

# NEGATIVE DISCREPANT FERTILITY AND RELATIONSHIP OF GENDER IN LATIN AMERICA - THE BRAZILIAN CASE

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## ABSTRACT

The reduction in fertility to below replacement levels in Less Developed Countries (LDC), and to extremely low levels in Europe have been associated to a more equilibrated gender relationships. Faced with low level fertility in Latin America, increasing number of women who desire having a number of children over what they had and the changes in legislation relating to the duties of biological father in Brazil, it becomes extremely important to understand how reproductive motivations of each member of the couple interact to form a joint action in childbearing particularly the influence of partners in planning and reproductive behavior. The aim of this work is to verify the unsatisfied demand for children among formally married or cohabiting women from a gender perspective in Brazil. Data analyzed came from 1996 and 2006 Demographic and Health Surveys conducted in Brazil. The outcomes show that negative discrepant in fertility increased in the period considered and the highest ratio occurred among women with partners who desired fewer children than them. These findings demonstrate the need to study the role of the husbands' opinion in decision-making for children in the presence of discrepant fertility in LDC, starting with the case of Brazil where fertility is below replacement level.

## INTRODUCTION

The reduction in fertility to below replacement levels in Less Developed Countries (LDC), and to extremely low levels in Europe, have been associated to a more equilibrated gender relationships, particularly among the later. This greater emphasis on the more balanced gender relations is due to the fact that women are now gaining more space in the society, enjoy the same rights and duties as men, and earn their place in the labor market. In accordance to the traditional conceptual mainframe, the consequence of the changing role of women of reproductive age to active members of the society, like man, would mean a substantial reduction in fertility. Beckman et al (1983), among others, maintain that women's desire for children always have a stronger influence than that of their male partners. Changes also occurred in the role of men involved in the formation process of procreation and family but this did not receive more attention. Thomson (1997) shows that wishes and intentions of men of reproductive age influence with a force equal to the wishes and intentions of women in determining the final size of offspring.

According to Thomson (1997) and Puur et al (2008), in economically developed societies, it is expected that husbands' wishes start to have greater influence on reproductive plans of their companions because marriages in these societies have smaller gender inequalities which could lead to increased desire for children by their wives, above the actual number of children initially desired. However, Puur et al (2008) argued that men with more egalitarian values and behavior might have higher cost, especially in terms of time and emotion, of childrearing than those in more traditional contexts, which can reduce the number of children they desire.

Faced with this new reality regarding the influence of gender relations in fertility behavior, the low level of fertility in Latin America and the more and more frequent appearance of women who wish to have a number of children over what they effectively had in Latin American context (Wong, 2009), it is extremely important to understand how reproductive motivations of each member of the couple interact and form a joint action in having children.

In Brazil's case, the knowledge of the influence of partners in the plan and reproductive behavior becomes even more compelling, since the country has undergone major changes in legislation relating to the duties of the biological father. This legal framework relating to men of all social strata calling on them to responsible parenthood, at least economically, creates questions of how this new role has affected the desire and intentions of men for children.

It is believed today that due to the influence of the media, legal institutions that subject offenders to punishment, and the increase demand of women in relation to the obligations of their partners, men would have an important opinion on the implementation of reproductive preferences of the couple. Following the arguments of Purr et al (2008), increase in men's responsibilities would lead to a smaller number of children desired. On the contrary, it is believed that, once the replacement level is reached, women would desire more children because they have more shared responsibilities. Our central hypothesis is that due to the more involvement of men in reproductive decisions and their greater bargaining power in this process, women end up having fewer children they desired.

From these arguments one might question the type of gender relations prevalent among LDC, where women increase their level of education, are part of the most successful in the labor market and seem at every moment getting greater autonomy. However, within their marital relationships, differential seems to still persists as to the power of decision, and if so, on the decision process for children, which until now has been advocated in the literature as a matter exclusively for female. In this sense the question arises: to what extent the reduction in fertility to below replacement levels is indeed an achievement of female autonomy or, conversely, the greater influence of desires and beliefs of the partners on the reproductive behavior of the couple?

Therefore, the aim of this work is to verify the dissatisfaction from lack of children among formally married women or those living together from a gender perspective in Brazil. Specifically, we intend to observe the extent to which gender relations within the family universe affect reproductive intention and desire of each member of the couple, and how it implies an adverse outcome for women who are dissatisfied by the lack of children.

This study identifies a new reality of reproductive behavior that is taking shape in Latin America, which differs from that observed so far in developed countries. It also draws attention to the importance of gender relations, and the role of man in determining family formation and consequently, for levels and patterns of fertility. And with this, it offers more consistent inputs for the formulation of public policies in the area of reconciliation between work and family, and sexual and reproductive health.

## **METHODOLOGY**

To meet these objectives, a comparative analysis of women who were 30 years or older between 1996 and 2006 in Brazil, when the below replacement level was reached, was done with the aim of verifying if there was any change in this unsatisfied demand.

Data for this study were obtained from the Demographic and Health Surveys (DHS) conducted in Brazil in 1996 and 2006. The DHS are nationally-representative household surveys that provide data for a wide range of monitoring and impact evaluation indicators in the areas of household and respondent characteristics, fertility and family planning, maternal and child health, nutrition, and HIV/AIDS in developing countries.

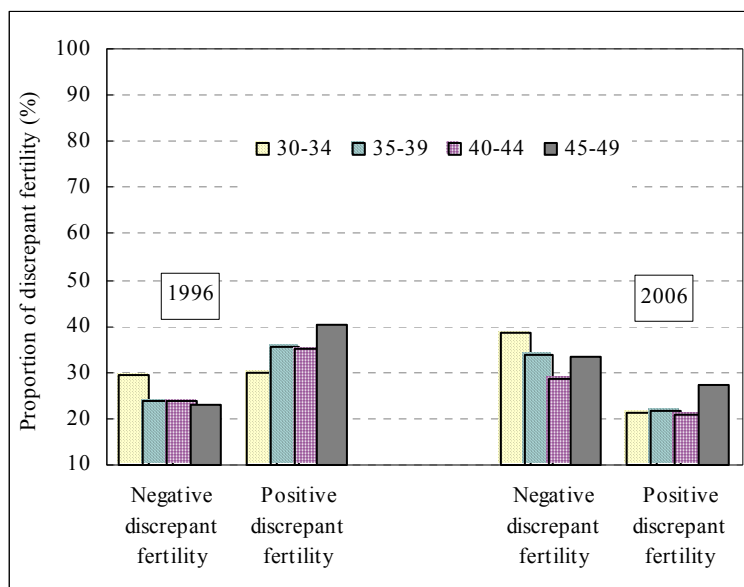
We adopted a measure that follows the concept of *discrepant fertility (DF)* used by Emeka (2006). Where the DF was calculated here by subtracting each respondent's ideal number of children from the actual number she has had. The result is a continuous measure whose responses are distributed in a fashion approximating the normal curve. A positive value for discrepant fertility represents excess or unwanted fertility such as we would expect to find in transition settings where the pace of change in reproductive or contraceptive technology has not kept pace with declines in desired fertility (Bongaarts 2001). A negative value reflects what will here be called "negative discrepant fertility"—a situation in which individuals have fewer children than they think ideal. We transformed this variable into a categorical variable with three categories: 0 none discrepant, 1 negative discrepant fertility and 2 positive discrepant fertility. We checked the degree of satisfaction with the current fertility of women aged 35 years and above that were either formally married or cohabiting.

In a first part, we described *DF* by many dimensions including: geographical regions, location of residence, age at first birth, parity, race, economic strata, religion, years of study, use of contraception, index gender, fertility preference and husband's desire for children. The presence of three age groups in two different decades also made it possible for us to do some cohort analysis about desired fertility.

As a further step, we did a multilevel logistic regression analysis, with the 2006 data, because these are the most recent available on the subject under consideration. The basis of using the multilevel approach is to control for the hierarchical nature of the DHS data. With this, the strength and direction of the statistical relationship of dissatisfaction with fertility due to lack of children are established.

## **OUTCOMES**

The unsatisfied demand for children can be seen in Figure 1 for formally married women or those cohabiting aged 30 years and above. Shown are the negative and positive DF. It is noticed that there was a change in the pattern shown by both groups between 1996 and 2006. In 2006, unlike ten years ago, the majority group is made up of women with negative DF. Similar patterns (not shown) were found for Colombia, whose fertility level is slightly above replacement level and, like Brazil, has experienced a relatively fast decline.



Source: Raw data from National Demographic and Health of Children and Women 1996 and 2006

**Figure 1. Percentage of women according of discrepant of fertility by age, Brazil 1996 and 2006.**

Findings from the DF based on location of residence of the respondents show that women who had a negative DF were residing in the Southeast, Midwest and South and in urban areas. It was found out that the differentials of women who wanted more children than they actually had decreased between rural and urban areas; where the gap was on average 10% to less than 4% and also between North and South. Possibly indicating greater homogeneity in behavior between regions and also between rural and urban dwellers.

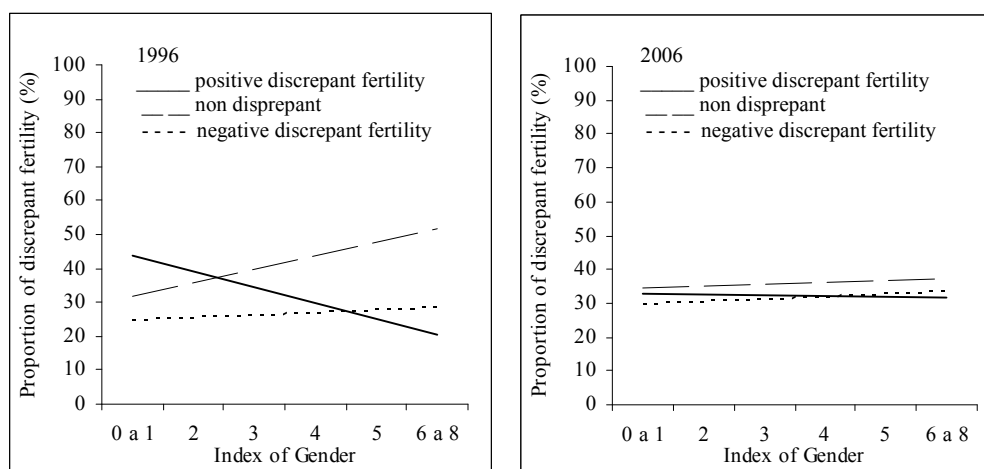
About the discrepant fertility in different economic strata, the findings indicate that women of higher economic strata often have less than desired number of children. Women of strata A and B between 35 and 39 years had the highest percentage of negative discrepant fertility (44%) and less than 10% had more children than they would like. Yet, even in the lower strata (D and E), there was an increase in negative discrepant fertility in the decade examined. In 2006, there were 29% of married women who wanted more children than they actually had (between 45 and 49 years).

Results on education follow the same direction. It was observed that the higher the number of years spent in studying, the higher the percentage of women who would like to have more children than they actually had. This percentage doubled between 1996 and 2006 for women over 12 years of study (28% to 60% respectively). More than half of women aged 12 and over year of study reported having fewer children than they desired. On the other hand, the positive discrepant fertility was 8% for this group. Women with less educated had positive discrepant greater than a negative discrepant fertility. As for work, women who exercised extra domestic activities had higher negative discrepant fertility than those who did not. These results corroborate the theory of Becker (1981), in which the insertion in the labor market contributes to the higher opportunity cost of women's time.

Results also show differences based on race/color. The white women had a higher negative discrepant fertility than black, brown, yellow and indigenous race/color women. Only little difference was noticed based on religion of the respondents.

The discrepant fertility and the relation with the gender can be seen in Figure 2. For 1996 the trends were very clear, the greater gender equality in the marital relationship would be the greatest degree of satisfaction with fertility by women. Women in relationships with low

gender equality tend to have high fertility. And the negative discrepant fertility was not sensitive to the categories of gender index. The observed differences seem to disappear in 2006 and there was no clear trend between variables.



Source: Raw data from National Demographic and Health Survey of Children and Women in 1996 and 2006

**Figure 2. Linear trend of percentage of women according of discrepant of fertility by Index of Gender, Brazil 1996 and 2006.**

It is interesting to note that the decision-making for children involves many ambiguities. Majority of women over 35 years of age had fewer children than they wanted when they used contraception (19% in 1996 and 26% in 2006). It is felt that this percentage has increased over the last decade, but this percentage was also accompanied by an increase in the number of women who have a demand for children and do not use contraception (increased from 36% in 1996 to 53% among women above 35 years). These findings suggest that despite the desire for children, there are actions of other mediators of reproductive behavior, which ultimately play a very important role in decision-making decision and that can often stand against the actual realization of women's desire.

One of the possible mediators that may impede the implementation of desired fertility of women is the attitude of the partner. Table 1 shows, firstly, that the negative DF increased in the period considered. Secondly, the highest ratio occurs precisely among women with partners who desired fewer children than them. And thirdly, that among these women, proportion of negative DF have experienced a significant increment: increased from an average of 37% in 1996 to over 75% in 2006. These findings demonstrate the need to better study the role of the husband's opinion in decision-making for children and in the presence of DF in LDC, starting with the case of Brazil where fertility is below replacement level.

**Table 1 - Percentage of formally married or cohabiting women according of discrepant fertility, age groups and husband's desires, Brazil 1996 and 2006**

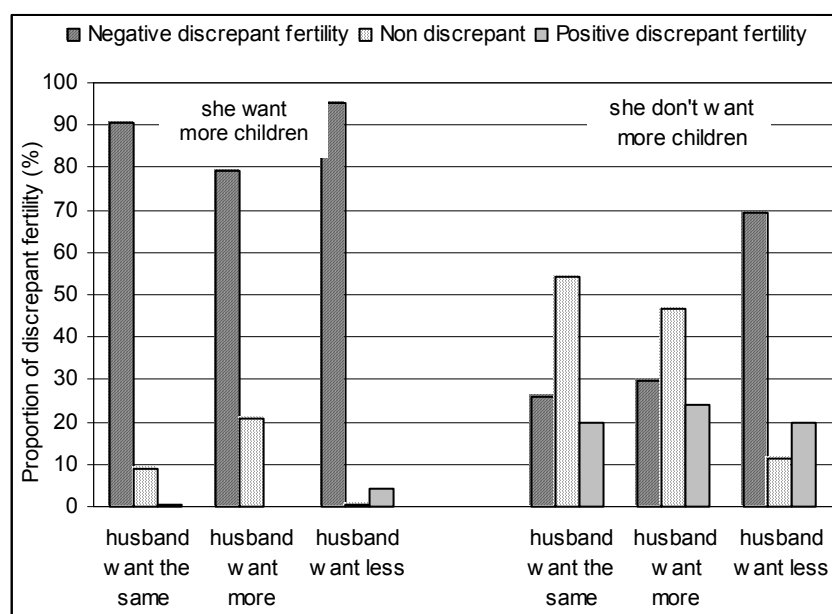
| Husband's Attitude               | Age groups | Discrepant fertility                   |                |          |         |  |                |          |         |
|----------------------------------|------------|--|----------------|----------|---------|--|----------------|----------|---------|
|                                  |            | 1996 (married women aged 30-49 n=4269) |                |          |         | 2006 (married women aged 30-49 n=2814) |                |          |         |
|                                  |            | Negative                               | Non discrepant | Positive | Total % | Negative                               | Non discrepant | Positive | Total % |
| Want the same number of children | 30-34      | 28.94                                  | 46.62          | 24.44    | 100.00  | 52.56                                  | 34.24          | 13.20    | 100.00  |
|                                  | 35-39      | 24.05                                  | 46.00          | 29.96    | 100.00  | 45.22                                  | 38.50          | 16.28    | 100.00  |
|                                  | 40-44      | 21.55                                  | 51.18          | 27.27    | 100.00  | 33.38                                  | 51.46          | 15.16    | 100.00  |
|                                  | 45-49      | 19.86                                  | 45.43          | 34.72    | 100.00  | 45.00                                  | 36.58          | 18.42    | 100.00  |
| Want more children               | 30-34      | 25.02                                  | 33.59          | 41.39    | 100.00  | 30.41                                  | 45.96          | 23.63    | 100.00  |
|                                  | 35-39      | 16.70                                  | 36.56          | 46.74    | 100.00  | 42.43                                  | 41.43          | 16.15    | 100.00  |
|                                  | 40-44      | 21.59                                  | 29.99          | 48.42    | 100.00  | 26.17                                  | 48.94          | 24.89    | 100.00  |
|                                  | 45-49      | 22.42                                  | 25.74          | 51.84    | 100.00  | 38.85                                  | 39.42          | 21.73    | 100.00  |

|                    |       |       |       |       |        |       |       |       |        |
|--------------------|-------|-------|-------|-------|--------|-------|-------|-------|--------|
| Want less children | 30-34 | 46.98 | 17.31 | 35.71 | 100.00 | 73.15 | 10.76 | 16.08 | 100.00 |
|                    | 35-39 | 35.84 | 28.80 | 35.36 | 100.00 | 86.64 | 4.56  | 8.80  | 100.00 |
|                    | 40-44 | 35.37 | 27.18 | 37.45 | 100.00 | 78.03 | 5.89  | 16.08 | 100.00 |
|                    | 45-49 | 40.81 | 18.94 | 40.25 | 100.00 | 62.59 | 18.39 | 19.02 | 100.00 |

Source: Raw data from National Demographic and Health of Children and Women 1996 and 2006

Regarding reproductive preferences, it was observed that among women 35 to 49 who desired to have children, 82% in 1996 and 91% in 2006 had negative discrepant fertility. Of those who reported not wanting more children, most of them (43% in 1996 and 49% in 2006), were satisfied. But a part of this women (31%) in 2006 had less children than they desired. This percentage is higher than the one for women with positive discrepant fertility (20%). One possible explanation could be the influence of the partner's desires in this response. There are many contradictions in the responses of women regarding their desire for children, because often women confuse their desires with the desires of their partners. To clarify this, we have the Figure 3.

Figure 3 shows DF of the women based on their desire for children and the desire of their partners. Among women who claim to want more children is the highest percentage of negative DF, especially in cases where the husband wished to have fewer children than she. Another interesting fact is that among women who reported not want children also showed a negative discrepant fertility quite high, especially among those in the husband wanted fewer children than she (70% women). Moreover, it is observed that women who did not want more children and their husbands want more children than they had the highest percentage of positive discrepant fertility (24%).



Source: Raw data from National Demographic and Health of Children and Women 1996 and 2006

**Figure 3. Percentage of women according of discrepant of fertility by fertility preferences and husband's desire, Brazil 2006.**

Results of the logistic regression are presented in Table 1. Findings show among the geographical region, that the odds of women having less children than desired is significantly higher (about 34% higher) for those in Midwest zone compared with those in Southeast region while it is not significant for those in the other zones. Women who practiced Traditional/Protestant also have significant higher odds of not being satisfied with number of

children compared with those of Catholic religion while it is not significant for women in other religious group.

Similarly, women whose husbands desired less children have significant higher odds of not being satisfied compared with those with equal desire with their partners while, on the other hand, those whose husbands desired more children were significantly less likely not to be satisfied. This result is interesting and indicates that reproductive intentions of the husband may have a particular importance in determining the wife's parity, especially when he wants to have fewer children. However, when the number of children that the husband wants is higher than that of wife's, seems to prevail the desire of the latter, in comparison when both have the same reproductive intentions, but to a lesser degree than observed in the first situation. Although this analysis is not sufficient to evaluate the role of gender relations in the negative discrepancy in fertility in Brazil in 2006, it suggests that the direction of the difference in reproductive desire between the couple indicates the desire of which member will tend to prevail in the wife's parity. In general, the member you want to have fewer children is one whose desire tends to prevail, however, for men, it seems to be much stronger and have a considerable weight in the reproduction of his wife.

Findings on parturition of the women shows that that compared with those who had three or more offspring, those who gave birth to no or one child had significant higher odds of not being satisfied while those with two were less likely not to be satisfied. One possible explanation for this difference lies in the fact that in Brazil the ideal size of offspring in general is 2 children. Thus, those women who had no children or who had only one child would be those who have not reached their reproductive desire, hence the increase in the negative discrepant of fertility, however, for those who had two children, the desire tends to be achieved, why the discrepancy decline compared to those who had 3 children (more than desired).

Results show that the difference among the women based on household situation (urban/rural), year of study, race/color, economic strata, participation in labor force, husband's year of study and index of gender.

**Table 2 – The Logistic Model to explain the negative discrepante of fertility between the formally married or cohabiting women of 35 until 34 yerar old in Brazil 2006 ( cases= 1924)**

| Variables                  | Coef.  | Std. Err. | Z      | P>z   | [95% Conf. In. | Odds Ratio | [95% Conf. In. |
|----------------------------|--------|-----------|--------|-------|----------------|------------|----------------|
| Constant                   | 0.641  | 0.236     | 2.720  | 0.006 | 0.180 1.103    | 1.899      | 1.197 3.013    |
| <b>Geographical region</b> |        |           |        |       |                |            |                |
| Southeast                  |        |           |        |       | Reference      |            |                |
| Northeast                  | 0.123  | 0.135     | 0.910  | 0.362 | -0.141 0.386   | 1.130      | 0.868 1.471    |
| North                      | 0.114  | 0.145     | 0.790  | 0.432 | -0.170 0.397   | 1.120      | 0.844 1.488    |
| South                      | -0.220 | 0.113     | -1.950 | 0.051 | -0.441 0.001   | 0.803      | 0.643 1.001    |
| Midwest                    | 0.292  | 0.107     | 2.730  | 0.006 | 0.083 0.501    | 1.339      | 1.086 1.650    |
| <b>Household situation</b> |        |           |        |       |                |            |                |
| Urban                      |        |           |        |       | Reference      |            |                |
| Rural                      | 0.109  | 0.069     | 1.590  | 0.113 | -0.026 0.244   | 1.115      | 0.975 1.276    |
| <b>Religion</b>            |        |           |        |       |                |            |                |
| Catholic                   |        |           |        |       | Reference      |            |                |
| Ttraditional protestant    | 0.297  | 0.149     | 2.000  | 0.046 | 0.005 0.589    | 1.346      | 1.005 1.802    |

|   |           |       |         |       |        |        |       |       |        |
|---|-----------|-------|---------|-------|--------|--------|-------|-------|--------|
| Pentecostal                               | 0.260     | 0.154 | 1.690   | 0.091 | -0.041 | 0.561  | 1.297 | 0.960 | 1.753  |
| No religion                               | -0.471    | 0.252 | -1.870  | 0.062 | -0.966 | 0.024  | 0.624 | 0.381 | 1.024  |
| Others                                    | -0.103    | 0.205 | -0.500  | 0.617 | -0.505 | 0.299  | 0.902 | 0.604 | 1.349  |
| <b>Education (years of study)</b>         |           |       |         |       |        |        |       |       |        |
| 12 and more                               | Reference |       |         |       |        |        |       |       |        |
| 0 until 4                                 | 0.085     | 0.116 | 0.740   | 0.462 | -0.142 | 0.312  | 1.089 | 0.868 | 1.366  |
| 5 until 8                                 | -0.163    | 0.098 | -1.660  | 0.097 | -0.356 | 0.029  | 0.849 | 0.701 | 1.030  |
| 9 until 11                                | -0.019    | 0.100 | -0.190  | 0.846 | -0.215 | 0.176  | 0.981 | 0.807 | 1.193  |
| <b>Race/color</b>                         |           |       |         |       |        |        |       |       |        |
| White                                     | Reference |       |         |       |        |        |       |       |        |
| Others                                    | -0.016    | 0.060 | -0.260  | 0.794 | -0.133 | 0.101  | 0.984 | 0.876 | 1.107  |
| <b>Husband's desires</b>                  |           |       |         |       |        |        |       |       |        |
| Wants the same                            | Reference |       |         |       |        |        |       |       |        |
| Wants more                                | -1.050    | 0.185 | -5.680  | 0.000 | -1.412 | -0.688 | 0.350 | 0.244 | 0.503  |
| Wants less                                | 1.667     | 0.245 | 6.820   | 0.000 | 1.188  | 2.146  | 5.297 | 3.280 | 8.554  |
| <b>Parturition</b>                        |           |       |         |       |        |        |       |       |        |
| 3 and more                                | Reference |       |         |       |        |        |       |       |        |
| No  | 2.174     | 0.268 | 8.120   | 0.000 | 1.649  | 2.699  | 8.794 | 5.204 | 14.860 |
| One                                       | 0.728     | 0.134 | 5.450   | 0.000 | 0.466  | 0.990  | 2.071 | 1.594 | 2.691  |
| Two                                       | -1.248    | 0.119 | -10.530 | 0.000 | -1.481 | -1.016 | 0.287 | 0.227 | 0.362  |
| <b>Economics strata</b>                   |           |       |         |       |        |        |       |       |        |
| A   | Reference |       |         |       |        |        |       |       |        |
| B   | 0.075     | 0.118 | 0.640   | 0.523 | -0.155 | 0.306  | 1.078 | 0.856 | 1.358  |
| C   | 0.060     | 0.119 | 0.510   | 0.613 | -0.173 | 0.293  | 1.062 | 0.841 | 1.341  |
| D and E                                   | 0.088     | 0.169 | 0.520   | 0.601 | -0.242 | 0.419  | 1.092 | 0.785 | 1.520  |
| <b>Labor market</b>                       |           |       |         |       |        |        |       |       |        |
| Yes                                       | Reference |       |         |       |        |        |       |       |        |
| No  | -0.020    | 0.073 | -0.270  | 0.788 | -0.163 | 0.124  | 0.980 | 0.849 | 1.132  |
| <b>Husband education (years of study)</b> |           |       |         |       |        |        |       |       |        |
| 12 and more                               | Reference |       |         |       |        |        |       |       |        |
| 0 until 4                                 | 0.176     | 0.170 | 1.040   | 0.298 | -0.156 | 0.509  | 1.193 | 0.855 | 1.664  |
| 5 until 8                                 | 0.071     | 0.179 | 0.390   | 0.693 | -0.280 | 0.422  | 1.073 | 0.755 | 1.525  |
| 9 until 11                                | 0.048     | 0.228 | 0.210   | 0.832 | -0.398 | 0.495  | 1.049 | 0.671 | 1.640  |
| <b>Index of Gender</b>                    |           |       |         |       |        |        |       |       |        |
| 0 until 3                                 | Reference |       |         |       |        |        |       |       |        |
| 4   | 0.056     | 0.127 | 0.440   | 0.661 | -0.193 | 0.305  | 1.057 | 0.824 | 1.356  |
| 5   | -0.032    | 0.099 | -0.320  | 0.749 | -0.225 | 0.162  | 0.969 | 0.798 | 1.176  |
| 6   | 0.051     | 0.118 | 0.430   | 0.669 | -0.181 | 0.283  | 1.052 | 0.834 | 1.327  |
| 7 until 8                                 | -0.006    | 0.157 | -0.040  | 0.971 | -0.313 | 0.301  | 0.994 | 0.731 | 1.352  |

Source: Raw data from National Demographic and Health of Children and Women 1996 and 2006

## DISCUSSION AND CONCLUDING REMARKS

In this paper, we addressed the relationship between fertility satisfaction and gender, especially the importance of husband's childbearing desires to negative discrepant fertility for women in contemporary Brazil. Many variables were included in the analysis to identify those that proved most important in explaining the fact that many women have fewer children than they wanted.



Some of these variables showed little or no relevance to explain the women's failure in reaching the reproductive desire, indicating the need to better treat these variables, or even understand why they were not important. Other variables, however, had great significance, as one that deals with reproductive intentions of the husband. Therefore the results points that the reproductive desire of the husband had great influence on the number of children the wife has. Thus, it is possible to believe that in societies where man still has the power to command the family, his reproductive intention will prevail. However, for the societies in which there is gender equality, it is difficult to suggest in what situations (if they exist) the intentions of the husband prevail. To the extent that Brazil is a very heterogeneous country, where it is possible to find the two kinds of situations mentioned, it is too early to ensure, with the data obtained, how gender relations affect directly or indirectly the negative discrepant fertility of women.

These findings about the women fertility preference and the desire of the partners for children gave doubts whether indeed the woman does not want children or if are their husband who do not want. Because it is known that her husband wanted to have fewer children than she and she declared to want more then she had. Again it is clear that there may be an ambiguity in the declaration of reproductive preferences of the women and a vies in the data of the partners preferences since this declaration is made by the women. These issues need to be further analyzed and tested in studies about indicators of reproductive preferences and which possess the opnion of both partners and specifically qualitative studies

It is important to advance in the understanding of this new phenomenon, that is, unmeet demand for more children and their relation to the likely stronger men involvement in the process. In the context of decision-making for children, where the desires of both partners should result in a unique behavior, gender relations earn a prominent role, since power differences can lead to a behavior that precludes the partner that has less autonomy (usually the woman) realize their desires.

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