

THESIS / THÈSE

ADVANCED MASTER IN INTERNATIONAL AND DEVELOPMENT ECONOMICS

Polygamy and Women Welfare The effects of polygamy on women welfare in Burkina Faso

Gilbert de Cauwer, Sibylle

Award date: 2018

Awarding institution: University of Namur

Link to publication

General rights Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Users may download and print one copy of any publication from the public portal for the purpose of private study or research.

You may not further distribute the material or use it for any profit-making activity or commercial gain
You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.



Polygamy and Women Welfare

The effects of polygamy on women welfare in Burkina Faso

Thesis presented by Sibylle Gilbert de Cauwer

Supervisor(s) Catherine Guirkinger (UNamur)

> Tutor(s) Jérémie Gross (UNamur)

Academic year 2017-18

Project presented as part of the requirements for the award of the Advanced Master in International and Development Economics

ement des Sciences économiques/UNamur • Rempart de la Vierge 8 • 5000 Namur l'économie de Louvain/UCL • Place Montesquieu 3 • 1348 Louvain-la-Neuve

Table of contents

Tab	le of contents 2
List	of tables
I.	Introduction7
II.	Literature review
1.	Polygamy
	a. Definition
	b. In which cultures?
	c. Long-term history evolution
	d. Polygamy and economic development10
2.	Theories to account for polygamy – Economics of Polygamy11
3.	Effects on women welfare14
	a. Advantages14
	b. Disadvantages15
	c. Harmony between co-wives16
ш.	Empirical part: The case of Burkina Faso
1.	Research questions18
2.	Methodology 20
3.	Limitations23
4	Results
	Background and demographics24
	Women's perception of polygamy 26
	Women's welfare in polygamous marriages
5.	Conclusion34
IV.	Discussion34
V.	Bibliography37
VI.	Appendix 40

List of tables

Table 1: Frequency of polygamy
Table 2: Background and demographics
Table 3: Women's opinions on polygamy27
Table 4: Reasons to choose or reject polygamy27
Table 5: Harmony between co-wives 29
Table 6: Women's welfare in polygamy30

Acknowledgements

The elaboration of this personal project has taken much effort and time but, of course, this research paper would not have been possible without the kind support and help of a few people. Consequently, I would like to express my special thanks of gratitude to all of them.

I would like to express my gratitude towards Ms Catherine Guirkinger, my thesis advisor, and Mr Jérémie Gross, my tutor, who have been supervising my progress over the whole research and writing period. I had the chance to benefit from their useful knowledge about the subject and research paper elaboration methods. I am grateful towards them for sharing their database and helping me to find relevant literature references. Their helpful guidance, as well as their willingness to provide considerable advice and resources, enabled me to accomplish my project.

Finally, I would like to acknowledge with much appreciation Virginie and Loic who kindly took some of their time to proofread my work and give me relevant feedbacks to improve my project. Our discussions also gave me the opportunity to get an external point of view.

Abstract

The incidence of polygamous marriages has declined over time but its practise is still carried on in some communities. To understand the persistence of polygamy, it is relevant to list individual incentives motivating men and women to prefer this type of union. The analysis of the effects on women welfare is used to justify why most of the women perceive polygamy as an advantage. In the surveyed village in Burkina Faso, the institution has positive effects on women's autonomy and individual wealth but polygamous women experience less wellbeing in terms of their marital conditions, the environment and follow-ups when giving birth and their health. One of the factor explaining this difference might be the higher amount of members living in a polygamous households leading to a sharing of the husbands' resources and attention. "The sad truth is, polygamy constitutes a national embarrassment in any country that fantasises about progress and development. Polygamy devalues women and the only person who revels in it is the husband who gets to enjoy variety. You, poor women, will become nothing more than a dish at the buffet"

"There is not enough about it in literature, the effects on women, how it changes a woman and impacts her choices"

Lola Shoneyin

I. Introduction

Polygamy is still widely practised in some regions of the world even if, in most countries, it is completely forbidden and monogamy dominates. The institution of having multiple wives is mainly persistent in the Middle East and in sub-Saharan Africa. The aim of this research is to analyse and understand the causes and consequences of this practise in Burkina Faso, a sub-Saharan country where the institution is still persistent. The current literature is brimming with theories clarifying the emergence of polygamy from two distinct perspectives. On the one hand, the institution can be explained with broader models of supply and demand between men and women matching on the marriage market. On the other hand, the presence of polygamy can be described with the help of individual incentives from men and women. The following study is focusing on the second type of theories because the aim is to understand why women would engage in polygamy. To reach this objective, the present research will start by detecting individual incentives to engage in polygamy to further evaluate the effects of the institution on welfare, especially from the point of view of women.

After a review of the state of literature to set the context and analyse the theories explaining individual incentives to account for polygamy, the empirical part will use data from Burkina Faso to look at three main topics. Firstly, the characteristics of women (in terms of education, professional activity, family and demographics) who engage in polygamous marriages, then the reasons pushing women to opt for polygamy as well as the type of relationship existing between co-wives in Burkina Faso and finally the effect of polygamy on women welfare. This last research question will also contribute to the understanding of the women's tendency to choose polygamy in the studied society in Burkina Faso.

II. Literature review

The literature review is divided into three main sections regrouping the relevant information of previous research linked to the topic. After this brief introduction, the first section will broadly define polygamy and its geographic extent as well as its long-term history evolution and the general effects it may have on the economic development. The aim is to set the context of the topic and to evaluate what has already been covered in the literature. The second section will compare the different theories explaining the main reasons or the benefits to engage in a polygamous marriage for men and for women, from an individual perspective. Finally, the last section will inform about positive and negative aspects of polygamy on women welfare and investigate the state of literature concerning relationships between co-wives.

1. POLYGAMY

a. Definition

Polygamy is still persistent in several specific regions worldwide through different forms and customs depending on the region's cultural traditions. According to the etymology of the word, polygamy literally means "often married". Hence, the term polygamy can be defined as an institution in which one individual is officially married to at least two spouses at the same time. The contrary, called monogamy, refers to the case where a person is married to only one individual (Zeitzen, 2008). Polygamy is a general term which can be classified into three main types. The literature typically distinguishes between polygyny, polyandry and group marriage depending on the gender of the individual who marries more than one person. Polygyny, which is the most common form of polygamy, refers to the case where one man is simultaneously married to several women. For the purpose of this research, the focus is centred on polygyny, even if the general term polygamy is being used. A scarcer type of polygamy, called polyandry, is a woman who is married to more than one man. The last form, also quite rare, is group marriage which is defined as the practise of several husbands being married to several wives. Even though these three types of polygamy prevail in the literature, the term is more complex because of the large variations of the institution across different regions and cultures. In some communities, the act of wife-sharing is common but does not necessarily refers to polygamy because of the absence of official marriage (Zeitzen, 2008).

b. In which cultures?

Historically, the practise of a man having multiple wives has been observed in some Jewish and Muslim societies, in ancient Greece, in Africa and in some Chinese communities (Becker, 1981). Nevertheless, the major part of polygamous marriages has always occurred on the African continent. More than 20 years ago, the term "polygamy belt" was used to describe the expansion of the institution from Senegal to Tanzania where more than a third of married women were engaged in polygamous marriages (Jacoby, 1995). In Cameroon, a decade ago, the numbers were even more impressive with more than half of the men having more than one spouse (Tertilt, 2005). Over time, the trend has tremendously decreased but the tradition remains important. Today, Africa remains the area with the highest prevalence of polygamy in the world (Zeitzen, 2008). More precisely, polygamy is mostly permitted and practised in sub-Saharan African countries. On the contrary, a high amount of regions in the world have set polygamy as illegal by penalizing practitioners with fines and imprisonment (Wheaton, 2015). Polygamy is also still observable in the Middle Eastern Islamic countries but to a much lower extent (Tertilt, 2005). The country selected for the present research, Burkina Faso, is characterized by a significant persistence of the institution today. Among adult married women, 42% are in polygamous unions. As far as men are concerned, 22% of married men between 15 and 49 years in Burkina Faso have more than one wife (DHS, 2010).

c. Long-term history evolution

The incidence of polygamy in the world has shown a downturn trend in history often justified by the emergence of religions and the increasing importance of women's rights or by the change in relative gains to men and women from polygamy (Becker, 1981). The significant disappearance of polygamy in many parts of the world has made some room for other marriage institutions. The evolution over time shows that polygamy has been abandoned with the increase of economic development and the wealth of men. Moreover, this decrease of polygamy has happened along with an increase in strict monogamy later followed by serial monogamy (De la Croix & Mariani, 2012). Serial monogamy has appeared with the emergence of divorce which gives individuals the possibility to remarry. It refers to an institution which allows men to have children with several distinct women but not at the same time.

d. Polygamy and economic development

Another research field in the literature has explored the general effects of polygamy on economic growth and development.

In the early 2000's, Michèle Tertilt has conceived several economic arguments showing some global consequences that polygamy can have on developing countries' development process. Many sub-Saharan African countries are stuck in poverty traps because of different reasons and a marriage system allowing for polygamy could be an obstacle among others to development (Tertilt, 2006). In fact, we observe today that all developed industrialized countries advocate for monogamy while prohibiting polygamy. More specifically, one study shows that implementing policies that directly or indirectly ban polygamy can (through different mechanisms) have positive effects on other variables such as fertility, investment and output/capita (Tertilt, 2005). Concerning the fertility rate, women in polygamous countries tend to engage earlier and have more children compared to women in monogamous countries. Then, as fathers have the opportunity to make the marriage arrangements for their daughters, they will get a positive return on their female children because of a high demand for wives in a polygamous country which inflates the bride prices. As a result, the author explains that investments are crowded out because men invest in the marriages of their daughters instead of putting their money in physical capital. Hence, she proves that the investment rates and per capita output are substantially higher in areas where monogamy prevails. Therefore, enforcing monogamy could positively trigger the economic development of poor regions by lowering the fertility rates, increasing investments and the output per capita (Tertilt, 2005). In terms of policy making, a ban on polygamy seems to be complicated. However, empowering women to let daughters make their own marriage choices could serve as a proxy policy to decrease the return on female children for fathers and raise the incentive to invest in alternative assets (Tertilt, 2006).

Another research uses the **child quality-quantity trade-off** to explain polygamy as a potential brake to development. A polygamous marriage system can negatively influence the trade-off decisions by encouraging men to gather several wives and increase the number of children. Indeed, in a polygamous society, there will be more kids because more women get married and become mothers at an earlier age than in monogamous societies. The choice to conceive a higher amount of children may be detrimental to the quality of the children who will have fewer educational opportunities. In the end, this may have negative impacts on the country's economic growth. Therefore, monogamy tends to be linked to less poverty and better economic growth (Gould, Moav, & Simhon, 2012).

Furthermore, the literature has shown that there is a positive correlation between monogamy and economic development through a **rise in the steady-state human capital level** resulting from the imposing of monogamous marriage system. The assumption behind this finding is that polygamy leads to a disequilibrium on the marriage market. The institution prevents some young men from marrying and having children because of older men taking advantage of the ability to remarry several times. The overlapping generation model used in the study affirms that young and old men use their available time differently. On the one hand, older men allocate their time between investment in their children's human capital and work. On the other hand, the young men have an additional activity, leisure. Hence, if young men are unable to marry and have offspring, their time and resources devoted to the investment in children's education will be very low or inexistent. As a consequence, the steady-state human capital is expected to be higher when old men don't have the opportunity to remarry. In other words, imposing monogamy could increase the average human capital by encouraging young men to substitute their leisure activities with human capital investment in their children (Edlund & Lagerloef, 2012).

2. THEORIES TO ACCOUNT FOR POLYGAMY - ECONOMICS OF POLYGAMY

In the present research, the discussed theories explain the emergence of polygamy from an individual perspective by specifying the individual incentives motivating men and women to choose polygamy. The current literature is brimming with contrasting theories explaining why individuals would choose to engage in a polygamous marriage. Reasons to account for polygamy go far beyond basic cultural and traditional customs. Indeed, according to Singh, marital decisions are expressed by rational individuals who wish to maximize their economic welfare (Singh, 1988). Several researchers have developed approaches to clarify the emergence and the persistent existence of this institution. Some theories explain the benefits of polygamy from men's point of view and other authors give arguments justifying women's choice.

The oldest theory on the economics of polygamy in Africa dates back to 1970. In her theory, the author stipulates that polygamy can be chosen by men for **economic reasons** (Boserup,

1970). For instance, a man can increase his income by marrying multiple productive wives who will contribute to an enlargement of the family workforce. As a consequence, the husband will be able to work less and substitute work for leisure time devoted to other activities such as hunting. Another positive effect encouraging men to marry several wives is the increase in a man's **progeny** which boosts his dignity and standing. Hence, the man will have the possibility to show a better status thanks to a higher number of children and a higher income. Nevertheless, this set of benefits only appears in cultures where the major agricultural work is done by women (in shifting cultivations), while the major share of resources is in the possession of men. The reason to prefer polygamy in this type of agricultural communities is that the income of having an additional wife exceeds the cost because women play an important role in the agricultural production. As a consequence, women have more value and are more desirable because they give their husband the ability to command more land, produce more food and achieve a high status due to wealth. Besides, women enjoy more economic independence and a larger freedom of movement (Boserup, 1970).

The incidence of polygamy can also be explained by using the **differences in productivity** between men as a basis (Becker, 1974). The theory points out that some men appear to be more productive than others, depending on parameters such as the size of a man's farm, his strength, etc. When assuming that women are identical in productivity and that marginal products are decreasing, the gap in men productivity makes polygamy lead to a greater total output over all marriages. Indeed, a woman might generate a higher productivity by being a productive man's second wife than by being the only wife of a less productive husband. Therefore, the total output might be higher if a man marries two women while leaving another man unmarried than if both men marry one woman each. This reasoning implies that more productive men with more resources have a higher ability to marry multiple wives. In fact, this result is proven in many empirics such as polygamy appearing amongst the wealthiest and most successful men (Becker, 1974).

Another theory to account for polygamy has been established by using a **model of a marriage market** where men are the demanders and women are the suppliers of marital services (Grossbard, 1976). Results show that wealthier men have more women because of an income effect. Indeed, the number of married women increases with the men's income and education (which indirectly impacts earnings). In particular, polygamy achieves a peak when a man is at his most productive age. Moreover, the theory proves that the number of wives per man is smaller when his senior wife is more educated. Basically, wealthier and more educated men tend to have more women but the higher the number of wives, the less educated they will be (Grossbard, 1976). Further researches produce similar results by affirming that polygamous women tend to be less educated than monogamous women while on the men side it is the contrary (Brown, 1981). In another article, the author highlights some theories to account for polygamy but from the wives' perspective. He emphasizes some reasons showing that polygamy positively impacts women's well-being. For instance, as polygamy is synonymous with a higher male competition for women services, the bride prices will surge in polygamous societies. Moreover, allowing men to marry more than one woman gives the opportunity to less attractive women such as widowed and divorced ones to get a second chance and decreases the proportion of unmarried women (Grossbard, 1978). This possibility for women to remarry is highly valued in societies where being married can increase an individual's social status. For instance, in Burkina Faso, a widow could remarry within her husband's kinsmen because the society expects all women to be married (Mason, 1988).

Similar to Boserup's theory of economics of polygamy, other approaches use African **women's productive contribution** to agricultural work as a reason to account for polygamy (Jacoby, 1995). As female labour is highly valued, the shadow price of women is relatively low which leads to a high demand for marrying multiple wives. As a result, polygamy worsens wealth inequality between men. A gap arises because men with productive farms manage to attract more wives who hope to improve their welfare since consumption is proportional to wealth while poorer men are left with no chances in the competition for wives (Jacoby, 1995).

The importance of **women's contribution** pushing men into polygamous practises is composed of two major elements. Actually, according to Singh, wives' economic value for their husbands are made up of their work in the household or on the farm complemented by their fertility (Singh, 1988). Hence, as individuals are always willing to maximize their utility, household heads will magnify the returns from wives and children through polygamy.

Finally, a last argument demonstrating why polygamy might still be practised is the institution's ability to serve as an insurance system (Posner, 1981). By marrying multiple wives, a husband enlarges the close relationships with his network of kinship. Hence, the number of individuals who could potentially offer financial help during crisis situations

increases and polygamy serves as a substitute for credit or insurance markets which are often absent in primitive societies.

3. EFFECTS ON WOMEN WELFARE

The following section will cover the literature review referring to the consequences of polygamy on women welfare. It is important to notice that the literature on the effects of polygamy on men's well-being is quite rare. Most of the existing studies focus on the benefits that polygamy offers to husbands but the research on welfare and well-being is mainly centred on women and children. However, this component should not be neglected since having multiple wives can also negatively impact the psychological well-being of husbands. Indeed, polygamous men seem to have more mental health problems, a lower marital satisfaction and more problematic relationships with their children (Al-Krenawi, 2006). Besides, it would also be relevant to analyse the effects on single men who need to stay in their parents' family because of the imbalanced marriage market caused by polygamy.

By gathering the positive and negative effects of the institution on women welfare and wellbeing, it will appear that scholars have arguments for both types of marriage systems. However, the major part of research on this topic concludes that polygamy represents rather a disadvantage for women than an advantage. In particular, the literature regroups opinions affirming that the institution may be harmful to women.

a. Advantages

One of the main advantages ensuing from the previous section about the economics of polygamy theories is that women in polygamy may benefit from **greater consumption**. Numerous studies have shown that polygamy is mainly within the reach of wealthy and productive household heads (Becker, 1981) (Grossbard, 1976). Consequently, women accepting polygamy end up in households with more resources and can probably allow themselves more expenditures and consumption. Furthermore, polygamous women have the opportunity to increase their leisure time by **sharing different kinds of labour**. On the one hand, co-wives are able to share domestic tasks by dividing imposed household duties such as childcare, husband care, cooking and cleaning. On the other hand, they can also carry out farm work together to save time for other activities and get more time slots to rest. For instance, women in polygamous households can free one another to participate more often in economic activities and earn money. Hence, co-wives have **more autonomy** and they can

increase their **economic productivity** by gathering together to process food for sale or perform other business duties such as marketing, for example (Brown, 1981).

b. Disadvantages

Polygamy also counts multiple negative consequences on women welfare. For instance, it seems to represent rather an **oppressive institution** than the outcome of a woman's rational choice (Ickowitz & Mohanty, 2015). The research demonstrates that women in polygamous relationships tend to accept and experience more domestic violence compared to women in monogamous unions. As women living in larger compounds with several co-wives have less decision-making power within the household, the probability is low that they will have the audacity to confront their husband to rebel against domestic violence.

In addition to being oppressive, polygamy can negatively impact **women's health** (Bove & Valeggia, 2009). The study informs that polygamy can negatively affect women's physical (illness, sexually transmitted infections) and mental (depression and anxiety) health through different channels. In particular, they are more exposed to illness and their access to medical treatment is limited compared to their monogamous counterpart. Through the husband's higher number of sexual partners and low contraception use, polygamous women have higher probabilities to attract sexually transmitted infections. Women's mental health seems to be hurt when women are afraid and angry about their husband's decision to marry an additional wife. Their feelings of sadness and of being abandoned can inadvertently lead to disastrous depression episodes (Jankowiak, Sudakov, & Wilreker, 2005).

Polygamy can also negatively impact women's health and welfare through the channel of **bequest rules** (Lambert & Rossi, 2014). According to the Islamic inheritance law, women are rarely entitled to a share of inheritance after their husband's death. In the case of a bequest intended for the husband's polygamous wives, this part has to be shared amongst co-wives. As polygamous men appear to be wealthier (Becker, 1974), the institution may not automatically decrease the amount each woman receives. However, the channel of bequest rules could represent an issue in a polygamous marriage since the children of other wives are also entitled to a share of inheritance which could increase the competition between wives. Moreover, as women are rarely left with enough resources, they, even more, need to use their children as financial instruments or insurance policy (Banerjee & Duflo, 2011). Consequently, women in polygamous unions are even more urged to get a male child to serve as widowhood

insurance. These women will force themselves to increase their fertility by **shortening birth spacing** with the aim of getting a son. As short birth spacing is known to increase maternal and infant mortality, they endanger their health by practising this method. Finally, an important negative effect of polygamy on women welfare is the **violation of their rights** (UN Women, 1994). In their general recommendations, the United Nations Entity for Gender Equality and Women Empowerment states that polygamy should be prohibited because it removes a woman's right to equality with men and can have negative emotional and financial consequences on women's welfare. The report even defines the marriage system as a "harmful, traditional practise" which can hurt women's health by infecting them with different diseases.

c. Harmony between co-wives

Among the negative effects of polygamy on women welfare, scholars sometimes mention the conflicts that can arise between co-wives. However, the nature of relationship between co-wives can be either competitive or collaborative, depending on the contextual conditions (Madhavan, 2002). The atmosphere prevailing in a compound will be influenced by socioeconomic and cultural features. In accordance with this context and harmony, the impact of polygamy on a woman's welfare may be beneficial or harmful. Other studies tend to maintain that conflicts between co-wives are unavoidable. Even if women in polygamous marriages prefer cooperating (always by keeping a certain distance), co-wife conflicts are usually present in the early years of marriage and often accompanied by verbal and physical violence (Jankowiak, Sudakov, & Wilreker, 2005). Quarrels seem to be part of routine when several wives are sharing the same husband whose attention and affection is rarely equally distributed. Therefore, it leads to a certain rivalry and competition between co-wives who may be jealous. The results of that study show that conflicts are the norm in polygamous households and that a new wife is generally not welcomed with pleasure and enjoyment. Hence, co-wives avoid close relationships with each other and try to live their lives separately. There are some exceptions to these distant relations, such as sororal polygamy or the existence of differences in age, health or reproductive status. Concerning this last point, another source of conflict between co-wives can be reproductive rivalry (Rossi, 2015). The emergence of a certain competition between the spouses tends to drive fertility by giving women incentives to want more children. In other words, fertility choices of women in polygamous marriages are strongly influenced by the fertility of their co-wives. As a result, the atmosphere remains strained in the compound and total population of regions with polygamous societies is surging. The literature also contains information on co-wife relationships in a specific village in Burkina Faso where Moose is the predominating ethnic group (Mason, 1988). Similar to other studies' results, the author explains that co-wife relationships seem to be characterized as either amicable or hostile. Both types of harmony appear when looking at people' perception as well as their actual behaviours. However, results also show that supportive, amicable relationships are predominating over conflictual behaviours in the evaluated village in Burkina Faso. According to the author, co-wives are present to help each other if one is ill, care for each other's children, share work and goods and offer companionship. The negative relationships deteriorating women's welfare are observed in the form of teasing and hostile behaviours but are less common than the amicable relationship (Mason, 1988).

The state of literature spreads out different facts and theories that have been elaborated and developed until today. The present research contributes to the literature by evaluating the perception of polygamy from women's point of view to better understand their choices in terms of marital institutions.

III. Empirical part: The case of Burkina Faso

Burkina Faso is a low-income, sub-Saharan African country with a population of 18.6 million inhabitants (World Bank, 2016). According to a measure computing the number of men who assume having more than one wife, Burkina Faso is characterized as a country with a high level of polygamy (Gebreselassie & Mishra, 2007). More precisely, among the married women (15-49 years old), 42% are in polygamous unions. Not surprisingly, the share of women in polygamies increases with the age of wives. In fact, from the married women aged below 35 years, there is a higher share engaged in monogamous than polygamous unions. For older married women, the tendency is reversed. Regarding the geographic repartition in Burkina Faso, polygamy is mainly practised in rural areas, where 48% of married women have at least one co-wife, compared to only 22% in urban areas. In the Northern region of the country, which is the one surveyed in this study, the number even reaches 53% of married women. As far as men are concerned, 22% of married men between 15 and 49 years in Burkina Faso have more than one wife. Again, this statistic is increasing with a man's age and the highest value is observed in rural areas, especially in the North and the East of the country (DHS, 2010).

1. RESEARCH QUESTIONS

Which types of women engage in polygamous marriages rather than monogamous marriages?

The first research question refers to the background and demographics of women engaged in polygamous marriages. The objective is to analyse the characteristics of women in terms of educational background, parents' characteristics, activity performed before the marriage and demographics (age, ethnicity, religion). According to the literature review, women engaged in polygamous unions are characterized as being less educated (Brown, 1981) (Grossbard, 1976), older and Muslim (Becker, 1981). More specifically, the share of women in polygamous marriages in Burkina Faso varies from 47% of adult married wives for uneducated women to only 12% for women having accomplished at least secondary education (DHS, 2010). Hence, the level of education of polygamous women is expected to be lower than the education of monogamous women.

Women's opinion of polygamy

The second analysis will investigate how women perceive the polygamous marriage system. The first objective is to find out if women refer to polygamy as an advantage or an inconvenient and for what reasons. A major part of the literature states that polygamy seems to be more a disadvantage for women since they would be in favour of its prohibition (Aluko & Aransiola, 2017). Polygamy would represent an inconvenient as it has proven to violate their rights (UN Women, 1994), to increase domestic violence (Ickowitz & Mohanty, 2015) and to have a negative impact on their physical and moral health (Bove & Valeggia, 2009). However, some theories discussed above could justify why women would see polygamy as an advantage. According to some studies, polygamous households are better off in terms of income and resources (Becker, 1981) (Grossbard, 1976) and having co-wives can increase a woman's leisure time and economic productivity through a sharing of labour activities (Brown, 1981). Afterwards, it is essential to find out about women's perception of the relationship with their co-wives and how polygamy impacts family solidarity. In the literature, research in polygamous families finds that relations are emotionally unsatisfactory for the majority of women because of constant competition leading to violence and jealousy (Jankowiak, Sudakov, & Wilreker, 2005) but also to reproductive rivalry (Rossi, 2015).

Women's welfare in polygamous marriages

The last research question involves the analysis of women's welfare in polygamous unions. It is essential to focus on the effects of polygamy on women to better understand why polygamy could be preferred or rejected in a polygamous society. To find an explanation of women's choice to engage or reject polygamy, the present study will analyse women's welfare in terms of autonomy, wealth at individual and household level, fertility, marital conditions and physical health. The starting hypothesis established further to other researchers' results is that women would choose to engage in polygamy to enjoy a higher family income (Becker, 1981) (Grossbard, 1976) allowing for greater consumption. Another reason which could justify this decision is the augmented freedom of movement resulting from the sharing of housework (Brown, 1981). Concerning fertility in polygamy, the literature has highlighted that polygamous women often have more children (Tertilt, 2005), especially because men want to increase their progeny to show off with a higher status (Boserup, 1970).

The marital conditions (age at first marriage, if the women knew her husband before the marriage and if the marriage was arranged by their families) are expected to be worse in polygamous unions since other studies have shown that polygamous women tend to engage earlier and in arranged marriages (Tertilt, 2005). Finally, the women's physical health, assessed with the help of their Body Mass Index and if they have been too sick to work since the last harvest, is expected to be worse in polygamous unions. In fact, the literature highlights that polygamous women are more exposed to illness and have less access to medical treatment (Bove & Valeggia, 2009).

2. METHODOLOGY

Measurements

The analysis of the characteristics of polygamous women, their perception of the marriage system, as well as the effects on their welfare, has been carried out with a database issued from a household survey performed in a Northern region in Burkina Faso in 2013. The survey form is composed of a first part containing individual information and demographics while the second part is about the women's parents, her marriage and fertility. The detailed list of selected survey questions can be found in Appendix 1.

The questions chosen to answer the first research question concern the <u>background and the</u> <u>demographics</u> of the women. Concerning the woman's **education**, it is relevant to consider the attendance to a formal school and to literacy classes in addition to the ability to read and write. The aim is to find out if polygamous women are more or less educated than monogamous women. The analysis of each woman's **familiar background** is performed firstly by asking about the father's involvement in a polygamous marriage system and secondly by examining the woman's parents' attendance to formal schools. The idea is to learn if polygamy is an intergenerational tradition influencing a woman's choice when accepting or refusing to join or welcome co-wives. To investigate the woman's **professional background**, women were asked if they had practised a non-agricultural paid activity before living with their husband. For the <u>demographics</u>, I used individual information question concerning women's age, ethnicity and religion. The analysis of the second research question, <u>the women's opinion of polygamy</u>, starts with a part of the survey asking women if, from their point of view, polygamy represents an advantage or a disadvantage. In addition, women are requested to give a reason justifying their opinion. Later, these reasons are classified into categories regrouping the main responses for a better understanding of why polygamy could be chosen or refused. Afterwards, the impact on familiar cohesion is measured with a question asking if, from the woman's point of view, polygamy encourages or discourages family solidarity. As the literature reveals that wives sharing one husband might be in competition with their co-wives and create intra-family conflicts, it is also relevant to examine how they perceive the relationship or harmony with their co-wives.

Finally, the last research question evaluating women's welfare in a polygamous marriage is divided into five main sections. To find out why polygamy may be preferred in a polygamous society such as Northern Burkina Faso, it is essential to compare women's welfare in polygamous unions with their counterparts in monogamous marriages in terms of autonomy, wealth, marital conditions, fertility and health. To evaluate a woman's autonomy level, the selected questions ask if they practise any self-employed activity which generates income and if they participate in village associations. Moreover, the study takes into account if women had the possibility to leave the household for at least one month during the last year for various reasons (visit family, work, education, ceremonies, etc.). For the wealth component, the analysis firstly refers to individual wealth in terms of personally owning plots, livestock and food stocks. Here, the women had to respond with yes or no if they personally did own plots, livestock and food stocks at the time of the survey. Besides, women's welfare is estimated through the proxy of family resources such as land ownership and food production at the level of the concession. For these measures, the concession's wealth is divided by the total number of members per household, including women, children and the man. More specifically, the concession's per capita land is expressed in terms of the amount of land cultivated collectively during the 2012 agricultural season (in hectares per capita). The concession's per capita harvest refers to the total quantity of cereal harvested in 2012 (in 100 kg bags per capita). The last family wealth indicator is the household's cereal self-sufficiency level during 2010/2011/2012 agricultural cycles. The cereal self-sufficiency is expressed on a latter between zero for households who were not self-sufficient at all and three for concessions being self-sufficient on the whole period.

Moreover, **marital conditions** such as age at marriage, if women knew their husband before the wedding and if their marriage was arranged by their family, are relevant indicators of women's well-being in polygamous unions compared to monogamy. Similarly, some questions concerning women's **fertility** are used. For instance, the number of births, the time span between the marriage and the first child, the presence of a serious pregnancy followups and the birth location can signal a positive or negative welfare effect of polygamy on wives. For the fertility section, only responses from women who have been married for more than five years were taken into account to avoid biases resulting from recently engaged wives. To conclude the analysis of women's welfare, two different variables are used to compare women's' **health**. Firstly, to evaluate if there is a difference in health, the study makes use of the Body Mass Index. Another parameter used in this last part is if women have been constrained to work because of any illness since the last harvest.

Sample

Polygamous?	Frequency	Percent
YES	885	65.41
NO	468	34.59
Total	1353	100

Table 1: Frequency of polygamy

The database is composed of observations which are the result of a broader survey. For the purpose of the present research on polygamy, only observations from adult females (>16 years) were taken into account. Therefore, the analysis is based on responses from more than 2000 women issued from 600 different households. The dataset shows that from a sample of 1353 women, 65.41% affirm that they have co-wives. Most of the women engaged in a polygamous marriage tend to count one or two co-wives. More specifically, most of polygamous relationships are composed of one man and two (60.36%) or three (30.69%) women.

Moreover, it is important to notice that some data are missing because some questions were not answered by every woman. Indeed, some individuals either refused to reveal some information or they did not know the answer. Consequently, some parts of the survey are composed of more or fewer observations than others. In the context of descriptive statistics, the whole set of answers were taken into account which explains the distinct results in terms of total observations. The size of the sample is provided in the tables for each measured variable.

3. LIMITATIONS

In the present study, several circumstances should be considered and explicitly mentioned as they might have impacted the results. The most important limitations, listed below, need to be discussed because they may have influenced the manipulation and interpretation of the database. It is also essential to understand that these limitations were either not controllable by the researcher or they reflect specific boundaries that have been established for the purpose of the study.

Firstly, the existence of a potential selection bias was unavoidable because of pre-existing differences between women in the sample. The method used is a comparison between polygamous and monogamous women' characteristics, but the observed differences are not necessarily the result of the marriage institution in which women are engaged. Hence, the problem of unobserved or missing variables concerning differences which may not be linked to the type of union could lead to biased results.

Another serious limitation is the way women were classified as being polygamous or monogamous. Indeed, a woman is perceived as being polygamous if she affirms to have cowives at the time of the survey. However, a woman might not have any co-wife at that specific moment in time when the survey takes place, but the possibility remains that her husband will engage with other wives in the following years. Therefore, it is highly probable that a woman classified as monogamous in the study will become polygamous later in her life.

Then, concerning the methodology, the selection of the sample and the way the questions were asked in the survey may also impact the final results. For instance, as the survey was carried out in a society where polygamy dominates and is deeply embedded in local traditions, women's opinions of the institution is probably influenced. For example, if a woman's parents were polygamous and she has always been used to live and observe only this type of union, her perspective might not be completely objective. Moreover, when it comes to the process of questioning individuals, it is possible that some answers, especially

to open questions, were subjectively interpreted either by the pollsters or later during the analysis and sorting of the data. In other words, the reasons given by the women who perceive polygamy as an advantage or an inconvenient were interpreted to be ranged into several distinct categories (Mutual aid, solidarity, conflict, etc.). Another limitation of the questioning process concerns the freedom of expression that women were offered during the survey. As some co-wives participated in the survey together, some women may not have dared to give accurate responses in attendance of the other women, especially for the questions relating to the relationships between co-wives. Similarly, the question if polygamy encourages or discourages the solidarity in the family is based purely on women's perception of polygamy instead of giving actual effects of the institution on family cohesion.

Finally, when analysing fertility dimensions, it is essential to keep in mind that the differences between both types of women might be linked to the age of women at the time of the survey rather than be the result of the marriage institution. In fact, if a woman is at the beginning of her lifecycle, her fertility (expressed by the number of children she gave birth to) at the time of the survey might not be her actual fertility. This limitation is reinforced by the age distribution since polygamous women are, on average, older (M=39.67, SD=11.7) than women without co-wives (M=31.25, SD=11.8) at the time of the survey.

4. RESULTS

Background and demographics

The first research question analyses which types of women engage in polygamous marriages rather than monogamous marriages. For this section, table 2 regroups the different characteristics of polygamous women compared to their monogamous counterpart. Both means are computed and tested to observe if the difference is statistically significant (p<0.05) or not.

	POLYGAMOUS		MONOGAMOUS		Combined		Difference	
	#observations	Mean	#observations	Mean	#observations	Mean		
Education					5 3	a state		
=1 if formal school	875	0.0606	465	0.1333	1340	0.0858	0.0728**	
=1 if literacy class	880	0.1761	465	0.1978	1345	0.1836	0.0217	

Table 2: Background and demographics

=1 if able to read & write	882	0.1304	466	0.2210	1348	0.1617	0.0906**
Parents							
=1 if father polygamous	877	0.7628	463	0.6458	1340	0.7224	-0.1170**
=1 if father educated (formal school)	851	0.0411	448	0.0603	1299	0.0477	0.0191
=1 if mother educated (formal school)	862	0.0174	453	0.0199	1315	0.0186	0.0025
Activity before marriage	849	0.1614	451	0.1641	1300	0.1623	0.0027
Demographics		Part Parts			N. Stat		
Age	885	39.67	468	31.25	1353	36.76	-8.4173**
Ethnicity (=1 if Moose)	880	0.9170	467	0.8544	1347	0.8953	-0.0627**
Religion (=1 if Muslim)	882	0.9478	467	0.8373	1349	0.9096	-0.1106**

** p < 0.01

In table 2, each variable is being compared between polygamous and monogamous women in order to reveal the specific characteristics which are describing which women tend to engage in a polygamous marriage. For the purpose of testing the means of the variables, each characteristic is expressed as a dummy variable where the mean refers to a percentage, except for the age which is expressed in years.

For the **educational background**, the data shows that only 8.58% of the surveyed women actually attended a formal school. There is a significant difference of 7.28 percentage points between polygamous women (6.06%) and monogamous women (13.33%). This result can be interpreted as a negative relationship between having attended formal school and polygamy. In fact, the less a woman is educated, the higher is the probability of engaging in a polygamous marriage. Results also show that there are more women who attended literacy classes (18.36%) than formal school (8.58%). However, the difference of 2.17 percentage points between polygamous and monogamous women in attending literacy classes is not statistically significant. Nevertheless, we observe again a significant difference between both types of women in terms of ability to read and write. In general, women in monogamous marriages have a higher probability of being able to read and write.

Regarding the woman's **familiar roots**, results prove that polygamy is an intergenerational institution. Parents have a significant influence on their daughter when it comes to engaging in a polygamous marriage. In fact, polygamous women's fathers were more often engaged in polygamy (76.28%) than monogamous women's fathers (64.58%) and the difference of 11.7 percentage points is statistically significant. However, there is no significant link between

a woman's choice to engage in polygamy and her parents' educational background. Concerning the **professional activity** before getting married, the difference is very tiny and not significant. For both types of women combined, only 16.23% of the sample had a nonagricultural, paid professional activity before her marriage. This low percentage point is not surprising as most of individuals in developing countries are working in the agricultural sector.

Finally, with respect to **demographics** (age, religion, ethnicity), there are also significant differences between polygamous and monogamous women. In terms of ethnicity, it is important to notice that a major part of the women in the surveyed community is Moose (89.53%), which is the predominant ethnic group in Burkina Faso. Women who engage in polygamous marriages are more likely to be Moose (91.7%) compared to monogamous women (85.44%), but the difference in tiny (6.27 percentage points). Concerning their religion, most of them are Muslim (90.96%). Polygamous women are more often Muslim compared to women who do not have any co-wives, with a significant difference of 11.05 percentage points. The significant difference was expected as religions lay down which traditional practises are allowed and accepted. In the case of Islam, polygamy seems to be tolerable and encouraged, while in other religions (Catholicism for instance), the institution is prohibited and considered inappropriate. Therefore, it is very surprising that amongst members of the second most dominant religion in the country, Catholicism, there is still a considerable number of women living in polygamous unions. For these women, either individual incentives or the influence of traditions may take over rules dictated by religion.

The observed average age is also statistically significant. Polygamous women tend to be older (M=39.67, SD=11.7) than monogamous women (M=31.25, SD=11.8). This difference could be biased since some women are considered being monogamous because they did not have any co-wives at the time of the survey but their husband may decide to marry other women some years later. Hence, women classified as monogamous might be at the beginning of their marriage as a first wife and therefore younger while women classified as polygamous already live with at least one co-wife.

Women's perception of polygamy

The analysis of women's perception of polygamy is carried out with the help of three relevant questions which were asked in the survey. Firstly, women revealed if the institution

represents more an advantage or rather an inconvenient. Then, another question required to say if polygamy encourages or discourages family solidarity. The last part refers to the nature of the relationship between the co-wives.

	POLYGAMOUS		MONOGAMOUS		Combined		Difference
	#observations	Mean	#observations	Mean	#observations	Mean	
Advantage/ Inconvenient (=1 if advantage)	823	0.8748	426	0.7042	1249	0.8167	-0.1706**
Solidarity (=1 if encourages solidarity)	820	o.8683	422	0.6754	1242	0.8027	-0.1929**

Table 3: Women's perception of polygamy

*ρ < 0.05 ** ρ < 0.01

Polygamy seems to represent an advantage for 81.67% out of 1249 female respondents. In table 3, we observe a significant difference between opinions of polygamous and monogamous women. Among women who actually have co-wives, 87.48% think that it is an advantage compared to 70.42% for monogamous women. It is very surprising that such a high share of monogamous women perceives the institution as being an advantage rather than an inconvenient. This unexpected result might be due to the above-mentioned limitation that women who are described as monogamous in this study are those that do not count any co-wife at the time of the survey, but they might become polygamous later. In the survey, women were also asked to answer to an open-ended question to detect for which reasons they would choose to engage (or not) in a polygamous marriage. For the purpose of highlighting the main reasons, different categories were created to gather together the women's responses which were similar. In total, eight categories were created for the advantage side and nine for the disadvantages. In addition, there are some answers (37) which were stored in a "NA" category because the surveyed woman did not give a relevant answer. For instance, specifications such as "no reasons", "not necessary", "bad thing" or "better to be alone" have been coded as NA (not applicable).

	Adva	ntages			Disadvantages					
	Poly	Mono	Total	Total		Poly	Mono	Total	Total	
	in	%	#	in %		in	%	#	in %	
Mutual aid	51.31	60.49	527	54.05	Conflict	57.43	61.29	134	59.56	
Labour force	20.78	14.69	185	18.97	Family management	9.9	4.03	15	6.67	

Table 4: Reasons to choose or reject polygamy

Solidarity	18.31	15.73	171	17.54	Oppression	3.96	7.26	13	5.78
Wealth	2.62	1.75	23	2.36	Lack of resources	8.91	3.23	13	5.78
Freedom	1.89	1.75	18	1.85	Lack of solidarity	3.96	4.84	10	4.44
Cohabitation	0.73	2.45	12	1.23	Inheritance	2.97	1.61	5	2.22
Children	0.44	0	3	0.31	Religion	0	4.03	5	2.22
Other	2.91	0.35	21	2.15	Children	1.98	1.61	4	1.78
NA	1.02	2.8	15	1.54	Other	3.96	0	4	1.78
					NA	6.93	12.1	22	9.78
TOTAL	100	100	975	100	TOTAL	100	100	225	100

Mutual aid is the most cited reason for polygamy to be an advantage, regardless of the type of marriage institution. In fact, 54% of 975 women who accepted to specify their opinion estimate that having co-wives is an advantage because it provides a division of work burdens. This category regroups all answers from women who see polygamy as a way to get mutual support and assistance in achieving housework or in case of illness. Mutual aid is perceived as even more important by monogamous women than by polygamous women. The second most listed reason (by looking at the total sample) to opt for polygamy is the increase of labour force. Almost 19% out of 975 women prefer polygamy because it increases the number of family members which means a higher workforce to work in the family fields. This benefit appears to be more cited by women already engaged in polygamous households, probably because they observe the work of their co-wives on a daily basis. Another reason, which is cited several times by both groups of women, is solidarity. Some women consider the institution as a good thing because it fosters family cohesion and it creates a pleasant harmony or atmosphere in the concession. This result seems to be coherent with women's perception of their relationship with their co-wives (see Table 5). Moreover, the surveyed women would opt for polygamy since a bigger concession can create more wealth and women in polygamous marriages apparently benefit from more individual resources (see Table 6). Furthermore, several explanations to choose polygamy include freedom. Having co-wives seems to improve women's well-being by offering them more travel opportunities and giving a possibility to rest and to be absent from time to time. They also feel more autonomous through more security, less suffering and pain and higher respect from their husbands.

Concerning the <u>disadvantages</u>, the biggest negative consequence of polygamy, from the point of view of all the women, regardless their type of union, is the risk of **conflicts**. 59.5%

of all female respondents who judge polygamy as a disadvantage argue that this institution tends to create situations of discords and jealousy between co-wives. This result was expected because previous research has shown the existence of competition between cowives. Another fact dissuading women from choosing polygamy is the complexity of **family** management. This reason is mainly cited by polygamous women, whereas for monogamous women it is less important. According to the surveyed women, living in a concession represents an unbearable burden because the family is extended. A polygamous marriage can also be **oppressive** because it has a direct negative impact on women's well-being. For example, women affirm that it can lead to a lack of freedom, respect and love which can make them sad and unhappy. Other statements reveal that polygamy is synonymous with discrimination and an unfaithful husband who needs to be shared. However, it is crucial to notice that especially monogamous women perceive polygamy as being an oppressive institution. Furthermore, a negative effect of polygamy is the lack of resources. As the available resources need to be divided among the concession members, they can become limited and some families might experience a shortage of food. This reason to describe polygamy as an inconvenient emerges mainly from the opinions of women who already have co-wives with whom they need to share the family resources. Finally, another cited reason to reject polygamy is the lack of solidarity. Since the husband takes care of more family members, the cohesion might be reduced which can lead to family division. This result is opposed to the previous finding that solidarity was one of the major reason to perceive polygamy as an advantage. Moreover, this reason contradicts the results obtained in the analysis of the perception of the harmony between co-wives (see table 5).

Indeed, this last point is not in line with the results concerning the effects of polygamy on family solidarity. In fact, Table 3 shows that 80.27% of all women affirm that polygamy encourages solidarity. Nevertheless, especially women currently engaged in polygamous marriages share this opinion (19.29 percentage point of difference).

Table 5:	Harmony	between	co-wives

Bad	Medium	Good	Very good
1.09%	8.09%	83.09%	7.73%

In addition, most of the surveyed women enjoy their good relationship with their co-wives. Only 1.09% of individuals have reasons to think that there is a bad harmony between the women in their concession. However, it is essential to specify that not all women responded to this question. Indeed, only women actually engaged in polygamous marriages were supposed to evaluate the relationship with their co-wives. Moreover, the analysis only informs about the perception of the relationship from the perspective of women while it does not give any evidence of the true harmony existing between co-wives. Perhaps, some respondents did not dare to assess the relationship in a negative way in front of other women or pollsters. This result clearly contradicts previous research on the topic which affirmed that relationships between co-wives were mostly driven by competition and conflicts (Jankowiak, Sudakov, & Wilreker, 2005) (Madhavan, 2002). However, the positive perception of the relationship between co-wives corresponds to former evidence showing amicable relationships between co-wives in a Moose ethnic group in Burkina Faso (Mason, 1988).

The results obtained in this section prove that women in Burkina Faso tend to prefer polygamy in a society where this institution seems to be the norm. To find out why most of the women have a positive opinion about polygamy it is crucial to analyse the welfare of the women who live in polygamous marriages compared to their female neighbours engaged in a monogamous marriage.

Women's welfare in polygamous marriages

Women's welfare in polygamous marriages has been analysed at the level of five main factors: autonomy, wealth, marital conditions, fertility and health. For each point, the welfare status of polygamous women is evaluated with the help of different indicators.

	POLYGAMOUS		MONOGAMOUS		Combined		Difference
	#observations	Mean	#observations	Mean	#observations	Mean	
Autonomy							
=1 if self-employed	873	0.1672	463	0.1188	1336	0.1504	-0.0484*
=1 if participates in village associations	863	0.3581	454	0.2093	1317	0.3068	-0.1488**
=1 if absent for minimum 1 month	885	0.0362	467	0.0257	1352	0.0325	-0.0105
Absence period (in months)	32	3.53	12	3.75	44	3.59	0.2188

Table 6: W	omen's wel	fare in	pol	lygamy
------------	------------	---------	-----	--------

Wealth							
=1 if individual plot	865	0.0173	455	0.0154	1320	0.0167	-0.002
=1 if individual livestock	863	0.372	455	0.2154	1318	0.318	-0.1566**
=1 if individual food reserves	768	0.8945	396	0.793	1164	o.86	-0.1016**
Concession's per capita land	878	0.2572	459	0.2747	1337	0.2632	0.0175*
Concession's per capita harvest (including cowpea)	883	1.5272	464	1.6663	1347	1.5751	0.1391*
Concession's per capita harvest (excluding cowpea)	883	1.3962	464	1.5278	1347	1.4416	0.1316*
Concession's self- sufficiency (2010- 2011-2012)	876	1.6621	460	1.5761	1336	1.6325	-0.086
Marital conditions			R. Charles		E Statistics		
Age at marriage	861	18.49	452	17.84	1313	18.27	-0.6562**
=1 if woman knew husband before wedding	879	0.2048	464	0.3664	1343	0.2606	0.1616**
=1 if arranged marriage	880	0.8182	464	0.6595	1344	0.7634	-0.1587**
Fertility	ONLY FO			CE MORE THA	N FIVE YEARS	5 (before or	in 2008)
Number of births	774	6.0452	316	5.0032	1090	5.7431	-1.0421**
Distance Marriage - First child (in years)	755	2.4464	306	2.0065	1061	2.3195	-0.4398
=1 if medical pregnancy following	767	0.8383	313	0.8914	1080	0.8537	0.053*
Medical birth location (=1 if hospital or maternity ward)	765	0.7373	312	0.7885	1077	0.7521	0.0512
Health							
BMI	807	21.61	428	21.74	1235	21.65	0.1382
=1 if too sick to work since the last harvest	868	0.2961	457	0.2144	1325	0.268	-0.0816**

*ρ<0.05 **ρ<0.01

Table 6 lists which differences between monogamous and polygamous women are statistically significant and evaluates which type of marriage institution seems to be better in terms of effects on women welfare. By observing the results, it appears that polygamy can have both, positive and negative, effects on women welfare.

<u>On the one hand</u>, we observe that women engaged in polygamous unions significantly enjoy **more autonomy**. The choice to live and share one husband with several co-wives seems evident when looking at this results. Indeed, women in polygamies have 4.84 percentage

points more opportunities to engage in self-employed activities than monogamous women. As they have the possibility to occasionally be absent by leaving their children and husband with their co-wives, polygamous women are able to dedicate more time and effort to other activities such as establishing their own small business, selling food or working in the gold mining industry. In a similar way, women accept and choose to share their husband with other wives in order to save time for leisure activities. By sharing time-consuming domestic work, wives can make themselves available to engage in village associations. Results show that 35.81% of polygamous women are members of village associations compared to only 20.93% of monogamous women. Polygamous women's greater autonomy is also visible when looking at the incidence of leaving the household for at least one month. The result is not statistically significant but it shows that amongst the surveyed women who left their house for at least one month, 1.05 percentage points more are from polygamous unions. However, monogamous women are, on average, leaving their homes for longer periods. The main reasons justifying women's absence are to visit their family or to attend ceremonies. Hence, polygamy could enhance women's welfare by increasing their opportunities to spend time with their loved ones and be present for special events. The results regarding the visits out of homes may not be statistically significant because the sample of women leaving their house is very tiny. The higher independence from which women in polygamous unions benefit is one of the reasons why female survey respondents think that polygamy would be an advantage rather than an inconvenient. In addition, the results represent a proof that polygamy offers women a greater individual wealth. In terms of individual livestock and food reserves, women in polygamous marriages are significantly better off than in monogamy. Women with co-wives also own slightly more individual plots but the difference is not significant. The higher degree of autonomy and the more important individual wealth could be valid reasons explaining why women perceive polygamy as an advantage.

However, <u>on the other hand</u>, we observe that on the **concession level**, monogamous women are richer on average. In fact, in per capita measures, they benefitted from a significantly higher amount of cultivated land in the 2012 agricultural season compared to women in polygamous households. The difference is also statistically significant regarding the quantity of cereal harvested which appears to be higher (in per capita terms) in monogamous concessions. This is still the case when excluding cowpea, which can also traditionally be used to feed livestock. Nevertheless, even if the indicator measuring the household's selfsufficiency capacity over a three-year period (2010-2011-2012) is not significant, it shows that polygamous households are slightly more self-sufficient. Even by computing the difference in cereal self-sufficiency for each year separately (2010, 2011 and 2012), the result is not statistically significant but still a little better for polygamous families. Hence, both types of compounds seem to have more or less the same level of cereal self-sufficiency in the three agricultural seasons no matter the marriage system.

Moreover, it appears that women engaging in polygamy have to tolerate less desirable marital conditions and birth processes. More specifically, polygamous unions are more often the fruit of marital arrangements elaborated by the bride's family. In numbers, 16.16 percentage points fewer girls knew their husband before the wedding in the case of polygamous marriages compared to monogamy. Similarly, 15.87 percentage points more girls were promised to their husband in polygamy. These results could explain why some women would consider polygamy as an inconvenient. Nevertheless, not knowing one's husband before the marriage or being promised to a man are considered as normal marital conditions in some developing regions such as Northern Burkina Faso and could cross a woman's paths in both marriage systems. Another difference noticed in this study concerns fertility. In polygamous marriages, women give birth to their first child in a larger time frame after the marriage (not statistically significant) but they tend to have more children on average. This result could be interpreted by affirming that polygamous women have more possibilities (in terms of time and resources) to bring up a higher amount of children. The argument is in line with the previous research outcomes stipulating that women enjoy more freedom and wealth in polygamy than in a monogamy. However, the result differs from former literature in which studies reported that fertility was lower for women in polygamous marriages (Brown, 1981). Concerning fertility conditions, they also display that women in monogamous unions have 5.3 percentage points more chances to get a serious follow-up of their pregnancy than polygamous women. In the same way as the marital conditions, this fact about polygamy could be a reason to refuse the adoption of co-wives, even if the difference between both marriage institutions is guite small. Finally, the last observed difference is in terms of health. The Body Mass Index is slightly higher for monogamous women but the difference is not statistically significant. However, polygamous women have been significantly more constrained to work because of an illness. This proves that women in polygamous marriages experience worse health conditions, either because of a lower access to health treatments or further to a higher exposure to illnesses (Bove & Valeggia, 2009).

5. CONCLUSION

To conclude the empirical analysis, the significant results from the study will be summarized to remind the major findings. The first part of the research has highlighted the main differences between polygamous and monogamous women by looking at the demographics and family background. The results show that women in polygamous unions are, on average, significantly less educated and older than monogamous women. For the most part of polygamous women (over 90%), they belong to the Moose ethnicity (the most predominant ethnic group in Burkina Faso) and Muslim religion. In the second part of the research which dealt with women's opinion about polygamy, it is interesting to notice that for more than 80% of the surveyed women, the institution represents an advantage and encourages family solidarity. The main reasons justifying their preference for polygamy are the mutual aid, the higher labour force and a stronger solidarity. Regarding the harmony between cowives, the major share of polygamous women perceives this relationship as good. The last part of the result analysis, which focuses on the effects on women welfare, concludes that most of the women tend to see polygamy as an advantage because it offers them more autonomy and higher individual resources. Indeed, the study shows that polygamous women enjoy more self-employed activities and participate more in village associations compared to their monogamous counterpart. In terms of resources, they own more individual plot and livestock but the land and harvest at the concession level are lower for polygamous households. Furthermore, women's welfare is deteriorated in a polygamous union since they experience worse marital conditions, they benefit from less medical pregnancy follow-ups and are more often constrained to work because of illness compared to monogamy.

IV. Discussion

The study's main findings show that most of the women in Burkina Faso perceive polygamy as an advantage which encourages family solidarity. When looking at the effects of polygamy

on women welfare, it appears that this preference is justified by individual incentives rather than agricultural reasons, as it is explained in the literature (Boserup, 1970). Indeed, in this research, it is proven that polygamous households are less wealthy in terms of per capita harvest and per capita cultivated land than monogamous families. This difference might appear because the wealth is evaluated in per capita terms and polygamous households count relatively more members since women have a higher fertility rate. Therefore, polygamy might be chosen because of its beneficial individual effects, such as higher autonomy and more individual resources. These individual incentives explaining the emergence of polygamy are also mentioned in other researchers' works. For instance, polygamy has the reputation of increasing the freedom of movement and economic independence (Boserup, 1970) by offering women more leisure time (Brown, 1981). However, women's choice does not seem rational when observing the negative impacts that polygamy can have on women's welfare. This might be explained by the fact that, in Burkina Faso and in other developing countries, women do not always have the opportunity to choose by themselves whom they are going to marry with (Mason, 1988). Therefore, their marital institution might not necessarily be the fruit of their own decision and a polygamous system might be imposed on them against their will. Concerning the negative impacts on their welfare, in accordance with the literature review, the present study finds out that polygamous women are more subject to arranged marriages, benefit from less medical followings during their pregnancy and are more often constrained to work because of illness compared to their monogamous counterpart. The negative effect on their health has also been proven in the literature (Bove & Valeggia, 2009) and has been mentioned in another part of the survey. More specifically, when explaining why polygamy represents an advantage, some polygamous women affirmed that having co-wives could be useful to take care of their children and housework burdens in case of illness.

Regarding women's background and demographics, the results seem to be coherent with former studies. Especially, concerning education, polygamous women are, on average, less likely to have attended a formal school which causes a lower ability to read and write. This significant difference is in line with the state of literature (Brown, 1981) (Grossbard, 1976). The demographics of polygamous women are significantly different from monogamous women, but the differences remain quite small. It was predictable that the major part of women would be of Moose ethnic group and Muslim religion which are the most predominant ethnicity and religion in Burkina Faso. However, it is quite surprising that 3.63% of polygamous women are Catholics because this marriage institution is normally not accepted by this religion.

The results of the second part, asking for women's opinion about polygamy, are unexpectedly positive. Opposing the literature, women tend to choose polygamy when expressing their point of view. For instance, a previous study has affirmed that to decrease the incidence of polygamy, one could use the channel of empowering women to let them choose their marriage institution themselves (Tertilt, 2006). However, in the case of this region in Burkina Faso, such a policy would be useless, since, even when having the freedom to choose, women would probably opt for polygamy because they perceive it as an advantage. Nevertheless, the reasons explaining why women see polygamy as an advantage, mainly mutual aid, are similar to the positive aspects of the institution in the literature where polygamy allows to share work burdens (Brown, 1981), help each other and care for each other's children (Mason, 1988).

Moreover, concerning women relationships in a polygamous household, the literature affirms that the institution mostly leads to the emergence of competition, jealousy and violence (Jankowiak, Sudakov, & Wilreker, 2005) in the form of reproductive rivalry for example (Rossi, 2015). On the contrary, the results of the present study state that the harmony between co-wives is good and encourages solidarity. One could explain this divergence by reminding that the tool used to assess this relationship was a survey asking co-wives how they perceive the harmony in the household. Hence, we have no information on the actual nature of relationship existing in the concessions. However, previous studies focusing on the Moose ethnic group in Burkina Faso also showed that the relationships between co-wives in this society are more often described as amicable than hostile or conflictual (Mason, 1988).

V. Bibliography

- Al-Krenawi, A. (2006). Polygyny and its impact on the psychosocial well-being of husbands. Journal of comparative family studies, 173-189.
- Aluko, M., & Aransiola, J. (2017). Peoples' Perceptions of Polygyny in Contemporary Times in Nigeria. *The Anthropologist*, 179-184.
- Banerjee, A. V., & Duflo, E. (2011). Pak Sudarno's Big Family. In A. V. Banerjee, & E. Duflo, Poor Economics: A radical rethinking of the way to fight global poverty (p. 119). USA: PublicAffairs.
- Becker, G. S. (1974, March/April). A Theory of Marriage: Part II. *Journal of Political Economy*, 92(2), pp. S11-S26.
- Becker, G. S. (1981). Polygamy and Monogamy in Marriage Markets. In G. S. Becker, A treatise on the family (pp. 80-107). London: Harvard University Press.
- Boserup, E. (1970). The Economics of Polygamy. In E. Boserup, *Woman's role in economic development* (pp. 25-40). Earthscan.
- Bove, R., & Valeggia, C. (2009). Polygyny and women's health in sub-Saharan Africa. *Social Science & Medicine*, 68, 21-29.
- Brown, J. E. (1981, August/September). Polygyny and Family Planning in sub-Saharan Africa. Studies in Family Planning, 12(8/9), 322-326.
- De la Croix, D., & Mariani, F. (2012). From Polygyny to Serial Monogamy: A Unified Theory of Marriage Institutions.

DHS. (2010). DHS Final Report.

- Edlund, L., & Lagerloef, N.-P. (2012). *Polygyny and Its Discontents: Paternal Age and Human Capital Accumulation.* Discussion Paper, Columbia University, Department of Economics, New York.
- Fenske, J. (2010). *Institutions in African history and development: a review essay.* Munich Personal RePEc Archive.

- Gebreselassie, T., & Mishra, V. (2007). *Spousal Agreement on Family Planning.* DHS Analytical Studies 11, United States Agency for International Development, Macro International Inc., Calverton.
- Gould, E. D., Moav, O., & Simhon, A. (2012). Lifestyles of the rich and polygynous in Cote d'Ivoire. *Economic Letters*, 115, pp. 404-407.
- Grossbard, A. (1976, December). An Economic Analysis of Polygyny: The Case of Maiduguri. (JSTOR, Ed.) *Current Anthropology*, 17(4), pp. 701-707.
- Grossbard, A. (1978, May). Towards a Marriage Between Economics and Anthropology and a General Theory of Marriage. *The American Economic Review*, pp. 33-37.
- Ickowitz, A., & Mohanty, L. (2015). Why would she? Polygyny and women's welfare in Ghana. *Feminist Economics*, 21(2), pp. 77-104.
- Jacoby, H. G. (1995, October). The Economics of Polygyny in Sub-Saharan Africa: Female Productivity and the Demand for Wives in Côte d'Ivoire. (JSTOR, Ed.) *Journal of Political Economy*, 938-971.
- Jankowiak, W., Sudakov, M., & Wilreker, B. C. (2005, Winter). Co-wife conflict and cooperation. *Ethnology*, 44(1), 81-98.
- Lambert, S., & Rossi, P. (2014, April). *The hidden cost of family-based widowhood insurance*. Paris School of Economics.
- Madhavan, S. (2002, Winter). Best of Friends and Worst of Enemies: Competition and Collaboration in Polygyny. *Ethnology*, 41(1), 69-84.
- Posner, R. A. (1981). A Model of Primitive Society. In R. A. Posner, *The Economics of Justice* (pp. 150-167). Harvard University Press.
- Rossi, P. (2015, July). Strategic Choices in Polygamous Households: Theory and Evidence from Senegal. Paris School of Economics.
- Singh, R. D. (1988). The Economics of Polygyny and the Household Demand for Children. In
 R. D. Singh, *Economics of the Family and Farming Systems in Sub-Saharan Africa:* Development Perspectives (pp. 17-37). Westview Press.

Tertilt, M. (2005). Polygyny, Fertility, and Savings. *Journal of Political Economy*, 113(6).

- Tertilt, M. (2006, April-May). Polygyny, Women's rights, and development. *Journal of the European Economic Association*, 4(2-3), 523-530.
- UN Women. (1994). Convention on the Elimination of All Forms of Discrimination against Women. United Nations Entity for Gender Equality and the Empowerment of Women. United Nations. Retrieved from http://www.un.org/womenwatch/daw/cedaw/recommendations/recomm.htm
- Wheaton, O. (2015, June 22). *Where exactly is polygamy legal?* Retrieved from metro.co.uk: http://metro.co.uk/2015/06/22/where-exactly-is-polygamy-legal-5257418/
- World Bank. (2016). *Where We Work*. Retrieved from The World Bank: http://www.worldbank.org/en/country/burkinafaso/overview#1

Zeitzen, M. K. (2008). Polygamy: a cross-cultural analysis. Berg.

VI. Appendix

1. APPENDIX 1: SURVEY QUESTIONS

Do you have co-wives? How many co-wives do you have in total?

<u>Which types of women engage in polygamous marriages rather than monogamous</u> <u>marriages?</u>

Education

Did you attend a formal school? Did you go to a literacy class? Are you able to read and write? (Not at all, a little bit, good, very good)

Professional activity

Before living with your husband, did you practise a (non-agricultural) paid activity? If yes, which one?

Parents

Did you father only had one wife at the same time? How many wives did your father have at the same time? Was your father engaged in a polygamous marriage? Did your father go to formal school? Did your mother go to formal school?

Demographics

Age, Ethnicity, Religion

Women's opinion of polygamy

Advantage/ Inconvenient

From your point of view, does polygamy represent an advantage or a disadvantage? Why?

Impact on family cohesion

How is the relationship/harmony with your co-wives? (Bad, middle, good, very good) From your point of view, does polygamy encourage or discourage familiar cohesion/solidarity?

Women's welfare in polygamous marriages

Autonomy

Since 2012, did you practise any self-employed activity (other than fields and gold planning) which generates income? Are you a member of a village association?

Did you leave the household for at least one month? If yes, for what reason?

Wealth

Individual level:

Do you personally own a plot? Do you personally own livestock? Do you have individual food stocks?

Concession level:

Land: How many hectares of land have been cultivated collectively during the 2012 agricultural season?

Production: How much cereal, excluding/including cowpea, have been harvested in 2012, in 100 kg bags?

Cereal self-sufficiency: Was the household cereal self-sufficient during 2012/2013 agricultural cycle?

Marital conditions

How old were you when you got married? Did you meet your husband before the announcement of the wedding? Were you promised to your husband (or to his family)? Was your marriage arranged by your parents?

Fertility (only for women married since more than 5 years)

How many births have you given? How many years after the marriage did you get your first child? Were you followed/monitored by someone during your last pregnancy? Where did you give birth to your last child? (Hospital, Maternity ward, Concession, other)

Health

Computation of the BMI Since the last harvest, have you been constrained to stop working because of illness?