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The Decision-making in Couples and Modern contraception use among Women in Côte d'Ivoire

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Abstract

This research analyzes the impact of decision making in couples on the usage of modern contraception and identifies the other relevant socioeconomic and cultural determinants. From "Côte d'Ivoire Demographic and Health Surveys 2012", the statistics results showed that the percent of women who have knowledge on contraception is very low. The usage of contraception is higher among young than older and is two times higher among urban than rural. The Probit regression results showed that decision-making power in couples has a strong positive significantly impact on using contraceptive methods. Furthermore, education, knowledge on methods, living environment and age are major determinants of the contraceptive practice. In contrast, Muslim religion has a negative significantly impact on the probability of using contraception. The reproductive health workers must involve couples and religious leaders, especially the Muslim authorities in advocacy and activities of sensitization for better usage of modern contraception in households. The health authorities must also reduce the regional gap concerning free distribution of the products of modern contraception. Similarly, the providers must play their role to increase access to the products of modern contraception to better meet the needs and satisfaction of women in family planning.

Keywords: Modern contraception – Decision-making— Usage – Women childbearing age— Family planning – Côte d'Ivoire

JEL Classification: J13 D0.

1. Introduction

In the world, women are exposed to the risks of unintended pregnancy and abortion. Statistics have shown that globally, 56 million abortions (safe or unsafe) are registered (Ganatra et al, 2017). 25% of unwanted pregnancies ended in induced abortion (Ganatra et al, 2017). In sub-Saharan Africa, most women of childbearing age use traditional, dangerous methods. As a result, they are exposed to a high risk of mortality (Sedgh et al, 2014). In fact, it is estimated that every year nearly 70,000 women die as a result of unsafe abortion (Shah and Ahman, 2009). The risk of unsafe abortion is highest in Africa (Ganatra et al, 2017). Some women suffer from genital complications after unsafe abortion (Singh et al, 2017). In Côte d'Ivoire, 15% of these deaths are related to unsafe abortions (Guillaume and Loû, 2002). The good knowledge on family planning and its methods will reduce the rate of mortality of women (Ajong et al, 2016). Indeed, unsafe abortion is one of the main causes of women death. Promoting the usage of modern contraception will reduce rates of unsafe abortion and mortality among women (Mohamed et al, 2015). The common goal of all national and international health actors is to increase access to modern contraception to better meet the needs of women in family planning (Jacobsteinet al, 2013). In Côte d'Ivoire, one of the objectives of the government is to increase the number of women users of contraceptive products to 2.2 million (UNFPA, 2009).Thus, Ivorian policy makers have taken actions to promote the usage of contraception through family planning programs. Since 2012, promoting the practice of modern contraceptive methods has prevented more than one million unintended pregnancies and 320,000 unsafe abortions (Singh and Darroch, 2012). In so doing, between 2013 and 2015, Côte d'Ivoire spent 5 billion CFA francs ($ 8.6 million) on family planning (Darroch and Singh, 2013).

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In 2016, Côte d'Ivoire also has spent 400,000 million FCFA ($ 690,000) for the purchase of contraceptive products (Singh and Darroch, 2012). Public expenses relative to the promoting of modern contraception made progress. Thus, 82% of health facilities offer family planning services (Darroch and Singh, 2013). Côte d'Ivoire also strengthened community services to make contraceptive products available to all women of childbearing age. Despite the actions of the Ivorian government to cover and meet the needs of women in family planning, the rate of the usage of modern contraception remains low in Côte d'Ivoire. 17% of women who do not want pregnancy, use modern contraceptive methods (UNFPA, 2009). This low rate can be explained by the delay in the adoption of the policy of population regulation and also the lack of knowledge on modern methods of contraception. The population regulation policy was adopted by the Ivoirian government in the late 1990os. Other factors may better influence the usage of modern contraception. This study fits into this perspective and attempts to assess the impact of decision making within couples on the usage of modern contraception and analyze the other relevant socioeconomic and cultural determinants.

In first, we examine the impact of decision-making in couples on the usage of modern contraception among women;

In second, we show the effect of each explanatory socioeconomic and cultural variable on the practice of modern contraception among women in Côte d'Ivoire. We use statistic and econometric approaches for the study. The rest of the paper is structured as follows: section 2 presents the Literature Review; in section 3, we show Data and Methods, we explain the Results in section 4 and section 5 highlights the Discussion and Conclusion.

2. Literature review

2.1. Empirical studies

Several studies showed the importance of using contraceptive methods as an effective way to make a longer interval between births and prevent unintended pregnancies. These include Ajayi et al (2018) who have shown that contraception is often needed to plan births. Family planning is a population-based policy adopted by several countries around the world, particularly in Africa to slow down population growth. However, there are several socioeconomic factors that justify the behavior of sexually active men and women in the practice of contraception. Contraception is a method using by women (or men) to delay and avoid unplanned pregnancy. Thus, the results of a study of two towns in southwestern Nigeria found that fear of side effects of contraceptive products and lack of support are the main explanatory factors for the non-use of modern contraception (Ajayi et al, 2018). In some poor countries, particularly in sub-Saharan Africa, there are no real mechanisms for promoting and providing information on the place of supply and giving training on the economic benefits of using modern contraception (Ali and Okud, 2013). The advice of reproductive health experts for women is not sufficiently given and followed up. The latter have a lack of knowledge of the products and their side of effects (Assaf et al, 2017). There is also a lack of support for the provision of modern contraceptive products. In the same order of ideas, Ali and Okud (2013) conducted a study in Sudan and their results showed that, fear of complication of reprocreation, lack of conviction and information are the reasons why contraceptive methods are not used. Likewise, a study in Ethiopia showed that socio-demographic characteristics have a direct effect on non-use of contraceptives products (Tiruneh et al, 2016). Indeed, women with very low levels of formal education do not use modern contraceptive methods and prefer to use traditional methods. This categories of women are not accessed of knowledge about contraception (Nzokirishaka and Itua, 2018). The usage of modern contraceptive methods increases with the level of education and income (Tirunet et al, 2016;Mota et al, 2015).

Income is the purchasing power of the individual, the household or the family. It is according to the income that the economic agent makes his choices and preferences in the market to acquire goods and services in order to satisfy his needs. For lack of support in terms of supply, the financial constraints limit the poor in terms of contraceptive products purchase.

In Côte d'Ivoire, Fassassi (2007) also conducted a study on factors associated with contraception practice. His findings showed that high women education, modern employment and access of knowledge about modern methods are the main determinants of the usage of contraception. These authors did not take into account the decision-making power within couples of the usage of modern contraceptive methods. In Africa, the main decision-maker in household is the husband. A study in Tanzania shows that of 365 men, only 31 were involved in planning familial program (Msovela et al, 2016).

This aspect is very important because the rate of waiver of contraceptive methods is very high for women (Ali and Cleland, 2010). In Brazil, women abandon other methods in favor of the injectable method (Leite and Gupta, 2007; Prata et al, 2011). For some women, unintended pregnancy was a consequence of strong opposition by their partners to family planning (Fotso et al, 2014). The findings from another study in Nigeria showed that men were not involved to the process of the practice of contraception (Gueye et al, 2015). Husband must participate to the decision-making process for the usage of contraception in the couple (Tiruneh et al, 2016); Nzokirishaka and Itua, 2018). Indeed, the rate of contraception non-use was strongly significantly associated with Domestic Violence (Stephenson and al, 2008).

2.2. The decline in fertility in Côte d'Ivoire

African societies are characterized by high fertility. Indeed, in the African tradition, children are a source of wealth for parents as they can replace aging human resources. The family is organized into a production unit in which domestic and agricultural tasks are reserved for children and women. The goal is to increase agricultural production and total income. Children are also presented as a source of physical security (Vlassoff, 1982). Thus, from 1960 to 1970, the fertility rate went from 7.35 to 7.88 (Lan and Tavrow, 2017). From 1980, the number of children per woman has decreased. The fertility rate rose from 7.61 in 1980; at 6.62 in 1990; at 5.86 in 2000; at 5.23 in 2010 and 4.94 in 2015 (Lan and Tavrow, 2017). The decline in fertility in Côte d'Ivoire is not necessarily explained by the successful of the family planning policy because the prevalence rate of modern contraception remains low. This rate went from 6% in 1994 to 22.7% in 2018 (USAID, 2017). This shows an upward trend, but it must be pointed out that for 28 years of adoption of the birth control policy in Côte d'Ivoire, the rate of growth in utilization of modern contraception stays low and slow. The decline of fertility in Côte d'Ivoire is partly the consequence of the economic crisis of the 1980s. The impoverishment of the population and the financial constraints imposed on households largely explain the drop in the number of children per woman in Ivorian households.

3. Data and Methods

In this section, the data, the Probit model and the specification of variables will be presented.

3.1. Data

Côte d'Ivoire Demographic and Health Survey 2012 was conducted from December 2011 to May 2012 across the country. In this survey, 10,060 women aged from 15 to 49 are successfully interviewed and so were about 5,135 men aged from 15 to 59 years. The interview consisted in asking some questions to women in order to get information concerning their sexual health, fertility preferences, knowledge and use of family planning methods. The surveys consist in filling three types of questionnaires- questionnaire for the household, for the women and for the children. The woman questionnaire and the child questionnaire depend on the household questionnaire. All persons who were surveyed in a household have a link with the head of the household. The head of the household can be a man or a woman.

The interviews were undertaken following a cluster sampling from the study population. A cluster consists of 25 households, which is to say in a cluster, 25 households are surveyed. These surveys were conducted by the National Institute of Statistics (INS) with technical assistance from ORC Macro, which is responsible for the international program of DHS. There are therefore national survey data. These are secondary data available in the archives of the DHS. The DHS provides information on several areas such as use of family planning methods, breastfeeding practices, nutritional status of women and children under five years, infant mortality, maternal mortality and the health of the mother and child in general. The survey also provides information on knowledge, attitudes, and behavior towards HIV / AIDS and other sexually transmitted Diseases (STDs) and the use of mosquito nets against malaria. HIV, anemia and malaria tests were also done during the survey.

We use SPSS and STATA software to analyze the data. We have qualitative variables and the dependent variable is binary. It's taking two modalities: 1=yes and 0=No. that brings us to use Probit model.

3.2. Probit model and specification of variables

The probit model can be presented as following:

Supposed that Me is 1 when a modern contraceptive is used and 0 in the case of non-use. Thus,

$$Me = \begin{cases} 1 \quad \text{si } y^* = f(Deci, Dfh, Rm, Agef, Am, InfoFp, InfoCP, Nch, Reli, €f) \\ 0 \text{ otherwise} \end{cases} \quad (1)$$

Where y*, a latent variable indicating the possibility of the use of contraceptive methods, is unobservable and related to a set of observable characteristics such as:
Deci, Decision of the usage of contraceptive methods;
D_{fh}, human capital of woman;
$R_{m,}$ Residence environment;
$Age_{f,,}$ Class of age;
A_m, assets or property owned by the household such as refrigerator, television set, radio etc;
InfoFP, Information about family planning and its advantages.
InfoCP, Information about sources and types of modern contraceptives;
Nch; Number of children
Reli, woman religion,
$€_{f,}$ error.
We derive from equation (1), the following equation:
Me=g (Deci, Dfh, Rm, Agef, Am, InfoFp, InfoCP, Nch, Reli, €). (2)
Where Me represents the probability of using modern contraceptives.
From equations (1) and (2), we have:

$$Y^* = \alpha_0 + \alpha' Dfh + \beta' Rm + \gamma' Agef + \delta' A_m + \sigma' InfoFP + \eta' Infocp + \mu' Nch + \lambda' \text{Re}li + \omega' Deci + \varepsilon \quad (3)$$

From Equation 3, we deduce the following equation:

$$Y_i^* = \alpha_0 + \alpha_1' Dfh + ... + \alpha_j' Dfh + \beta_1' Rm + ... + \beta_k' Rm + \gamma_1' Agef + ... + \gamma'_m Agef + \delta'_1 A_m + ... + \delta'_n A_m + \sigma' InfoFP + \eta' Infocp + \mu' Nch + \lambda'_1 \text{Re}li + ... + \lambda'_p \text{Re}li\varepsilon + \omega'_1 deci + ... + \omega'_q deci + \varepsilon_i \quad (4)$$

The Equation is presented as following:

$$Y^* = \alpha_0 + \alpha_1' educ1 + \alpha_2' educ2 + \alpha_3' educ3 + \beta_1' mil1 + \beta_2' mil2 + \gamma_1' clag1524 + \gamma_2' clag2529 + \gamma_3' clag3034 + \gamma_4' clag3539 + \gamma_5' clag4044 + \gamma_6' clag4549 + \delta_1' nvie051 + \delta_2' nvie052 + \delta_3' nvie053 + \delta_4' nvie054 + \sigma' InfoFP + \eta' Infocp + \mu' Nch + \lambda_1' \text{Re}lig1 + \lambda_2' \text{Re}lig2 + \lambda_3' \text{Re}lig3 + \lambda_4' \text{Re}lig4 + \lambda_5' \text{Re}lig5 + \omega_1' decision1 + \omega_2' decision2 + \omega_3' decision3 + \omega_4' decision4 + \varepsilon. \quad (5)$$

decision1=woman makes decision for using contraceptives; decision2=husband or partner makes decision for using contraceptives; decision3= both woman and husband make decision for using contraceptives; decision4= other, educ1=no instruction;educ2=primary level; educ3=secondary and higher level; mil1=urban; mil2=rural; clag1524=class of age between 15 and 24 years old; clag2529=class of age between 25 and 29 years old; clag3034=class of age between 30 and 34 years old; clag3539=class of age between 35 and 39 years old; Clag4044=class of age between 40 and 44 years old; clag4549=class of age between 45 and 49 years old; nvie051=very poor; nvie052=poor; nvie053=middle; nvie054=rich; InfoFP=Information about Family planning and its Economic advantages ; Infocp=Information about place to obtain contraception and types of methods; Nch=Number of children; Relig1=Christians, Relig2=Muslim; Relig3=animist; Relig4 = No religion ; Relig5=Other;

$\alpha; \beta; \gamma; \delta; \sigma; \eta; \mu; \lambda; \omega$ are regressions coefficients or parameters and ε error term.

In this study, the probit model is estimated by the Maximum Likelihood Procedure

Table 1. Specification of variables

Variables	Definition	Range value and unit	Expected sign
Me	**The probability of using modern contraceptive methods is the dependent variable.**	**Variable, in the database records V313, the variable is taken 3=modern method. We recode into method4** **1=Yes, 0=No.**	
Deci, Decision-making for using contraception	**Decision of the use of contraceptive methods** **decision1= woman makes decision for using contraceptives; decision2= Husband or male partner makes decision for using contraceptives; decision3= both woman and husband make decision for using contraceptives and decision4=other.**	**We recode V632 into decision 1; decision2; decision3 and decision4. They take two values, 1=yes, 0=No.**	(+)
D_{fh}, human capital of woman;	**Human capital endowment** **Level of education. The formal education levels are represented by three modalities –no instruction; primary level; secondary and higher level, which takes into account the level of schooling attainted by a woman.**	**We recode V106 into edu1=no instruction; educ2=primary; educ3=secondary and higher. They take two values 1=yes, 0=No.**	(+)
R_m, Residence environment	**The living environment where the woman lives. mil1= urban; mil2= rural.**	**It's available in the database, we recode V025 into mil1=urban; mil2=rural.They take two values; 1=yes, 0=No**	(+)
$Age_{f,}$ Class of age	**Age of women represented by six classes of age. clag1524= class of age between 15 and 24 years old; clag2529= class of age between 25 and 29 years old; clag3034= class of age between 30 and 34 years old; clag3539= class of age between 35 and 39 years old; Clag4044= class of age between 40 and 44 years old; clag4549= class of age between 45 and 49 years old.**	**We recode V013 into groups of age. They take two values; 1=Yes, 0=No.**	(+)
A_m, Assets	**Assets or property owned by the household such as refrigerator,**	**We have built a wealth**	

	television set, radio etc;	**indicator based on assets or property owned by the household by the Nonlinear Principal Component Analysis method (ACP). This indicator is broken down into a quartile of poverty; nvie051=very poor; nvie052=poor; nvie053=middle; nvie054= rich. They take two values; 1=Yes, 0=No.**	(+)
InfoFP,	**Information about family planning And its advantages.**	**We recode S715E1 and S715E4 into InfoFP; 1=Yes, 0=No**	(+)
InfoCP,	**Information about sources and types of contraceptives**	**We recode S715E2 and S715E3 into InfoCP; 1=yes, 0=No.**	(+)
Nch;	**Number of children**	**It's V201 in the database.**	(-)
Reli,	**woman religion,**	**We recode V130 into Relig. Relig1=Christians, Relig2=Muslim; Relig3= animist; Relig4=No religion; Relig5=Other. They take two values; 1=yes, 0=No.**	(-)

Source :Available variables in DHS-CI -2012

4. Results

It concerns the results of Statistic analysis and econometric analysis.

4.1. Statistics descriptives

Table 2. Number of users by types of methods. N = 10,060 =the total number of respondents

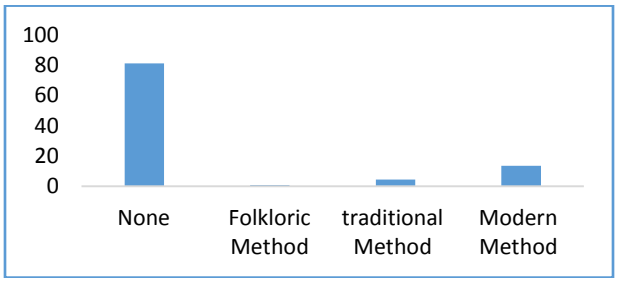
Type of Methods	Number of Users	Percentage of Users (%)
None	8170	81.22
Folkloric Method	84	0.83
Traditional Method	445	4.42
Modern Method	1361	13.53
Total	10,060	100 .00

Source: DHS-MICS-2012-CI data - IBM SPSS statistics 20 Software used

Table 2 above shows that out of the sample of 10,060 women, 8170 women do not use any contraceptive method that is 81.2% of non-users. Only 18.8% use contraceptive methods. This result shows that the rate of using contraceptive method is still very low in Côte d'Ivoire despite the efforts made by the government.

The number of women using different methods varies; 0.83% of them practice Folkloric methods (for example: Lactional amenorrhea); 4.42% of the users use traditional methods (for example: the calendar method) and 13.53% of women use modern methods (for example the oral pill).

Figure 1. Number of users by types of methods



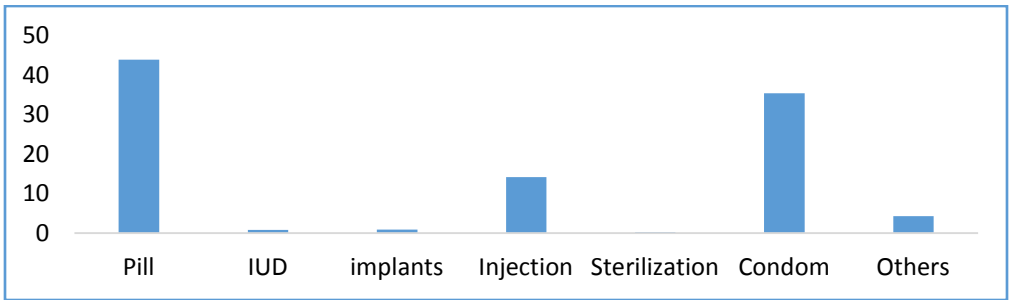
Source: Data of table 2 – Excel used

Table 3. Number of users by types of modern methods. N =1361= total number of modern methods users

Types of Modern Methods	Number ofUsers	Percentage of Users (%)
Pill	597	43.86
IUD (Intra-Uterine Device)	11	0.82
implants	12	0.88
Injection	193	14.18
Sterilization	4	0.30
Condom	482	35.41
Others	62	4.55
Total	1361	100

Source: DHS-2012-CI data – IBM SPSS statistics 20 Software used

Figure 2. Number of users by types of modern methods



Source: Data of table 3 – Excel used

In total 1361 women use modern contraception and 8699 do not use it. In the database, the different types of modern contraceptive products used by women are Pill, IUD (Intra-Uterine Device), Implants, Injection, Sterilization, Condom and Others. The distribution of the number of users according to the type is done in descending order of importance: Pill (43.86%); Condom (35.41%); Injection (14.18%); others (4.55%); Implants (0.88%); IUD (0.82%); Sterilization (0.30%) (See Figure 2).

First, the results in Table 3 above reveal that oral Pill is the main modern method of contraception in Côte d'Ivoire. In other words, oral contraception is the most used mode by women in Côte d'Ivoire. Second, the condom is the second method of contraception used by couples in Côte d'Ivoire to prevent unwanted pregnancies. Finally, injectable contraception remains the third method practiced in Côte d'Ivoire.

Table 4. The number of users of modern contraception by decision-making and others socioeconomic, demographic and cultural categories

Variables	Number of women	Percentage (%)	Number of users	Percentage of Users (%)
Decision making by woman	420	4.2	245	58.53
Decision making by husband	161	1.6	128	78.50
Joint decision	467	4.6	354	75.80
Other	14	0.1	14	100.00
No instruction	5744	57.10	505	08.79
Primary	2347	23.30	413	17.60
Secondary and higher	1969	19.6	443	22.50
Very poor	2220	22.1	199	8.96
Poor	1719	17.1	203	11.80
Middle	1597	15.9	178	11.14
Rich	4524	45.0	781	17.26
Urban	4595	45.7	828	18.01
Rural	5465	54.3	533	9.75
Age 15-24	3984	39.6	546	13.70
Age 25-29	1862	18.5	307	16.49
Age 30-34	1478	14.7	214	14.48
Age 35-39	1142	11.4	165	14.45
Age 40-44	887	8.8	97	10.94
Age 45-49	707	7.0	32	4.52
Christians	4293	42.7	724	16.86
Muslims	4312	42.9	508	11.78
Animists	305	3.0	20	06.56
No religion	1017	10.1	91	08.95
Other	133	1.3	18	13.53
Information about Family planning	2277	22.6	511	22.44
Information about contraceptives methods	1958	19.5	464	23.70

Source : DHS-2012-CI data – StataSE 14 software used

4.1.1. Socio-economic and cultural characteristics of respondents

On the one hand, the table 4 above highlights the socioeconomic and cultural characteristics of women of reproductive age in Côte d'Ivoire. 57.10% of women have no education; 23.3% of them have primary level and 19.6% of them have secondary level and higher. We also have 22.1% of very poor women; 17.1% of them are poor; 15.9% of them have a middle standard of living and 45.0% of women are wealthy compared to the categories of women surveyed. Indeed, concerning the calculation of the standard of living, we did not take into account the income but rather the durable good spossessed in the households, the level of precariousness of the sanitary environment and the habitat (precarious or not) were be taken account. 45.7% of women live in urban areas versus 54.3% in rural areas. We recorded 39.6% of them aged between 15 and 24 years old; 18.5% of them aged 25 to 29 years old; 14.7% of women are between 30 and 34 years old; 11.4% of them aged 35 to 39 years old; 8.8% of women aged 40 to 44 years old and 7.0% of them are between 45 and 49 years old. We have 42.7% of women are Christians; 42.9% of them are Muslim, 3.0% of women are animists; 10.1% of women have no religion and 1.3% of them belonging to other type of religion. Regarding the level of knowledge of family planning, 22.6% of women are registered and 19.5% of them have information on contraception. At the decision-making level, 4.2% of women have decision-making power over contraception; 1.6% of husbands decide; 4.2% of couples decide and 0.1% of couples are influenced by other people. This explains the rate of reticence of couples in terms of contraceptive practice (see Figure 1).

4.1.2. Percentage of modern contraceptive users by socioeconomic and cultural characteristics

On the other hand, the table 4 above indicates relevant determinants of modern contraceptive use. Overall, the proportions of users of modern contraceptive methods vary by different characteristics. This table calls for several comments:

Firstly, the decision-making power of husbands is stronger than that of women in terms of using of contraception. When women decide to take contraceptive products, the rate is 58.33%. When the decision is made by the husband or male partner, the rate is 78.50%. The rate is estimated at 75.80%, when the two partners jointly decide (See figure 3). Concerning other type of decision, the rate is 100%. The latter result means that when the provider participate in the decision-making process in a way that emphasized the women's values and preferences; the rate of contraceptive increases (Steyn, 2016). When women receive comprehensive information about side effects clearly from an intimate, friend-like relationship with their providers,they are motivated to use contraception (Dehlendorf et al, 2013).

Secondly, the variable "education" is represented by "no instruction"; "primary" and "secondary and higher" levels of education. The statistics in Table 4 indicate that the rate of women using modern contraceptive methods increases when their level of education is higher. Similarly, the rate of modern contraceptive methods use increases when the level of education increases. Indeed, 08.79% of women who have no instruction practice modern contraception. 17.60% of women who have primary education level use modern contraceptive methods and 22.50% of women who have secondary and high education level use modern contraception.

Thirdly, the "standard of living" variable is subdivided into four categories: very poor, poor, middle and rich. Indeed, a wealth indicator was constructed from assets owned by households by the Non-linear Principal Component Analysis (ACP) method. This procedure allows each property to have a score. The distribution of these scores follows a reduced normal centered law (mean is zero and the variance is 1); since the ACP consists in reducing and centering the variables from the data available on them in a contingency table, and then finding a unit of analysis common to all the variables.

Centering the selected relevant variables contained in a table consists of calculating the average for each type of variable and measuring each individual in more or in less compared to this average in each variable. Reducing the variables consists of calculating the standard deviation for each of the variables and expressing them all in boxes or rows (because all the characteristics or variables are expressed in line and the individuals in column). These calculated standard deviations are negative or positive. The standard deviation thus becomes a unit of measurement common to all variables. These assigned values are then used to stratify households into four groups (in our case, in quartiles) - very poor, poor, middle and rich - the variables are ordinal - 1 = non-precarious or non-poor; 2 = precarious or poor. The variables used to identify the levels of precariousness of available assets choosed are: place of comfort, access to drinking water, type of habitat, possession of a motorcycle, a radio, a refrigerator, a telephone, a Television, a car, a bicycle. The conditions of poverty are defined as follows:

Are considered poor, with a level of poverty or precariousness equal to 2:

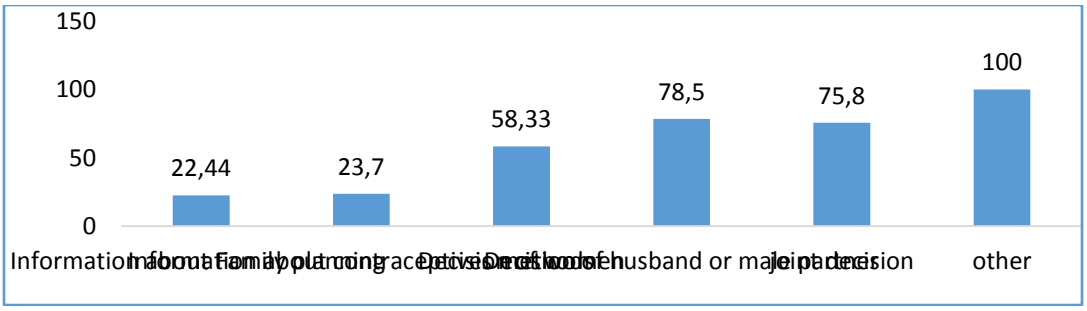
(i) - Households that do not own durable goods such as: radio, television, refrigerator, bicycle, motorcycle, car;
(ii) - households who use water from wells (wells in the dwelling, in the yard, public wells), surface water from - spring, river, dam, pond, lake, rainwater;
(iii) – households using basic latrines, those with no toilet facilities and which used nature for their needs;
(iv) - households living in a house whose floor is made of earth, sand and wood;
(v) -households without access to electricity.
Access to land has not been taken into account because urban populations do not own land.

In Table 4, wealthy women have increased access to modern methods of contraception (17.26%) compared to those with a low standard of living (11.80%) or average (11.14%). Access to modern contraception by very poor women is very low (8.96%).

Fourthly, women living in urban areas (18.01%) use modern contraceptive methods more than counterparts in rural areas (9.75%). Fifthly, age is considered as an indicator of physical health, sexual health, and reproductive health. Age is represented by six age classes for women aged between 15 and 49 years old. The statistics in Table 4 reveal that the rate of women using modern contraception increases between the two age groups 15-24 years old(13.70%) and 25-29 years old (16.49%). The rate decreases from the age group 30-34 years old (14.48%), 35-39 years old (14.45%), 40-44 years old (10.94%) and falls down completely between 45-49 years old (4, 42%).

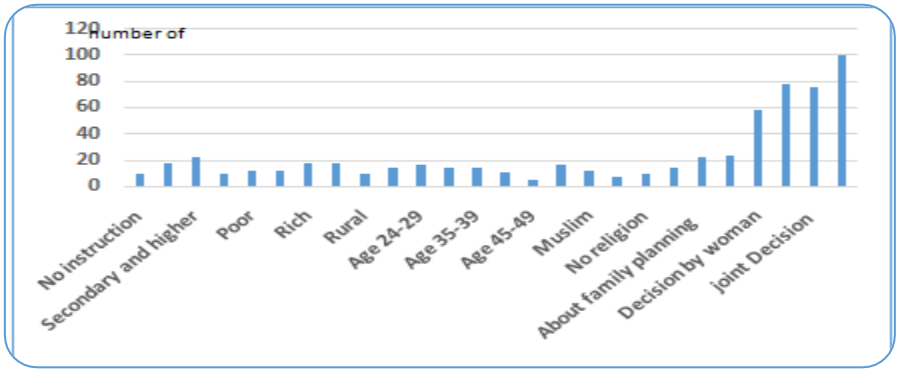
Sixthly, rates of women using contraception are distributed according to different religions as follows: Christians (16.86%), Muslims (11.78%), and Animists (06.56%). No religion (08.95%) and other religion (13.53%. Seventhly, 22.44% of women who received information on the economic benefits of family planning use modern contraception. 23.70% of those having received information on the place of acquisition and the types of contraception methods, use contraceptive products.

Figure 3. The number of users of modern contraception by decision- making and others cultural categories



Source: Data of table 4 – Excel used

Figure 4. The number of users of modern contraception by different socioeconomic demographic and Cultural categories



Source: Data of table 4 – Excel used

4.2. Econometric analysing

Table 5. Regression coefficient estimates and marginal effects of the determinants of usage of contraceptives in Côte d'Ivoire. – Result of Probit model- STATA SE 14 software used

Parameters Variables	β	t[2]	Ef.mg[3]
Constant	-2.5336	-13.55***	0.0788***
Woman's decision[4]	1.8998	27.22***	0.5904***
Husband's decision	2.4840	21.48***	0.7756***
Joint decision	2.3635	33.13***	0.7359***
Primary level[5]	0.3027	6.19***	0.0315***
Secondary and higher	0.4831	8.83***	0.0870***
Information about FP[6]	0.0094	0.12	0.0013
Information about Cp[7]	0.0207	2.50***	0.0323***
Age 15-24[8]	0.6885	5.23***	0.1134***
Age 2.5-29	0.5747	4.47***	0.1082***
Age 30-34	0.5071	4.00***	0.0950***
Age 35-39	0.4103	3.19***	0.0748***
Age 40-	0.2403	1.78**	0.0405**
Urban[9]	0.2650	5.24***	0.0397***
Very poor[10]	0.0281	0.48	0.0042
Poor	0.1220	2.02***	0.0189***
Middle	-0.0662	-1.09	-0.0094
Christian[11]	0.1922	1.57*	0.2566*
Muslim	-0.1076	-1.38***	-0.0160***
Animist	-0.0080	-0.09	-0.0012
No Religion	-0.0316	-0.23	-0.0045
Number of children[12]	-0.0252	-1.92**	-0.0037**
Log likehihood	-2643.2676		
LR chi2(20)	2687.37		
Prob>chi2	0.0000		
Pseudo R^2	0.3370		

(1) In the estimation of probit model, the dependent variable is the probability of contraceptive method use; (2) « two-tailed » probability that the coefficient is equal to zero ; the t is the ratio between β and standard error; (3) Marginal effects are partial derivatives of the characteristics; (4) Decision of using contraceptive: base=Decision4=other; (5) Level of education: base=No education; (6) Information about Family planning: yes=1, 0=N0; (7) Information about contraceptive methods: yes=1, 0 =No; (8) Classes of age: base =clag4549; (9) Residence environment: base=mil2=rural (10) Poverty: base= Nvie054=rich; (11) religion of woman: base=relig5=other religion; (12) number of children. Note: *** = significant between 0 and 5%; ** =significant between 5 and 10%; *= significant between 10 and 15%.

5. Discussion and Conclusion

5.1. Discussion

The results in Table 5 suggest several comments:

Firstly, when the decision to use contraceptive methods is made by the woman, or by the husband or both, the chances of practicing modern contraception are very high. The coefficients associated with these variables are positive and very significant. Indeed, all things being equal, when woman has the decision–making power, she has much greater chance to use contraceptive products and the probability of using contraception increases by 0.59 points (Belay et al, 2016). All things being equal, when husband has the decision–making power, the probability of using modern contraception increases by 0.77 points. All things being equal, when both decide jointly, the probability of using contraceptive methods increases by 0.73 points. These results show that the main decision-maker is the husband.

These results corroborate with those found by Mutombo and Bakibinga (2014), who focus on the importance of male partners in women's contraceptive decision-making. Decision-making power in couples has a strong positive impact on using contraceptive methods.

When by advertising or campaigns on the usage of contraception, men and women in the household agree to choose periods of having children or to limit their number, the probability that the woman practices modern contraception increases.

Secondly, the coefficients associated with variables "primary**"** and "secondary and higher" are positive and significant. When a woman got formal education, she would have more chances to use contraception. This means that education plays an important role in the usage of modern contraceptives (Mochache et al, 2018). The positive effect of formal education on the usage of contraceptives can be explained in two ways:

In first, education enables women to understand the economic benefits of using modern contraceptives (Najafi-Sharjabad et al, 2016; Ochako, 2014). Indeed, contraception allows the woman to make a longer interval between births of her children. This allows to get earn enough time to manage his economic activities. The contraceptive use is a best factor of women economic empowerment (León et al, 2014). If she is employed by the public sector or by a private company, she will be more able to ensure a good professional career in order to obtain promotions accompanied by wage increases (Dharmalingam, 1995). In Second, an educated woman makes a better choice between the use of modern contraceptives and abortion (Biney, 2011). Women's risk of unsafe abortion was associated with doubtful sources of information during decision-making (Arambepola et al, 2014). Educated women have the best information about the disadvantages of unsafe abortion and choose the best way when they use modern contraception.

In general, abortion is caused by an unwanted pregnancy (Dehlendorf, 2010). Her choices and preferences are focused on the practice of modern contraceptives, which justifies the positive impact of formal education on the usage of contraceptives (Aviisah et al, 2018). Formal education is a determining factor in the increase of the rate of using contraceptives (Mprah, 2013). However, the coefficient associated with variable "information about family planning" is not significant. Thirdly, the coefficient associated with variable "information about the place and the type of contraception" is positive and significant. It means that when a woman knows the place where to buy and obtain contraceptives, the probability to use contraceptives increases (Labat et al, 2018). They also have information about the types of contraception that exist. In Côte d'Ivoire, contraceptives distributed are free at public maternity centers. There are also institutions like AIBF (Ivorian Association for Family Welfare), that offer free contraceptives to women and young women aged from 15 to 49 years.

Fourthly, the probability of using contraceptive is higher when the woman is aged from 15 to 35 years than the other classes of age. Indeed, all things being equal, when a woman aged from 15 to 24 years old, from 25 to 29 years old and from 30 to 34 years old, the probability that she uses contraceptive increases respectively by 0.11 points; 0.10 points and 0.09 points. The probability of using contraceptive declines as the woman's age increases. The marginal effects show a downward trend 0.10 points [25-29 years old]; 0.09 points [30-34 years old]; 0.07 points [35-39 years old]; 0.04 points [40-44 years old]. Young women are more likely use contraception than the others groups of age (Megabiaw, 2012). At a young age, partners are sexually active. This partly justifies the high probability of using contraception.

Fifthly, the residence environment of woman influences significantly on the probability of using modern contraceptives. All things being equal, when the woman lives in urban area, the probability that she uses contraceptives increases by 0.04 points. Modern contraceptive use is two times higher among urban than rural women (Muanda et al, 2017; Kamal et al, 2013).

Sixthly, concerning economic stratification of households, the coefficient associated with "poor" remains positive and significant (see Table 5). When the woman is poor, she have some opportunities to access for contraceptives products. Indeed, In Côte d'Ivoire, distribution of contraceptives is free at public maternity centers. The coefficients associated with "very poor" and "middle" are not significant (see Table 5).

Seventhly, Christian religion has a positive effect on the probability of using contraception because the coefficient associated with this variable is positive and significant (Agadjanian, 2013). In contrast, Muslim religion has a negative impact on the probability of using contraception (Obasohan, 2015; Tigabu, 2018). Indeed, the coefficient associated with this variable is negative and very significant.

Lastly, the coefficient associated with "number of children" remains negative and significant. It means that the couple use contraception to limit births (Lakew, 2013).

5.2. Conclusion

The study highlighted the major socioeconomic and cultural determinants of the usage of modern contraceptives. These are: decision-making power, formal education, age, standard of living in terms of assets, religion, knowledge of contraceptive methods and number of children. Despite the efforts made by the government, the level of knowledge of modern contraceptive methods and the rate of usage remain low in Côte d'Ivoire. Likewise, there is a disparity between urban and rural areas in terms of access to contraceptive products. The free distribution of contraceptive products is much made in large cities, especially in Abidjan. Public maternity clinics in remote areas are neglected. So the Ivorian government must make further efforts to reduce the regional gap. The results of the study showed that the oral pill, the condom and the injectable products are principal methods of contraception in Côte d'Ivoire. So, authorities must make efforts to ensure that pills, injectable products and condoms are always available for replenishment of users. Campaigns need to be expanded to enable people to know about the economic benefits of contraception. It is also important to involve household heads (men / women), religion leaders in advocacy and activities of sensitization for better usage of modern contraception in households. Indeed, the study reveals that the power of decision plays a very important role in the practice of modern contraception within couples. The providers must give the best counseling to the women for preferences on the modern contraception and explain them clearly the side effects of this practice. They must oblige each woman to make biologic exams or clinic exams before giving them a type of modern contraceptive because biological needs of each woman are differ. Their role is also very important to increase access to modern contraceptive to better meet the needs and satisfaction of women in family planning.

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Abbreviations

WHO: World Health Organization
INS: National Institute of Statistics
DHS: Demographic Health Survey.
DHS-CI: Demographic Health Survey in Côte d'Ivoire
HIV / AIDS: Human Immunodeficiency Virus Infection / Acquired Immunodeficiency Syndrome
STIs: Sexually transmitted infections
ACP: Principal Component Analysis
AIBF: Ivorian Association for Family Welfare

Appendice

The types of methods

no Method

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	1890	18,8	18,8	18,8
	1,00	8170	81,2	81,2	100,0
	Total	10060	100,0	100,0	

Folkloric Method

Pourcentage	Pourcentage valide	Pourcentage cumulé
99,2	99,2	99,2
,8	,8	100,0
100,0	100,0	

Traditional Method

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	9615	95,6	95,6	95,6
	1,00	445	4,4	4,4	100,0
	Total	10060	100,0	100,0	

Modern method

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	8699	86,5	86,5	86,5
	1,00	1361	13,5	13,5	100,0
	Total	10060	100,0	100,0	

1- The types of modern Methods

pill

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	9463	94,1	94,1	94,1
	1,00	597	5,9	5,9	100,0
	Total	10060	100,0	100,0	

IUD

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
	,00	10049	99,9	99,9	99,9
Valide	1,00	11	,1	,1	100,0
	Total	10060	100,0	100,0	

injection

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
	,00	9867	98,1	98,1	98,1
Valide	1,00	193	1,9	1,9	100,0
	Total	10060	100,0	100,0	

condom

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
	,00	9578	95,2	95,2	95,2
Valide	1,00	482	4,8	4,8	100,0
	Total	10060	100,0	100,0	

sterilization

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
	,00	10056	100,0	100,0	100,0
Valide	1,00	4	,0	,0	100,0
	Total	10060	100,0	100,0	

implants

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
	,00	10048	99,9	99,9	99,9
Valide	1,00	12	,1	,1	100,0
	Total	10060	100,0	100,0	

2- Education

sans instruction

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	4316	42,9	42,9	42,9
	1,00	5744	57,1	57,1	100,0
	Total	10060	100,0	100,0	

primaire

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	7713	76,7	76,7	76,7
	1,00	2347	23,3	23,3	100,0
	Total	10060	100,0	100,0	

secondaire et plus

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	8091	80,4	80,4	80,4
	1,00	1969	19,6	19,6	100,0
	Total	10060	100,0	100,0	

3- Classes of Age

clag1524

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	6076	60,4	60,4	60,4
	1,00	3984	39,6	39,6	100,0
	Total	10060	100,0	100,0	

clag2529

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	8198	81,5	81,5	81,5
	1,00	1862	18,5	18,5	100,0
	Total	10060	100,0	100,0	

clag3034

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	8582	85,3	85,3	85,3
	1,00	1478	14,7	14,7	100,0
	Total	10060	100,0	100,0	

clag3539

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	8918	88,6	88,6	88,6
	1,00	1142	11,4	11,4	100,0
	Total	10060	100,0	100,0	

clag4044

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	9173	91,2	91,2	91,2
	1,00	887	8,8	8,8	100,0
	Total	10060	100,0	100,0	

4- **Residence environment urbain**

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	5465	54,3	54,3	54,3
	1,00	4595	45,7	45,7	100,0
	Total	10060	100,0	100,0	

rural

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	4595	45,7	45,7	45,7
	1,00	5465	54,3	54,3	100,0
	Total	10060	100,0	100,0	

5- Religion

Religion

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	Muslim	4312	42,9	42,9	42,9
	Catholic	2014	20,0	20,0	62,9
	Methodist	208	2,1	2,1	65,0
	Evangelical	1719	17,1	17,1	82,0
	Other Christian	352	3,5	3,5	85,5
	Animist	305	3,0	3,0	88,6
	No religion	1017	10,1	10,1	98,7
	Other	133	1,3	1,3	100,0
	Total	10060	100,0	100,0	

6- Possession durable assets

radio

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	précaire	4177	41,5	41,5	41,5
	non précaire	5883	58,5	58,5	100,0
	Total	10060	100,0	100,0	

telev

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	précaire	5401	53,7	53,7	53,7
	non précaire	4659	46,3	46,3	100,0
	Total	10060	100,0	100,0	

refri

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	précaire	8520	84,7	84,7	84,7
	non précaire	1540	15,3	15,3	100,0
	Total	10060	100,0	100,0	

teleph

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	précaire	9713	96,6	96,6	96,6
	non précaire	347	3,4	3,4	100,0
	Total	10060	100,0	100,0	

bicy

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	précaire	5627	55,9	55,9	55,9
	non précaire	4433	44,1	44,1	100,0
	Total	10060	100,0	100,0	

moby

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	précaire	7154	71,1	71,1	71,1
	non précaire	2906	28,9	28,9	100,0
	Total	10060	100,0	100,0	

auto

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	précaire	9601	95,4	95,4	95,4
	non précaire	459	4,6	4,6	100,0
	Total	10060	100,0	100,0	

7- Health environment

sanitaire

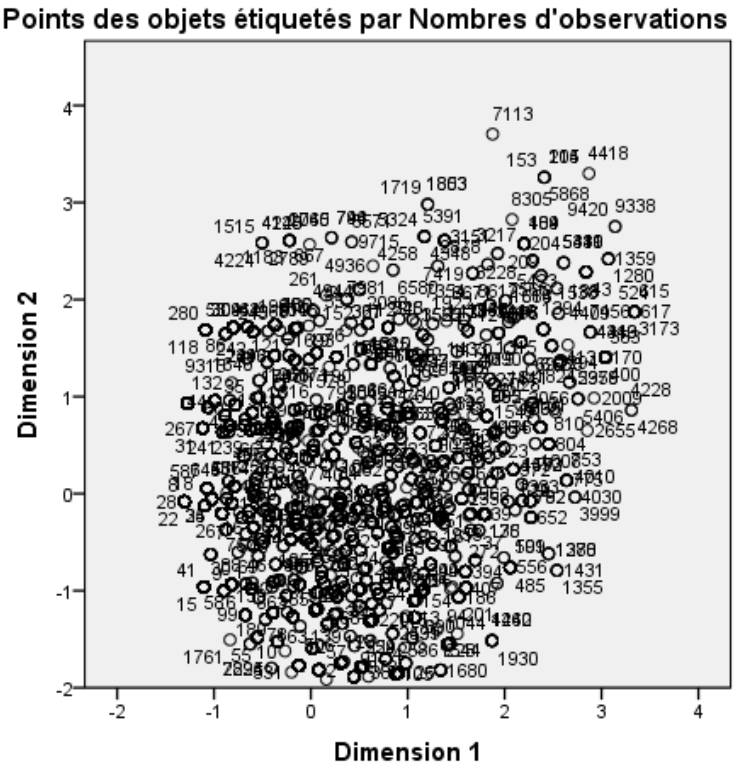
		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	précaire	8251	82,0	82,0	82,0
	non précaire	1809	18,0	18,0	100,0
	Total	10060	100,0	100,0	

8- Habitat

habitat

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	trèsprécaire	2173	21,6	21,6	21,6
	précaire	6639	66,0	66,0	87,6
	non précaire	1248	12,4	12,4	100,0
	Total	10060	100,0	100,0	

9- Nonlinear Principal Component Analysis Method

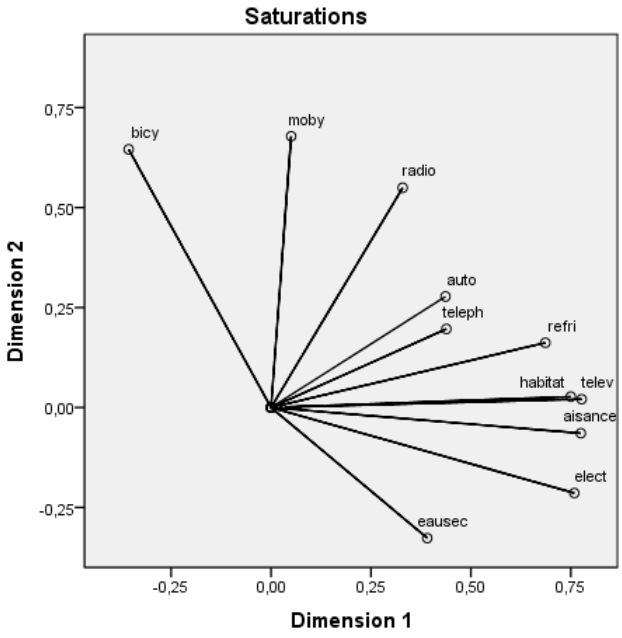


Normalisation principale de la variable.

Saturations

	Dimension	
	1	2
habitat	,750	,027
aisance	,775	-,064
eausec	,391	-,327
elect	,759	-,214
radio	,329	,549
telev	,777	,021
teleph	,439	,196
refri	,686	,162
bicy	-,356	,646
moby	,050	,678
auto	,436	,277

Normalisation principale de la variable.



Normalisation principale de la variable.

Très pauvres

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	7840	77,9	77,9	77,9
	1,00	2220	22,1	22,1	100,0
	Total	10060	100,0	100,0	

pauvres

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	8341	82,9	82,9	82,9
	1,00	1719	17,1	17,1	100,0
	Total	10060	100,0	100,0	

intermédiaires

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	8463	84,1	84,1	84,1
	1,00	1597	15,9	15,9	100,0
	Total	10060	100,0	100,0	

riches

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	5536	55,0	55,0	55,0
	1,00	4524	45,0	45,0	100,0
	Total	10060	100,0	100,0	

10- Decision maker for using contraception

woman

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	9640	95,8	95,8	95,8
	1,00	420	4,2	4,2	100,0
	Total	10060	100,0	100,0	

husband

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	9899	98,4	98,4	98,4
	1,00	161	1,6	1,6	100,0
	Total	10060	100,0	100,0	

joint decision

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	9593	95.4	95.4	
	1,00		4,6	4.6	
		467			95,54
	Total	10060	100,0	100,0	100,0

other

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	10046	99,9	99,9	99,9
	1,00	14	,1	,1	100,0
	Total	10060	100,0	100,0	

11- Information on the existence of planning and the economic benefits related to this policy.

1'oui' 0 'non'

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	7783	77,4	77,4	77,4
	1,00	2277	22,6	22,6	100,0
	Total	10060	100,0	100,0	

12- Information on the place and types of contraceptives.

1'oui' 0 'non'

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	,00	8102	80,5	80,5	80,5
	1,00	1958	19,5	19,5	100,0
	Total	10060	100,0	100,0	

13- Total of children ever born

Total children ever born

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	0	2562	25,5	25,5	25,5
	1	1593	15,8	15,8	41,3
	2	1383	13,7	13,7	55,0
	3	1112	11,1	11,1	66,1
	4	921	9,2	9,2	75,3
	5	770	7,7	7,7	82,9
	6	587	5,8	5,8	88,7
	7	396	3,9	3,9	92,7
	8	302	3,0	3,0	95,7
	9	214	2,1	2,1	97,8
	10	126	1,3	1,3	99,1
	11	57	,6	,6	99,6
	12	29	,3	,3	99,9
	13	3	,0	,0	100,0
	14	3	,0	,0	100,0
	15	2	,0	,0	100,0
	Total	10060	100,0	100,0	

```
. tab nvie051 Method4
```

tr□s pauvres	Modern method 0	1	Total
0	6,678	1,162	7,840
1	2,021	199	2,220
Total	8,699	1,361	10,060

```
. tab nvie052 Method4
```

pauvres	Modern method 0	1	Total
0	7,183	1,158	8,341
1	1,516	203	1,719
Total	8,699	1,361	10,060

```
. tab nvie053 Method4
```

interm□dia ires	Modern method 0	1	Total
0	7,280	1,183	8,463
1	1,419	178	1,597
Total	8,699	1,361	10,060

```
. tab nvie054 Method4
```

riches	Modern method 0	1	Total
0	4,956	580	5,536
1	3,743	781	4,524
Total	8,699	1,361	10,060

```
. tab educ1 Method4
```

sans instructio n	Modern method 0	1	Total
0	3,460	856	4,316
1	5,239	505	5,744
Total	8,699	1,361	10,060

```
. tab educ2 Method4
```

primaire	Modern method 0	1	Total
0	6,765	948	7,713
1	1,934	413	2,347
Total	8,699	1,361	10,060

```
. tab educ3 Method4
```

secondaire et plus	Modern method 0	1	Total
0	7,173	918	8,091
1	1,526	443	1,969
Total	8,699	1,361	10,060

```
. tab V130 Method4
```

Religion	Modern method 0	1	Total
Muslim	3,804	508	4,312
Catholic	1,669	345	2,014
Methodist	166	42	208
Evangelical	1,439	280	1,719
Other Christian	295	57	352
Animist	285	20	305
No religion	926	91	1,017
Other	115	18	133
Total	8,699	1,361	10,060

```
.
```

```
. tab decision1 Method4
```

woman	Modern method 0	1	Total
0	8,524	1,116	9,640
1	175	245	420
Total	8,699	1,361	10,060

```
. tab decision2 Method4
```

husband	Modern method 0	1	Total
0	8,666	1,233	9,899
1	33	128	161
Total	8,699	1,361	10,060

```
. tab decision3 Method4
```

joint decision	Modern method 0	1	Total
0	8,586	1,007	9,593
1	113	354	467
Total	8,699	1,361	10,060

```
. tab decision4 Method4
```

other	Modern method 0	1	Total
0	8,699	1,347	10,046
1	0	14	14
Total	8,699	1,361	10,060

```
. tab infoFP Method4
```

1'oui=1'0 'non'	Modern method 0	1	Total
0	6,933	850	7,783
1	1,766	511	2,277
Total	8,699	1,361	10,060

```
. tab infoCP Method4
```

1'oui=1'0 'non'	Modern method 0	1	Total
0	7,205	897	8,102
1	1,494	464	1,958
Total	8,699	1,361	10,060

```
. tab clag1524 Method4
```

ag□es de 15-24	Modern method 0	1	Total
0	5,261	815	6,076
1	3,438	546	3,984
Total	8,699	1,361	10,060

```
. tab clag2529 Method4
```

ag□es de 25-29	Modern method 0	1	Total
0	7,144	1,054	8,198
1	1,555	307	1,862
Total	8,699	1,361	10,060

```
. tab clag3034 Method4
```

ag□es de 30-34	Modern method 0	1	Total
0	7,435	1,147	8,582
1	1,264	214	1,478
Total	8,699	1,361	10,060

```
. tab clag3539 Method4
```

ag□es de 35-39	Modern method 0	1	Total
0	7,722	1,196	8,918
1	977	165	1,142
Total	8,699	1,361	10,060

```
. tab clag4044 Method4
```

ag◆es de 40-44	Modern method 0	1	Total
0	7,909	1,264	9,173
1	790	97	887
Total	8,699	1,361	10,060

```
. tab clag4549 Method4
```

ag◆es de 45-49	Modern method 0	1	Total
0	8,024	1,329	9,353
1	675	32	707
Total	8,699	1,361	10,060

```
. tab mil1 Method4
```

urbain	Modern method 0	1	Total
0	4,932	533	5,465
1	3,767	828	4,595
Total	8,699	1,361	10,060

```
. tab mil2 Method4
```

rural	Modern method 0	1	Total
0	3,767	828	4,595
1	4,932	533	5,465
Total	8,699	1,361	10,060