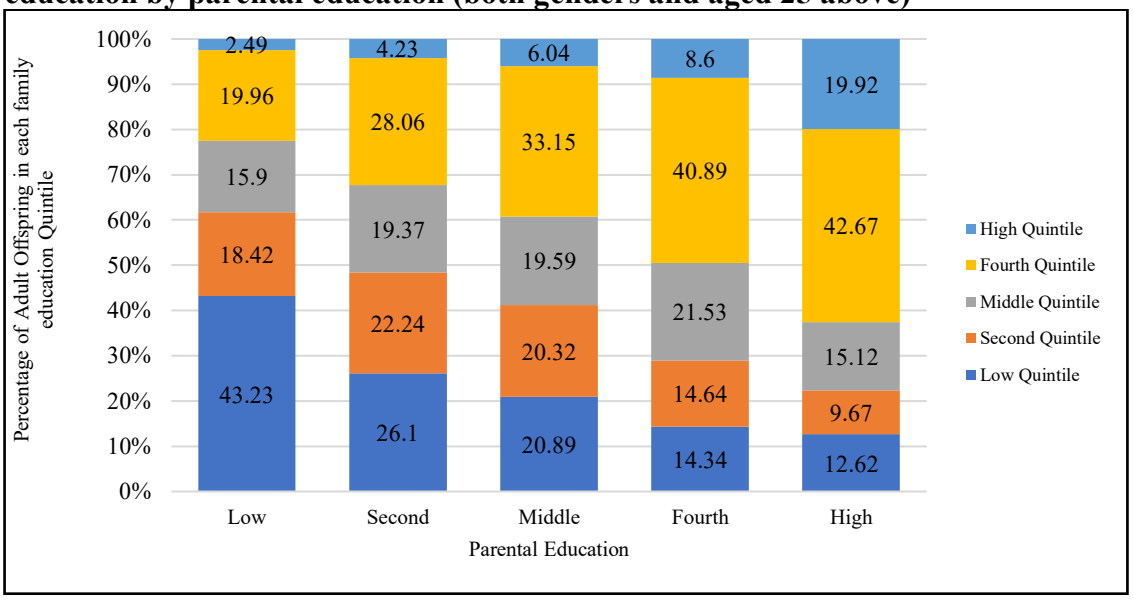
This section of the research examines how educational achievement is passed down over the generations, with a focus on how education mobility has evolved over time and across generations in the DRC. This study employed both the transition matrices and the regression coefficient or intergenerational persistence (IGP) approaches through OLS, which have typically been used to measure intergenerational persistence in schooling, to answer to sub-research question 1.1 and test the hypothesis.

Regarding transition matrices, Figure 5.1 below shows the matrix of education transition for the likelihood that people (both males and females) aged 25 and above in the DRC will advance or lag behind in education as a result of parental education, highlighting some intriguing variations in education transmission from father to child. The estimation indicates that if parents are in the lowest quintile, represented by the proxy of a father with less or no education, offspring have a greater than 43% likelihood of remaining in that quintile. It implies that the probability of not receiving any education is about 43 percent for those from a family with a less educated father.

What is more concerning about these findings is that Figure 5.1 also shows that an individual from a family in which the father is in the lowest quintile has only a 2.5% probability of moving up to the highest quintile. Simply put, this means that, in the DRC, coming from a family in which the parents do not have an education gives only a 2.5% probability of receiving a higher or tertiary education. While education persistence in this context of lowest-quintile education level is understandable, the potential for large increases in either direction across this generational cohort, as presented in the results, is also surprising. Individuals from families with parents in the second, middle, fourth, and higher quintiles, for example, have 26%, 20.9%, 14.3%, and 12.6% probability of remaining at that education level, respectively, but also have a much higher probability

of moving up to twice as high, three times higher, and four times higher, respectively, than an individual from a family with no education. On the other hand, the intergenerational persistence of education from fathers' education attainment in the highest quintile is less than 19.9% in the DRC.

Figure 5. 1: Transition matrix for chances of getting ahead or falling behind in education by parental education (both genders and aged 25 above)



Source: Author's estimation based on 1-2-3 data (2012)

The study uses an intergenerational persistence method (IGP) to learn more about how important parents' education is to the education of their children in the DRC. Table 5.1 shows the baseline results for the five 9-year birth cohorts in terms of educational attainment persistence. In general, the findings of the study revealed a consistent and pronounced steady persistence in education over a 49-year period (1940–1989), as measured by the estimated mean regression coefficient. For those born between 1940 and 1949, the findings from Table 5.1 particularly show that a one-year difference in the father's education is linked to a 0.491-year difference in the offspring's education. In addition, a one-year difference in fathers' education is related to a 0.518-year difference in offspring's education for those born between 1949 and 1959, a 0.478-year difference for those born between 1960 and 1969, and 0.440 for those born between 1970 and 1979.

Furthermore, for people born between 1980 and 1989, a one-year difference in their fathers' education was related to 0.457.

[17] Table 5. 1: Estimates for cohort analysis of intergenerational persistence in educational attainment in the DRC

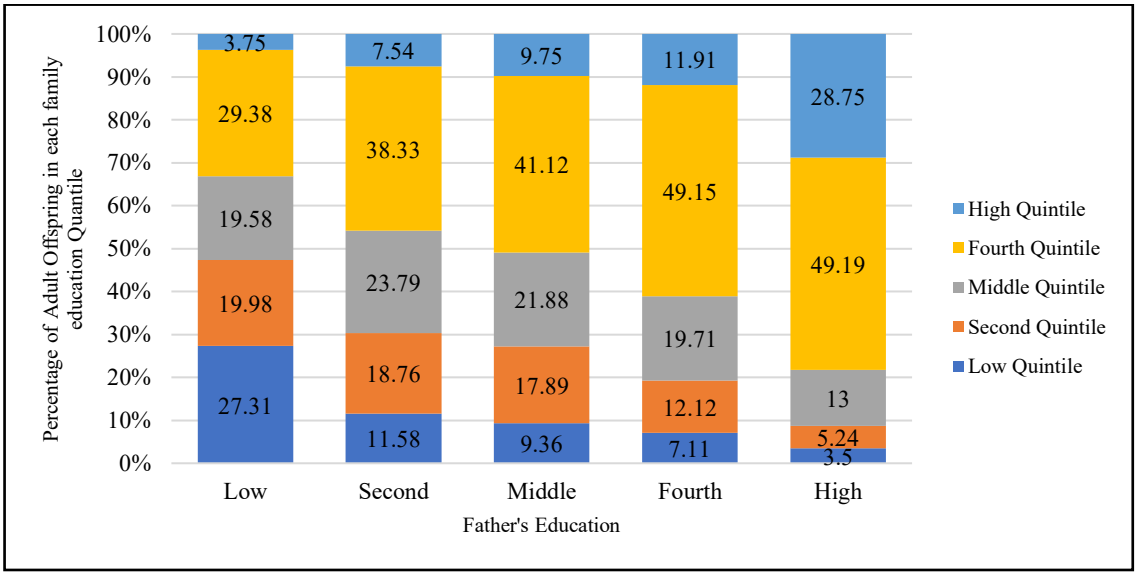
Offspring birth cohort	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989
Faeduc	0.491***	0.518***	0.478***	0.440***	0.457***
	(0.0272)	(0.0194)	(0.0134)	(0.0106)	(0.00779)
_cons	2.963***	4.027***	4.388***	4.726***	4.489***
	(0.112)	(0.0896)	(0.0735)	(0.0659)	(0.0555)
N	2230	4685	7495	10319	14827
adj. R^2	0.127	0.132	0.146	0.143	0.188

Source: Author's calculation based on data from 1-2-3 (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1%.

5.1.2. Intergenerational educational attainment between genders and among lineage groups in the DRC

Figure 5.2 indicates the results of the transition matrix for the chances of male offspring aged 25 and above getting ahead or falling behind in education due to parental education in the DRC, after disaggregating the data by gender.

Figure 5.2: Transition matrix for chances of male offspring (aged 25 above) getting ahead or falling behind in education by parental education

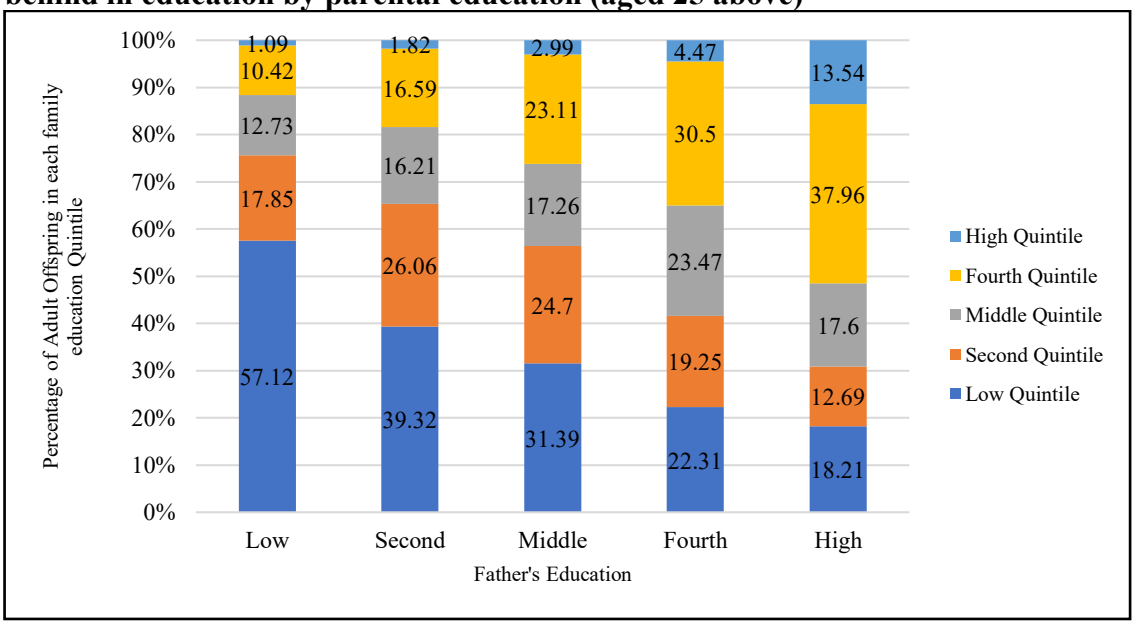


Source: Author's calculation based on data from 1-2-3 (2012)

[17] Note: Intergenerational persistence is the regression coefficient of children's years of education on their parents' years of education. Greater persistence is associated with lesser intergenerational mobility.

According to the figure, males from families with parents in the lowest education quintile have a greater than 27% probability of remaining in that quintile, implying that the probabilities of receiving no education for males born in the DRC from a family with a less educated father are about 27%. Figure 5.2 also reveals that a male from a family in which the father is in the lowest quintile has only a 3.8% probability of moving up to the highest education quintile, i.e., only a 3.8% probability of attaining higher or tertiary education. This is a particularly alarming finding. The figure also shows a few other interesting findings, such as that males from families with fathers' education in the second, middle, and fourth quintiles have respectively 11.6%, 9.4%, and 7.1% probabilities of remaining in the same quintiles, but they also have 7.5%, 9.8%, and 11.9% probabilities of moving up the educational ladder. In the DRC, however, the intergenerational persistence of education from fathers' educational attainment for male offspring in the highest quintile is less than 28.9%. This means that being born into a family with a highly educated father increases an individual's probability of being highly educated by 28.9%.

Figure 5.3: Transition matrix for chances of female offspring getting ahead or falling behind in education by parental education (aged 25 above)



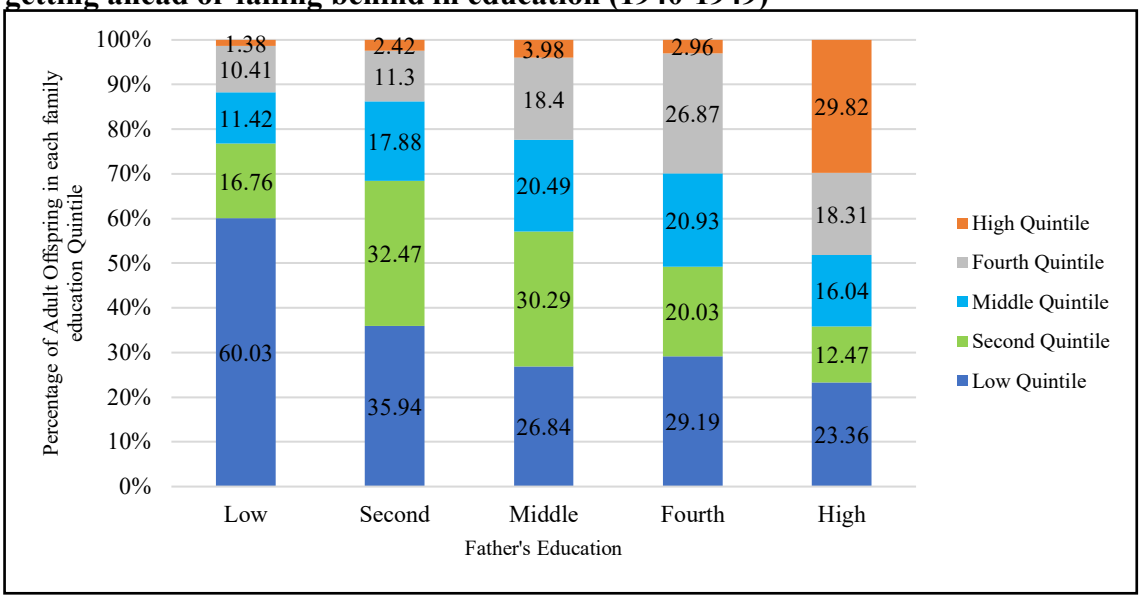
Source: Author's estimation based on 1-2-3 data (2012)

Regarding the transition matrix for the probabilities of female descendants in the DRC furthering their education, Figure 5.3 shows the transition matrix for the likelihood of female offspring aged 25 years and older in the DRC advancing or falling behind in education due to the level of education of their parents. The figure indicates that females from families with parents in the lowest quintile have a greater than 57% probability of remaining in the same quintile. This means that females born in the DRC to a father with a low level of education have a 57% probability of not receiving an education. A female from a family where the father is in the lowest quintile has a 1.1% probability of moving up to the highest quintile, which translates to a 1.1% probability of females obtaining a higher or tertiary education. This is a particularly troubling finding for women. However, the intergenerational persistence of education from fathers' educational attainment for daughters in the highest quintile is less than 13.5%. This means that if a female's father has a high level of education, her chances of attaining a high level of education increase by 13.5%.

However, in the DRC, the results of transition matrices for females are, in general, not impressive. For instance, other findings suggest that a large proportion of females whose parents are in the second, middle, fourth, and higher education quintile face the same fate of being at a higher risk of remaining in the same quintiles. This is the case even though these parents have some levels of education. Only a small percentage of females – approximately 1.8%, 3%, and 4.5% of those who fall into the second, middle, and fourth education quintiles, respectively – have a different educational path than their parents.

Transition matrices were also created to better understand education mobility among the main lineage groups found in the DRC. Because the study was only interested in how education has evolved in the oldest and newest generation cohorts, a comparison of matrices for individuals of patrilineal and matrilineal lineage descent is only presented for two cohorts, 1940 and 1980.

Figure 5.4: Transition matrix for chances for patrilineal offspring individual getting ahead or falling behind in education (1940-1949)



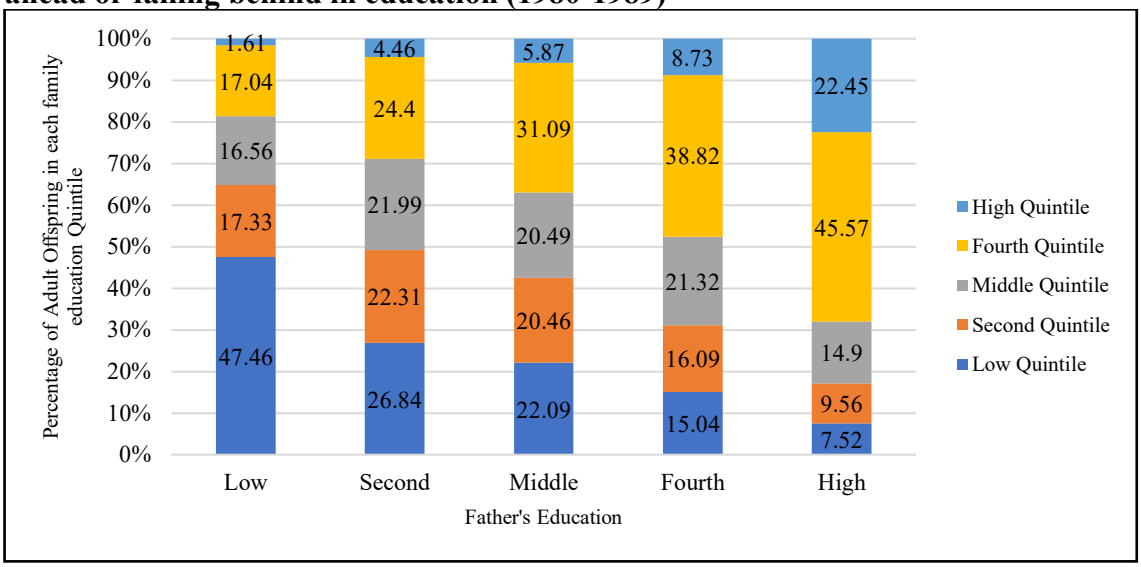
Source: Author's calculation based on data from 1-2-3 (2012)

Figures 5.4 and 5.5 show the results of the transition matrix. These numbers reflect the likelihood of patrilineal descendants progressing or falling behind in schooling for the 1940–1949 cohort and the generation that followed (1980–1989). For instance, in the 1940 cohort, individuals with a patrilineal father in the lowest quintile had a greater than 60% chance of remaining in that quintile (see Figure 5.4). Those in the 1980 cohort whose patrilineal father was in the same quintile had a 47% chance of remaining in the same quintile (see Figure 5.5).

The transmission of educational attainment from parents to offspring in the older generations of patrilineal families has been shown to be very challenging. Some of the individuals born of patrilineal parents in the second, middle, and fourth quintiles had higher probabilities of staying in those same quintiles. For example, 35.9% of individuals from parents in the second quintile, 26.8% of individuals from parents in the middle, and 29.2% of individuals from parents in the fourth quintile remained in that same quintile. Additionally, only a small percentage of people, specifically 2.4% of individuals in the second quintile, 3.9% of individuals in the middle quintile, and 3% of individuals in the

fourth quintile, had a different educational path than their parents and reached the highest education quintile.

Figure 5.5: Transition matrix for chances for patrilineal offspring individuals getting ahead or falling behind in education (1980-1989)



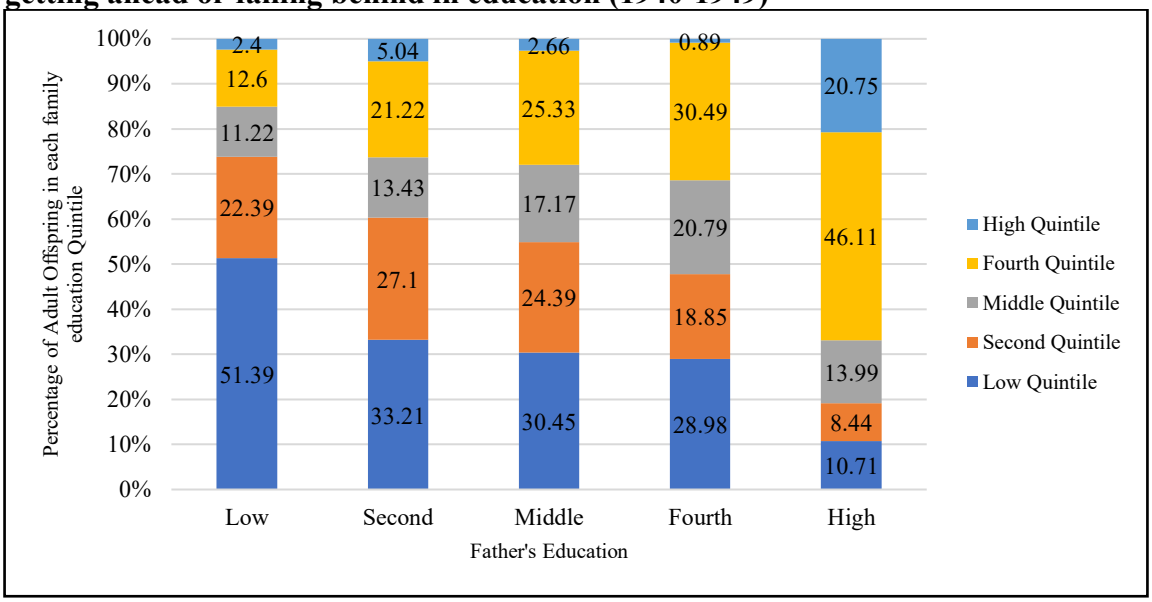
Source: Author's calculation based on data from 1-2-3 (2012)

The intergenerational persistence of educational attainment in the top quintile is 29.8% for people with a patrilineal descent father in the previous cohort, but only 22.5% for those with a patrilineal father in the most recent cohort. This suggests that having a highly educated father boosted the likelihood of receiving a higher education for patrilineal people by 29.8% in the previous cohort, but only by 22.5% in the most recent generation.

Similarly, the results for individuals with matrilineal fathers in the previous cohort indicate that those with fathers in the lowest quintile in the previous cohort had a greater than 51.4% probability of remaining in that quintile (Figure 5.6), compared to the 37.9% of individuals with matrilineal fathers in the most recent cohort who remained in that quintile (Figure 5.7). Interestingly, although education transfer remains challenging even for matrilineal people, education persistence has fallen from a 51% likelihood of staying in the same quintile as their fathers to just a 37% probability in the most recent cohort. The intergenerational persistence of educational attainment in the highest quintile,

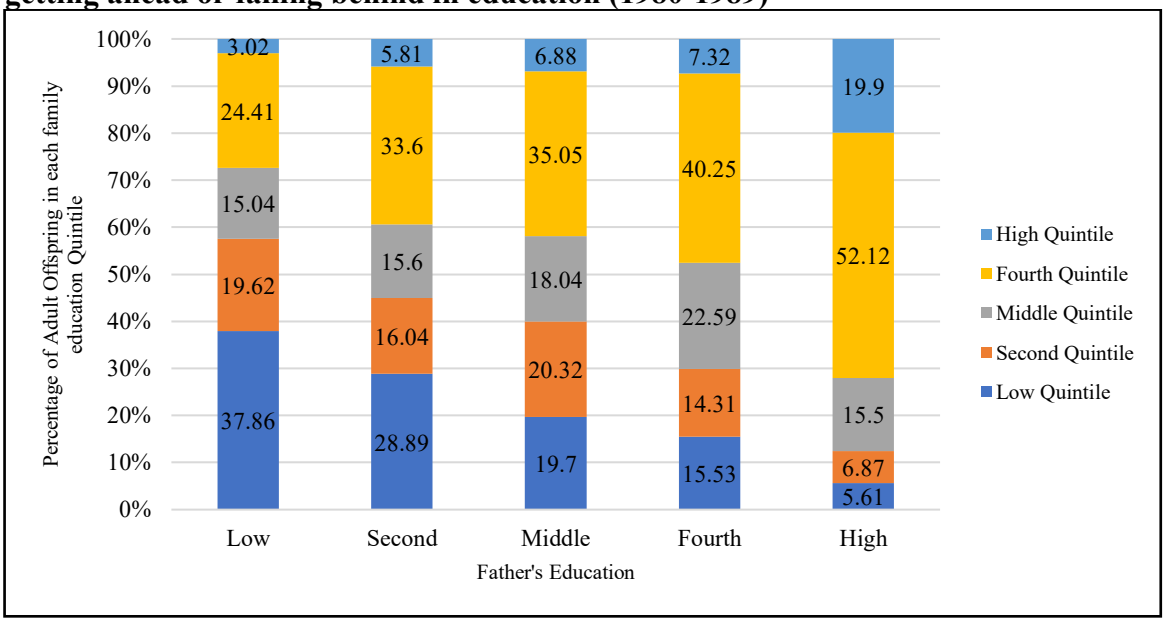
however, was actually 20.8% for people with a matrilineal father in the previous cohort, which was higher than the 19.9% for people with a matrilineal father in the most recent cohort from families with no education.

Figure 5. 6: Transition matrix for chances for matrilineal offspring individuals getting ahead or falling behind in education (1940-1949)



Source: Author's estimation based on 1-2-3 data (2012)

Figure 5. 7: Transition matrix for chances for matrilineal offspring individuals getting ahead or falling behind in education (1980-1989)



Source: Author's calculation based on data from 1-2-3 (2012)

Tables 5.2 and 5.3 provide further interesting results about educational continuity over generations, broken down by family origin and gender. These results are similar to those shown in Table 5.1. As an example, the data by gender provided in Table 5.2 show that the rate of intergenerational persistence in schooling in the DRC has declined dramatically for males in recent cohorts while increasing marginally for females.

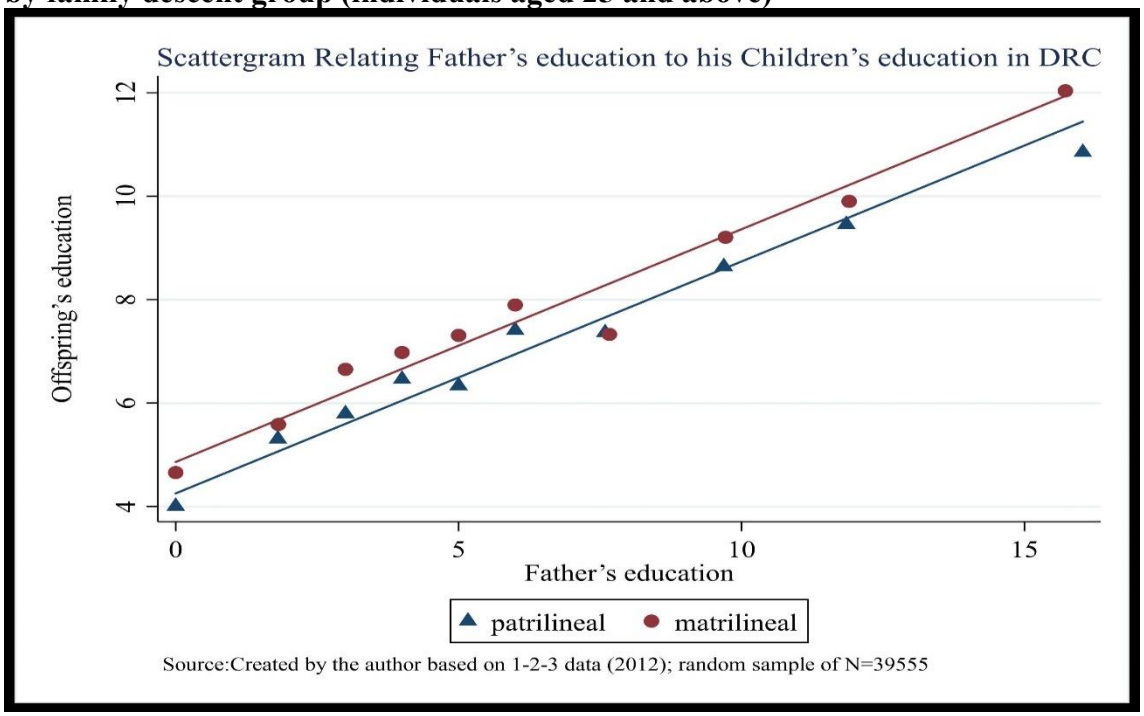
To illustrate the trend, we compare those born between 1980 and 1989 to those born between 1940 and 1949. For the former cohort, a one-year difference in fathers' education is associated with a 0.518-year difference in their male offspring's education, while for the latter cohort, a 0.399-year difference in their male offspring's education is observed. A one-year difference in fathers' education is also linked to a 0.309-year difference in the education of the female children for those born between 1940 and 1949 in the earlier cohort, as opposed to a 0.479-year difference for those born between 1980 and 1989 in the later cohort.

The results shown in Table 5.3 indicate that the level of intergenerational persistence in education has been going down for people who come from matrilineal descent groups in more recent cohorts, whereas the degree of intergenerational education persistence has not changed significantly over the course of the last 49 years for individuals who come from patrilineal descent groups in the same cohorts. For those of patrilineal ancestry born between 1940 and 1949, a one-year difference in their fathers' education is associated with a 0.475-year difference, compared to a 0.471-year difference for those of patrilineal descent born between 1980 and 1989. In contrast, a one-year difference in the education of the fathers is related to a 0.514-year difference for those of matrilineal lineage descent born between 1940 and 1949, compared to a 0.433-year difference for those born between 1980 and 1989, demonstrating a considerable drop in the matrilineal descent group.

Throughout the presentation of these facts from Section 5.1, graphs and tables have shown that, on average, the more educated the parents are, the more educated their

children, boys, and girls, are (see Figure 5.8). This graph, however, has a number of exceptions. Some individuals in the country, for example, have less or no access to education than others, most likely because of their ethnicity, kinship system membership, gender, and social position at birth. Figure 5.8 depicts how education is passed down from one generation to the next in the DRC. The figure also reveals that the observations are not especially near the regression line, showing that there is substantial intergenerational schooling mobility in the country.

Figure 5. 8: Scattergram of children's education on father's education in the DRC by family descent group (individuals aged 25 and above)



Source: Author's estimation based on 1-2-3 data (2012)

Moreover, a few variables from the literature were included in Table 5.4 along with the district dummy in order to capture the influence of other family background factors. These variables included the number of children, family size, the father's proxy for socioeconomic status or place of residence, and the standard of nearby educational facilities. According to the findings, in comparison to results presented in previous tables,

the incorporation of these control variables resulted in a significant reduction in the regression coefficients for intergenerational persistence in education in the DRC.

The incorporation of these control variables has also led to a significant increase in the explanatory power of the regression. In spite of the inclusion of such powerful control variables, the quantitative results of the study remained unchanged: that is, parental education, which was demonstrated as a proxy for this study by the father's education, continues to play an important role in children's educational attainment in the DRC. It was surprising to learn that the father's occupation variables were still a poor predictor of their offspring's schooling, even after the district dummy had been employed, and this was the case for both the former and recent cohorts. Furthermore, the quality of local educational facilities does not favor any particular school type, either in the previous or most recent cohorts of students. However, a larger household size was associated with a lower probability of attending school in the earlier cohorts for those of both lineage-descent groups.

Table 5. 2: Estimates for cohort analysis of intergenerational persistence in educational attainment by gender in the DRC

Offspring birth	1940-1949		1950-1959		1960-1969		1970-1979		1980-1980	
cohort	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Faeduc	0.518***	0.309***	0.521***	0.430***	0.420***	0.449***	0.394***	0.464***	0.399***	0.479***
	(0.0361)	(0.0295)	(0.0252)	(0.0230)	(0.0176)	(0.0175)	(0.0143)	(0.0140)	(0.0109)	(0.0103)
_cons	5.124***	1.168***	6.126***	1.947***	6.421***	2.702***	6.471***	3.115***	6.200***	3.241***
	(0.163)	(0.108)	(0.120)	(0.102)	(0.103)	(0.0893)	(0.0904)	(0.0861)	(0.0800)	(0.0715)
N	1096	1134	2451	2234	3753	3742	5113	5206	6649	8177
adj. R^2	0.158	0.088	0.148	0.135	0.131	0.149	0.129	0.174	0.167	0.210

Source: Author's estimation based on 1-2-3 data (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1

Table 5. 3: Estimates for cohort analysis of intergenerational persistence in educational attainment by lineage descent group in the DRC

Offspring birth cohort	1940-1949		1950-1959		1960-1969		1970-1979		1980-1989	
	Patrilineal	Matrilineal	Patrilineal	Matrilineal	Patrilineal	Matrilineal	Patrilineal	Matrilineal	Patrilineal	Matrilineal
faeduc	0.475***	0.514***	0.472***	0.555***	0.464***	0.483***	0.420***	0.450***	0.471***	0.433***
	(0.0359)	(0.0411)	(0.0273)	(0.0275)	(0.0187)	(0.0191)	(0.0146)	(0.0152)	(0.0107)	(0.0114)
_cons	2.667***	3.248***	3.864***	4.211***	4.087***	4.748***	4.285***	5.229***	4.202***	4.880***
	(0.153)	(0.163)	(0.122)	(0.132)	(0.0986)	(0.109)	(0.0885)	(0.0972)	(0.0731)	(0.0850)
N	1137	1093	2413	2272	3988	3507	5484	4835	8081	6745
adj. R^2	0.133	0.125	0.110	0.151	0.133	0.154	0.131	0.154	0.192	0.177

Source: Author's estimation based on 1-2-3 data (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1

Table 5. 4: Estimates for cohort analysis of intergenerational persistence in educational attainment by district dummy in the DRC

Offspring birth cohort	1940-1949		1950-1959		1960-1969		1970-1979		1980-1989	
	Patrilineal	Matrilineal	Patrilineal	Matrilineal	Patrilineal	Matrilineal	Patrilineal	Matrilineal	Patrilineal	Matrilineal
faeduc	0.297***	0.391***	0.286***	0.345***	0.255***	0.261***	0.217***	0.239***	0.292***	0.232***
	(0.0598)	(0.0542)	(0.0376)	(0.0396)	(0.0259)	(0.0286)	(0.0205)	(0.0193)	(0.0151)	(0.0147)
no_sibling	0.142	0.319*	0.188	-0.111	-0.206*	-0.227*	0.0457	0.290***	0.340***	0.388***
	(0.181)	(0.159)	(0.146)	(0.116)	(0.0937)	(0.101)	(0.0928)	(0.0760)	(0.0698)	(0.0627)
hhsize	0.147*	-0.0537	0.224***	0.272***	0.179***	0.154***	-0.0578	-0.160***	-0.135***	-0.190***
	(0.0739)	(0.0694)	(0.0596)	(0.0556)	(0.0343)	(0.0401)	(0.0309)	(0.0347)	(0.0304)	(0.0304)
Father's occupation (Executive used as ref. group)										
Qualified staff	-1.121	-2.110*	-1.309*	0.0790	-0.241	-0.335	-0.824**	-1.207***	-0.132	-0.987***
	(0.849)	(0.884)	(0.591)	(0.575)	(0.391)	(0.425)	(0.294)	(0.295)	(0.271)	(0.220)
Unskilled worker	-1.208	-2.397*	-2.420***	-0.713	-1.416**	-1.036*	-1.852***	-1.413***	-1.305***	-1.249**
	(1.157)	(1.046)	(0.715)	(0.672)	(0.480)	(0.497)	(0.422)	(0.422)	(0.348)	(0.421)
Employer	-0.345	-2.183	-2.231*	-1.666	-0.506	-0.669	0.983	-1.529**	-0.107	-2.000***
	(1.393)	(1.797)	(0.994)	(0.906)	(0.807)	(0.686)	(0.526)	(0.547)	(0.512)	(0.412)
Self-employed	-1.674*	-2.496**	-2.370***	-1.444*	-1.116**	-0.977*	-1.530***	-1.721***	-0.715**	-1.581***
	(0.811)	(0.890)	(0.588)	(0.577)	(0.385)	(0.433)	(0.296)	(0.299)	(0.260)	(0.236)
Paid domestic worker	-2.433**	-3.128*	-3.446***	-1.441	-1.142	-1.586*	-1.795***	-1.120	-0.375	-2.244***
	(0.917)	(1.293)	(0.717)	(0.943)	(0.584)	(0.740)	(0.449)	(0.901)	(0.358)	(0.528)
Quality of local educational facilities (Public school used as ref. group)										
Denominational school	0.153	-0.209	-0.145	-0.427	0.282	-0.228	-0.109	-0.237	-0.260	-0.425**
	(0.348)	(0.371)	(0.272)	(0.282)	(0.186)	(0.208)	(0.165)	(0.183)	(0.140)	(0.152)
Private school	1.257	-0.479	0.335	0.0657	0.821	-0.356	0.442	-0.615	0.0813	-0.394
	(0.922)	(0.724)	(0.540)	(0.540)	(0.423)	(0.443)	(0.320)	(0.314)	(0.266)	(0.240)

Area Characteristics										
rural	-1.136**	-1.224**	-1.433***	-2.105***	-2.712***	-2.960***	-2.814***	-2.902***	-2.841***	-3.036***
	(0.377)	(0.464)	(0.342)	(0.321)	(0.228)	(0.247)	(0.190)	(0.218)	(0.157)	(0.174)
District dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
_cons	6.001***	6.316***	7.372***	6.857***	9.609***	9.236***	10.90***	10.85***	8.831***	9.939***
	(1.176)	(1.012)	(0.758)	(0.700)	(0.627)	(0.508)	(0.460)	(0.394)	(0.367)	(0.310)
N	1137	1093	2413	2272	3988	3507	5484	4835	8081	6745
adj. R^2	0.256	0.199	0.270	0.278	0.330	0.324	0.325	0.324	0.339	0.340

Source: Author's estimation based on 1-2-3 data (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1%

5.1.3. Qualitative results for the transmission of educational attainment across generations in the DRC

To gain an understanding of the capabilities of the families in the DRC to move up the educational ladder, participants in the study were asked to respond to some open-ended questionnaires. In total, 100 people were interviewed to learn more about how educational attainment is passed down through generations in the DRC. Some of the key discussions focused on how educational mobility has changed over time and across generations, as well as how it is transmitted across genders and lineage groups. The participants were questioned about their own educational journey, the education level of their father and mother, and the education level of their grandparents (including whether or not any of their grandparents attended school). They were also prompted to discuss their perspectives on the current educational trends in the DRC.

According to Table 5.5, 78 of the 100 individuals interviewed had completed or were on track to complete a tertiary education, whereas only 53 of the respondents' fathers and 28 of the respondents' mothers had completed a tertiary education. Similarly, 16 individuals interviewed reported having completed secondary school and, when compared to their parents, it appears that respondents' mothers had a higher level of secondary education, with 49 mothers and only 29 fathers holding such level of education. Two respondents had only a primary education, and the results indicate that the fathers of four respondents and mothers of ten respondents also had only a primary education. Five respondents' mothers did not attend school at all. A question was asked to determine if any of the respondents' grandparents had some level of education, and only 23 out of the 100 respondents believed their grandparents were educated, with some of the respondents' grandparents having achieved tertiary education.

According to the results of the qualitative analysis, it is evident that the education mobility in the DRC is bidirectional, with some people from highly educated families being unable to receive education and others from families with low or no education being

able to do so. Similarly, 59 respondents believe that their generation will be highly educated because, in the DRC today, everyone has the opportunity to advance as far as their talent and perseverance will allow. However, thirteen respondents still believe that one's position in society in the DRC is largely determined by one's origins and parents. While both assertions are valid in the context of the DRC, the findings of this study show that parental education continues to have a significant impact on children's educational outcomes; as a result, parental education is critical in shaping children's educational mobility.

Table 5.5: Transmission of educational attainment in the DRC(N=100)

Education level	Individual	Father	Mother	Grandparents
Graduate (Master or Doctoral degree)	1	8	0	23 respondents said one of their grandparents had some education 56 said none of their grandparents had any education 20 said they didn't know 1 didn't want to answer the question.
Primary education	2	4	10	
Non-formal education program	3	5	8	
Secondary	16	29	49	
Tertiary	78	53	28	
Never been to school	0	1	5	
N	100			

Source: Created by the author

In terms of passing on a higher level of educational achievement from one generation to the next, the qualitative findings on Table 5.6 indicate that, in general, men have a higher level of education than women. For instance, 50 of the male respondents had obtained a tertiary education or were about to finish a university degree, whereas only 28 of the female respondents had done so. Additionally, more male respondents, approximately 10, had a secondary education, whereas only 6 of the female respondents had. Finally, we were able to find 2 female respondents who had only completed primary school, whereas all of the male respondents had completed at least primary school.

It should come as no surprise that the degree of education attained by one's parents is associated in some way to the outcomes that were seen. Table 5.6 drew a connection between the educational attainment of parents and that of their children, implying, for instance, that respondents who have attained the highest levels of educational success have had parents who were educated. 50 of the male respondents who achieved a tertiary level of education had highly educated fathers and mothers, with 35 of the male respondents' fathers and 17 of the male respondents' mothers having a university degree. In comparison, 18 of the female respondents' fathers and 11 of the female respondents' mothers had a university degree. This trend repeats itself throughout each and every level of education.

Some respondents also indicated high aspirations to achieve greater education despite coming from families with no education, and even others admitted to high self-esteem, which led them to obtain more education than their parents. Those from families in which both of the parents had a lower level of education, particularly females who went on to earn some level of higher education, reported that they had relied heavily on family resources to support their schooling. This was true despite the fact that their parents had not had the opportunity to pursue higher education and did not understand the importance of investing in their child's education, as well as the fact that they themselves had to overcome some societal stereotypes and prejudice against women who like to study.

Table 5.6: Transmission of educational attainment by gender (N=100)

	Parents	Primary	Secondary	Tertiary	Graduate	Non-formal	Never been to school
Female		2	6	28	0	2	0
	Father	3	9	18	5	2	1
	Mother	6	14	11		2	5
Male		0	10	50	1	1	0
	Father	1	20	35	3	3	0
	Mother	4	35	17	0	6	0

Source: Created by the author

In terms of education transmission among lineage groups in the DRC, the qualitative data in Table 5.7 appear to contradict the quantitative conclusions described above. In general, respondents from patrilineal-descent systems have more education than those from matrilineal-descent systems. For example, 46 of respondents with a tertiary education are all from patrilineal families. These findings are also true when it comes to parental education, with 33 respondents from a patrilineal system with fathers having completed a university degree compared to only 20 respondents from matrilineal families.

Some possible explanations for these findings include the fact that the qualitative data were supposed to correct the limitations of the quantitative data, and that due to COVID-19 only a small sample from Kinshasa, the DRC's capital city, was used to help understand the findings from the quantitative results. Secondly, and maybe most crucially, our qualitative data corroborated the urbanization theory, which states that cultural and social features such as casts and lineage tend to disappear in urban areas. Thirdly, another hypothesis that has been explored and supported by many respondents is that in the DRC today, everyone has an equal opportunity to advance as far as their aptitude and hard work will allow. Thus, even though many quantitative findings favor matrilineal societies in protecting females and investing more in education, individuals from patrilineal systems are also better off in educational opportunities in the DRC.

Table 5.7: Transmission of educational attainment by lineage group (N=100)

	Parents	Primary	Secondary	Tertiary	Graduate	Non-formal	Never been to school
Matrilineal		1	7	32	0	1	0
	Father	4	11	20	3	3	
	Mother	8	17	10	0	4	2
Patrilineal		1	9	46	1	2	
	Father	0	18	33	5	2	1
	Mother	2	32	18	0	4	3

Source: Created by the author

5.2. Intrahousehold's decision-making power and children's schooling in the DRC

.2. . I nfluence of women's decision-making power on children's school attendance in the DRC

To measure women's decision-making power regarding their children's schooling, this study employed both variables serving as proxies for women's decision-making ability in the household, such as mother age and mother education, as well as the principal component analysis (PCA) index derived from women's education and age variables. Table 5.8 displays the results of four different specifications. Using a stepwise approach for analysis, the results of each specification are disaggregated based on the household head, with the goal of gaining a better understanding of the power dynamics at work in households where women or men serve as household heads.

According to the results from specification 1, mother's age has no statistical effect on increasing children's school attendance in a male-headed household; however, increasing mother's education by one year increases the probability of children's school attendance by 0.243 percentage point. Similarly, results from specification 1 show that in a female-headed household, mother's age increases the probability of children attending school by 0.278 percentage point, and mother's education increases the probability of children attending school by 1.09 percentage point.

In specification 2, we included additional variables from the literature that may influence the power dynamic in the household, such as the occupation of the household head, the quality of local educational facilities, the expenditure and other individual characteristics such as household size, and place of residence. According to the findings, increasing mother age by one year increases children's school attendance by 0.047 percentage point in a male-headed household, while increasing mother education by one year increases children's school attendance by 0.3 percentage point. A year increase in mother's age corresponds to 0.294-year increase in children's school attendance in

female-headed households, and a year increase in mother's education corresponds to 1.21-year increase in children's school attendance.

The study only used the principal component analysis index (PCA) in specifications 3 and 4. In specification 3, for example, a reduced model was used with the PCA, and the results show that an increase in bargaining index increases children school attendance by 0.963 percentage point in a male headed household and 3.87 percentage point in a female headed household. In specification 4, where a full model was used with other variables to influence power dynamics, results show that increasing the bargaining index by one unit increases children school attendance by 1.26 percentage point in a male headed household and 3.93 percentage point in a female headed household.

Other important findings were also presented from additional variables included in the analysis. For example, in specifications 1 and 2, the variable used for matrilineal descent indicates that in a male-headed household, the matrilineal system strongly increases the probability of children attending school by 2.11 percentage points in specification 1, and 2.14 percentage points in specification 2.

The results also suggest that an increase in father's education, grandfather's education, and expenditure has a positive influence on children's school attendance in all the specifications, which suggests that these variables are powerful predictors of school attendance in the DRC. Moreover, the findings indicate that the occupation status of the head of the household is not a good predictor of children's school attendance, neither in the current generation nor in the generation before it; occupation either has a negative influence on the school attendance of children or has no statistical significance in the analysis. Furthermore, the quality of local educational facilities is not a good predictor of children's school attendance in the DRC, with no statistical significance found across all types of schools. Finally, in female-headed households, household size is not a good predictor of children's school attendance, but it is positive and statistically significant in male-headed households.

Table 5.8: Estimates for influence of intra-household decision-making power on children's school attendance in the DRC (Marginal Effects)

	Specification 1		Specification 2		Specification 3		Specification 4	
	Male headed	**Female headed**	**Male headed**	**Female headed**	**Male headed**	**Female headed**	**Male headed**	**Female headed**
mothage	0.000371	0.00278***	0.000473*	0.00294***				
	(0.000195)	(0.000452)	(0.000215)	(0.000497)				
motheduc	0.00243***	0.0109***	0.00302***	0.0121***				
	(0.000629)	(0.00143)	(0.000709)	(0.00159)				
bargaining index [Principal component analysis (PCA)]					0.00963***	0.0387***	0.0126**	0.0393***
					(0.00280)	(0.00635)	(0.00422)	(0.00940)
matrilineal	0.0211***	0.0108	0.00669	0.0271	0.0214***	0.0152	0.00718	0.0294
	(0.00516)	(0.0117)	(0.00668)	(0.0160)	(0.00515)	(0.0117)	(0.00668)	(0.0161)
bargaining index*matrilineal							-0.00166	0.00624
							(0.00577)	(0.0126)
fatheduc	0.00992***	0.00126	0.0102***	0.00323*	0.00998***	0.00210	0.0103***	0.00386*
	(0.000626)	(0.00136)	(0.000703)	(0.00152)	(0.000625)	(0.00135)	(0.000703)	(0.00152)
grandfaeduc	0.00885***	0.00911***	0.00910***	0.0102***	0.00888***	0.00904***	0.00911***	0.00976***
	(0.000606)	(0.00132)	(0.000693)	(0.00146)	(0.000606)	(0.00132)	(0.000693)	(0.00145)
lntotalexp	0.00905***	0.00371**	0.00744***	0.00646**	0.00914***	0.00503***	0.00742***	0.00673***
	(0.000645)	(0.00141)	(0.000878)	(0.00198)	(0.000644)	(0.00139)	(0.000878)	(0.00198)
Household head's occupation status (e cutive as the reference group)								
Qualified staff			-0.0613**	0.0472			-0.0617**	0.0447
			(0.0189)	(0.0342)			(0.0189)	(0.0343)
Unskilled worker			-0.119***	-0.0280			-0.120***	-0.0334
			(0.0237)	(0.0435)			-0.120***	(0.0436)
Employer			-0.0129	0.0215			-0.0131	0.0137
			(0.0277)	(0.0559)			(0.0277)	(0.0566)

Self-employed			-0.0949***	-0.00476			-0.0955***	-0.0134
			(0.0168)	(0.0334)			(0.0168)	(0.0333)
Paid domestic workers			-0.138***	-0.0617			-0.139***	-0.0654
			(0.0192)	(0.0381)			(0.0192)	(0.0381)
Grandfather's occupation status (Executive as the reference group)								
Qualified staff			-0.0200	-0.0710**			-0.0204	-0.0684**
			(0.0124)	(0.0257)			(0.0124)	(0.0257)
Unskilled worker			-0.0159	-0.180***			-0.0159	-0.180***
			(0.0160)	(0.0355)			(0.0160)	(0.0355)
Employer			-0.0207	-0.101*			-0.0214	-0.0965*
			(0.0228)	(0.0476)			(0.0228)	(0.0475)
Self-employed			-0.0273*	-0.0956***			-0.0278*	-0.0959***
			(0.0120)	(0.0248)			(0.0120)	(0.0248)
Paid domestic workers			-0.0234	-0.0630			-0.0224	-0.0636
			(0.0204)	(0.0451)			(0.0204)	(0.0451)
Quality of local educational facilities (public school as the reference group)								
Denominational school			-0.00412	-0.0120			-0.00403	-0.0108
			-0.00412	(0.0146)			(0.00647)	(0.0146)
Private school			-0.0126	0.0293			-0.0130	0.0255
			(0.0103)	(0.0212)			(0.0103)	(0.0213)
Other individual's characteristics & place of living								
age			0.209***	0.191***			0.209***	0.193***
			(0.00297)	(0.00665)			(0.00297)	(0.00663)
agesq			-0.00748***	-0.00673***			-0.00748***	-0.00676***
			(0.000100)	(0.000222)			(0.000100)	(0.000221)
no_sibling			0.0135***	0.0251***			0.0135***	0.0261***
			(0.00258)	(0.00592)			(0.00258)	(0.00592)

hhsize			0.0109***	-0.0108**			0.0110***	-0.00976*
			(0.00178)	(0.00410)			(0.00178)	(0.00410)
rural			-0.0373***	-0.0396*			-0.0385***	-0.0467**
			(0.00767)	(0.0174)			(0.00765)	(0.0174)
district			Yes	Yes			Yes	Yes
N	**35822**	**6867**	**35822**	**6867**	**35822**	**6867**	**35822**	**6867**

Source: Author's estimation based on 1-2-3 data (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1%.

.2.2. Influence of women's decision-making power on their daughters' school attendance in the DRC

Similar to the previous section, this study used both variables that served as proxies for women's decision-making ability in the household, such as mother age and mother education, as well as the principal component analysis (PCA) index derived from women's education and age variables, to measure women's decision-making power on daughters' schooling. The outcomes of four different specifications are shown in Table 5.9. The results of each specification are broken down by household head and children genders using a stepwise analysis process.

According to the results of specification 1, an increase in mother's age has no statistically significant impact on the likelihood that girls will attend school in a household headed by a male, however, a one-year increase in mother's age increases the probability of girls' school attendance by 0.277 percentage point in a household headed by a female. Additionally, a one-year increase in mother's education increases the likelihood that girls will attend school by 0.334 percentage point in households headed by a male, whereas a one-year increase in mother's education increases the likelihood that girls will attend school by 1.81 percentage point in households headed by a female.

In specification 2, the analysis included several additional variables that may predict girls' school attendance in order to gain a better understanding of household power dynamics in the DRC. For instance, in a male-headed household, a one-year increase in mother's age has no statistically significant influence on girls' school attendance, whereas in a female-headed household, a one-year increase in mother's age increases the probability of girls' school attendance by 0.329 percentage point. Similarly, in a male-headed household, a one-year increase in mother's education increases the probability of girls attending school by 0.276 percentage point, whereas in a female-headed household, a one-year increase in mother's education increases the probability of girls attending school by 1.56 percentage points.

In specifications 3 and 4, the PCA was employed to quantify the bargaining index's effect on decisions about females' school attendance in the DRC. The results indicate that a unit rise in bargaining index, for example, boosts girls' school attendance by 1.44 percentage points in male-headed households and 5.58 percentage points in female-headed households. In specification 4, despite the inclusion of additional variables that may affect the power dynamics in the household as well as an interaction term of the bargaining index and matrilineal descent, a unit increase in the bargaining index still increases girls' school attendance by 2.32 percentage points in male-headed households and 4.46 percentage points in female-headed households. The interaction term between the bargaining index and matrilineal descent reduces girls' educational attainment in households headed by men.

Further results from this section and across the four specifications reveal, for example, that father's education, grandfather's education, and expenditure are all highly strong predictors of girls' school attendance in the DRC across all specifications. All of the variables used for household head's jobs, including grandfather's occupation status, have a negative impact or no statistically significant impact on girls' school attendance. Furthermore, none of the variables used to assess the quality of local educational facilities were statistically significant in terms of girls' school attendance. Finally, many of the variables used to assess individual characteristics, such as number of siblings, household size, and place of residence, have mixed results across genders; for example, having more siblings benefits girls' school attendance, while living in a rural area is statistically significant and negatively associated with girls' school attendance in the DRC.

Table 5.9: Estimate for women's decision-making power influence on their daughters' school attendance in the DRC (Marginal Effects)

	Specification 1				Specification 2				Specification 3			
	Male headed		**Female headed**		**Male headed**		**Female headed**		**Male headed**		**Female headed**	
	Boys	***Girls***	***Boys***	***Girls***	***Boys***	***Girls***	***Boys***	***Girls***	***Boys***	***Girls***	***Boys***	***Girls***
mothage	0.000809**	-0.000426	0.000872	0.00277***	0.00105***	-0.00032	0.00175*	0.00329***				
	(0.000271)	(0.000313)	(0.000681)	(0.000665)	(0.000279)	(0.000326)	(0.00071)	(0.0007)				
motheduc	0.00309***	0.00334***	0.00744***	0.0181***	0.00348***	0.00276**	0.00866***	0.0156***				
	(0.000893)	(0.000998)	(0.00203)	(0.00220)	(0.000935)	(0.00106)	(0.00214)	(0.0024)				
bargaining index [Principal component analysis (PCA)]									0.0109**	0.0144**	0.0327***	0.0558***
									(0.00413)	(0.00472)	(0.00946)	(0.0104)
matrilineal	0.0173*	0.0211*	-0.00994	0.0217	0.00832	-0.00219	0.00191	0.0442	0.00924	-0.00248	0.00321	0.0487*
	(0.00721)	(0.00826)	(0.0166)	(0.0179)	(0.00870)	(0.0101)	(0.0217)	(0.0235)	(0.0087)	(0.0101)	(0.0216)	(0.0234)
fatheduc	0.0121***	0.0132***	-0.00119	0.00625**	0.0101***	0.0104***	-0.000349	0.00652**	0.0103***	0.0104***	-0.00004	0.00727***
	(0.000876)	(0.000997)	(0.00198)	(0.00204)	(0.000918)	(0.00106)	(0.00213)	(0.00219)	(0.00092)	(0.00106)	(0.00213)	(0.00218)
grandfaeduc	0.00603***	0.0141***	0.0136***	0.00722***	0.00562***	0.0124***	0.0149***	0.00646**	0.00560***	0.0123***	0.0147***	0.00587**
	(0.000862)	(0.000982)	(0.00193)	(0.00199)	(0.000905)	(0.00105)	(0.00204)	(0.0021)	(0.000905)	(0.00105)	(0.00204)	(0.00209)
lntotalexp	0.00631***	0.0142***	0.00108	0.00850***	0.00599***	0.00948***	0.00354	0.00949**	0.00588***	0.00948***	0.00361	0.00985***
	(0.000909)	(0.00103)	(0.00203)	(0.00213)	(0.00116)	0.00948***	(0.00272)	(0.0029)	(0.00116)	(0.00131)	(0.00272)	(0.00290)
age	0.204***	0.222***	0.191***	0.183***	0.202***	0.223***	0.193***	0.190***	0.202***	0.223***	0.193***	0.192***
	(0.00376)	(0.00451)	(0.00877)	(0.00954)	(0.00381)	(0.00464)	(0.00896)	(0.00987)	(0.00381)	(0.00464)	(0.00895)	(0.00984)
agesq	-0.0069***	-0.0084***	-0.0065***	-0.0066***	-0.0069***	-0.0084***	-0.0066***	-0.0069***	-0.0069***	-0.0084***	-0.006***	-0.0069***
	(0.000125)	(0.000155)	(0.000294)	(0.000319)	(0.000127)	(0.000160)	(0.0003)	(0.0003)	(0.00013)	(0.00016)	(0.0003)	(0.000329)
Household head's occupation status (ref. e cutive)												
Qualified staff					-0.0851**	-0.0418	0.0481	0.0484	-0.0863**	-0.0415	0.0470	0.0451
					(0.0265)	(0.0271)	(0.0456)	(0.0507)	(0.0265)	(0.0271)	(0.0457)	(0.0508)
Unskilled worker					-0.129***	-0.125***	-0.0387	-0.0284	-0.130***	-0.125***	-0.0425	-0.0367

					(0.0332)	(0.0336)	(0.0583)	(0.0660)	(0.0332)	(0.0336)	(0.0586)	(0.0662)
Employer					-0.0600	0.0374	-0.0104	0.0407	-0.0624	0.0371	-0.0150	0.0303
					(0.0393)	(0.0398)	(0.0778)	(0.0821)	(0.0394)	(0.0398)	(0.0784)	(0.0831)
Self-employed					-0.0975***	-0.093***	0.0185	-0.0236	-0.0992***	-0.0929***	0.0135	-0.0339
					(0.0221)	(0.0250)	(0.0457)	(0.0491)	(0.0221)	(0.025)	(0.0456)	(0.0489)
Paid domestic workers					-0.104***	-0.141***	-0.0367	-0.0664	-0.105***	-0.141***	-0.0413	-0.0672
					(0.0267)	(0.0270)	(0.0520)	(0.0550)	(0.0267)	(0.027)	(0.0522)	(0.0549)
Grandfather's occupation status (ref. e cutive)												
Qualified staff					-0.00822	-0.0298	-0.0893*	-0.0488	-0.00873	-0.0294	-0.0876*	-0.0460
					(0.0162)	(0.0186)	(0.0366)	(0.0364)	(0.0162)	(0.0185)	(0.0366)	(0.0364)
Unskilled worker					0.00124	-0.0277	-0.139**	-0.197***	0.00116	-0.0278	-0.138**	-0.198***
					(0.0208)	(0.0239)	(0.0529)	(0.0476)	(0.0208)	(0.0239)	(0.0528)	(0.0475)
Employer					-0.000136	-0.0352	-0.0248	-0.157*	-0.00113	-0.0346	-0.0204	-0.155*
					(0.0303)	(0.0332)	(0.0655)	(0.0649)	(0.0303)	(0.0332)	(0.0650)	(0.0649)
Self-employed					-0.0143	-0.0454*	-0.0610	-0.131***	-0.0149	-0.0450*	-0.0610	-0.133***
					(0.0158)	(0.0181)	(0.0346)	(0.0357)	(0.0158)	(0.0181)	(0.0346)	(0.0357)
Paid domestic workers					-0.0234	-0.0292	-0.0767	-0.0634	-0.0209	-0.0297	-0.0754	-0.0692
					(0.0269)	(0.0309)	(0.0621)	(0.0666)	(0.0267)	(0.0309)	(0.0620)	(0.0668)
Quality of local educational facilities (ref. public school)												
Denominational school					0.00288	-0.0109	-0.0296	0.0109	0.00341	-0.0109	-0.0294	0.0128
					(0.00840)	(0.00984)	(0.0197)	(0.0216)	(0.00841)	(0.0098)	(0.0197)	(0.0216)
Private school					-0.00702	-0.0113	0.0118	0.0507	-0.00743	-0.0111	0.0107	0.0456
					(0.0134)	(0.0154)	(0.0298)	(0.0305)	(0.0134)	(0.0154)	(0.0298)	(0.0305)
t her individual's characteristics Place of living												
no_sibling					0.00104	0.0105**	0.0223**	0.0238**	0.000996	0.0105**	0.0225**	0.0251**
					(0.00338)	(0.00392)	(0.0081)	(0.0087)	(0.0034)	(0.0039)	(0.0081)	(0.00869)
hhsize					0.00934***	0.0184***	-0.00573	-0.0149*	0.00947***	0.0184***	-0.0054	-0.0134*

					(0.00232)	(0.00271)	(0.00558)	(0.00605)	(0.00232)	(0.00271)	(0.0056)	(0.00604)
rural					-0.0399***	-0.0397***	-0.0312	-0.0539*	-0.0432***	-0.0390***	-0.034	-0.0641*
					(0.0100)	(0.0116)	(0.0239)	(0.0255)	(0.0099)	(0.0116)	(0.0238)	(0.0254)
district					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	**17586**	**18236**	**3385**	**3482**	**17586**	**18236**	**3385**	**3482**	**17586**	**18236**	**3385**	**3482**

Source: Author's estimation based on 1-2-3 data (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1%

	Specification 4			
	Male headed		**Female headed**	
	Boys	***Girls***	***Boys***	***Girls***
bargaining index [Principal component analysis (PCA)]	0.00542	0.0232***	0.0373**	0.0446**
	(0.00556)	(0.00632)	(0.0129)	(0.0138)
matrilineal	0.00878	-0.00157	0.00446	0.0440
	(0.00870)	(0.0101)	(0.0218)	(0.0237)
bargaining index*matrilineal	0.0113	-0.0179*	-0.00909	0.0229
	(0.00761)	(0.00863)	(0.0173)	(0.0184)
fatheduc	0.0103***	0.0104***	-0.000057	0.00721***
	(0.000917)	(0.00106)	(0.00213)	(0.00218)
grandfaeduc	0.00559***	0.0124***	0.0147***	0.00585**
	(0.000905)	(0.00105)	(0.00204)	(0.00209)
lntotalexp	0.00587***	0.00946***	0.00353	0.00990***
	(0.00116)	(0.00131)	(0.00272)	(0.00290)
age	0.202***	0.223***	0.193***	0.192***
	(0.00381)	(0.00464)	(0.00896)	(0.00984)
agesq	-0.0069***	-0.0084***	-0.006***	-0.0069***

	(0.000127)	(0.000160)	(0.000300)	(0.000329)
Household head's occupation status (ref. Executive)				
Qualified staff	-0.0872**	-0.0416	0.0471	0.0432
	(0.0265)	(0.0271)	(0.0457)	(0.0510)
Unskilled worker	-0.131***	-0.126***	-0.0426	-0.0383
	(0.0332)	(0.0336)	(0.0586)	(0.0662)
Employer	-0.0624	0.0365	-0.0147	0.0330
	(0.0394)	(0.0399)	(0.0784)	(0.0830)
Self-employed	-0.0996***	-0.0930***	0.0136	-0.0343
	(0.0221)	(0.0250)	(0.0456)	(0.0489)
Paid domestic workers	-0.105***	-0.142***	-0.0414	-0.0678
	(0.0267)	(0.0270)	(0.0522)	(0.0549)
Grandfather's occupation status (ref. Executive)				
Qualified staff	-0.00841	-0.0295	-0.0875*	-0.0464
	(0.0162)	(0.0185)	(0.0366)	(0.0364)
Unskilled worker	0.00134	-0.0280	-0.137**	-0.200***
	(0.0208)	(0.0239)	(0.0528)	(0.0475)
Employer	-0.00135	-0.0354	-0.0204	-0.158*
	(0.0304)	(0.0332)	(0.0650)	(0.0650)
Self-employed	-0.0145	-0.0459*	-0.0610	-0.134***
	(0.0158)	(0.0181)	(0.0346)	(0.0357)
Paid domestic workers	-0.0212	-0.0291	-0.0754	-0.0700
	(0.0267)	(0.0309)	(0.0620)	(0.0669)
Quality of local educational facilities (ref. public school)				
Denominational school	0.00377	-0.0116	-0.0298	0.0139
	(0.00841)	(0.00984)	(0.0197)	(0.0216)
Private school	-0.00706	-0.0118	0.0108	0.0458

	(0.0134)	(0.0154)	(0.0298)	(0.0305)
t her individual's characteristics & Place of living				
no_sibling	0.000810	0.0105**	0.0225**	0.0249**
	(0.00338)	(0.00392)	(0.00811)	(0.00869)
hhsize	0.00960***	0.0184***	-0.00560	-0.0128*
	(0.00232)	(0.00271)	(0.00559)	(0.00606)
rural	-0.0440***	-0.0381***	-0.0342	-0.0650*
	(0.00998)	(0.0116)	(0.0238)	(0.0254)
district	Yes	Yes	Yes	Yes
N	**17586**	**18236**	**3385**	**3482**

Source: Author's estimation based on 1-2-3 data (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1%

.2. . Qualitative results on intrahousehold's decision-making power and children's schooling in the DRC

Another interview was conducted to try to gain a better sense of the intrahousehold's decision-making power and children's education in the DRC. Recognizing the difficulty of generating particular, time-bound survey questions for household decision-making, this phase of the interview allowed questions to be about a particular event or action rather than a general notion, as respondents are less likely to misunderstand it, and questions to have a set timeline so that replies from respondents may be compared. With this in mind, respondents were asked a series of questions ranging from their age at first marriage to who was responsible for financial decisions in the home regarding purchase of school supplies for the children and when, for example, a couple should have sex.

Only married people, around 35 respondents, were eligible for this phase of the interview. Table 5.10 indicates that among those selected, 32 respondents (20 males and 12 females) declared they had school-age children, while 3 respondents (2 males and 1 female) did not. This part of the interview was difficult due to the DRC's rigid and discriminatory patriarchal norms. In the DRC, women and girls are frequently the targets of various forms of violence. They are unaware that their rights are being violated so discussing some of those distressing experiences with them was problematic. Given the above, age is an important factor in household decision-making. In the case of our qualitative data, 2 respondents (1 male and 1 female) were over 65 years old, 8 female respondents were 25 to 49 years old, 17 male respondents were 25 to 49 years old, and 8 respondents (4 females and 4 males) were 50 to 65 years old. While the ages of the respondents vary, Table 5.11 shows no significant differences in their educational levels, assuming that women are not intimidated by their husbands. Age and education were both demonstrated in the quantitative analysis, allowing women to positively influence the schooling of their children. Given the above descriptions, the following question was posed:

If you're at home and tired, and thus unable to care for your children, do you think your husband can help?

Nine out of 35 females responded that women are solely responsible for childcare while husbands are busy earning an income for the family. Some even said that because of the way women are taught in the Congo, it was difficult to imagine husbands caring for the children. Only 4 female respondents, on the other hand, strongly opposed this notion, citing some developed countries where both parents are responsible for childcare and stating that they were working within their families to implement a shared-care arrangement.

When the same question was asked to male respondents, approximately 15 out of 35 said they thought women should be solely responsible for raising children, but 7 disagreed, calling the idea "very old in modern societies", and these 7 men claimed to assist with childcare in their own homes. As seen from the discussion above, families are making an effort to share childcare responsibilities. This is one of the stronger indicators of power dynamics in African families and a change in this mindset can increase the power of women to make decisions in their family. With regard mainly to children's schooling, many of the male respondents were very supportive of women.

Table 5.10: Eligible respondents-household head with school age children

	Household head		**School age children**	
	Yes	No	Yes	No
Male	10	12	20	2
Female	7	6	12	1
N	**35**		**35**	

Source: Created by the author

When you and your husband are considering purchasing school supplies for your children, who usually gets the last say?

Four of the 35 female respondents stated that when it comes to decisions concerning their children's education and other crucial family affairs, males in their households always

have the last say. This was true whether the women were involved in decision-making or not. However, 9 of the women who responded to the survey disagreed with the notion that men should always have the final say, believing that family decisions should always be made in consultation with both the husband and the wife.

When men were interviewed, 14 of the male respondents agreed with the idea and stated that they have never seen a family in which the women have the final say. On the other hand, 8 of the male respondents disagreed and stated that families in which women participate in decision-making and have equal weight in the final decision always benefit from better solutions than families in which only men have the final say. This is another illustration of how difficult life can be for married women with regard to having their voice heard in the context of family decision-making. It demonstrates, once again, that women often have to engage in power struggles in order to have their opinions taken seriously.

Table 5.11: Eligible respondents level of education (N=35)

	Primary	Secondary	Tertiary	Graduate	Non-formal
Female	0	3	9	0	1
Male	0	3	18	1	0

Source: Created by the author

Will you be able to say 'no' if your husband wants to have sex?

This remark was strongly disagreed with by 13 of the women who answered the survey. Several stated that males should accept the fact that women are not always ready for sex and that women are not slaves. 18 male respondents in addition shared the view that forced sex is repugnant and that it should be up to women to decide when they are ready. However, 4 of the male respondents asserted that the fact that they had paid a bride price for their wives gave them the right to choose when they would have sexual relations with them.

The above discussion demonstrates how difficult it is for women to make decisions when they do not even have the right to refuse some of the harsh societal practices supported by men, and it also demonstrates how difficult it is for women to be heard on the topic of their children's education while some male respondents still believe their wives were bought with a bride price.

Do you believe that women have the same right to study and work as men?

Thirteen of the women who responded to this question expressed a firm conviction that women should have equal access to educational and employment opportunities as men. 1 of the 13 female respondents expressed regret that she gave in to pressure from her parents to abandon her education in order to marry; she believed that having an education would have given her access to a greater variety of opportunities, and she hoped that all of her daughters would attend school. 16 male respondents sided with the 13 female respondents in their support of the concept that it is just as important for women as for men to go to school and pursue decent careers. 6 of the men interviewed still believed that a woman's place is in the home and that women should concentrate their energies on finding husbands and caring for their homes.

Has your husband ever offered to help with housework?

Ten of the female respondents said that their husbands frequently help them around the house. Another woman revealed that her husband occasionally prepares meals for the family, and one of even claimed that she and her husband had made a list of the duties she expected him to accomplish. 3 of the other women who took part in the study said, however, that their husbands never provided them with any help with housework.

When asked if they would be willing to help around the house, 18 of the men responded that it would not be difficult for them to do so, and some even stated that doing so was a family task rather than supposedly some help as many see it, while 4 others said they were simply too busy to help. This is another example of how husbands and wives wield different levels of control in the home.

To summarize, only 9 female respondents believed that husbands and wives are equal partners in the household, whereas 5 other female respondents disagreed, claiming that they do not believe women are equal partners with their husbands. When asked if they are equal partners with their wives, 10 male respondents replied 'yes', while 12 others said 'no'. Despite the fact that qualitatively comprehending the processes involved in household decision-making is difficult, the aforementioned conversations have helped the study obtain a better grasp of the debates that take place in households between husbands and wives. The section aimed to characterize the discussions in houses about power dynamics that occurred during data collection, which definitely have an impact on how decisions for children's schooling are made.

5.3. Family lineage environment and its influences on school attendance

5.3.1. ffe ct of matrilineal family lineage descent on children's school attendance

To answer these sub-research questions, the study employed the treatment-effect estimator technique, focusing specifically on the treatment effects of belonging to or not belonging to a family matrilineal group. The study used the augmented inverse probability weighted (AIPW) estimator to calculate the average treatment effects (ATEs).

The study indicates 3 model specifications in Table 5.12. Pretending that ignorability was true in the first specification, A simple, dependable old-fashioned probit model was used. We are already aware that individual regression coefficients can only be interpreted in a limited number of ways when using probit regression. For example, if the coefficient is positive, it implies that increasing the predictor will result in an increase in the projected probability, whereas if the coefficient is negative, it shows that increasing the predictor will result in a decrease in the expected probability. Table 5.12 shows that the coefficient for matrilineal, which is our variable of interest, is 0.00341, but it is not statistically significant, implying that switching from patrilineal to matrilineal has no influence on the anticipated probability of children attending school in the DRC. The

study attempted to use marginal effects estimators in the second specification, and the coefficient for matrilineal, our variable of interest, is now 0.00125, but is still not statistically significant, implying that switching from patrilineal to matrilineal has no effect on the expected probability of children attending school in the DRC.

Finally, in the third specification, the study used the augmented inverse probability weighting estimator and now the coefficient of matrilineal is 0.0179** and is now statistically significant. This means being from a matrilineal family increases the predicted probability of children to attend school in the DRC by 1.79 percentage points.

5.3.2. Matrilineal family lineage descent and the probability for girls to attend school at all levels of education in the DRC

The study applied the same augmented inverse probability weighted (AIPW) estimator as in section 5.3.1 to evaluate the average treatment effects (ATEs) of belonging to or not belonging to a family matrilineal group on the probability for females to attend school in the DRC. Table 5.12 indicates that an interaction term between the matrilineal variable and the female variable (matrilineal*female) was included in the study to better understand how the matrilineal variable influences the degree to which girls attend school in the DRC. There are significant advantages to including an interaction term (matrilineal*female) in the regression model for this study. It significantly deepens our comprehension of the connections between the two variables in the model and can support the testing of more focused hypotheses.

In the first specification, a probit model was run, and the results suggest that the coefficient for the interaction term between matrilineal and female (matrilineal*female), which is now our variable of interest, is 0.0291, but it is not statistically significant. This suggests that being a girl from a matrilineal family has no influence on the expected probability of the individual attending school in the DRC. The study attempted to use marginal effects estimators in the second specification and, while the coefficient for the

interaction term between matrilineal and female (matrilineal*female), our variable of interest, is now 0.0106, it is still not statistically significant. This indicates that even in marginal effects, being a girl from a matrilineal family has no effect on the expected probability of the individual attending school in the DRC. In the third specification, the study measured the effect of being a girl and belonging to a matrilineal family using the augmented inverse probability weighting estimator. The coefficient of the interaction term between matrilineal and female (matrilineal*female) is now 0.267*** and is statistically significant. This means that being a girl and from a matrilineal family increases the predicted probability of the individual to attend school in the DRC by 26.7 percentage points.

Several of the other variables utilized in the augmented inverse probability weighting models were found to be very good predictors of children's, and particularly girls', school attendance. For example, when employed without the interaction term of 'matrilineal', the variable 'female' was in all of the specifications adversely influencing female offspring's levels of schooling. This was the case despite the fact that it was statistically significant. In addition, explanatory variables such as father's education, mother's education, grandfather's education, and household expenditure variables were all excellent predictors of children's school attendance in the DRC. In all of the specification models generated in this section of the study, these variables were always statistically significant. A one-year increase in the education of a father, for example, is associated with a 0.835 percentage point increase in the probability of a child attending school; similarly, a one-year increase in the education of a mother is associated with a 0.336 percentage point increase in the probability of a child attending school; and a one-year increase in the education of a grandfather is associated with a 0.929 percentage point increase in the probability of a child attending school. A unit increase in household expenditure is likewise connected with a 0.576 percentage point unit increase in a child's likelihood of attending school in the DRC. Furthermore, while mother's age is not

statistically significant in relation to child school attendance, father's age and individual's own age were strong predictors of children's school attendance in the DRC, with a one-year increase in father's age associated with a 0.347-year increase in the probability of a child attending school in the DRC, and an increase in individual age associated with the probability of school attendance.

Table 5.12: Estimation of family lineage system environment and offspring's school attendance in the DRC using augmented inverse probability weighting (AIPW)

Variable names	Specification 1	Specification 2	Specification 3
Estimators	Probit	marginal effects	augmented inverse probability weighting
matrilineal	0.00341	0.00125	0.0179**
	(0.0222)	(0.00814)	(0.00569)
matrilineal*female	0.0291	0.0106	0.267***
	(0.0277)	(0.0101)	(0.0477)
female	-0.346***	-0.126***	-0.107***
	(0.0190)	(0.00685)	(0.00658)
fatheduc	0.0268***	0.00982***	0.00835***
	(0.00176)	(0.000644)	(0.000817)
motheduc	0.0125***	0.00458***	0.00336***
	(0.00176)	(0.000647)	(0.000751)
grandfaeduc	0.0259***	0.00950***	0.00929***
	(0.00171)	(0.000626)	(0.000741)
lntotalexp	0.0197***	0.00721***	0.00576***
	(0.00219)	(0.000804)	(0.000774)
fathage	0.00573***	0.00210***	0.00347***
	(0.000556)	(0.000204)	(0.000257)
mothage	0.00184***	0.000675***	0.000488
	(0.000538)	(0.000197)	(0.000255)
age	0.563***	0.207***	-0.0110***
	(0.00737)	(0.00272)	(0.000639)
Household head's occupation status (ref. Executive)			
Qualified staff	-0.0805	-0.0299	0.113
	(0.0441)	(0.0165)	(0.0590)
Unskilled worker	-0.259***	-0.0990***	0.119

	(0.0532)	(0.0209)	(0.0729)
Employer	0.0134	0.00490	0.0214
	(0.0672)	(0.0245)	(0.0919)
Self-employed	-0.190***	-0.0692***	0.129*
	(0.0417)	(0.0151)	(0.0563)
Paid domestic workers	-0.288***	-0.109***	0.0552
	(0.0443)	(0.0171)	(0.0607)
Variable names	Specification 1	Specification 2	Specification 3
Estimators	Probit	marginal effects	augmented inverse probability weighting
Grandfather's occupation status (ref. Executive)			
Qualified staff	-0.0858**	-0.0317**	0.172***
	(0.0301)	(0.0112)	(0.0431)
Unskilled worker	-0.118**	-0.0443**	0.0927
	(0.0388)	(0.0148)	(0.0564)
Employer	-0.0896	-0.0334	0.173*
	(0.0545)	(0.0206)	(0.0807)
Self-employed	-0.113***	-0.0414***	0.134**
	(0.0297)	(0.0108)	(0.0430)
Paid domestic workers	-0.101*	-0.0376*	-0.100
	(0.0494)	(0.0188)	(0.0754)
Quality of local educational facilities (ref. public school)			
Denominational school	-0.0116	-0.00425	0.0670**
	(0.0162)	(0.00592)	(0.0232)
Private school	-0.00478	-0.00175	0.0567
	(0.0252)	(0.00924)	(0.0355)
Other individual's characteristics & Place of living			
no_sibling	0.0309***	0.0113***	0.0162
	(0.00638)	(0.00234)	(0.00921)
hhsize	0.0212***	0.00778***	0.00442
	(0.00437)	(0.00160)	(0.00629)
rural	-0.0993***	-0.0364***	0.144***
	(0.0192)	(0.00702)	(0.0267)
district	Yes	Yes	Yes
N	42689	42689	42689
pseudo R^2	0.218	0.218	-

Source: Author's estimation based on 1-2-3 data (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1%

Table 5.13: Computation of the augmented inverse-probability weighting

Treatment-effects estimation					Number of obs =	42,689
Estimator: augmented IPW						
Outcome model: probit by ML						
Treatment model: probit						
attend school	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
POmeans						
matrilineal						
0	0.6259	0.0036	173.22	0.000	0.6188	0.6330
1	0.6438	0.0044	146.40	0.000	0.6352	0.6524
OME0						
female	-0.3493	0.0173	-20.17	0.000	-0.3833	-0.3154
fatheduc	0.0309	0.0019	15.62	0.000	0.0271	0.0348
motheduc	0.0152	0.0019	7.66	0.000	0.0112	0.0189
grandfaeduc	0.0285	0.0020	14.18	0.000	0.0246	0.0325
_cons	0.0372	0.0201	1.85	0.064	-0.0022	0.0767
OME1						
female	-0.2960	0.0184	-16.05	0.000	-0.3322	-0.2599
fatheduc	0.0252	0.0022	11.45	0.000	0.0209	0.0296
motheduc	0.0128	0.0020	6.33	0.000	0.0088	0.0167
grandfaeduc	0.0246	0.0021	11.50	0.000	0.0204	0.0288
_cons	0.1370	0.0227	6.02	0.000	0.0924	0.1815
TME1						
female	-4.5654	0.0244	-186.55	0.000	-4.6133	-4.5174
mfemale	9.2712	0.0458	202.00	0.000	9.1812	9.3611
fatheduc	0.0072	0.0026	2.81	0.005	0.0021	0.0123
motheduc	0.0071	0.0025	2.86	0.004	0.0023	0.0121
grandfaeduc	0.0014	0.0024	0.56	0.577	-0.0034	0.0062
lntotalexp	-0.0223	0.0032	-6.79	0.000	-0.0278	-0.0154
fathage	0.0020	0.0007	2.56	0.011	0.0005	0.0035
mothage	0.0028	0.0007	3.59	0.000	0.0013	0.0043
age	0.0033	0.0018	1.79	0.074	-0.0003	0.0069
Qualified staff	0.1173	0.0584	2.01	0.045	0.0027	0.2318
(father)						
Unskilled worker	0.1194	0.0723	1.65	0.099	-0.0222	0.2611
Employer	0.0111	0.0914	0.12	0.903	-0.1681	0.1904
Self-employed	0.119	0.0557	2.15	0.032	0.0104	0.2290
Paid domestic workers	0.0298	0.0604	0.49	0.622	-0.0886	0.1482
Qualified staff	0.1608	0.0428	3.75	0.000	0.0768	0.2448
(grandfather)						
Unskilled worker	0.0798	0.0561	1.42	0.155	-0.0302	0.1898
Employer	0.1544	0.0805	1.92	0.055	-0.0035	0.3123
Self-employed	0.1160	0.0429	2.70	0.007	0.0318	0.2003
Paid domestic workers	-0.1028	0.0751	-1.37	0.171	-0.2500	0.0443
Denominational school	0.0667	0.0232	2.88	0.004	0.0213	0.1123

Private school	0.0818	0.0355	2.31	0.021	0.0122	0.1513
no_sibling	0.0149	0.0092	1.62	0.104	-0.0031	0.0330
hhsize	0.0048	0.0063	0.77	0.443	-0.0075	0.0172
rural	0.1479	0.0267	5.54	0.000	0.0956	0.2003
district	Yes	Yes	Yes	Yes	Yes	Yes
_cons	1.1933	0.2432	4.91	0.000	0.7166	1.6700

Source: Author's estimation based on 1-2-3 data (2012).
Standard errors in parentheses * Significant at 10%, ** Significant at 5%, *** Significant at 1%

The procedures involved in calculating the final augmented inverse-probability weighting (AIPW) model are laid out in Table 5.13. The treatment of interest in this model is the matrilineal family group, and the outcome of interest is children's school attendance in the DRC. Table 5.13 shows that the double-robust property was incorporated into the AIPW estimator models used, implying that only one of these two models, either the outcome model or the treatment model, must be correctly specified in terms of the independent variables they include for the AIPW estimator to be consistent, a property also known as "asymptotically unbiased".

The results from the estimation of the Potential-Outcome means (POmeans) show that the average probability of school attendance of a child from a matrilineal family is approximately 0.6438, while the potential outcome mean or the average probability of a child from a patrilineal family group is approximately 0.6259. Therefore, in order to determine the effects of coming from a family that practices matrilineal descent on the probability of a child attending school in the DRC, the study simply subtracted these two potential outcomes. To be more specific, the average treatment effects (ATEs) of the matrilineal descent group minus patrilineal descent is 0.6438 - 0.6259, which equals 0.0179. This indicates that coming from a family that follows the tradition of matrilineal descent makes it 1.79 times more likely for a child to go to school in the DRC. This is the same result that was obtained in specification 3 of Table 5.12 above.

5.3.3. Qualitative results on family lineage environment and its influences on school attendance in the DRC

The family lineage context and its implications on school attendance in the DRC were the subjects of interviews performed to collect qualitative data for the section of this study. The sample size was still kept to 35 married respondents, who were asked about the various roles that their matrilineal or patrilineal descent origins might play in their children's education.

Do you believe that it is more necessary for boys to attend school than for girls? What is the rationale, or why not?

In response to this question, 7 out of 35 respondents, all women coming from matrilineal families, strongly disagreed with the notion that it was more important for boys to attend school than it was for girls. Many of them claimed that female children have the same right to go to school as male children, and that they did not understand why some parents would choose to keep their daughters at home in a society that is already filled with educated and successful women. Similarly, 5 respondents, all women from patrilineal families, supported the views of the 7 female respondents from matrilineal families. Surprisingly, one additional respondent, a female respondent from a patrilineal family, believed that making an effort to send boys to school was good because in her village, girls marry and do not benefit their families. The same question was asked to the male respondents, and 8 of those male respondents, all of whom came from matrilineal families, voiced vehement opposition to the notion of sending just boys to school. They all stated that in their households they provide financial means to pay for the education of both their boys and daughters, and they did not see any reason why girls should not also have the opportunity to obtain an education. Another male responder from a matrilineal family stated unambiguously that, in his opinion, daughters should not pursue higher education; nevertheless, he was evasive about the reasons he believes daughters should not pursue higher education. When they were interviewed, 10 male respondents

from patrilineal families supported the views of the 8 male respondents from patrilineal families who stated their daughters should have the same right to education as their sons. Only three male respondents from patrilineal families believed that investing in the education of daughters is a waste of money because daughters will marry and benefit the families of their future husbands, whereas they should invest in boys because their lineage is characterized by the transmission of paternal roles through males.

Do you feel that, if finances are limited, boys should obtain an education before girls, and what would prevent you from investing in your children's education today?

Seven of the female respondents, all of whom came from matrilineal households, said that they would still do their utmost to send their children to school even if their families had very few resources. On the other hand, if finances were particularly limited, they could choose to send only their sons to school. Some of the respondents noted that, no matter how much money their families had, their children would never quit school as long as the mothers were still alive. 5 of the female respondents from patrilineal families supported the views expressed by the 7 women from matrilineal families. They also emphasized the importance of doing everything in their power to ensure that all of the children remained enrolled in school; however, they could choose to invest in sons in extremely precarious financial circumstances. One other female respondent from a patrilineal household said that she did not even give the matter a second thought, and that the family's limited resources would be allocated only to the education of the son unless the family did not have any male children. Hearing the comments of male respondents to the same topic presented earlier was really intriguing. 9 of the male respondents were from matrilineal households, and their responses were nearly identical to those of the seven female respondents from matrilineal families. When resources were scarce, matrilineal households would prioritize investing in girls if the male child was too young to attend school. Some of the ideas suggested by the 9 male respondents from matrilineal families were backed by 10 more male respondents from patrilineal households. 3 more

male respondents from patrilineal households, on the other hand, were uncompromising; they would not invest in female education in a family with tight and low resources.

Based on your responses to the previous two questions, do you believe it is better to have more sons?

This question was first directed at men, and 6 men from patrilineal societies responded. All 6 of these men believed that it would be best for their community to produce only sons since boys are preferable for passing along their lineage and sons are valued. 14 of the male responders, 9 from matrilineal families and 5 from patrilineal families, were unified in their passionate opposition to having only sons as offspring. Some of these males even said that women are superior to men when it comes to preserving the customs of their families and ancestors. They were also startled to learn that some males in the DRC in the 21st century still believe in having only male offspring. The question astonished 7 of the female respondents who came from families practicing matrilineal-lineage descent, and they were equally surprised to find that some men today desire to have solely male offspring. When questioned, 6 separate women from patrilineal families agreed that prioritizing sons over daughters in familial succession decisions and education is ridiculous in today's culture. Some of these women even claimed that children, whether sons or daughters, are blessings and have the ability to provide constant happiness to the family.

Do you believe that it is obligatory for sons to keep all of the family property once their parents pass away?

Four of the women who responded, one from a matrilineal family and 3 from patrilineal families, made the unexpected comment that they believe it is appropriate for sons to keep all of the family property. According to the female respondent from a matrilineal household, when her father died, she and her sister were disinherited by her father's family. She said that this was because her father had only daughters. She believed that families that characteristically disinherit their children and widows following the

death of the husband or father felt the need of a strong male voice, such as that of an adult son. Similarly, 5 male respondents from matrilineal households and 7 male respondents from patrilineal families agreed with the 3 female respondents who stated that sons should inherit all the property. 6 female respondents from matrilineal households, on the other hand, agreed that, if at all possible, all of the children in the family should share equal management duties of the family properties if the family had both sons and daughters. 3 more female respondents from patrilineal families, 4 male respondents from matrilineal families, and 6 male respondents from patrilineal families agreed with the above 6 matrilineal female respondents.

Do you think there is gender discrimination in the DRC after all the discussions we had about numerous issues involving schooling for both boys and girls?

Four females from matrilineal families had a firm conviction that there is a widespread pattern of gender discrimination against women and daughters. However, 3 of the matrilineal female respondents believed that this pattern is more subtle and contingent on an individual's location and line of work, but not within their own families. 3 female respondents from patrilineal families said that there is a prevalent pattern of gender discrimination against women and daughters in the DRC, whereas 3 additional female respondents from patrilineal families strongly disagreed with this statement. 5 male respondents from matrilineal families believed there are various examples of discriminatory regulations against females in the DRC, such as prohibiting them from borrowing money from a bank and so on. 4 other male respondents from matrilineal families expressed their belief that some forms of discrimination exist but said they had not personally experienced discrimination against women. Furthermore, 8 patrilineal male respondents said that some women face discrimination in the DRC for school, jobs, and a variety of other reasons, whereas 5 patrilineal male respondents disagreed.

CHAPTER 6: DISCUSSION AND CONCLUSION

In this section of the study, the findings reported in Chapter 5 are discussed together with their interpretations. This section's goal is to provide a more in-depth understanding of the findings, as well as to explore and characterize the significance of those findings in relation to the research questions, the literature review, the conceptual framework that was developed, and the hypotheses that were formulated. In addition, because the research was conducted using a mixed method through a qualitative sequential explanatory design, the discussion will make use of the findings from the qualitative analysis in order to present a comprehensive explanation for the findings of the quantitative analysis.

6.1. Discussion

6.1.1. Transmission of educational attainment across generations

6.1.1.1. Evolution of education mobility over time and across generations

This section discusses the findings from the first sub-research question, which are shown in Figure 5.1 and Table 5.1. To be explicit, the first sub-research question seeks to investigate ways in which educational mobility has evolved in the DRC over time and across generations. This study used both the transition matrices and the regression coefficient or intergenerational persistence (IGP) methods to answer this first sub-research question and test the hypothesis 1.1. To recap, intergenerational education persistence is the coefficient derived from the regression of children's years of schooling on their parents' years of schooling. Greater persistence implies lower relative intergenerational education mobility and vice versa.

The results from the transition matrix (Figure 5.1) show that, despite being higher, intergenerational persistence in educational attainment in the DRC has been declining, indicating greater intergenerational educational mobility. However, results using intergenerational persistence (IGP) methodologies (Table 5.1) indicate that throughout a 49-year period (1940-1989) there has been a consistent and pronounced persistence in intergenerational education attainment, signifying no greater or lower education mobility.

As a result, hypothesis 1.1, suggesting that intergenerational persistence in education attainment has been increasing in the DRC, and implying a lower intergenerational education mobility, is rejected.

The results of this research support the findings of several previous studies, including those conducted by Golley et al. (2013), Azomahou and Yitbarek (2016), Bratberg et al. (2017), and Neidhöfer et al (2018). In rural and migrant populations in China, Golley et al. (2013) observed less intergenerational education correlation. Azomahou and Yitbarek (2016) found a decline in SSA educational persistence after the 1960s. Neidhöfer et al. (2018) identified similar decreasing trends in intergenerational educational persistence in Latin America. The findings of the above-mentioned studies demonstrated a decrease in intergenerational persistence of educational attainment and an increase in intergenerational mobility of educational attainment.

To further discuss the magnitude of a decline in intergenerational education persistence in the DRC, this study has broadened the scope of the analysis. One example of education mobility presented in Figure 5.1 indicates that if parents are in the lowest quintile, represented by the proxy of father with less or no education, their offspring have a greater than 43% probability of remaining in that quintile, implying that today in the DRC, only about half of individuals from families with less educated parents are likely to not receive an education. Moreover, when compared to prior generations, the study's quantitative results in Table 4.1 show that persons born in 1940, before the country's independence, had just four years of schooling on average, whereas those born in 1980 had seven.

A possible explanation for these findings in the context of the DRC could be that the relationship between parents' educational attainment and that of their children is weakening as a result of the country's rapid expansion and increased access to education, allowing children from low-income families, for example, to ascend higher on the socioeconomic ladder than their parents when they become adults. This point of view is

supported by the findings of Ballarino and Bernardi (2016) and Momo et al. (2019) who found that intergenerational educational attainment is weaker in countries with greater access to education, corroborating the idea that improved access to educational opportunities will reduce the likelihood of educational disparities being passed down from generation to generation.

By the same token, the concept of increasing access to educational opportunities across the DRC is examined in great depth over the whole of this study. For example, in section 2.4.2 on the organizational structure of the education system in the DRC, it is stated that the country is experiencing a remarkably fast expansion of basic education coverage, with average net primary school enrollment reaching nearly 80% today, an increase from less than 40% in the 1990s. This indicates that the country is making significant progress toward achieving its goal of universal primary education coverage. It also demonstrates that the country is making tremendous strides in increasing the quality of its educational programs.

Another possible explanation for these results could be the significance of parental education. Although the government may expand education coverage, if parents do not value education, they will not invest time and resources in their children's education, limiting the cycle of higher education mobility. This assumption is consistent with those that were drawn from earlier research, such as by Azomahou and Yitbarek (2016), Gang and Zimmermann (2000), and Sime and Sheridan (2014). Using nationally representative survey data, Azomahou and Yitbarek (2016) investigated the trends, levels, and pattern of intergenerational mobility of educational attainment over 50 years by gender in the context of Comoros, Ghana, Guinea, Madagascar, Malawi, Nigeria, Rwanda, Tanzania, and Uganda. Gang and Zimmermann (2000), using large German data to compare the educational attainment of second-generation immigrants to those of natives in the same age cohort, and Sime and Sheridan (2014), reporting on a study conducted on intergenerational education attainment in an area with high levels of social and economic

deprivation in Scotland, all asserted that parental education remains a significant predictor of the educational outcomes of children.

According to the findings of the qualitative interviews conducted for the purpose of this study (see Table 5.5), 78 of the 100 participants had either completed or were on track to complete their university degree within the next few years. The interviews indicated that the majority of respondents came from highly educated families as compared to their parents. For example, 53 of the respondents' fathers and 28 of the respondents' mothers had a tertiary education. These findings provide validity to the claim that parental level of education remains an essential determinant in predicting the children's educational level and trajectory in the DRC.

This assertion is further confirmed by the theory put forth by Dubow et al. (2009), who claimed that a child's educational and occupational achievement 40 years later was significantly predicted by their parents' educational status when the child was 8 years old. While the qualitative study results show that education mobility in the DRC is bidirectional, with some from highly educated households unable to get education and others from low or no education families able to do so, many respondents believe that their generation will be highly educated because today in the DRC, despite the significant influence over social standing that origins and parents continue to exert, everyone has the potential to advance as far as their skills and perseverance will allow.

Despite the accuracy of such opinions expressed by these individuals and the development in terms of educational access across the country, there is still a very long way to go. Figure 5.1, for example, shows that a person from a household in which the father is in the lowest education quintile has a 2.5% chance of climbing to the highest education quintile.

This finding is very troubling since it indicates that if the parents did not complete their education, great effort will be required to obtain a higher education or university degree in the DRC, and only 2.5% of those in this group achieve such a goal.

However, the results also show that intergenerational persistence of educational attainment from fathers in the highest education quintile is less than 20% in the DRC. This indicates that even those individuals from families with a high level of education will need determination to be among the 20% who are successful in obtaining a similarly high level as their fathers.

6.1.1.2. Intergenerational educational attainment between genders and among lineage groups in the DRC

This section discusses the findings from the second sub-research question, which are depicted in Figures 5.2 through 5.7 and Tables 5.2 and 5.3. To be specific, the second sub-research question tries to determine the extent to which intergenerational educational attainment is passed across genders and lineage groups in the DRC. To answer this second sub-research question and test hypothesis 1.2, the study first disaggregated the data by gender and lineage descent groups and then employed both transition matrices and regression coefficient or intergenerational persistence (IGP) techniques to estimate the correlation.

The hypothesis 1.2 suggests that intergenerational persistence in educational attainment has been decreasing for males in the DRC; the same is true for both matrilineal and patrilineal lineage groups.

The results of the transition matrices (Figures 5.2–5.7) and intergenerational persistence (IGP) approaches (Tables 5.2 and 5.3) show that, in general, intergenerational persistence in educational attainment for males in the DRC has been significantly decreasing in recent cohorts while slightly increasing for females. Furthermore, findings indicate that in recent cohorts, intergenerational persistence in educational attainment has been decreasing in matrilineal descent groups while increasing in patrilineal descent groups. Therefore, hypothesis 1.2, which suggested that intergenerational persistence in educational attainment has decreased for males in the DRC, and that the same is true for both matrilineal and patrilineal lineage groups, is partially accepted.

The results of this study are consistent with those obtained by Piopiunik (2014), Pfeffer and Hertel (2015), Azomahou and Yitbarek (2020), and Loleka (2021). The findings of the studies cited above revealed that intergenerational persistence in educational attainment has been decreasing for males, as well as for the matrilineal lineage group. Piopiunik (2014) showed increasing male education mobility in West Germany. Pfeffer and Hertel (2015) noticed a tiny but gradual increase in the US in male children's education mobility. Azomahou and Yitbarek (2020) in SSA showed that a daughter's education level is more closely associated with her parents' than a son's, implying lesser mobility for female children. Literature on intergenerational persistence in education and lineage is scarce. Only one study looked at the influence of family lineage descent groups on intergenerational educational attainment in the DRC. Loleka (2021) found that intergenerational persistence in education has been rising for patrilineal descent groups while decreasing for matrilineal descent groups, implying higher education mobility for the matrilineal group.

Expanding on what was previously demonstrated in section 6.1.1.1, let us once more broaden the scope of this study to evaluate the extent of diminishing intergenerational persistence in educational attainment for males and the matrilineal group. According to Figure 5.2, if parents are in the lowest quintile, indicating they have little or no education, their male offspring have just a 27% likelihood of remaining in that quintile, compared to 57% for female offspring (Figure 5.3).

One of the probable explanations for these findings is that despite the rapid expansion of education, many families are still unable to perceive the benefit of sending their female children to school. In addition, it is not surprising that the findings indicate that education mobility is increasing only for males and individuals from matrilineal families in the context of the DRC, because patrilineal kinship system is strongly correlated to male gender: numerous studies, such as by Song et al. (2006), indicate that, despite a likely decline, gender gaps in schooling favoring males in developing countries

in general are substantial. Moreover, an increase in education mobility is likely to increase among matrilineal individuals because matrilineal kinship has been shown to positively affect the education and well-being of women and children (Lowes, 2016, 2017, 2018, 2020; Gneezy et al., 2009).

Continuing with the question of family lineage and the perception of the benefits of sending their female children to school, many parents stated during the qualitative data collection interviews that they would still make every effort to send their children to school even if their families had very limited resources. Alternately, if resources were extremely limited, they had the option of sending only their sons to school. This gives support to the claims made by Bommier and Lambert (2000) who predicted that the amount of time Tanzanian children spent in school reflected major inequalities in the quantity of household resources available to each gender among Tanzanian families.

On the basis of the claims made by the aforementioned parents, it seems likely that widespread poverty and persisting cultural attitudes will continue to be the most significant barriers to the educational mobility of females in the DRC. Parents who are struggling to make ends meet are consistently put in a position where they must make difficult decisions about how best to use the meager resources available to them in order to provide their children with the best possible prospects for the future. For instance, low-income families, particularly those living in rural areas, are commonly compelled to send their sons to school while keeping their daughters at home to help with housework. They do this because they hold the belief that the chores that come with staying at home are adequate training for girls to learn how to manage a family. What these parents did not express openly was the fact that, while financial difficulties may be one reason that some of them choose to withdraw their daughters from school, there are a variety of other reasons, including the fear that their daughters may become victims of rape at the hands of male instructors or other male adults in the community when schools are distant from the home.

6.1.2. Intrahousehold's decision-making power and children's schooling in the DRC

6.1.2.1. Influence of women's decision-making power on children's school attendance in the DRC

This section discusses the findings presented in Table 5.8 from the sub-research question 2.1. Specifically, sub-research question 2-1 attempts to examine the influence of women's decision-making power on school attendance among children in the DRC. Since the sub-research question concerns power dynamics within the household and its dependent variable is binary, this study first disaggregated the data by household head, and then used both the probit estimator and marginal effects to answer this sub-research question and test hypothesis 2.1.

The hypothesis 2.1 suggests that children from households in which women can influence decisions that affect family's daily lives are more likely to attend school in the DRC. Using variables serving as proxies for women's decision-making ability and the principal component analysis (PCA) index derived from women's education and age variables serving as household bargaining power, the results of the study indicate that an increase in bargaining index raises children's school attendance even in households headed by men. Therefore, it is not possible to reject hypothesis 2.1, which claimed that children from families in which women can influence decisions affecting the family's everyday life are more likely to attend school in the DRC.

These results corroborate the findings of a substantial amount of prior research by Min Soo et al. (2011), Martnez (2013), Basu and Maitra (2020), and Ringdal and Sjursen (2021), who also found that increasing women's household-bargaining power can positively affect the schooling of children. For example, in the context of Indonesia, Min Soo et al. (2011) found that households spend more on their children's schooling if the wife has a stronger voice. According to Martnez (2013), when women have more decision-making power, children under 19 are more likely to attend school in Chile. Basu and Maitra (2020) found that women's stronger bargaining power improved household

spending on health and schooling in Iran. Ringdal and Sjursen (2021) found that an increase in a wife's bargaining power improved gender balance in children's school funding.

These findings can be explained in a broader context by the fact that the data used for this study reject the unitary model evolved from Becker's household models of microeconomic (Neo-Classical) theory in the 1960s. This model maintains that decisions made by households are based on the preference of a single member of the household, typically the father. The findings can also be explained in part by the fact that the conceptual framework used in this study, which supports the collective model in households, validates the positive relationship between women's decision-making power in households and children's school attendance. This is especially true given the expanding body of research that contradicts the unitary model of intrahousehold resource allocation in developing countries (Blitstein & Evans, 2006; Flagg et al., 2014; Rahman et al., 2015).

Another possible reason for these findings is the household's power structure. The capacity to make decisions in the DRC may be tied to the power balance between husbands and wives in the family, which is why it was required to disaggregate the data of this study by household head. For instance, all of the model specifications reported in Table 5.8 reveal that a mother's age has no statistical influence on increasing children's school attendance in a male-headed household. This finding is contrary to previous studies which have suggested that maternal age increases school achievement and a similar-sized reduction in behavior problems (Duncan et al. 2018). This can be explained by the fact that the DRC has a younger population, with some females marrying as early as 15 years of age and husbands being typically older. Assuming that the data was collected at random from much younger females, their ages would have little effect on how women bargain for power in the home or influence children's schooling. However, what is promising about these findings is that they show that educated mothers, regardless

of age, may influence the power dynamic and increase their children's school attendance even in households headed by men.

The findings from all model specifications given in Table 5.8 showing that female-headed households influence the likelihood of children attending school were very encouraging and should not come as a surprise in the context of the DRC. Given the growing unemployment rate among husbands in the DRC, resourceful women are increasing in number. They sell bread, vegetables, bottled water, edible fruit, and even work as shoe polishers. They commute between cities on a regular basis to earn money in order to support their families.

During interviews conducted to gather qualitative data, a significant number of women stated that they were self-employed. In addition, some of the women who headed households claimed that they occasionally left their houses before 5 a.m. to collect bread and begin selling, and one who worked as a shoe polisher near a railway station stated that she had to be at her place of business by 7 a.m. Unlike their husbands, they were all in agreement that they would like to invest the entirety of their incomes towards the education of their children. This lends support to the findings of Biblarz and Gottainer (2000), who argued that the varying social structures of different types of women in families may account for observed inequalities in child school outcomes.

6.1.2.2. Influence of women's decision-making power on their daughters' school attendance in the DRC

This section explains the findings reported in Table 5.9 in response to sub-question 2.2. Specifically, sub-research question 2.2 examines the influence of women's decision-making power on their daughter's school attendance in the DRC. Since the sub-research question is concerned with power dynamics within the household over the child quality and preference and its independent variable is binary, this study first disaggregated the data by children genders and household head, and then used both the probit estimator and marginal effects to answer this sub-research question and test hypothesis 2.2.

The hypothesis 2.2 suggests that women's decision-making power positively affects girls' schooling in the DRC. For this sub-research question, the study also used variables serving as proxies for women's decision-making ability and the principal component analysis (PCA) index derived from women's education and age variables serving as household bargaining power. The results of the study suggest that an increase in women's decision-making power increases the probability of daughters attending school. Therefore, it is not possible to reject hypothesis 2.2, which asserts that women's decision-making power in the household favorably influences girls' school attendance in the DRC.

These findings are consistent with those of Afridi (2010), Luz and Agadjanian (2015), Afoakwah et al. (2020), and Basu et al. (2023) who found that an increase in women's decision-making power positively influence girls' schooling. In India, for example, Afridi (2010) found that mothers' autonomy had a major impact on India's prejudice against girls' education. Moreover, Luz and Agadjanian (2015) found that for daughters, but not for sons, women's decision-making autonomy was positively connected with the likelihood of attending elementary school in four districts of Gaza province in southern Mozambique. Similarly, Afoakwah et al. (2020) in Ghana discovered that female children benefit more than male from their mother's bargaining position. Furthermore, Basu et al. (2023) discovered a favorable association between mother's decision-making authority and primary school enrolment in rural Côte d'Ivoire.

In the context of the DRC, there are several potential explanations for the results provided in this section of the study. It might be argued that decision-making power is concerned with power dynamics within the family over the child's quality and preference; hence, data for this section were disaggregated by gender of the children and household head to better capture the underlying mechanisms over this assumption. Regarding, for example, parental choice for the quality and preference of their children, the DRC is a country that adheres to several inflexible and discriminatory patriarchal customs. In the

country, women and girls are commonly the victims of various sorts of abuse (Bartels et al., 2010; Peterman et al., 2011), and this has unwittingly and naturally generated patterns of parental favoritism towards one child over another. These patterns may include an increase in the amount of time spent together, a decrease in the amount of punishment, or both, as well as an increase in privileges.

During the interviews conducted with men to collect qualitative data, a few of them expressed the belief that "it would be best for their community to produce only sons since boys are preferable for passing along their lineage, and sons are valued". These male viewpoints in the DRC are supported by the findings of Das Gupta et al. (2003) who postulated that a preference for sons exists in East and Southeast Asian countries such as China, India, and even the Republic of Korea. It is evident from the findings presented in Table 5.9 that male-headed households favor male children over female for schooling, and the percentage of girls who go to school is lower in households that are led by men when compared to that of boys. This is the case in the first two model specifications (see Table 5.9). In the third and fourth model specifications, increasing mother bargaining power increases the likelihood of female child schooling in both male- and female-headed households. This gives credibility to the statements made by a few of the women questioned during the qualitative data collection process that "women often have to engage in power struggles in order to have their opinions taken seriously."

These findings may also have another possible explanation: that the decision-making power in a family influences a parent's judgment over whether or not to invest in the education of a male or female child. This assertion is mostly consistent with Lee and Beatty (2002) who emphasized that mothers who provide for their families wield considerable influence. Accordingly, these findings have brought to light the challenges faced by married women when having their voices heard in the context of family decision-making. For instance, while the decision to send a male child to school may be an easy one for both husband and wife, the mother may face opposition when it comes to sending

female children to school. The discussion that took place during the qualitative data analysis suggested that many parents, and more specifically mothers, face a dilemma when there are limited financial resources in the household. Even though these mothers would still do everything in their power to send children of both genders to school, they may make the choice to send only their sons if resources are particularly limited.

6.1.3. Family lineage environment and its influences on school attendance

6.1.3.1. Effect of matrilineal family lineage descent on children's school attendance

This section discusses the findings of the sub-research question 3.1, which are reported in Table 5.12. Specifically, sub-research question 3.1 measures the effect of matrilineal family lineage descent on children's school attendance in the DRC. To answer this sub-research question and test hypothesis 3.1, the study applied the treatment-effect estimator technique, concentrating on the treatment effects of belonging to or not belonging to a matrilineal family group. The average treatment effects (ATEs) were calculated using the augmented inverse probability weighted (AIPW) estimator.

The hypothesis 3.1 suggests that matrilineal family lineage descent has a positive effect on children's school attendance in the DRC. The results of the study presented on Table 5.12 suggest that being from a matrilineal lineage group causes children's school attendance to increase by an average of 1.79% from the average of 62.6% for children from patrilineal lineage group. As a result, this study does not provide sufficient evidence to reject hypothesis 3.1, which maintains that in the DRC, matrilineal family lineage descent has a beneficial impact on children's school attendance.

The results of this study corroborate earlier findings by Lowes (2016, 2018, 2020), Gneezy et al. (2009), Starkweather and Keith (2019), who revealed that matrilineal family lineage descent as opposed to patrilineal had a positive impact on children's school attendance. In the DRC, for example, Lowes (2016, 2018) suggested that children of matrilineal women have more years of education than children of patrilineal women. Lowes (2020) found that children of matrilineal mothers are 8 percentage points less

likely to have been ill in the preceding month and had 0.4 more years of education. Moreover, Gneezy et al. (2009) observed that educational attainment was marginally higher among matrilineal individuals than among patriarchal in the context of the Maasai in Tanzania and the Khasi in India, indicating education persistence and the possibility of investment in progeny. Furthermore, Starkweather and Keith (2019) discovered that children of matrilineal Shodagor people in rural Bangladesh get indirect investment, such as schooling, from a maternal uncle.

A plausible explanation for these findings in the context of the DRC could be based on this major theory in kinship-system research, which states that the structure of matrilineal-kinship systems is better for the well-being of women and children than patrilineal-kinship systems (Lowes, 2020). Accordingly, it has been strongly argued that the practice of matrilineal kinship typically corresponds with other societal and cultural practices that may be of advantage to women and children, such as sending children to school (Lowes, 2018). An example of such a practice is the habit which is consistent with the hypothesis that matrilineal systems reduce a husband's authority over his wife (Knight, 2008; Peters, 2010; Lowes, 2016, 2017).

It has been shown during the course of this dissertation that households in which women are able to make decisions promote the education of their children. The matrilineal group is one of the extra-environmental factors mentioned in the conceptual framework that women in the DRC can adhere to in order to increase their decision-making power. Consequently, the lineage of a woman might potentially improve the worth of her outside alternatives and her relative negotiating strength in the event that the family disintegrates. In addition, because matrilineal women in the DRC have more control over their children, it is possible that children born to matrilineal mothers do not have to worry as much about who will invest in their education as children born into patrilineal societies do. This is because matrilineal women have more control over their children.

Following on from the preceding argument, Munsi (2016) asserted that the father of the family performs a particular role in managing the family's affairs within the matrilineal social structure and traditional practices of the DRC. Since a mother's brothers pass on rank and inheritance to her offspring, the maternal uncle exercises the most authority and has the final say in establishing the father's role. In this lineage structure, one may claim that the maternal uncle is responsible for protecting the social, economic, and legal interests of the lineage. It is reasonable also to hypothesize that matrilineal groups have a greater rate of education than patrilineal groups because maternal uncles and brothers of mothers have indirect decision-making authority, such as investing in the education of lineage children. This is one reason children from matrilineal families can go to school even if their fathers are unable to finance their education. This assertion is corroborated by Starkweather and Keith (2019) who observed that children of matrilineal Shodagor people in rural Bangladesh receive indirect investment, such as schooling, from a maternal uncle.

6.1.3.2. Effect of matrilineal family lineage descent on the probability of girls attending school at all levels of education in the DRC

This section discusses the results of sub-question 3.2, which are presented in Table 5.12. In particular, sub-research question 3.2 examines the effect of matrilineal family descent on the likelihood of girls attending school at all levels of education in the DRC. To answer this sub-research question and test hypothesis 3.2, the study used the treatment-effect estimator technique, focusing on the treatment effects of matrilineal family group membership. The interaction term (matrilineal*female) between the matrilineal variable and the female variable was included in the model specifications in Table 5.12 to help gain a better understanding of the relationship between the matrilineal variable and the degree to which it influences girls' school attendance in the DRC. The average treatment effects (ATEs) were calculated using the augmented inverse probability weighted (AIPW) estimator.

The hypothesis 3.2 suggests that matrilineal family lineage descent increases girls' opportunities to attend school at all levels of education in the DRC. The results of the study presented on Table 5.12 suggest that being from a matrilineal lineage group causes girls' school attendance to increase by 26.7% from the average of 62.6% for children from the patrilineal lineage group. As a consequence, the findings of this study do not give adequate evidence to reject hypothesis 3.2, which asserts that matrilineal family lineage descent increases the probability for female children to attend school in the DRC at all levels of education. The results of this study indicating that the matrilineal group increases female children's school attendance three times compared to non-matrilineal children corroborate earlier findings by Marak (2012), Vleuten (2016), La Ferrara and Milazzo (2017), and Robinson and Gottlieb (2021) who revealed that matrilineal family lineage descent, as opposed to patrilineal, had a positive impact on female children's school attendance. Marak (2012) revealed that girls were chosen for schooling investment among the matrilineal Garos of Bakrapur, Assam in India. In 86 developing and middle-income countries, Vleuten (2016) found that the matrilineal family group predicts equitable gender participation in education. Matrilineal groups in Ghana invest more on education, according to La Ferrara and Milazzo (2017). In Malawi, matrilineality increases girls' schooling, according to Robinson and Gottlieb (2021).

In reality, many of the arguments outlined in the preceding section that may work in favor of increasing school participation for all children from the matrilineal group in the DRC can also be applied to girls. However, given that the country is well known for being highly patriarchal (Carlsen, 2009) and to operate on the basis of male dominance and control, the findings showing that matrilineal families send their daughters to school at a rate three times higher than that of non-matrilineal families are especially significant. Table 5.12, for example, demonstrates that when the variable female is considered independently of the matrilineal category, there is a significant reduction in the number of female children who attend school in the DRC.

One possible explanation for these findings is that the impacts of matrilineal kinship on female child school attendance are more correctly characterized as the effects of the broader collection of cultural practices outlined by Narzary and Sharma (2013), practices that are commonly combined. These practices include the matrilocal residence system, in which the husband frequently resides with the family of his wife; the descent through mother system, in which the family name is passed down through the mother; and the succession of parental property by the daughter system, in which the family property is given to the female lineage.

Table 5.12 highlights the fact that the degree of family education, which in this case is proxied by the education of the grandfather, has a significant influence on the amount of time a female child spends in school. This is one example of how the practice of matrilocal residence can have a significant impact on a child's educational path. Another factor that may explain the relatively strong link between matrilineal group and female child school attendance in the DRC is the daughter's inheritance of parental property. It is possible that this outcome is driven by the underlying mechanism that, even in places where matrilineal inheritance is still practiced, female children with less education will lack the ability to claim, control, and self-manage property today.

The qualitative interviews conducted for this research were unable to provide evidence to support the claims made above; however, the discussion with participants did help shed some light on the bigger picture regarding the daughter's succession to parental property, matrilineal descent, and female children's schooling. Members of both matrilineal and patrilineal families were divided on whether sons should be allowed to inherit the entirety of the family property. Many respondents from matrilineal families believe that, if at all possible, all the children in the family should share equal management duties for the family properties if the family has both sons and daughters, indicating that many parents want children of both genders to be equally educated despite the cultural and social divide in the population.

6.2. Limitations of the study

The study has three limitations. First, despite the fact that this study employed a three-generation paradigm to assess the impact of the first generation of parents (grandparents) on the educational attainment of the third generation (grandchildren), the data used for this dissertation lacked information on the education of first-generation mothers who were also third-generation grandmothers, which could have altered the findings and interpretation of the study. To overcome this limitation, the study used the education level of the grandfathers as a proxy for the education level of the grandparents. Additional research involving both grandfather and grandmother will be required to provide a complete picture of intrahousehold decision-making power and the transmission of educational attainment across generations.

Second, the use of cross-sectional data in this study is another source of limitation. In fact, using cross-sectional data has made it challenging to understand the temporal relationship between the outcome variables used, such as individuals' educational attainment or attendance, and the variables of interest, such as decision-making power and matrilineal group, because the outcome and treatment variables were both used in this study concurrently. To overcome this limitation, the study created a birth cohort variable using the year-of-birth variable provided in the data and then divided these birth cohorts into five 9-year generations. However, additional studies that take timeseries into account will be required.

Third, selecting an appropriate method to analyze the qualitative data presented another significant challenge, given that the study's overall objective was to learn how social and cultural phenomena like family lineage groupings affect household power dynamics and, in turn, influence the educational opportunities available to children within those families. To overcome this constraint, the study employed discourse analysis, which solely examines debate within the cultural and social context, however, the end result was a rather modest investigation and a lack of in-depth analysis of the qualitative data collected.

6.3. Conclusion

In society today, obtaining a good education is one of the most important factors for the attainment of a successful life. Nonetheless, family background has a considerable impact on an individual's chances of getting a satisfactory education in many countries, including the Democratic Republic of Congo (the DRC). As a direct consequence, we see relatively little education mobility across generations. To ensure that policy actions are focused effectively, it is critical to understand the mechanisms that are responsible for this intergenerational persistence in schooling.

Despite great progress made in the education sector since the country's independence in 1960, the DRC remains one of the countries with the largest proportion of out-of-school children in the world. While it is evident that the DRC's education sector confronts significant difficulties in terms of quality, governance, and equity, keeping children in school, especially girls, is the biggest challenge. Since it is now well-established that school attendance is closely related to higher performance, which leads to more learning opportunities and better employment possibilities for children, regular school attendance is not only important but also required. According to the World Bank, an estimated 86% of 10-year-olds in the DRC are in "learning poverty", meaning they are unable to read and understand a simple text.

Regrettably, in 2014, UNESCO estimated that over 36% of school-age girls in the DRC were out of school, compared to only 29% of boys. Similarly, there were 38% more out-of-school children in rural areas than in urban areas. While the exact current number of children not enrolled in school is unknown and the government has been working to address issues related to quality, governance, and equity in the field of education, additional effort from the demand side (the families) is still required to get all school-age children, both boys and girls, enrolled in, and regularly attending, schools.

Previous studies that looked into lower transmission of education between generations identified three main causes: (i) biological, related to the hereditary

transmission of ability, which is frequently assessed by IQ; (ii) economic, related to the socioeconomic condition of the parents and their children's schooling; and (iii) direct education-to-education, related to a higher return on education for children with highly educated parents. However, the author of this study argues that, in the context of the DRC, the above-mentioned channels of lower transmission of education between parents and children may share a common denominator. Furthermore, he suggests that one possible explanation for the low schooling rate over generations may be the influence of intrahousehold decision-making power induced by the family-lineage-descent system that is practiced in the country. There are two primary reasons why the DRC is an excellent case study for intrahousehold decision-making authority and intergenerational mobility in schooling.

The first reason is the prevalence of family lineage descent systems in the country. The DRC has a very varied population. Despite increasing urbanization, family institutions continue to be crucial. Hundreds of tribes continue to bind families through social, economic, religious, cultural, and linguistic conventions. The lineage descending from a common ancestor makes decisions regarding production, consumption, inheritance, child-rearing, succession, and authority in Congolese societies. According to Lowes (2018), the DRC is an ideal location to study the effects of family-lineage descent systems on intergenerational transmission of education persistence because it is situated at the intersection of the "matrilineal belt," which describes the distribution of patrilineal and matrilineal ethnic groups throughout central Africa.

The second factor is the country's reputation for patriarchy (Carlsen, 2009). This indicates that the father is the central authority in the DRC, and that the country is governed by concepts of male dominance and control. Moreover, despite the fact that women and men are accorded equal rights and obligations under statutory law (Constitution of the DRC, 2011), the country's family code identifies the husband as the head of the household, so obligating the wife to obey her husband (Art. 444). In addition,

members of the household are typically bound together by the surname of the father, forming a group that he connects to his ethnic group of origin or community networks.

To date, the effect of family lineage system on offspring's schooling remains unclear, and most studies on family descent have only been carried out in unilineal societies, where it is not possible to naturally observe the differential treatment of both patrilineal and matrilineal groups. Moreover, the influence of decision-making power differences for women with an extra-household parameter such as family lineage descents is not fully understood. Additionally, it is not clear from previous literature the nature of the mechanisms that support women's decision-making power in a highly patriarchal society in Africa. Furthermore, there have been mixed results concerning intergenerational education persistence. Though research has been carried out in many countries, the channel through which parental educational inequality is transmitted across generations has remained unclear, especially when interest focuses on the roles of lineage-descent systems.

It is against this background that this study investigated these three main research questions: (1) How is educational attainment transmitted across generations in the DRC? ; (2) How does the intrahousehold's decision-making power influence children's schooling in the DRC? ; (3) How does the family lineage system environment in which an individual was raised affect the school attendance of their offspring in the DRC?

Using data from the Democratic Republic of Congo, the study identified the following as significant contributions to the field of knowledge of this topic.

First, a substantial amount of literature has developed around the concepts of social structure, family-lineage systems, and inheritance. While anthropologists have long researched these ideas, their variations, and their consequences for social outcomes, economists are only now beginning to grasp their roles and implications as determinants influencing the well-being and development of children, families, and communities. The current study was one of the first to adopt a mixed-methods approach to extensively

investigate the relationships between the family-lineage system, intra-household decision-making power, and intergenerational transmission of education.

Second, while there is much scholarly interest in comparing intergenerational education mobility across cultures, the evidence for its drivers is still inconsistent, inconclusive, or unknown. In general, intergenerational education mobility research focuses on the transmission of economic disparity and poverty. Furthermore, studies on intergenerational education mobility often emphasize the transmission of ability. This study offers a more in-depth look at how social and cultural factors can explain intergenerational educational mobility, particularly with regard to the significance of lineage-descent systems. This study, in particular, generates evidence to illuminate how family origins, as explained by parental education, determine intergenerational education mobility in the second generation of both male and female adults, as well as in the third generation of offspring. Furthermore, this research adds to our understanding of intergenerational education mobility in patrilineal and matrilineal societies.

Third, regarding intra-household decision-making power, there has been considerable debate surrounding its relative importance in the schooling of offspring. This study adds to our understanding of the relationship between a strongly patriarchal society, in which the father is the major authority of the household, and how this affects educational investment in numerous ways. Moreover, this study provides a thorough examination of how women's age and education can influence children's school attendance, even in very patriarchal societies. Furthermore, this study also develops a quantitative framework for determining how girls attend school in male- and female-headed households in a strongly patriarchal environment.

Fourth, research on intergenerational mobility in education has been dominated by a two-generation paradigm as an integral unit, confining the idea of "a family" to a simple individual household rather than widening it to the extended one. Studies involving three generations of families found that grandparents have little direct influence

over their grandchildren's education. This argument is founded on the premise that the influence of grandparents is entirely mediated by the middle generation. It should be noted, however, that the majority of the research has been conducted in Western societies, and there is little information from which to draw any judgments about whether the impact of grandparents' education on grandchildren's schooling varies across countries. According to the findings of this study, the educational level of the grandparents has a considerable and substantial direct impact on the educational level of the grandchildren.

The main research questions of the study helped to formulate a number of sub-research questions, which led to the development and testing of a large number of hypotheses.

The following hypotheses were developed in response to the first main research question of the study. Hypothesis 1.1: Intergenerational persistence in education attainment has been increasing in the DRC, implying a lower intergenerational education mobility. Hypothesis 1.2: Intergenerational persistence in educational attainment has been decreasing for males in the DRC; the same is true for both matrilineal and patrilineal lineage groups.

The following are the hypotheses related to the second main research question of the study. Hypothesis 2.1: Children from households in which women can influence decisions that affect their family's daily lives are more likely to attend school in the DRC. Hypothesis 2.2: Women's decision-making power positively affects girls' schooling in the DRC.

The hypotheses suggested in response to the third main research question were as follows. Hypothesis 3.1: Matrilineal family lineage descent has a positive effect on children's school attendance in the DRC. Hypothesis 3.2: Matrilineal family lineage descent increases girls' opportunities to attend school at all levels of education in the DRC.

Given the sequential relationship between the quantitative and qualitative analyses, the overall approach utilized for the study was a mixed-methods sequential

explanatory design. This was done to guarantee that the findings from the quantitative could be appropriately explained by the qualitative data analysis. To investigate ways in which educational mobility has evolved in the DRC over time and across generations, this study used both the transition matrices and the regression coefficient or intergenerational persistence (IGP) methods to answer the main research question 1 and test the hypotheses. Similarly, to examine the influence of women's decision-making power on school attendance among children in the DRC, the study used both the probit estimator and marginal effects to answer the main research question 2 and test the hypotheses. In the same vein, to analyze the effect of matrilineal family lineage descent on children's school attendance in the DRC, the study applied the treatment-effect estimator techniques to answer the main research question 3 and to test the hypotheses.

Survey 1-2-3 on Employment, a repeated cross-sectional and retrospective survey of the informal sector and household living conditions conducted in 2012 in the DRC, provided the data for this research. The DRC's National Institute of Statistics carried out the survey in partnership with Afristat and the World Bank. The survey is multilayered and nationally representative, with three nested surveys and three stages including several statistical populations. In addition to quantitative data, qualitative data were gathered to support the conclusions of the quantitative analysis. The quantitative data included about 21,454 households, 111,679 individuals, and 8,776 informal production units.

For the first main research question, the findings from the transition matrix demonstrated that, despite being higher, intergenerational persistence in educational attainment in the DRC has been decreasing, which indicates that there is greater intergenerational educational mobility. The findings also suggested that, in general, males in recent cohorts in the DRC have shown a large decline in intergenerational persistence in educational attainment, whilst females have shown a minor increase in this regard. In a similar vein, the findings revealed that intergenerational persistence in educational achievement has been decreasing in matrilineal descent groups while increasing in

patrilineal descent groups. This was a very interesting conclusion to emerge given the delayed intergenerational education mobility in the DRC as well as the considerable number of previous research studies that suggested limited education mobility in many regions around the world.

In relation to the main research question 2, the findings of the study indicated that an increase in women's bargaining index increases the probability of children's school attendance even in households headed by men. In a similar vein, and this finding is extremely significant, the results revealed that an increase in women's decision-making power increases the probability of daughters attending school in the DRC, even in households where only male children are favored for schooling. These findings are highly encouraging and may have significant consequences in the context of the DRC, a country where male-headed households always have the final say in family life decisions and, most importantly, investments in children's education.

In terms of the main research question 3, the findings of the study suggested that being from a matrilineal lineage group causes children's school attendance to increase by an average of 1.79%, as compared to the average of 62.6% for children from patrilineal lineage groups. Possibly the most notable finding from the study was that being from a matrilineal lineage group generates an increase in female children's school attendance of 26.7%, compared to the average of 62.6% for children from patrilineal lineage groups.

The findings from this main research question 3 could be interpreted in the context of the DRC as due to the impacts of the matrilineal kinship system on the increased probability of female children attending school. These effects are more accurately characterized as the effects of a broader collection of social and cultural practices observed in the majority of matrilineal societies. Examples of such practices include co-residence, which often constrains the husband to reside with or near his family-in-law in the matrilineal descent, and to the daughter's inheritance of parental property, by which the family property is passed down from mother to daughter. In the event that

the married couple lives in close proximity to the wife's family, it is easier for the wife's brother to support and even pay for the schooling of his sister's children. In addition, if the daughter inherits the family property, this may encourage her to pursue a higher degree of study.

According to the findings of this study, despite the DRC's protracted history of both economic and military strife, the country's educational system has proven to be remarkably resilient. For instance, enrollment has increased across the country, but it has done so most quickly at the primary school level. However, it has been clear throughout the lengthy period since the country gained its independence that the funding for the education sector came almost entirely from contributions made by households.

The DRC is currently confronted with substantial policy options as it attempts to achieve a more effective and equitable education system with a combination of public and private financing, in addition to expanding the system and increasing its overall quality. Unfortunately, many school-age children continue to be excluded from the expansion of the educational system in the country. There is growing concern that a significant proportion of these out-of-school children will be unable to benefit, with the majority of the multiple difficulties stemming from the families' environment. While different factors have been established to influence the transmission of education from parents to children and school attendance, the home environment in particular needs to be thoroughly researched in the context of the DRC. To illustrate the significance of the preceding claim, consider that the country's Human Capital Index (HCI) now stands at only 37%. This means that a child born in the DRC today will be just 37% as productive as if he or she had access to a comprehensive education and health-care system.

This study has demonstrated how intricate and dependent on multiple mechanisms the transfer of educational attainment from one generation to the next is. If earlier research focused on the biological, economic, and education-to-education channels, this study provided some further insights demonstrating that, in the DRC, family lineage descent

systems could be the denominator of the aforementioned channel. Nevertheless, the study provided some important conclusions about the power structure in Congolese households as follows:

(i) Despite the fact that educational mobility has increased across the country, female children born into families where their parents, most commonly the father, have no education have a lower chance of receiving any education or of completing university than male children growing up in the same household.

(ii) Younger married women who lacked any education were unable to have sufficient bargaining power to influence the schooling of their children. This is an especially dramatic finding given that the daughters of these women will not have the opportunity to go to school.

(iii) In order for female-headed households in the DRC to be able to adequately support the education of their children, the household head must be of an appropriate age and have completed some level of formal education. This suggests that mothers who head households need to be mature in addition to knowledgeable in order to be able to send their children to school.

(iv) While education and age are very strong predictors of schooling for female children in the DRC, family background through grandfather education is even stronger. This finding was remarkably significant given the number of studies conducted in western societies where life expectancy is much higher than in Africa, implying that this finding can only be connected to family lineage.

This dissertation concludes on an optimistic note, yearning for a Congolese society in which every child, regardless of origins, social class, tribe, or lineage descendent groups, would have access to an education.

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ANNEXES

ANNEX 1 : Qualitative approach: in-depth interview questionnaire for qualitative approach data collection (PhD thesis)

I am Bernard Yungu Loleka, Congolese PhD student in education economics at Kobe University at Japon. I am undertaking research to determine how the family lineage system effects family structure and child education in the Democratic Republic of the Congo, specifically in the city province of Kinshasa. Please complete this brief questionnaire. As a respondent, your participation is anonymous. This survey is critical to my research, and I guarantee you that any information you submit will be used solely for the purposes of this study. (For any questions or comments about my research, contact me by email: bernardloleka84@stu.kobe-u.ac.jp)

* Required

Section I. Demographic characteristics

1. What is your marital status? *

Mark only one oval

- ◯ Single
- ◯ Monogamous married
- ◯ Polygamous married
- ◯ Cohabitation
- ◯ Divorced
- ◯ Widow / widower

2. How many people do you live with in your household? *

Mark only one oval

- ◯ Less than 4 people
- ◯ House with 5 people
- ◯ House with 6 people
- ◯ House with 7 people
- ◯ House with 8 people
- ◯ House with 9 people
- ◯ House with 10 people
- ◯ House with more than 10 people

3. Which of the following best describes where you currently live? *

Mark only one oval

- In town (Example Gombe)
- Suburbs close to the city (Example Bon-Marché district)
- Suburbs far from the city (Example Commune of Masina)
- In rural areas

4. Are you the head of the household? *

Mark only one oval

- Yes
- No

5. What is your gender? *

Mark only one oval

- Female
- Male

6. How old are you? *

Mark only one oval

- 16 to 24 years
- 25 to 49 years
- 50 to 64 years
- 65 years and older

7. What is your home province? *

_____

8. What is your tribe? *

_____

9. What is your lineage system? *

Mark only one oval

- Matrilineal
- Patrilineal
- Do not know

10 . Please situate yourself in relation to the following income categories (income * total household net, per month in U.S. dollars):

Mark only one oval

- Less than $500
- Between $500 and $1,500
- Between $1,500 and $2,500
- More than $2,500

Section II. Transmission of educational attainment across generations & Social mobility

II. A. Transmission of educational attainment

1. What is the highest level of education you have taken? *

Mark only one oval

- Primary
- Secondary
- Non-formal education
- Tertiary
- Graduate (Master's and Doctoral)
- Never been to school

2. What was your father's highest level of education? *

Mark only one oval

- Primary
- Secondary
- Non-formal education
- Tertiary
- Graduate (Master's and Doctoral)
- Never been to school

3. What was your mother's highest level of education? *

Mark only one oval

- Primary
- Secondary
- Non-formal education
- Tertiary
- Graduate (Master's and Doctoral)
- Never been to school

4. Did one of your grandparents complete university or equivalent? *

Mark only one oval

- Yes
- No
- I'd rather not say it
- I don't know

5. Do you have a job? *

Mark only one oval

- Yes
- No

6. What is your professional category? *

Mark only one oval

- Manager
- Skilled worker
- Unskilled worker
- Boss at the company
- Freelancer
- Domestic worker
- Unemployed

7. What sector of activities do you work in?*

Industry includes manufacturing and mining and construction etc. Trade includes wholesale and retail trade. Services include hotels and restaurants, repair services, leisure and tourism, as well as domestic services, utilities, business services, banking and financial services, transport and telecommunications, and other services.

Mark only one oval

- Agriculture
- Industry
- Commerce
- Service
- Another sector
- None of these answers

8. What was your father's professional category? *

Mark only one oval

- Manager
- Skilled worker
- Unskilled worker
- Boss at the company
- Freelancer
- Domestic worker
- Unemployed

9. What was your father's sector of activities? *

Mark only one oval

- Agriculture
- Industry
- Commerce
- Service
- Another sector
- None of these answers

10. What was your mother's professional category? *

Mark only one oval

- Manager
- Skilled worker
- Unskilled worker
- Boss at the company
- Freelancer
- Domestic worker
- Unemployed

11. What was your mother's sector of activities? *

Mark only one oval

- Agriculture
- Industry
- Commerce
- Service
- Another sector
- None of these answers

12. What type of school did you mainly attend between the ages of 11 and 16? *

Mark only one oval

- State schools
- Subsidized publicly run schools
- Private schools

II. B. Social mobility

Social mobility refers to changes in the social status of individuals or social groups over time, as well as differences between the social status of parents and that of their children. What do you think about social mobility in the DRC?

1. What is your opinion about this? In DRC everyone has an equal chance to go as far as their talent and hard work will take them? Why or why not? *

2. Do you think it becomes easier for people from backgrounds less favored to progress in the Congolese society? Why or why not? *

3. After a young person has completed high school, which of these pathways offers him/her the best opportunity to progress in life or career? *

Mark only one oval

- ◯ Go to a Vocational Education and Training (VET)
- ◯ Entering tertiary education (i.e., university)
- ◯ Entering higher education (i.e., technical education)
- ◯ Search directly for a job
- ◯ Do other things
- ◯ I don't know

4. What do you think, was the influence of your family origins on your level of education? *

5. What is the influence of your family origins on your professional career? *

6. What do you think, is the influence of your family origins on your progression at work? *

Section III. Intrahousehold's decision-making power & its influence on children's schooling

How decision-making power within the household influences children's schooling? answer all questions on a scale from (1) Strongly agree to (5) Strongly disagree

1. Do you have school-age children? *

Mark only one oval

- ◯ Yes
- ◯ No

2. Do all your children attend school?

Mark only one oval

- ◯ Yes
- ◯ No

3. If you answered "No" to question 2. Why your children stopped their studies, or did they not go to school?

Mark only one oval

- ◯ Financial impossibility of parents

- [ ] Preference for an apprenticeship or job
- [ ] Pregnancy, marriage
- [ ] Disability, illness
- [ ] School failure
- [ ] Too young
- [ ] Schools too far away
- [ ] Completed studies
- [ ] Other

4. Do you think polygamy is important? *

Mark only one oval

Very important
1 ◯
2 ◯
3 ◯
4 ◯
5 ◯
Not important

5. Do you live in a polygamous couple? *

Mark only one oval

- [ ] Yes
- [ ] No

6. Do you think the mother is responsible for the care of the children? Why ? *

7. Do you think that in the family the man should have the last word? Why ? *

8. Do you think the man decides when the couple should have sex? Why ? *

9. Do you think women have the same right to work and study as men? Why ? *

10. Do you think wives should tolerate being beaten by husbands? Why? *

11. Do you think the couple should decide how many children together? Why ? *

12. Do you think women can suggest using a condom? Why ? *

13. Do you think men should help with household chores? Why ? *

14. Do you think men should eat first if food is limited? Why ? *

15. Do you think woman can go to the health center without her husband's permission? Why or why not? *

16. Do you think a woman can use family planning without her husband's permission? Why or why not? *

17. Do you think that the wife and the husband are equal partners in the family? Wy? *

18. Who in your household decides how to spend money? Why? *

19. How old were you at the first marriage?

Mark only one oval

- ◯ Under 18 years
- ◯ Between 18 and 25 years
- ◯ Between 25 and 30 years
- ◯ Between 30 and 40 years
- ◯ Over 40 years

Section IV: Family lineage environment and its influences on the educational attainment

How does the environment of the family lineage system in which a person is raised affect the schooling of his or her children?

1. Do you think it's more important for a boy to go to school than a girl? Why or why not? *

2. Do you think women should be able to marry whomever they want, no matter what their parents think? Why or why not? *

3. Do you think it's better to have more sons? Why or why not? *

4. Do you think boys should get an education before girls if finances are limited? Why or why not ? *

5. Do you think that sons are required to keep all the family property after the parents die? Why or why not? *

6. Do you think that sons earn more money and can better provide for the needs of the family? Why or why not? *

7. Do you think that daughters get married and leave the family, so they are not as useful as sons? Why or why not? *

8. Do you think that sons get married and stay with their parents, taking care of them in their old age? Why or why not? *

9. Do you think the dowry is important? Why or why not? *

10. Do you think there is discrimination against women in the DRC? Why ? *

11. Do you think that daughters should have a similar right to property inherited on the death of parents like sons? Why or why not? *

ANNEX 2: French translation of the questionnaire used for the qualitative analysis

Je suis Bernard Yungu Loleka, étudiant Congolais en doctorat de l'économie de l'éducation à l'Université de Kobe au Japon. Je mène une étude pour savoir comment le système de lignage familial influence la structure de la famille ainsi que la scolarisation des enfants en RDC et dans la ville province de Kinshasa pour être précis. Je vous prie de bien vouloir répondre à ce petit questionnaire. En tant que répondant, votre participation est anonyme. Cette enquête sera très importante pour ma recherche et je vous assure que toutes les informations que vous nous fournirez ne seront utilisées qu'aux fins de cette étude. (Pour toute question ou commentaire sur ma recherche, contactez-moi par email : bernardloleka84@stu.kobe-u.ac.jp)

* Obligatoire

Section I. Caractéristiques démographique

1. Quelle est votre situation matrimoniale ? *

Une seule réponse possible

- ◯ Celibataire
- ◯ Marié (e) monogame
- ◯ Marié (e) polygame
- ◯ Union libre
- ◯ Divorcé(e)
- ◯ Veuf / veuve

2. Vous vivez avec combien de personnes dans votre ménage ? *

Une seule réponse possible

- ◯ Moins de 4 personnes
- ◯ Ménage de 5 personnes
- ◯ Ménage de 6 personnes
- ◯ Ménage de 7 personnes
- ◯ Ménage de 8 personnes
- ◯ Ménage de 9 personnes
- ◯ Ménage de 10 personnes
- ◯ Ménage avec plus de 10 personnes

3. Lequel des énoncés suivants décrit le mieux l'endroit où vous vivez actuellement ? *

Une seule réponse possible

- [ ] En ville (Exemple Gombe)
- [ ] Banlieue proche de la ville (Exemple Quartier Bon-marché)
- [ ] Banlieue loin de la ville (Exemple Commune de Masina)
- [ ] En zone rurale

4. Êtes-vous le chef du ménage ? *

Une seule réponse possible

- [ ] Oui
- [ ] Non

5. Quel est votre sexe ? *

Une seule réponse possible

- [ ] Femme
- [ ] Homme

6. Quel âge avez-vous ? *

Une seule réponse possible

- [ ] De 16 à 24 ans
- [ ] De 25 à 49 ans
- [ ] De 50 à 64 ans
- [ ] 65 ans et plus

7. Quelle est votre province d'origine ? *

_____

8. Quel est votre tribu ? *

_____

9. Quel est votre système de lineage ? *

Une seule réponse possible

- [ ] Matrilinéaire
- [ ] Patrilinéaire
- [ ] Je ne sais pas

10 . Veuillez-vous situer par rapport aux catégories de revenus suivantes (revenu net total du ménage, par mois en dollar américain) * :

Une seule réponse possible

- [ ] Moins de 500 dollars
- [ ] Entre 500 et 1.500 dollars

- [ ] Entre 1.500 et 2.500 dollars
- [ ] Plus de 2.500 dollars

Section II. r ansmission du niveau d'éducation à travers les générations mobilité sociale

II. A. r ansmission du niveau d'éducation

1. Quel est le niveau d'enseignement le plus élevé que vous avez suivi ? *

Une seule réponse possible

- [ ] Primaire
- [ ] Secondaire
- [ ] Programme non formel
- [ ] Universitaire
- [ ] Post - universitaire (Maitrise ou Doctorat)
- [ ] Jamais été à l'école

2. Quel était le niveau d'enseignement le plus élevé de votre père ? *

Une seule réponse possible

- [ ] Primaire
- [ ] Secondaire
- [ ] Programme non formel
- [ ] Universitaire
- [ ] Post - universitaire (Maitrise ou Doctorat)
- [ ] Jamais été à l'école

3. Quel était le niveau d'enseignement le plus élevé de votre mère ? *

Une seule réponse possible

- [ ] Primaire
- [ ] Secondaire
- [ ] Programme non formel
- [ ] Universitaire
- [ ] Post - universitaire (Maitrise ou Doctorat)
- [ ] Jamais été à l'école

4. Est-ce que l'un de vos grands-parents a terminé des études universitaires ou Équivalentes ? *

Une seule réponse possible

- [ ] Oui
- [ ] Non
- [ ] Je préfère ne pas le dire
- [ ] Je ne sais pas

5. Avez-vous un travail ? *

Une seule réponse possible

- Oui
- Non

6. Quelle est votre catégorie professionnelle ? *

Une seule réponse possible

- Cadre
- Travailleur qualifié
- Travailleur non qualifié
- Patron
- Travailleur independent
- Travailleur domestique
- Chômeur

7. Dans quel secteur travaillez-vous ? *

L'industrie comprend la fabrication et l'exploitation minière et la construction etc. Le commerce comprend le commerce de gros et de détail. Les services comprennent les hôtels et restaurants, les services de réparation, les loisirs et le tourisme, ainsi que les services domestiques, les services publics, les services aux entreprises, les services bancaires et financiers, les transports et les télécommunications, et d'autres services.

Une seule réponse possible

- Agriculture
- Industrie
- Commerce
- Service
- Autre secteur
- Aucune de ces réponses

8. Quelle était la catégorie professionnelle de votre père ? *

Une seule réponse possible

- Cadre
- Travailleur qualifié
- Travailleur non qualifié
- Patron
- Travailleur independent
- Travailleur domestique
- Chômeur

9. Quel était le secteur d'activité de votre père ? *

Une seule réponse possible

- Agriculture
- Industrie
- Commerce
- Service
- Autre secteur
- Aucune de ces réponses

10. Quelle était la catégorie professionnelle de votre mère ? *

Une seule réponse possible

- Cadre
- Travailleur qualifié
- Travailleur non qualifié
- Patron
- Travailleur independent
- Travailleur domestique
- Chômeur

11. Quel était le secteur d'activité de votre mère ? *

Une seule réponse possible

- Agriculture
- Industrie
- Commerce
- Service
- Autre secteur
- Aucune de ces réponses

12. Quel type d'école avez-vous principalement fréquenté entre 11 et 16 ans ? *

Une seule réponse possible

- Public non conventionné
- Public conventionné
- Privé

II. B. Mobilité sociale

La mobilité sociale concerne les changements de statut social des individus ou des groupes sociaux au cours du temps, ainsi que les différences entre le statut social des parents et celui de leurs enfants.

1. Quelle est votre opinion sur ce point ? En RDC, tout le monde a une chance égale d'aller aussi loin que leur talent et leur travail acharné les mèneront ? Pourquoi ou pourquoi pas ? *

2. Pensez-vous qu'il devient plus facile pour les personnes issues de milieux moins favorisés de progresser dans la société congolaise ? Pourquoi ou pourquoi pas? *

3. Une fois qu'un jeune a terminé ses études secondaires, lequel de ces parcours lui offre la meilleure chance de progresser dans la vie ou dans sa carrière ? *

Une seule réponse possible

- ◯ Faire une formation professionnelle
- ◯ Entrer dans l'enseignement supérieur (c'est-à-dire l'université)
- ◯ Entrer dans l'enseignement supérieur (c'est-à-dire l'enseignement technique)
- ◯ Chercher directement un travail
- ◯ Autre chose
- ◯ Je ne sais pas

4. Selon vous, quelle a été l'influence de vos origines familiales sur votre niveau d'éducation ? *

5. Quelle est l'influence de vos origines familiales sur votre carrière professionnelle ? *

6. Selon vous, quelle est l'influence de vos origines familiales sur votre progression au travail ? *

Section III. Le pouvoir décisionnel intraménage et son influence sur la scolarisation des enfants

Comment le pouvoir de décision au sein du ménage influence-t-il la scolarité des enfants ? répondre à toutes les questions sur une échelle de (1) Tout à fait d'accord à (5) Fortement en désaccord

1. Avez-vous des enfants en âge scolaire ? *

Une seule réponse possible

- ◯ Oui
- ◯ Non

2. Vos enfants fréquentent-ils tous l'école ?

Une seule réponse possible

- [ ] Oui
- [ ] Non

3. Si vous répondez par « Non » à la question 2. Pourquoi vos enfants ont arrêté leurs études ou ne sont-ils pas allés à l'école ?

Une seule réponse possible

- [ ] Impossibilité financière des parents
- [ ] Préférence pour un apprentissage ou travail
- [ ] Grossesse, mariage
- [ ] Handicap, maladie
- [ ] Echec scolaire
- [ ] Trop jeune
- [ ] Ecoles trop éloignées
- [ ] Etudes achevées
- [ ] Autres

4. Pensez-vous que la polygamie est importante ? *

Une seule réponse possible

Très importante

1 [ ]
2 [ ]
3 [ ]
4 [ ]
5 [ ]

N'est pas importante

5. Vivez-vous dans un couple polygame ? *

Une seule réponse possible

- [ ] Oui
- [ ] Non

6. Pensez-vous que la mère est responsable de la garde des enfants ? Pourquoi ? *

7. Pensez-vous que dans la famille l'homme devrait avoir le dernier mot ? Pourquoi ? *

8. Pensez-vous que l'homme décide sur quand le couple doit avoir des relations sexuelles ? Pourquoi ? *

9. Pensez-vous que les femmes ont le même droit de travailler et d'étudier que les hommes ? Pourquoi ? *

10. Pensez-vous que les femmes devraient tolérer d'être battues ? Pourquoi ? *

11. Pensez-vous que le couple doit décider du nombre d'enfants ensemble ? Pourquoi ? *

12. Pensez-vous que les femmes peuvent suggérer d'utiliser un préservatif ?

Pourquoi ? *

13. Pensez-vous que les hommes devraient aider avec les tâches ménagères ?

Pourquoi ? *

14. Pensez-vous que les hommes devraient manger en premier si la nourriture est limitée ?

Pourquoi ? *

15. Pensez-vous que la femme peut se rendre au centre de santé sans la permission de son mari ? Pourquoi ? *

16. Pensez-vous que la femme peut utiliser la planification familiale sans la permission de son mari ? Pourquoi ? *

17. Pensez-vous que la femme et le mari sont des partenaires égaux dans la famille ? Pourquoi ? *

18. Qui décide dans votre ménage de la façon de dépenser de l'argent ? Pourquoi ? *

19. Quel était votre âge au premier mariage ?

Une seule réponse possible

- ◯ Moins de 18 ans
- ◯ Entre 18 et 25 ans
- ◯ Entre 25 et 30 ans
- ◯ Entre 30 et 40 ans
- ◯ Plus de 40 ans

Section IV : L'environnement de la lignée familiale et ses influences sur le niveau d'instruction

Comment l'environnement du système de lignage familial dans lequel une personne est élevée affecte-t-il la scolarisation de ses enfants ?

1. Pensez-vous qu'il est plus important qu'un garçon aille à l'école qu'une fille ? Pourquoi ? *

2. Pensez-vous que les femmes devraient pouvoir épouser qui elles veulent, peu importe l'opinion de leurs parents ? Pourquoi ? *

3. Pensez-vous qu'il vaut mieux avoir plus de fils ? Pourquoi ? *

4. Pensez-vous que les garçons devraient recevoir une éducation avant les filles si les finances sont limitées ? Pourquoi ? *

5. Pensez-vous que les fils sont tenus de garder tous les biens de la famille après le décès des parents ? Pourquoi ? *

6. Pensez-vous que les fils gagnent plus d'argent et peuvent mieux subvenir aux besoins de la famille ? Pourquoi ? *

7. Pensez-vous que les filles se marient et quittent la famille, elles ne sont donc pas aussi utiles que les fils ? Pourquoi ? *

8. Pensez-vous que les fils se marient et restent avec leurs parents, prenant soins d'eux dans leur vieillesse ? Pourquoi ? *

9. Pensez-vous que la dot est importante ? Pourquoi ? *

10. Pensez-vous qu'il n'y a pas de discrimination à l'égard des femmes en RDC ? Pourquoi ? *

11. Pensez-vous que les filles devraient avoir un droit similaire aux biens hérités au décès des parents comme les fils ? Pourquoi ? *