Regional evidence about consequences of teen childbearing in Colombia 2010

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 Abstract

Using data from a Demographic and Health Survey (DHS) of 2010 from Colombia and multivariate descriptive methods (correspondence analysis), this paper compares school performance (scholar qualities) and socioeconomic welfare of women that became mothers at early ages (specifically at the age of teenagers) and women that didn't. Differences among regions and residence zones (urban/rural) are established in order to claim for a differential design and implementation of public policies. Using papers of the past years as a basis, we focused on checking teenage childbearing adding the regional approach. We established the intensity and duration of consequences of teenage childbearing in terms of years of schooling, educational level and socioeconomic welfare of mothers. We ended this paper proposing a discussion about the uses of these indicators as a sign of a successful life, discussion that emerged from regional characteristics and our theoretical perspective.

 "Macro Level information that suggest that fertility declines in general are correlated with rising material aspiration also imply that education is associated with rising aspiration if we accepts that fertility declines at the macro-level are linked to rises in educational levels in a society"
(Malwade, 2002 p.1786).

Introduction

Teen childbearing has been considered as a cause of short, medium and long-term socioeconomic disadvantages for mothers and the families they belong to (Geronimus & Sanders 1992). These disadvantages vary in intensity and duration according to the country, economic level, area of residence, and other specific characteristics of regions, mothers and households. Data and analysis for Colombia suggest a double-way relation between teen childbearing, school performance and socioeconomic welfare. "In most of the cases [of

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teenage childbearing] educational path is interrupted and reinforces the vicious cycle of poverty" (Flórez & Soto, 2007 p.30 *Free translation*). The cited investigation used the Demographic and Health Survey (DHS) to establish this relation from 1990 to 2005. Between those years the Total Fertility Rate showed a downward trend while the teenage fertility rate had a fluctuating one. In addition, the specific trend of fertility rate estimated from the DHS showed also for grouped ages higher than 19 years a decreasing trend as it can be observed in table 1.

Until 2010 the trend of Total Fertility Rate seems to be the same, it is not the same case for the trend of teenage fertility rate that has actually fluctuated. It has been eight years since the publication of the DHS of 2005, now the DHS of 2010 is available with a larger sample and the fact of a change in teenage fertility rate trend. This motivated us to ask ourselves if the mentioned result from 1990 to 2005 is still valid. In other words: Do Colombian teenage-mothers still have short and medium term disadvantages in comparison with older mothers?

This paper aimed to answer those two questions adding regional considerations. Using data from the DHS 2010 and statistical descriptive multivariate methods we found out those relations are still valid in the medium and short term. Leveraging regional representativeness of the DHS we presented disaggregated results for the regions and sub-regions established by the DHS of 2010 in order to criticize and overcome the perspective conceiving population as the simple addition of interchangeable persons and try to look forward trough the regional differences. This conceptual approach reconstructs the category "population", without denying the heuristic potential that the population has if it is seen as numerical abstraction.

Canales (2006) proposes going beyond traditional demographic analysis that comprises Demography as the analysis of population aggregate. He suggests understanding the population based on a differential approach. He assures that the study of population should be consistent with the changes that have emerged in the human sciences using the category "demographics subjects and differentiated in them". This concept is developed by Canales (2006) and named *Sujeto-sociodemográfico* (or sociodemographic-subject). This approach is not only useful considering just its theoretical scope, but it could also be useful for practical issues as the design and implementation of differential public policies according to specifics conditions, trends, determinants, and characteristics of regions that are usually not considered.

Differences among regions in socioeconomic characteristics motivated the disaggregation of results. Differences on access to public services among regions were remarkable. According to the DHS of 2010 in the region named Amazonía and Orinoquía just the 67% of households had access to an adequate source of water. On the other hand, in Bogotá (capital city) the coverage for the same year was 98%. It is just an example of these remarkable differences that can be observed in the proximate determinants of fertility. Using Bonggarts' (1978) framework of proximate determinants of fertility, table 2 presents regional levels for some proximate determinants and some interesting characteristics. Additionally, the percentage of preteen mothers (women aged 10 to 14) and teen mothers (women aged 15 to 19) must be considered in the regional analysis. Table 3 show remarkable differences at the age of their first birth and percentage of teen mothers, especially for the Amazonía-Orinoquia region in comparison to Bogotá and the Atlantic region.

Multidimensional poverty and ethnicity show the most important differences. In short, it is important to check the results in a disaggregated way. Differences concerning education are not equal in all the regions, depend

on the residence zone (Urban/Rural), as well as the disaggregation of the regions, e.g. In the Caribbean region there were 10.5% of women without education, whereas in Bogotá there were 3.7%. All these differences prove that there is a need to analyze the behavior of fertility from a regional approach.

Conceptual Approaches

The adolescence is a social fact that is historically constructed. It is a phase of humans characterized by specific personal and relational behaviors. Flórez (2007) argues that such factors as the modern education and the market have been changing these features; the beginning or duration of this phase. It is important to note that as a social fact, also is mediated by culture. Philibert and Wiel (1998), identify the adolescence as a stage that may be considered as a result of civilization (quoted by Flórez 2006:25). For practical reasons, population statistics usually categorize the teenage from 12 to 19 years. In our paper this classification responds to risk factors to which teens are exposed according to their age. Teenage pregnancy is conditioned by contextual and institutional factors, such as government actions, family structures, the social networks, and cultural particularities.

Teenage pregnancy then responds to the context, to preconceptions that are built around being mother, educational contexts, etc. For purposes of this study, we decided to consider adolescents between 13 and 20 years, classified into two groups, pre-adolescence and adolescence. The pre-teen were seen between 13 and 16 years and the "teen" between 17 to 20 years. For this classification, first, it was taken into account the histogram of total births by age of the women, and second, the risk factors to which women are exposed.

Data and Methodology

This general portrait of regional conditions was used to inquire about the consequences of teenage childbearing on school performance (scholar qualities) and socioeconomic welfare; and its variations among residence areas and regions. For school performance we used *educational level*, for economic welfare we would use the *wealth index* calculated by the DHS. The retrospective information of the DHS of 2010 let us compare achievements between teenage mothers and older ones checking their current conditions. Correspondence analysis (CA) applied to this data showed important association between socioeconomic current conditions and fertility levels in presence of teenage childbearing and in absence of this condition. We used as active variable the proximate determinant of fertility: *Educational level, Wealth index, Age at first birth, Current age (at 2010), Total children and Type of residence*. As an illustrative variable we used a constructed variable that relates a current age group (Teen, Young, and Adult) with the age group at first birth (no child, Teen, Young, and Adult). We presented a general analysis for the whole country and analysis for each region and sub region by using indicators. According to Menkes y Suarez (2003), in México, teenage childbearing is associated with a marital project (at least a free union); even school attendance and a higher school level diminish the childbearing risk (on married and single women), that risk is still higher in teenage unions. For Colombia, a country with a high rate of married women (49% including formally married and couples living together), it is important to include *marital status* in the analysis.

Active variables in CA are considered as those that shape a "field". In terms of Bourdieu (1991): "I use Correspondence Analysis very much, because I think that it is essentially a relational procedure whose philosophy fully expresses what in my view constitutes social reality. It is a procedure that thinks in relations,

as I try to do with the concept of field" (Bourdieu, 1991. Cited in Lebaron, 2007, p.13). On the other hand, illustrative variables take the place of *stances* inside the field. Its distribution establishes the consequences and duration of teenage childbearing.

To conclude, it is important to mention that it is still limited to talk about causal relations because of the complexity of fertility. Our conclusions were developed in terms of proximate determinants as it is common in fertility studies. The new contribution to the common analysis is the inclusion of regional differences on the analysis of consequences of teen childbearing and its relations with future educational and socioeconomic conditions. Ineffectiveness of public policies concerning teenage fertility can be prevented and can also be corrected if these kinds of differences are considered in its design and implementation.

Results

A first glance to the relations between variables confirms the results and conclusions we found in literature (Florez & Soto, 2005, 2006, 2007; Menkes & Suárez, 2003). Using CA as we explained in the Data and Methodology section, we used the so-called "objective-variable" as an active variable in order to build the field of objective relations. The main reason for this choice is that those entire variables are proximate determinants of fertility. Figure 1 shows strong relations between low educational level and poverty, as well as a higher number of births. Considering age at first birth, it is clear that women who start childbearing early (Teenagers) have more children than those who start later. Menkes & Suárez (2003) drew similar conclusions for Mexico establishing that if a woman starts childbearing before the age of 19, it will be more probable to have more children in the whole reproductive age.

In summary, the horizontal axis of figure 1 is describing the age distribution of women and separating those with no child to the right from those with at least one child to the left. Vertical axis is describing achievements on education; on the top we find the lowest levels of education and on the bottom the highest ones (graduate levels). This axis is also showing the distribution among wealth; the poorest women are associated with the lowest levels of education and vice versa. Similarly, this axis also locates on the top, women with 3 and more children, and on the bottom women with one to two children. So, the horizontal direction is representing aging of women (from right to left) and the vertical, an integrated variable of wealth conditions. It is remarkable the strong difference between rural and urban areas. The first ones are strongly associated with the worst conditions, the higher fertility levels and a lower age at first birth.

According to our approach it is important to take into account the differential utility of education among areas. A higher level of education could be useless in rural areas considering the main economic activities and the ways to earn the sustenance of households. A low level of education in a rural household should not be directly associated with a condition of deprivation, although the recent migration trends from rural to urban areas show an increasing desire of young peasants to get involved in formal education in order to improve living conditions (Murat, 2003). A similar situation occurs with poverty measures (Wealth index), because they use indicators centered on urban conditions that bias the results. This investigation pretends to avoid this problem by separating the data among regions and areas. Differences on fertility levels between areas should not be underestimated. The coverage of health services, the cultural conditions of rural households and the prevalence of armed conflict in this area are issues that explain those differences.

A technical detail deserves attention. The percentages of inertia retained by the first, second, third, and fourth axes are 15.4 %, 12.5 %, 7.3% and 6.5 %, respectively. An accumulated inertia of 27.8% is a good amount for a factorial map.

Now we want to see what happened with illustrative variables. As we said, those variables are considered different from the active ones because they involve subjective conditions, desires, aspirations, or in some way decisions of women and their current position on the field of objective relations. The first one is a constructed variable that relates the current age with the age at first birth. We named the categories of this variable concatenating the current age group with the age group at first birth. So if there is a 30-year-old woman with a 15-year-old son, she will be labeled as: "Adult_Preeten_Mother" because she is currently an adult and her first son was born when she was 15.

Figure 2 has the projection of the constructed variable called "Current condition" on the first factorial map of the previous CA. We used blue for women without children, green for preteen mothers at different current age groups, orange and red for teen mothers, and purple for adult mothers. The location of the category's name must be interpreted using the axis description mentioned above because it is located in the center of mass of the entire women in the category. In summary, from left to right we have younger to older women and from top to the bottom we have best to worse living conditions.

Women without children seem to be independent from wealth because they are distributed almost uniformly in the vertical axis. Differences are explained by age, the older women have more years of education simply because they are older. On the other side we find women with at least one child. Preteen mothers (green) are located at the top, being it, the worst position in the chart; it means that preteen childbearing is associated with low educational levels, more than 5 children per woman, poverty and rural areas. In a better but not good location we found teen mothers (red and orange) associated with a little bit higher educational level, the second and the third quintile of wealth and with a number of children from 3 to 5. Finally, adult mothers occupied the best position, associated with the highest levels of education and the last quintile of wealth.

These results can be used to promote public policies focused on education and family planning. Prevention of teenage pregnancy and promotion in the use of anti-conceptive methods could be well accepted if we aim to improve and equalize women conditions. To precise this intention we must look deeper, allowing differentiating areas from regions. We divided the data and performed the same analysis for women living on rural areas and women in urban areas. We included the marital status variable and excluded women without children in order to focus on mothers. The figure 3 shows the same distribution and relations between teenage childbearing and achievements but it seems to be stronger in rural areas. Adult women are closer in the urban map that means more similar conditions no matter when they had their first birth.

Flórez & Soto (2007) have shown that differences on living conditions between teen-age mothers and adult mothers tend to be equalized in the mid and long time. It implies a reproduction of inequalities on wealth and education because women on the highest quintiles spend less to equalize theirs than those on the lowest. It seems to be the most significant difference between areas, with a clear disadvantage for rural women.

For a further analysis, it is important to summarize separately the main results of the CA. For urban areas the percentage of inertia retained by the first factorial map is 19% and for the rural area is 21%. In the urban map the horizontal axis is associated with wealth, educational level and the total births from left to right, while the

vertical axis describes marital status and age. In the rural map the entire variables are distributed in a diagonal direction from the left-down corner (worst living conditions) to the right-top corner (best living conditions) as can be seen in figures 4 and 5.

Going back to our consideration about the bias in poverty and school performance, we used two more illustrative variables in order to enlarge the comprehension of rural situation and overcome a biased interpretation. First we used the relation to the household head. This variable allows seeing differences due to familiar composition without using and specific index of poverty. Figure 6 shows there is no a specific relation between woman's position on the household and the wealth, education and fertility condition. Instead, in the rural map can be observed a little advantage for women who are married or who are household heads, but it does not seem to be significant.

Then we took the declared Ideal number of children, although this variable has intrinsic problems (Bonggarts, 1997) it is still useful to observe fertility preferences and compare it with the so-called objective variables. Using the same CA divided by area but excluding the Age in order to minimize the effect of responses conditioned to the current total number of children, we projected the Ideal number of children grouped in five categories: from one child to more than five (including Do not know/Do not answer). It is remarkable that for rural areas the strongest relation occurs between the desire of more than five children; the fact of having more than five children, the poorest wealth condition, no education and the start of childbearing at teenage (look at right-down corner of figure 7). In the opposite corner we find adult mothers with higher education, a lower amount of children, and a mid-level of wealth. In urban areas we find the same associations in the second and the first quadrant.

Now we turn to sub-regional analysis. First of all it is important to locate geographically regions, sub-regions and metropolitan areas. These regions and areas allow for estimation of indicators we would compare. Map 1 show those three geographical areas using different color and lines. In this section we used the results commented above and we focused in cross table obtained with the variables: sub region of residence, and the constructed "Consequent" variable. For this analysis we used simple Correspondence Analysis. Figures 8 and 9, show the spaces of rows (sub regions) and the spaces of columns (categories of Consequent).

There is a clear relation between sub region and fertility dynamic. He higher levels are clearly associated to rural areas (refer to map 6). This should be observing and take in account for policy maker. There is sub region where the first step could be the increasing of fertility control, while the metropolitan areas could need a different strategy.

Spatial Analysis

It was important to carry out a spatial analysis recognizing the importance of graphing information. Social facts, such as adolescent fertility, are problems that can be analyzed from its location in space. In our paper, the survey provided a disaggregation of the information because it is representative at national, regional and sub-regional levels.

These spatial units allowed us to use the information placing it in the territories, comparing the results of CA and finding differences and similarities in the country.

The use of geographic information systems is useful for the theoretical approach and the purposes of this paper. Human geography attempts to rescue the differences, inequalities, and the subject itself in the scientific

perspective that studies the space. From space are not only important natural or physical characteristics, not only functions as a container, space influences, symbolically, the construction of subjects, their preferences, and their identities.

Public policies using a differential approach not only would analyze the magnitude and implications of teenage pregnancy, would also get to understand the problem from their regional, cultural, educational, and economic particularities, which in turn would allow greater efficiency of government action. The use of Geographic Information Systems (GIS) is a tool that facilitates the researcher's approach to reality, involving spatiality in decision-making.

We use some concepts of Bourdieu in light of relational thinking, to argue that the practices and preconceptions of adolescents are dynamically configured within a social space. As it is possible to represent on a factorial plane the positions girls take according to their income or education level, we can also focus the problem and to consider the implications of teenage pregnancy in the territories with the aim of making a differential approach.

This empirical approach allows us to look, not only to the space of the positions, but also to the position choice, the perception, and the disposals of the actors and institutions, such as the family or the state.

Each field implies certain specific disposals (Habitus). This is the explanatory principle that Bourdieu (1988) uses to establish a feedback dynamic between social space and space built by the decisions. From this approach, we conducted a spatial analysis of information at the regional and sub-regional level, analyzing regional particularities with socio-economic contexts.

Conclusions

The use of CA allows us to observe the changes in association considering regions between young mothers and the other women, teenage mothers are located in a disadvantage position (third quadrant in figure 5) in comparison with adult mothers and mothers without children. Retrospective information also allows us to follow conditions trough time, giving us an idea of intensity and duration of consequences. Over the alternative of using linear models, we prefer to inquire data with no assumptions of distribution or independence. These methods (CA) let data show associations, variations and distributions just the way they appear, allowing to detect differences completely related with data. Resuming again Bourdieu (1984 p.103) "The most independent of '*independent*' variables conceals a whole network of statistical relations which are present, implicitly, in its relationship with any given opinion or practice".

We consider teenage fertility as a strategic field of public policy and family planning. The results we found out can be helpful to consider different ways to understand and intervene on the territories. As it has been established in México (Menkes & Suarez, 2003), the results indicate teenage childbearing is mainly a social phenomena, strongly related with *Marital status, Age* and *Educational level*.

Colombia, as many countries in Latin America, is a country of regions. Public policies with a differential approach could be useful to treat the teenage fertility issue at a micro level. On the other hand, the qualitative evidence we consulted suggests a more complex vision of fertility. Indicators we use to refer to a successful life (*wealth index and school level*) are not necessarily considered equally for all women. Expectations, personal experience and aspirations, familiar environment, ethnicity, and religion, define what a woman

considers a successful life. It is not possible to capture this complexity by surveys, so we insist on the importance of complementing statistical analysis with qualitative information in order to reach a comprehensive understanding of fertility behavior.

Figures and Tables

Table 1 – Trends and levels of specific fertility rates and other measure of fertility distinguished by area of residence in Colombia from 1990 to 2010

Age	Year											
	1995			2000			2005			2010		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
15-19	74	137	89	71	134	85	79	128	90	73	122	84
20-24	150	245	173	124	212	142	114	199	132	110	168	122
25-29	135	190	148	120	160	129	105	155	116	95	119	100
30-34	91	132	101	87	141	99	70	101	77	69	74	70
35-49	53	158	82	54	106	66	55	88	63	46	74	52
TFR	2.5	4.3	3.0	2.3	3.8	2.6	2.1	3.4	2.4	2.0	2.8	2.1
GFR	92	150	107	80	130	91	74	117	83	68	96	74

Source: Adapted from Final Reports of the Demographic and Health Surveys 1995 to 2010 (available at www.measuredhs.com)

Table 2 – Indicators related with fertility levels by region

Region	Incidence of multidimensional poverty (a)	Use of modern anticonceptive method	Know secondary effects of the method	Women with intercourse before aged 18	Infertility problems	Household ethnicity
Caribe	41.8	65.4	36.7	52.2	14.2	24.2
Oriental	29.2	75.3	50.4	59.0	10.7	3.7
Bogotá	11.9	75.7	65.6	58.5	9.5	2.1
Central	30.7	75.3	59.2	66.5	9.9	9.0
Pacífica	32.0	73.7	56.2	66.1	10.6	35.4
Orinq. y Amazonía	35.6	72.1	52.8	78.3	9.3	19.2

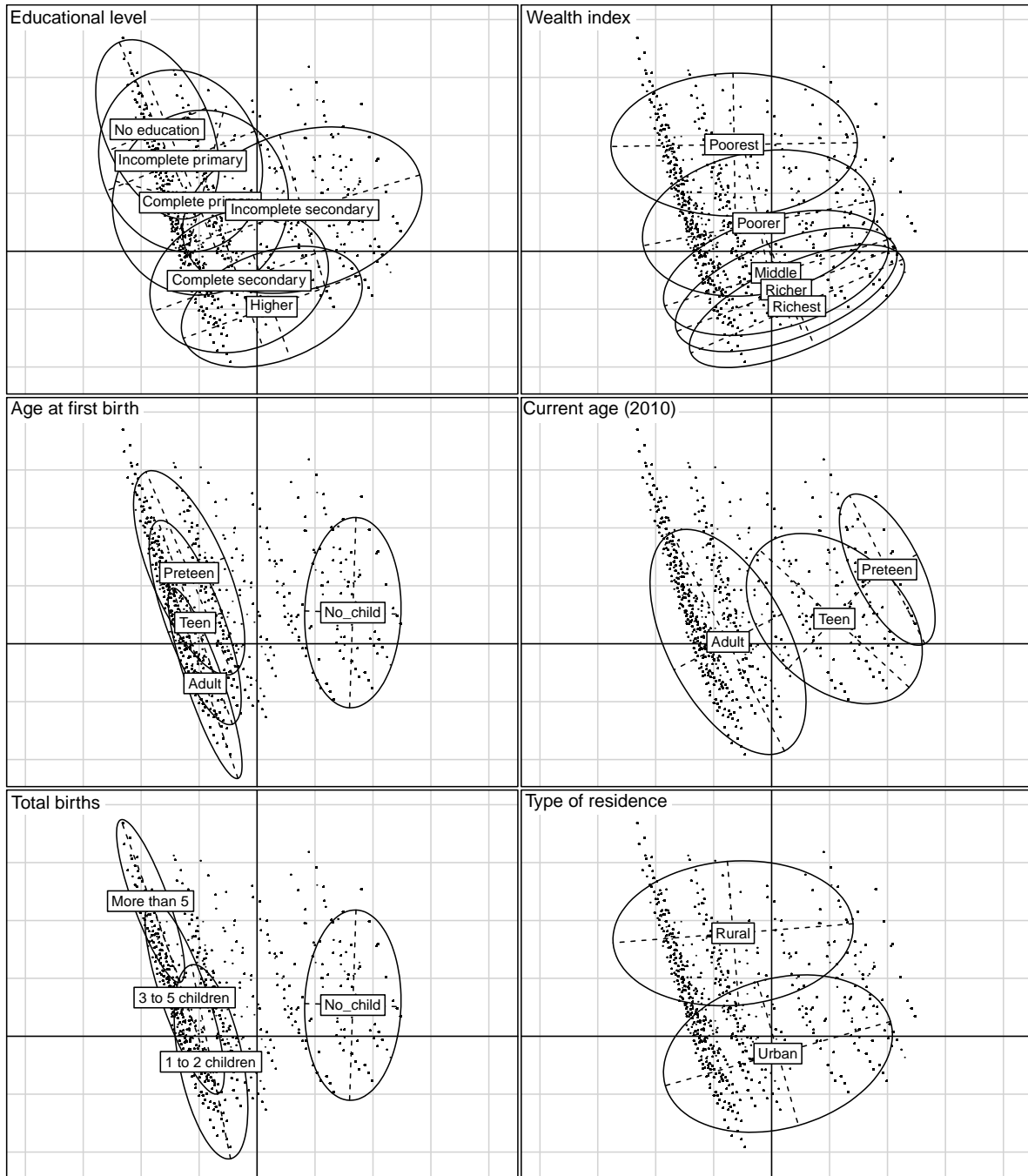**Source:** Final Reports of Demographic and Health Surveys 1995 to 2010 (available at: www.measuredhs.com)
(a) Departamento Administrativo Nacional de Estadística DANE – Colombia (available at: http://www.dane.gov.co/). All values are percentages.

Table 3 – Percentage of mother by age group and region

| Region	Pre- teen mothers	Teen mothers	No child
Orinoquía-Amazonía	9.6%	39.9%	30.6%
Oriental	6.6%	34.6%	33.7%
Pacífica	5.1%	33.0%	35.9%
Central	5.7%	32.1%	36.4%
Atlántica	5.7%	31.1%	35.7%
Bogotá	2.2%*	27.8%	37.5%

Source: Author´s calculations with DHS 2010. * Estimations has an Estimate coefficient of variance higher than 10%

Figure 1 – Scatter plot of active variable from Multiple Correspondence Analysis. Colombia 2010
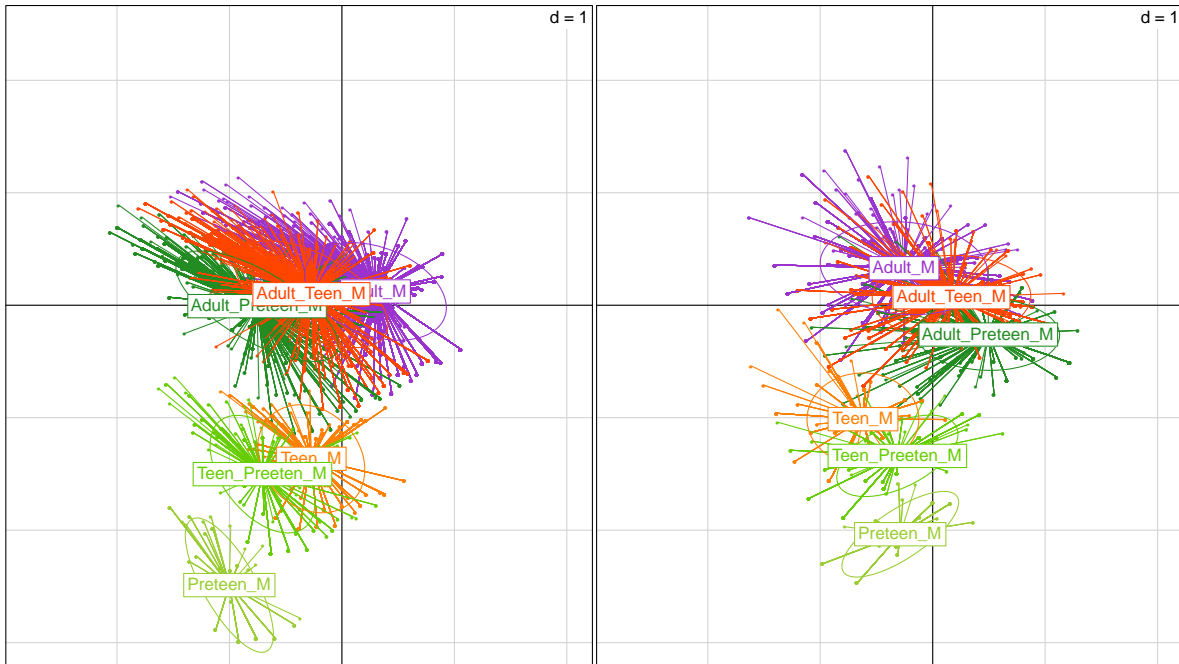
Figure 2 – Illustrative variable on scatter plot that relates current group age with age at first birth
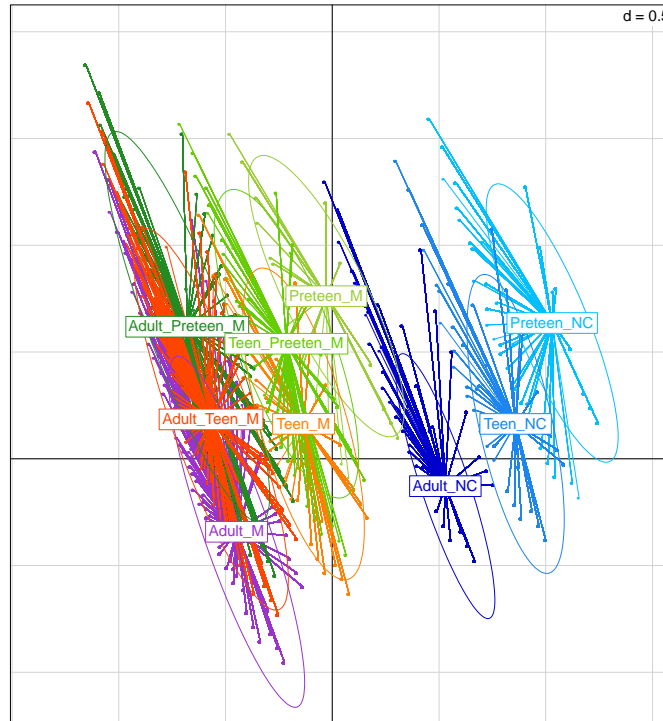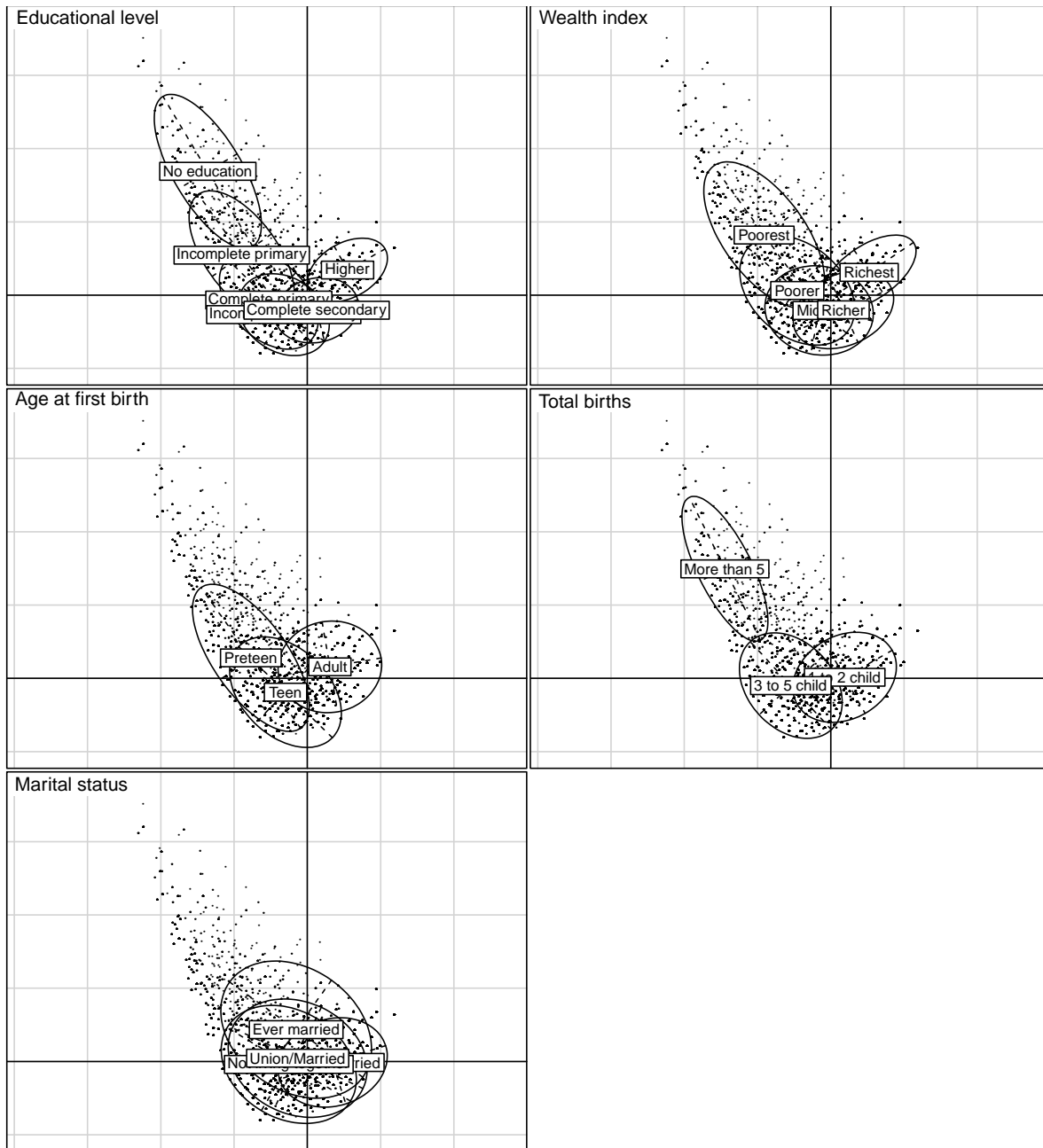
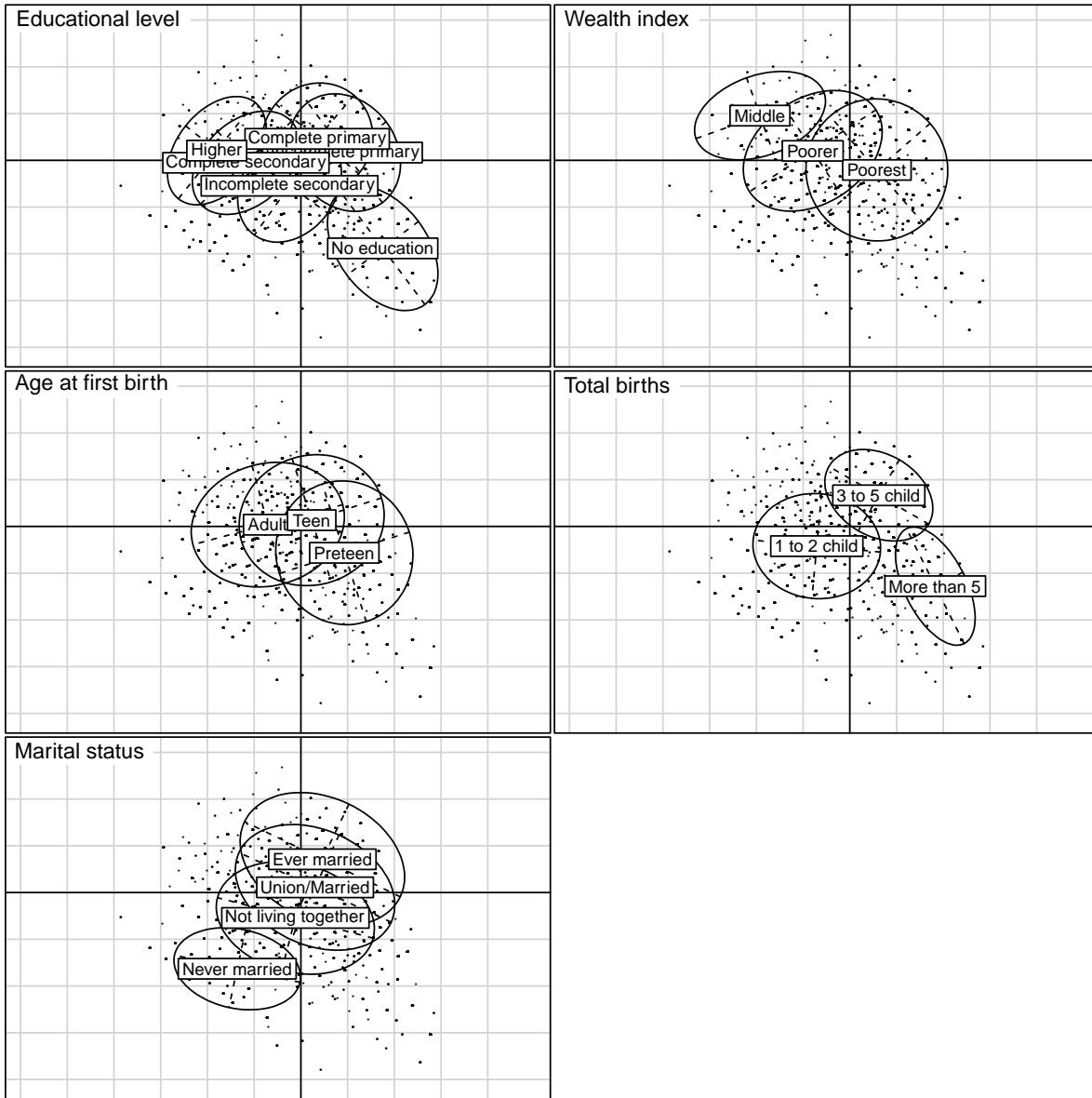**Figure 3 – Illustrative variable on scatter plot that relates current group age with age at first birth by area**

Codes: *Adult_m* (Adult mothers), *Adult_teen_m* (current adult teen mother), *Adult_nc* (current adult no child), *Teen_m* (current teen mother), *Teen_nc* (current teen no child), *Preteen_nc* (current preteen no child). *Right:* Rural area; *Left:* Urban area

Figure 4 – Scatter plot for active variables – Urban area DHS 2010

Educational level

No education

Incomplete primary

Higher

Complete primary

Incom Complete secondary

Wealth index

Poorest

Richest

Poorer

Mid Richer

Age at first birth

Preteen Adult

Teen

Total births

More than 5

3 to 5 child 2 child

Marital status

Ever married

No Union/Married ried

Figure 5 – Scatter plot for active variables – Rural area DHS 2010

Educational level

Higher | Complete primary | Complete secondary | Incomplete primary | Incomplete secondary | No education

Wealth index

Middle | Poorer | Poorest

Age at first birth

Adult | Teen | Preteen

Total births

3 to 5 child | 1 to 2 child | More than 5

Marital status

Ever married | Union/Married | Not living together | Never married
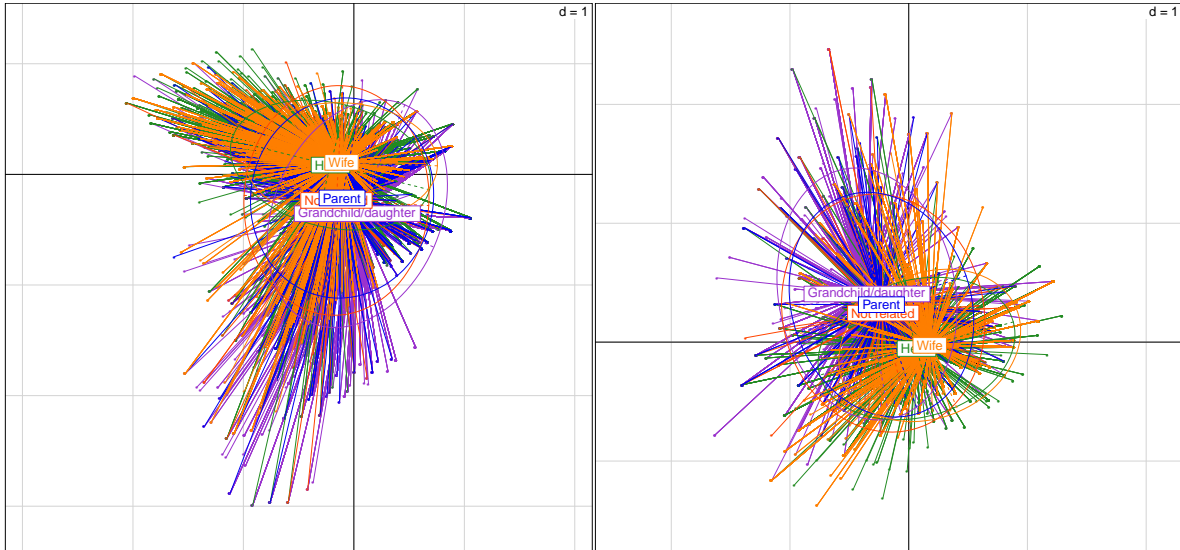
Figure 6 – Illustrative variable: relation to the household head

Source: Author´s calculations with DHS 2010 using R (Package FactoClass and ade4: Dray, S. & Dufour, A. 2007; Pardo, C. 2007)
Codes: *Right:* Rural area; *Left:* Urban area

Figure 7 – Illustrative variable: Ideal number of children

Source: Author´s calculations with DHS 2010 using R (Package FactoClass and ade4: Dray, S. & Dufour, A. 2007; Pardo, C. 2007)
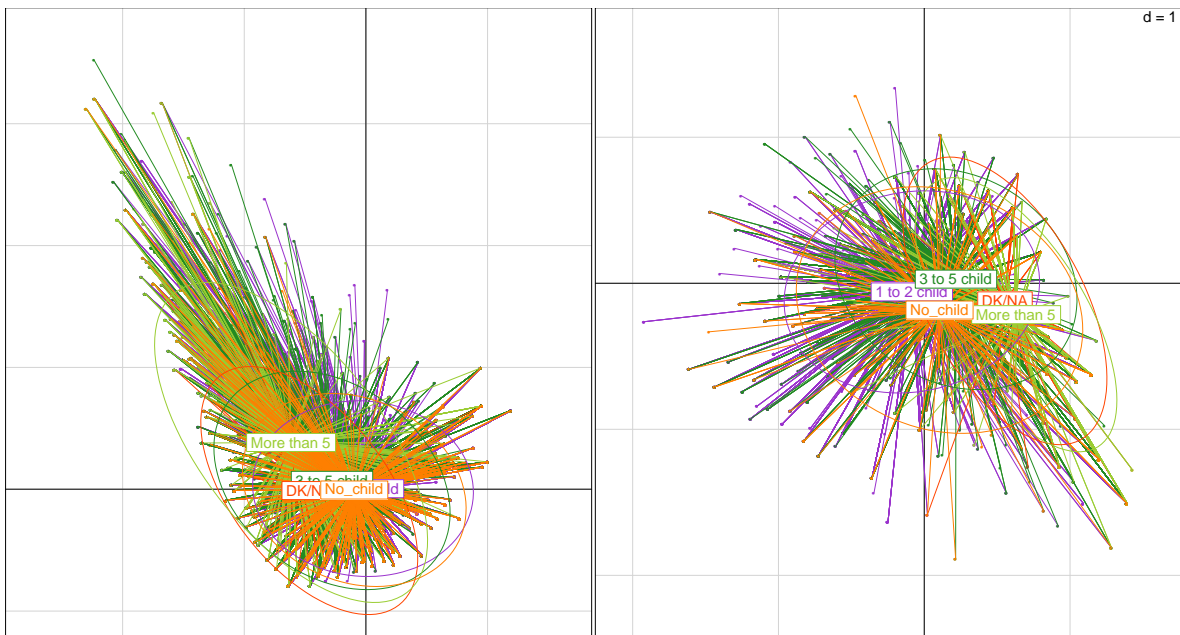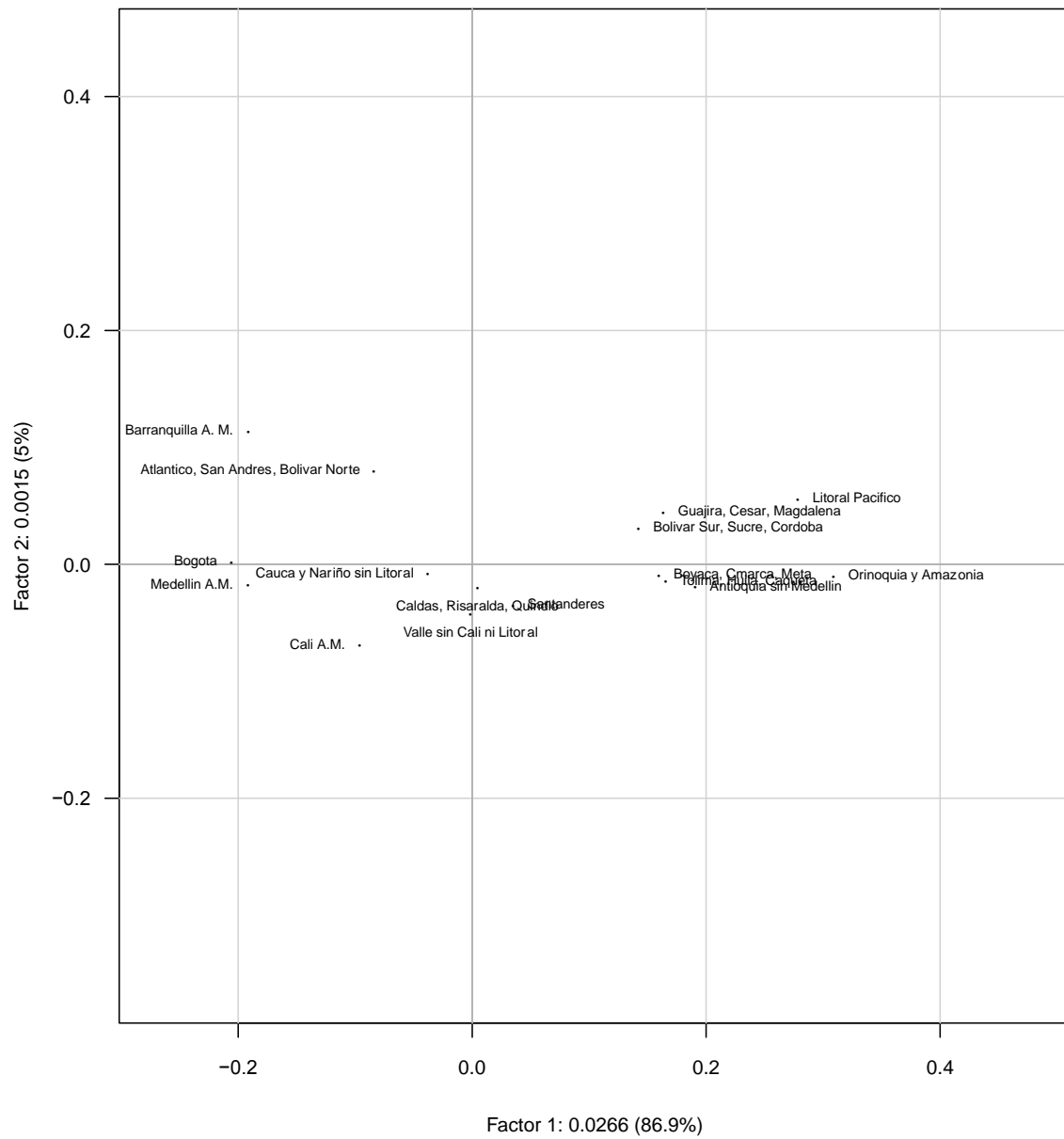**Codes:** *Right:* Rural area; *Left:* Urban area

Figure 8 – Sub region projection (SCA)

Figure 8 – Sub region projection (SCA)

Factor 2: 0.0015 (5%)

0.4

0.2

Barranquilla A. M.   ·

Atlantico, San Andres, Bolivar Norte   ·

· Litoral Pacifico
· Guajira, Cesar, Magdalena
· Bolivar Sur, Sucre, Cordoba

Bogota ·
Medellin A.M. ·   Cauca y Nariño sin Litoral ·   · · Boyaca, Cmarca, Meta   · Orinoquia y Amazonia
0.0   · Tolima, Huila, Caqueta
                                                          · Antioquia sin Medellin
                        Caldas, Risaralda, Quindio · Santanderes
            Cali A.M. ·   Valle sin Cali ni Litoral

−0.2

        −0.2   0.0   0.2   0.4

Factor 1: 0.0266 (86.9%)

Source: Author´s calculations with DHS 2010 using R (Package FactoClass and ade4: Dray, S. & Dufour, A. 2007; Pardo, C. 2007)

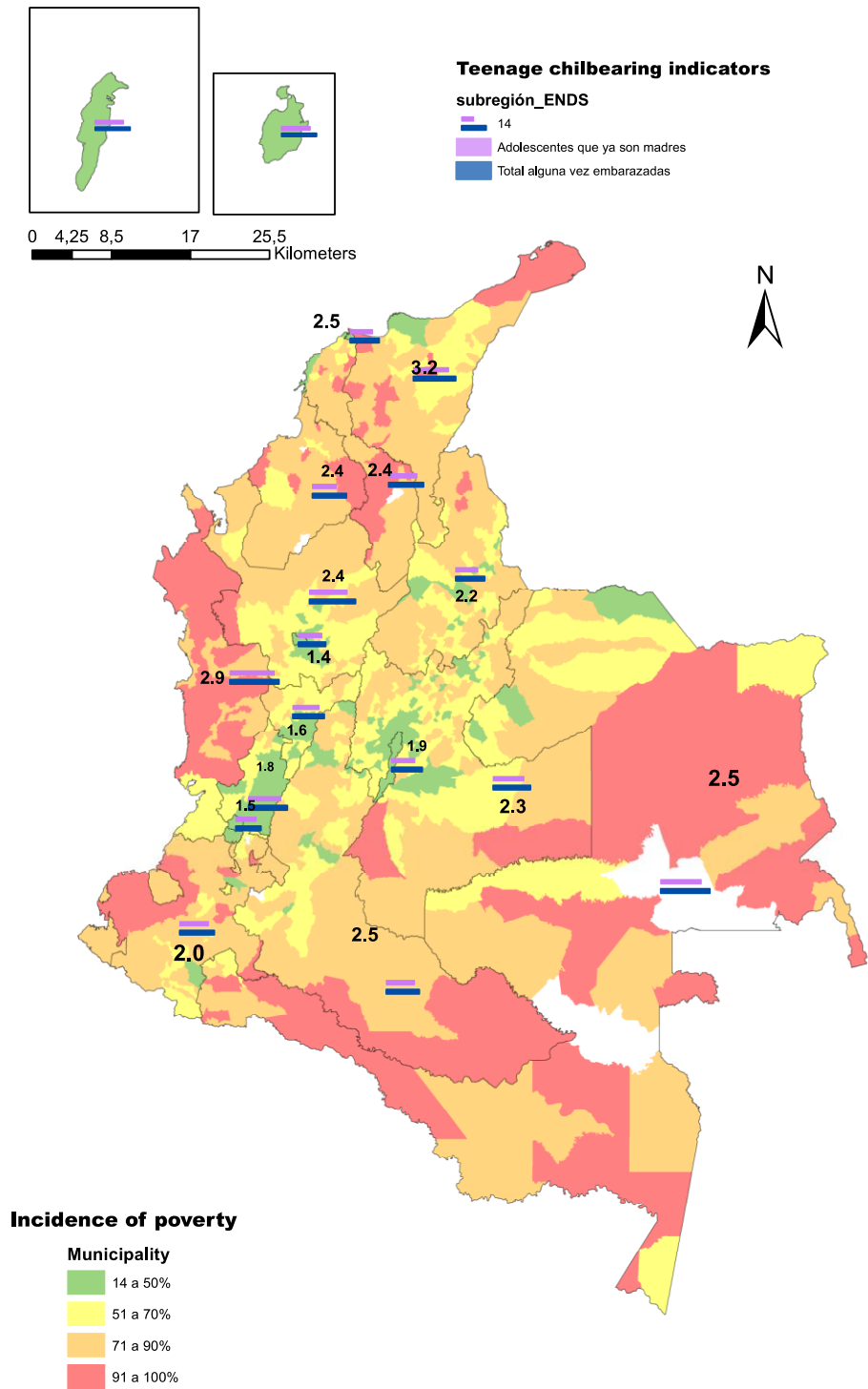**Figure 9 – Consequent of births (SCA)**
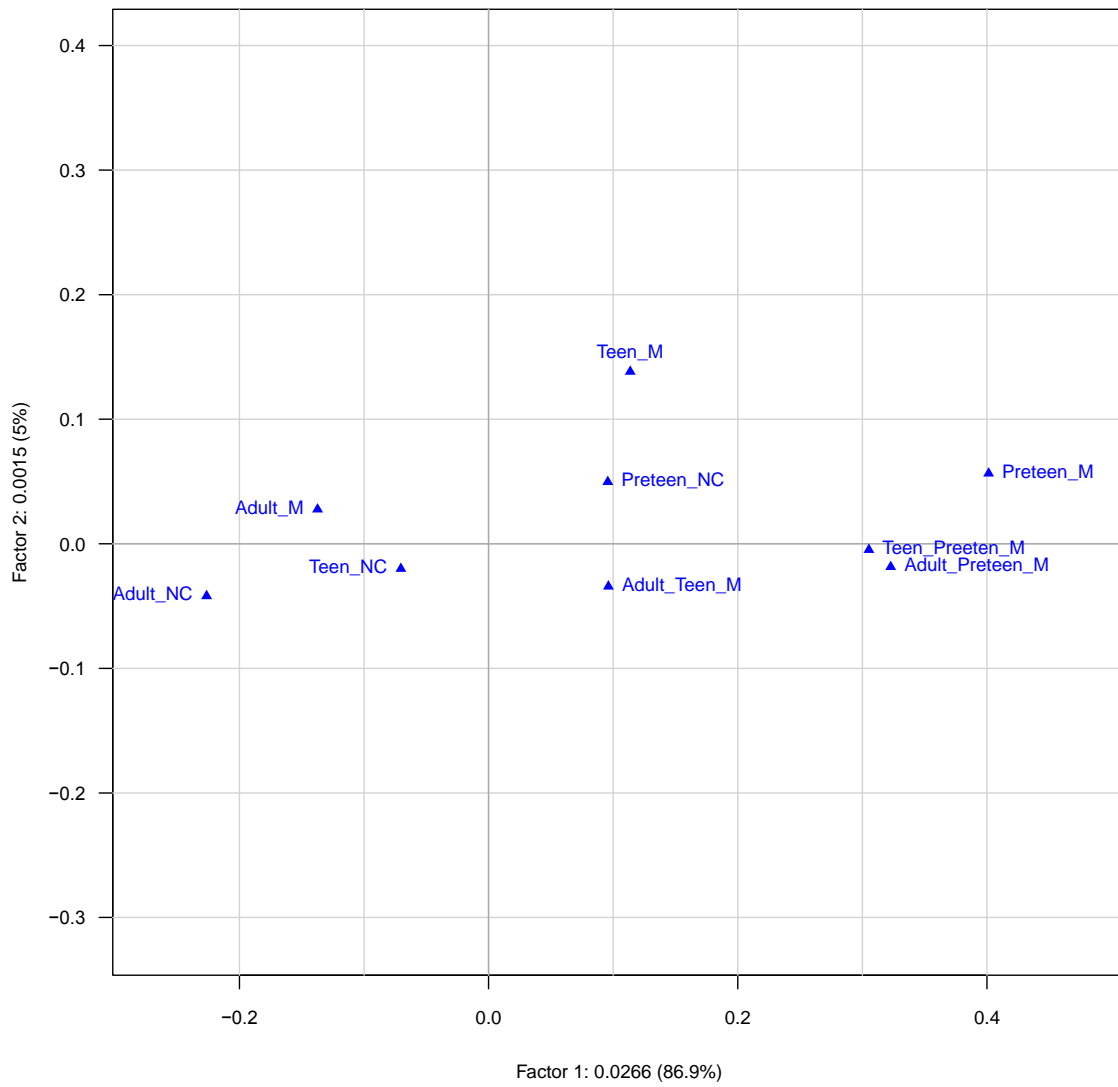
Map 1 – Regions, sub regions and Metropolitan Areas

Atlantico, San Andrés y Bolivar
Sucre y Córdoba
Guajira, Cesar y Magdalena
Antioquia
Caldas, Risaralda y Quindio
Tolima, Huila y Caquetá
Cauca y Nariño
Litoral Pacifico
Valle
Cmarca, Boyacá y Meta
Santanderes
Orinoquia y Amazonia

Metropolitan areas
Barranquilla
Bogotá D.C.
Cali
Medellín
Deptal. limit

Source: Author´s elaboration with DHS 2010 and cartography base of National Planning Department

Map 2 - Poverty and teenage pregnancy.

Teenage chilbearing indicators

subregión_ENDS

14

Adolescentes que ya son madres

Total alguna vez embarazadas

0   4,25 8,5   17   25,5

Kilometers

N

2.5

3.2

2.4   2.4

2.4   2.2

1.4

2.9

1.6

1.9

1.8   2.5

2.3

1.5

2.0

2.5

Incidence of poverty

Municipality

14 a 50%

51 a 70%

71 a 90%

91 a 100%

* The total fertility rate was calculated for each subregion.
  This data is located in the center of each subregion.

Kilometers

0   60 120   240   360

Elaboration on data from DANE (2005) Municipal and sub-indicators of adolescent pregnancy.

Map 3 - Number of births by teenage mothers and educational level.

Kilometers

0 3,5 7   14   21   28

N

Woman's educational level

Departments

🔴 No Education

🟢 With an education

🔵 Higher education

Births per 100 teenager women

Municipalities

🟩 0 - 1

🟨 1 - 4

🟧 4 - 10

🟥 10 - 53

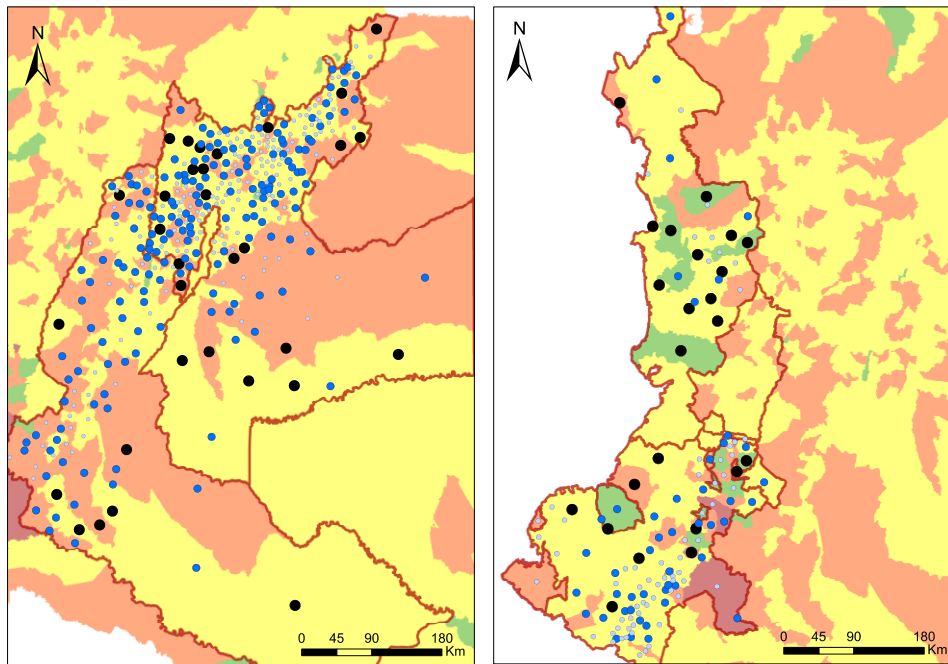100 50 0   100   200   300
Kilometers
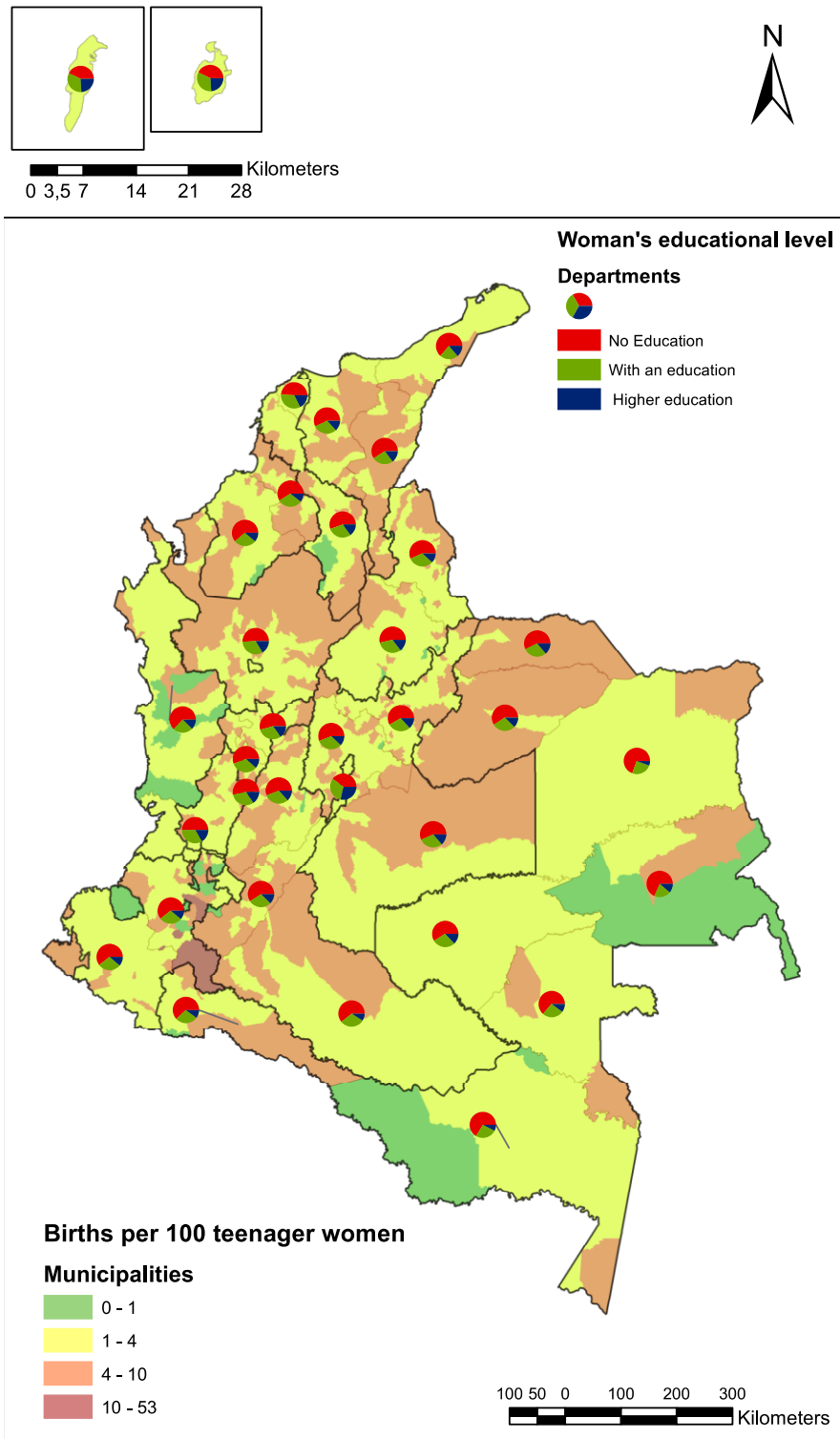
Based on data from DANE (2010) and educational level by sub-region, taken from ENDS (2010)

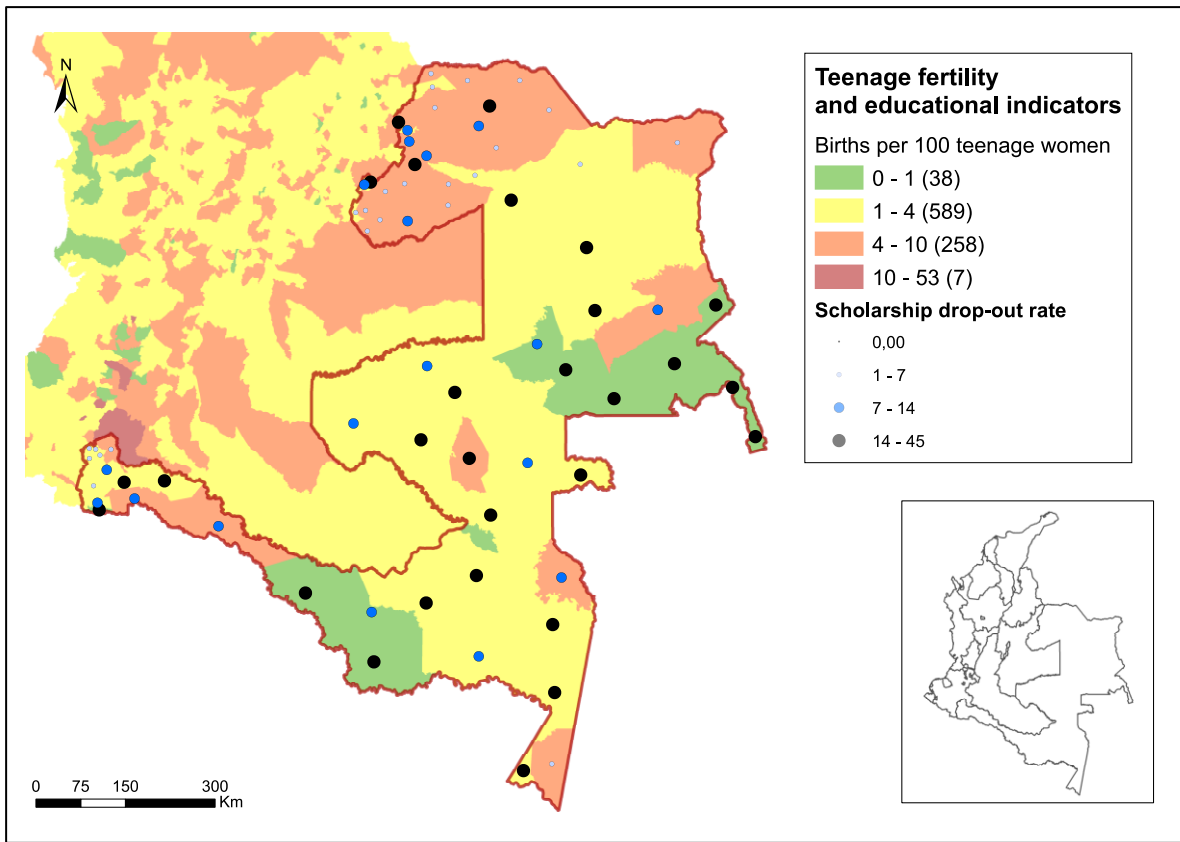**Map 4 - Number of births of teenage mothers and school dropouts. North zone**
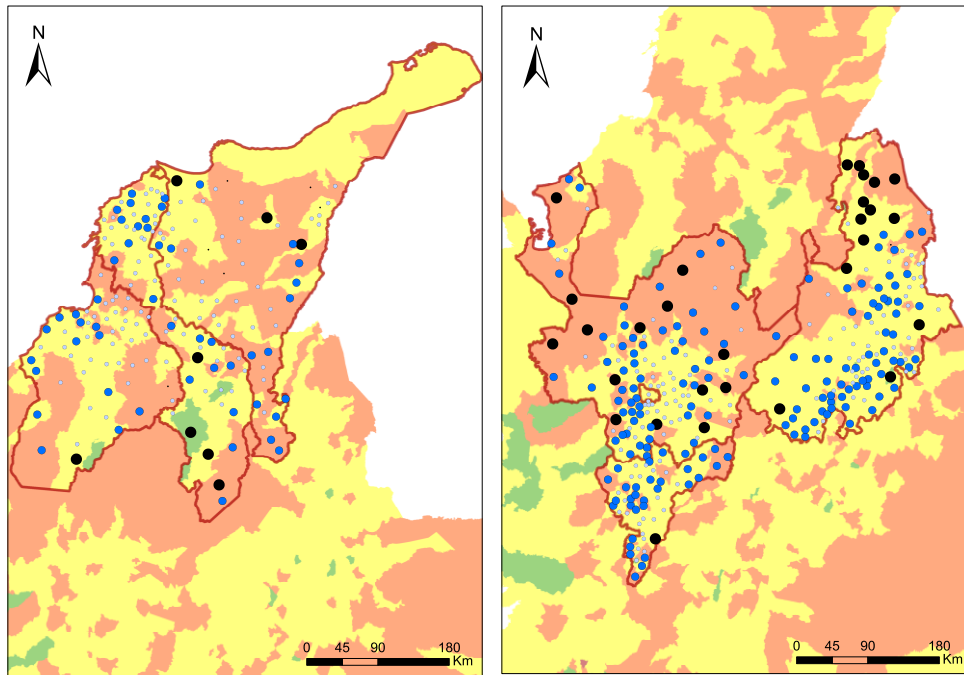
Based on data from DANE (2010) and Ministry of Education (2009)

Map 5 - Number of births oft eenage mothers and school dropouts. Central zone
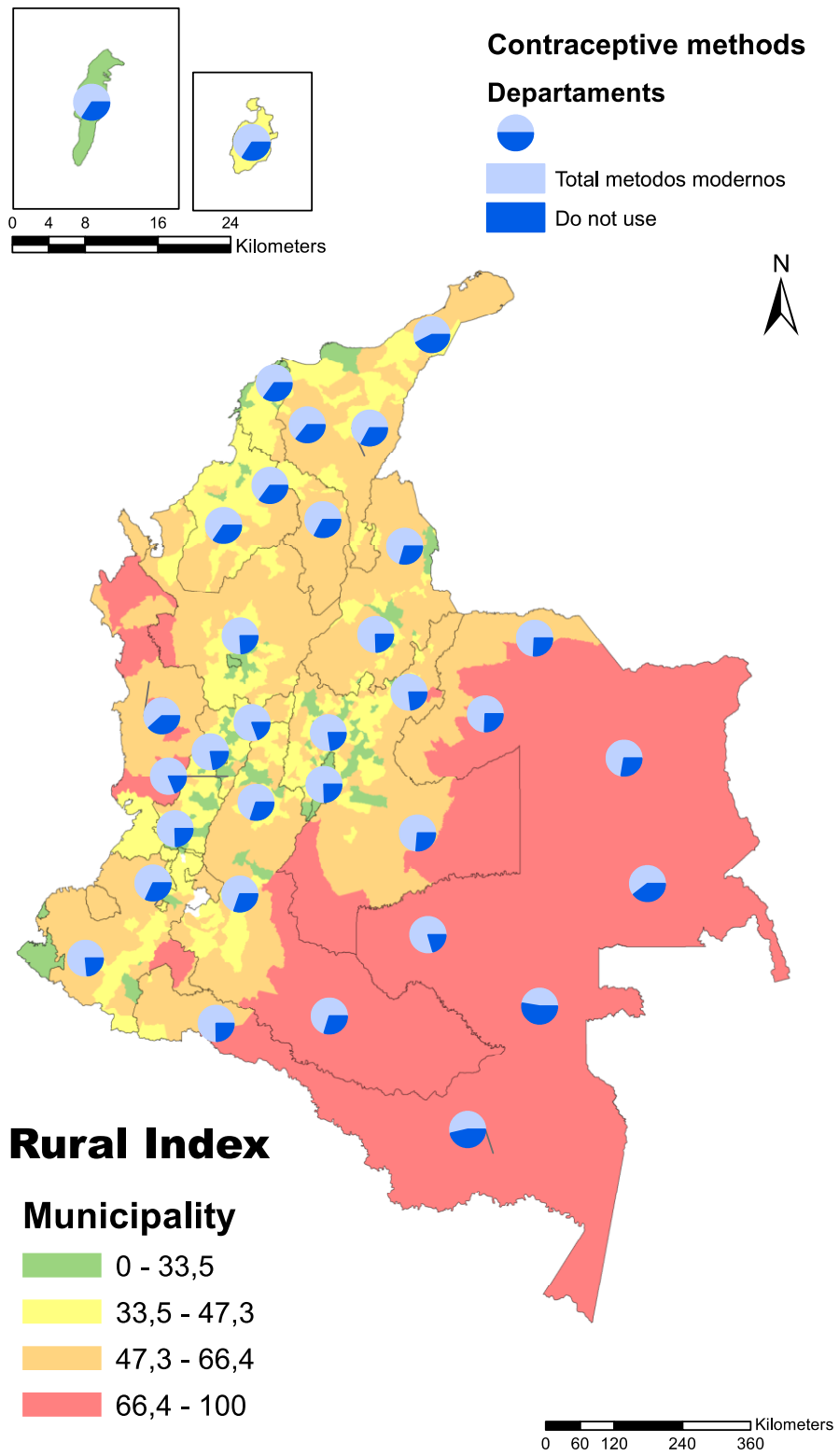

Based on data from DANE (2010) and Ministry of Education (2009)

Map 6- Number of births of teenage mothers and school dropouts. South zone

Teenage fertility and educational indicators

Births per 100 teenage women
- 0 - 1 (38)
- 1 - 4 (589)
- 4 - 10 (258)
- 10 - 53 (7)

Scholarship drop-out rate
- 0,00
- 1 - 7
- 7 - 14
- 14 - 45

0   75   150   300
Km

Based on data from DANE (2010) and Ministry of Education (2009)

Map 7 - Rurality index and contraceptive methods

Contraceptive methods

Departaments

Total metodos modernos

Do not use

0 4 8   16   24
Kilometers

N

Rural Index

Municipality

0 - 33,5

33,5 - 47,3

47,3 - 66,4

66,4 - 100

Kilometers
0 60 120   240   360

Based on data from UNDP (2011) and ENDS (2010).

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