Regional Variations in Philippine Fertility: An Exposure Analysis

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ABSTRACT

It is universally accepted that even in the absence of economic development, family planning programs integrating maternal and child health services can substantially reduce fertility. Thus, it is interesting to focus on the question on whether differences in regional fertility rates are mainly due to differences in contraceptive use. While regional variations in fertility rates and contraceptive prevalence rates are known, little information is available on the factors that account for discrepancies between fertility rates on one hand and contraceptive prevalence rates on the other. This study addresses this information gap using data from the 1993 National Demographic Survey. It aims to determine whether regional variations in fertility are associated with the level of contraceptive use and to examine which of the proximate determinants of fertility other than contraception can account for differences in regional fertility. It also presents estimates of regional levels of unmet family planning needs. Analyses of synthetic cohort measures of contraceptive prevalence and of other proximate determinants of fertility reveal the following: the proximate determinants of fertility are highly correlated with the total fertility for the various regions, the "exposed" person-years lived are also highly correlated with the total fertility rates in the opposite direction, and that unmet need for family planning is higher for regions with higher fertility rates. Regional fertility rates in the Philippines are found not to be highly correlated with contraceptive prevalence rates, even when these rates are converted to synthetic cohort measures. The role of marriage patterns and infecundity contribute to the wide regional variation in fertility rates.

INTRODUCTION

Rapid population growth has been a major concern in development planning since it threatens social and economic growth. A strong interaction between development planning and family planning in reducing fertility has been reflected in experiences of Asia's newly industrialized countries (Robey, 1991). But even in the absence of economic development, family planning program integrated with maternal and child health services can still reduce fertility as demonstrated by the Matlab project in Bangladesh (Robey, 1990). Although family planning can greatly enhance fertility reduction (Kantner, 1991), contraceptive use does not solely account for variations in fertility. Many factors can affect fertility and these may vary by level of development and culture, making fertility reduction a complex task for planners and policy makers. Nevertheless, "widespread use of contraceptive methods may be the single most important factor necessary for a society to complete the fertility transition" (Robey, 1989:1).

Identifying specific factors which have substantial effect on fertility can help policy makers achieve their goals in reducing fertility. Moreover, understanding the unmet needs for family planning and providing the

appropriate types and levels of family planning services can stimulate further decline in fertility toward a reduced population growth.

Census-based estimates indicate that fertility in the Philippines fell by at least 21 percent between 1965-1970 and 1985-1990 (Palmore et al., 1995). The largest annual reduction was during the first half of the 1980s (3.2 percent) while the smallest was during the latter half of the 1970s (0.6 percent). According to the most recent estimate from the 1993 Philippine National Demographic Survey (PNDS), the total fertility rate for the country as a whole for the years 1991-1993 stood at 4.09 (National Statistics Office and Macro International Inc. 1994:26), having declined from well over five in the 1965-1970 time period (Cabigon, 1985; Concepcion, 1985; Palmore et al., 1995) and well over six in the late 1950s (Cho, 1964; Lorimer, 1966). The sluggish decline in fertility has often been associated with the low levels of contraceptive use. There was no substantial increase in the use of contraceptives among women aged 15-44 from 1988 (36.1 percent) to 1993 (41.5 percent). The largest increase was observed during the period 1973-78, from a level of 17.4 percent to 38.5 percent. Modern contraception use rose gradually after 1978 although contraceptive prevalence rate (CPR) dropped to 32 percent in 1983, dropped to 32 percent in 1983, mainly due to the sharp fall in the percentage using traditional methods. However, during the last 15 years, the increase in modern contraceptive use was only half of what was achieved 10 years earlier.

Fertility levels have been observed to vary from region to region. One issue which needs to be addressed is whether fertility variations can mainly be attributed to differences in contraceptive use. In other words, do regions with high CPRs have low TFRs and regions with low CPRs have high TFRs? If the relationship does not exist, what other factors can account for the regional fertility differences?

OBJECTIVES OF THE STUDY

This study aims to ascertain which of the intermediate fertility determinants would most likely lead to fertility decline in each region and to determine the unmet needs for family planning in each region. Specifically, this study proposes to:

(1) determine whether regional differences in fertility are associated with the level of contraceptive use;
(2) examine which of the proximate determinants of fertility other than contraception can account for the remaining differences; and
(3) estimate the level of unmet need in each region.

DATA AND METHODOLOGY

Results from the 1993 National Demographic Survey are utilized in the present study. To identify the factors which can account for the discrepancy between fertility and contraceptive use, the following strategies were adopted:

(1) the construction of a synthetic or hypothetical cohort of women classified

by their "exposure" and "non-exposure" to the risk of childbearing; and

(2) the analysis of the proximate determinants of fertility, in addition to contraceptive use.

The concept of synthetic or hypothetical cohort is adopted in the analysis. This method has been useful in interpreting total fertility rate (TFR) and was applied by Suyono and Palmore (1995) in their synthetic cohort analysis of the proximate determinants of fertility and unmet need for family planning for Indonesia. Their "exposure analysis" first advanced the reason that the TFR and the CPR are different types of measures. The TFR is, in fact, an age-standardized measure and is a "true rate" in the sense that the numerator is a demographic event (births) and the denominator is a measure of all women exposed to the risk of experiencing that event. The TFR also has a useful interpretation: it summarizes the fertility experience for a synthetic or hypothetical cohort of women. It shows the total number of live births a woman would have if she were "exposed" throughout her reproductive period to the current age-specific fertility rates and assuming that she will live throughout her childbearing years (Palmore and Gardner, 1994: 91-95). It thus summarizes the age-standardized fertility rates of a synthetic cohort.

The contraceptive prevalence rate (CPR), on the other hand, is not age-standardized and does not have synthetic or hypothetical cohort interpretation. It is possible, however, to calculate a measure of contraceptive prevalence that does have a synthetic cohort interpretation (Suyono and Palmore, 1995). The estimates would account for the person-years lived by, say, 100 women in the "currently practicing contraception" non-exposed states if they all lived throughout their childbearing years and were subject to a given (and unchanging) set of age-specific "non-exposed" states. Like the TFR, the percentages of person-years lived by the synthetic cohort calculated from age-specific rates or proportions are age-standardized.

Using the synthetic or hypothetical cohort approach, the following percentages of person-years lived by the synthetic cohort of women can thus be estimated as:

(1) currently using effective contraceptive method or sterilization;
(2) never married or not currently married;
(3) infecund;
(4) currently using an ineffective family planning method;
(5) having an unmet need for family planning;
(6) exposed to health risk; and
(7) not in need of contraceptives.

In this study, women in the "non-exposed" states include sterilized women, currently married women using effective contraceptive method, the never married and not currently married (divorced and separated) women, and those using and understanding a natural family planning method (i.e., they know when they would likely become pregnant during the menstural cycle). Women using an ineffective method, those using a family planning method who do not know when during the menstrual cycle they would likely become pregnant, and those who do not use a family planning method are

considered "exposed". Those who do not use a method are further classified into whether they have an unmet need for family planning either to space or limit their births, whether they have a "health risk" need for family planning or whether they do not need a method.

Abortion and breastfeeding are two important determinants of fertility. However, breastfeeding was not included in the analysis because none of the NDS respondents were fully breastfeeding their child the night before the interview. Inclusion of partial breasfeeding will only complicate the analysis because it would be difficult to properly classify women as exposed or not exposed since partial breast-feeding can affect child-spacing differently among women. On the other hand, while the analysis involves the current exposure status of women, the data on abortion refers to varying points in women's reproductive period. The number of cases is likewise very small.

ANALYSIS

Regional Variations in the Total Fertility Rate and Contraceptive Prevalence Rates

The fertility decline has not spread evenly over the country's regions (Figure 1). The 1993 PNDS estimates of the TFR ranged from a low of 2.76 for the National Capital Region (NCR) to a high of 5.87 for Region 5 (Bicol Region). The latter rate is close to the whole country's fertility level some thirty years earlier. Only the NCR has a TFR somewhat close to replacement level, given current mortality levels. The two regions with the next lowest fertility are Region 4 (Southern Tagalog) and Region 3 (Central Luzon) which are both contiguous to the NCR. (See Chart 1).

Clearly, one would expect that a major reason for the wide range in regional fertility rates will be the regional variations in the prevalence of contraceptive use. If this is so, then regions with a low TFR would have high contraceptive prevalence rate (CPR) while regions with a high TFR would have a low CPR. Somewhat surprisingly, however, the regional CPRs in the Philippines are not highly correlated with the TFRs.

Figure 2 shows wide variations in the CPRs as of 1993. The regions are arranged according to their fertility level from lowest to highest. The percentage of currently married women aged 15-49 who were currently using contraception ranged from 28.5 percent for Western Mindanao to 49.3 percent for Northern Mindanao. The figure also shows that several regions have higher CPR than the NCR where the TFR is lowest. These regions are Central Luzon, Southern Mindanao, Central Visayas, and Northern Mindanao. On the other hand, Southern Tagalog, Western Mindanao, Central Mindanao, and Eastern Visayas have lower CPRs than Bicol where fertility level is highest.

An interesting question emerges when assessing Philippine fertility levels in 1993: Why is fertility high in some regions of the country that have high contraceptive prevalence rates while also being relatively low in some regions where contraceptive rates are not that high? In fact, a simple plot of the TFR and the CPR shows clearly the Bicol and the National Capital Region are "deviant cases." Figure 3 shows a scatterplot

Figure 1. Total Fertility Rates By Region

Estimated from the Birth Histories of the 1993 NDS (Last 3 Years)

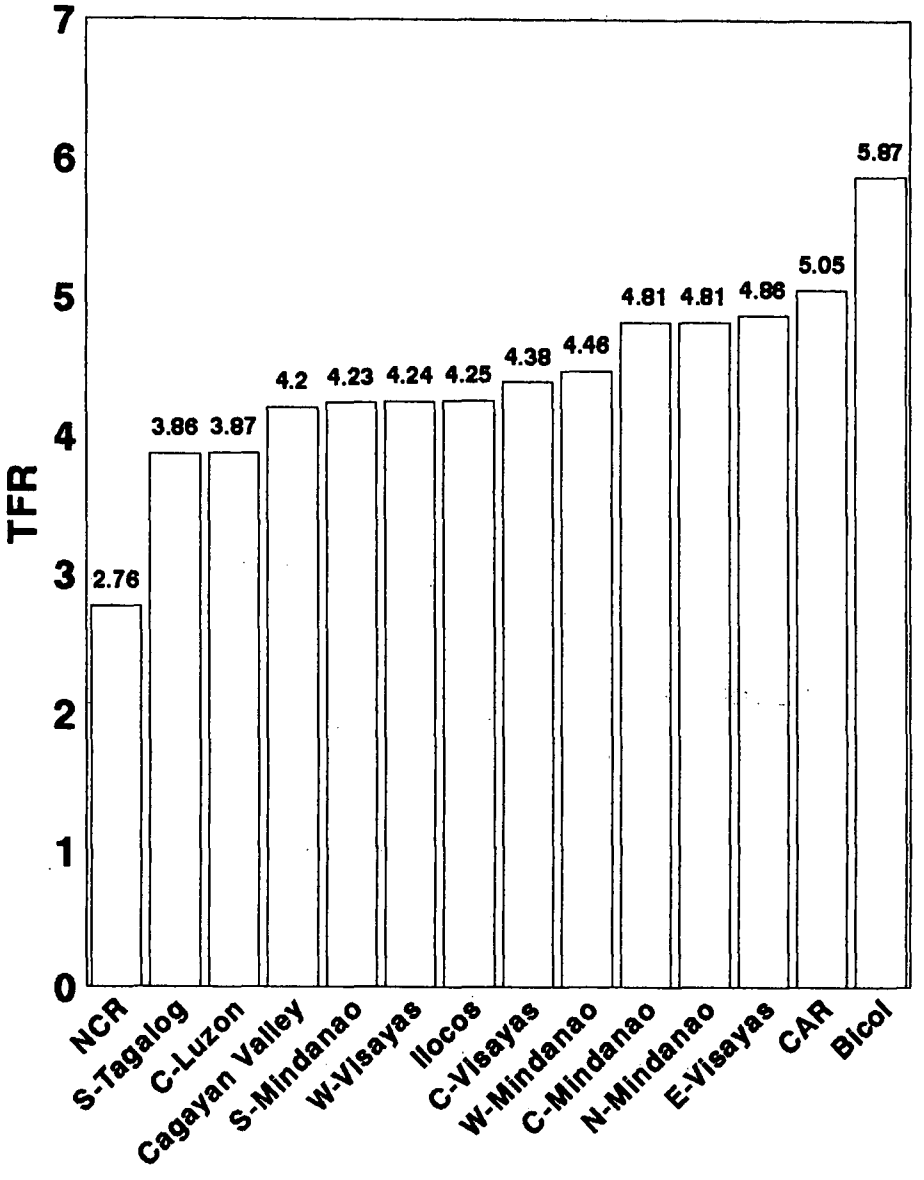


Figure 2. % of Currently Married Women Using Contraception By Region

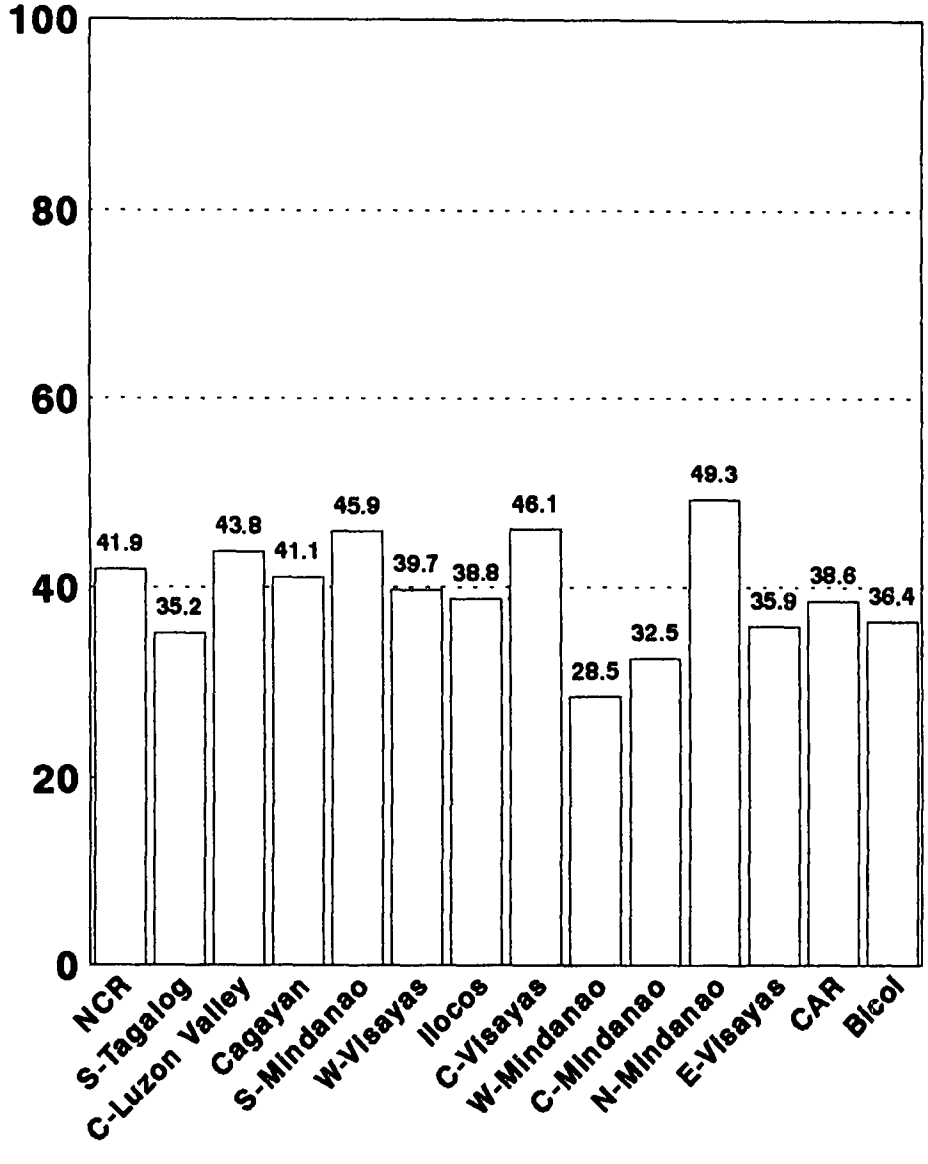
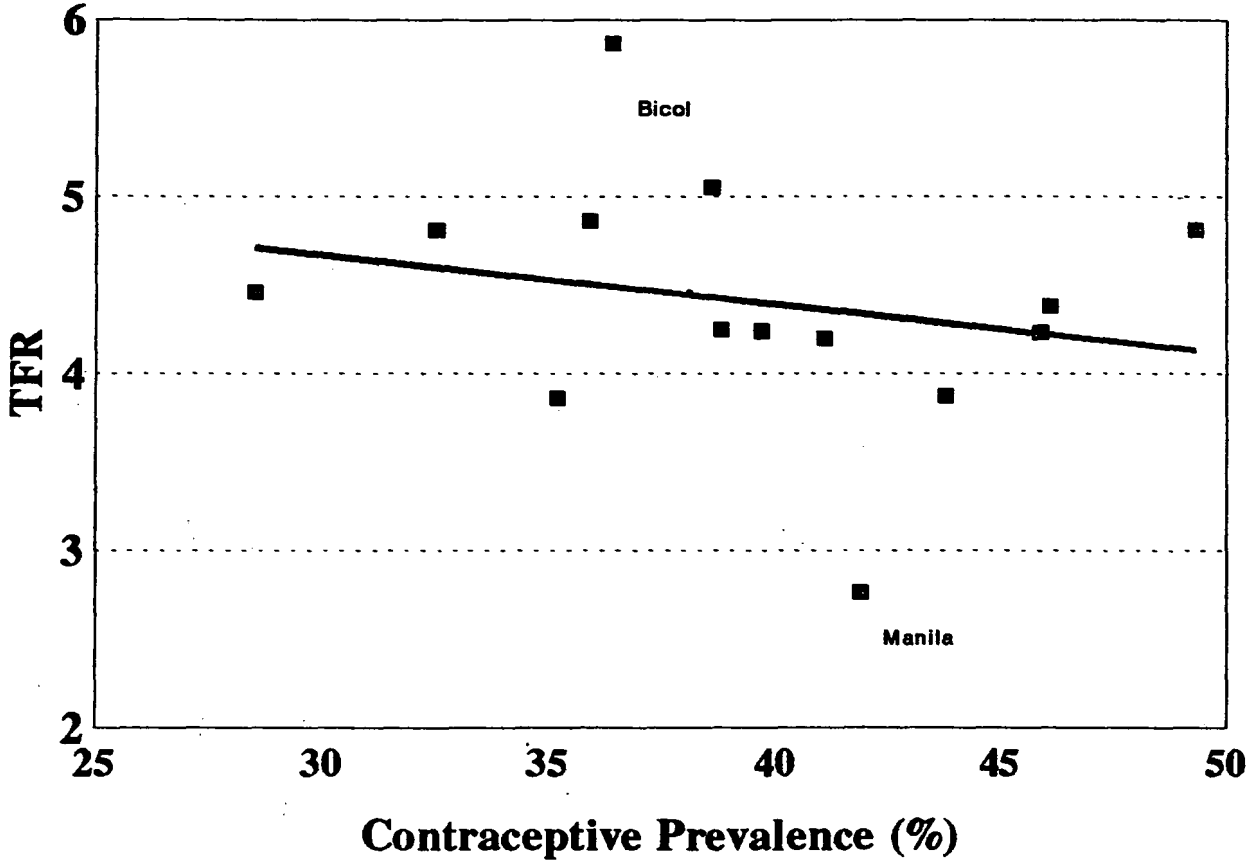


Figure 3. TFR and Contraceptive Prevalence



TFR and Contraceptive Prevalence Estimated from 1993 NDS

of the TFR and the CPR, with each point being one of the regions. The straight line on the chart is the simple linear regression line for the CPR and the TFR. The fact that most of the regions do not lie very close to that line shows that the correlation between contraceptive prevalence rates and fertility rates in the Philippines is very low ($r = .23$, $R^2 = .05$).

Undergraduate and introductory graduate-level texts in population studies have led us to expect a much higher correlation. For example, Weeks (1992: 110-111) prepared a similar scatterplot for 101 countries in the 1980s and found an R^2 of .83. Why is the correlation so low in the Philippines?

Synthetic Cohort Measures of Contraceptive Prevalence

Figure 4 shows the percentages of person-years lived by the synthetic cohort in the "currently practising contraception" non-exposed state. Note that in Figure 4 the regions are arranged, left to right, according to their fertility level from lowest to highest.

Unfortunately, using the new synthetic cohort measure still does not account for the regional fertility variations in the Philippines. The regions with low fertility do not necessarily have high percentages of person-years lived as current contraceptive users. The percentages using contraception for the NCR and Southern Tagalog remain considerably lower than that for Northern Mindanao. The percentages are almost the same as those for Eastern Visayas, the Bicol Region, and the Cordillera Autonomous Region (CAR) even though these regions have much higher TFRs. This simply shows that it is not sufficient to use the level of contraceptive prevalence in measuring the impact of contraceptive use on fertility. One reason is that the contraceptive method mix in the Philippines is unusual, particularly as compared with other countries in Southeast Asia. A very high proportion of current contraceptive use is the use of natural family planning or "traditional methods." In 1993, 40 percent of the currently married women aged 15-49 were current contraceptive users. Of these, 40 percent were using traditional contraceptive methods, the condom or the diaphragm, foam, or jelly (NSO and Macro, 1994: 46-47).

Another reason may be low reliability and the continuity of contraceptive use (Jejeebhoy, 1989). Because traditional or ineffective contraceptive use is less likely to strongly reduce fertility, we subdivided contraceptive use by method. Effective methods here refer to the modern methods - pills, IUD, and injectables while ineffective methods refer to condom, diaphragm, foam and jelly. Natural family planning methods include rhythm or periodic abstinence, withdrawal and other traditional methods.

Figure 5 shows the synthetic cohort measures only for sterilization and effective contraceptive use. Subdividing the contraceptive use measures this way helps to account for some of the fertility differences noted earlier. For example, the relatively high TFR in Bicol, Western Mindanao, and Eastern Visayas is partly accounted for by the low percentages using sterilization or an effective method. On the other hand, the low TFR in Regions 3 and 2 is partly explained by the relatively high percentages using

Figure 4. Percentages of Person-Years Lived by the Synthetic Cohort as Current Contraceptive Users (CCU) by Region

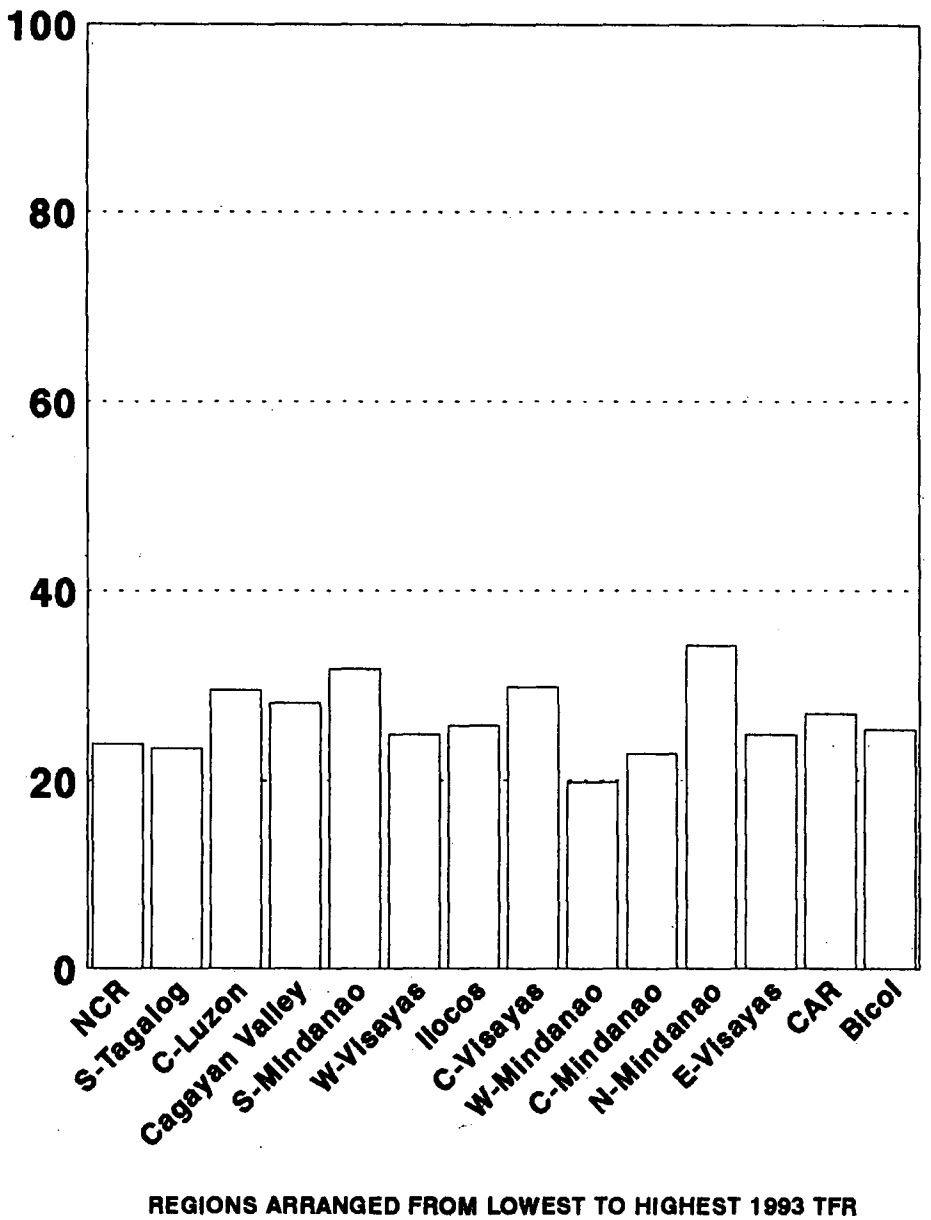
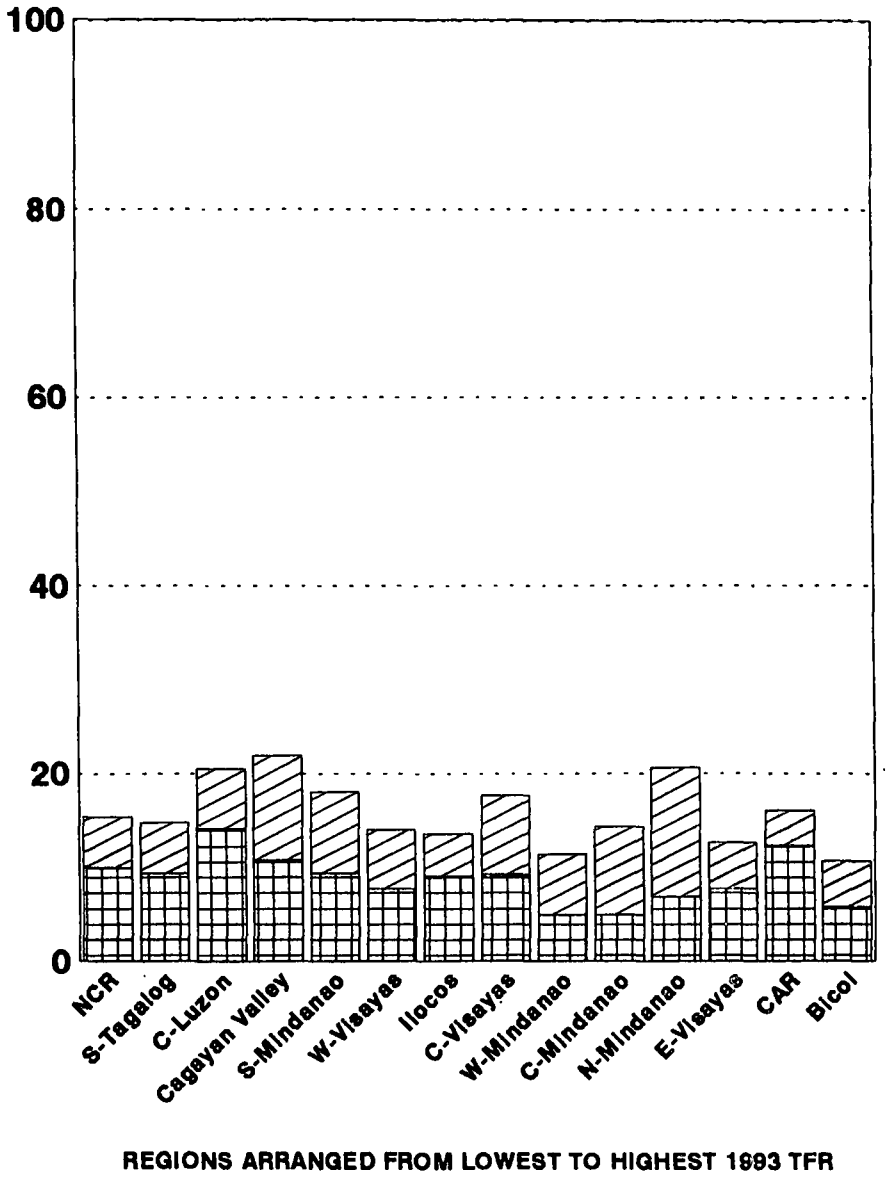


Figure 5. Percentages of Person-Years Lived by the Synthetic Cohort as Sterilized and Effective CCU by Region



sterilization or an effective method. However, the high percentages using sterilization or an effective method in Central Visayas, Northern Mindanao, and CAR (all with relatively high fertility) still depict the inconsistent pattern. Similarly, the low percentages for NCR and Region 4 put these regions "out of line."

It is thus clear that the bars on the left hand side of Figure 5 are not always higher than those on the right hand side of the chart. As such, we still find a relatively low correlation between regional contraceptive use and fertility. The reason for this must be that there are important variations in the other proximate determinants that affect fertility.

Contraceptive use is, after all, only one of the proximate determinants affecting fertility rates. Two other important proximate determinants are marriage variables: (1) the amount of time spent being never married (before being married the first time) during the reproductive years and (2) the amount of time spent as divorced, widowed, or separated during the reproductive years.

Using a synthetic cohort analysis of fertility deteminants, Suyono and Palmore (1995) have shown that greater nonexposure to the risk of conception by being never married, divorced or widowed, or being infecund can account for the lower fertility levels found in Jakarta and East Java. Results of their study show that low fertility in those provinces results from an interplay between the other fertility determinants and contraceptive use. They also observed that areas with the highest fertility rates have the highest unmet need for family planning.

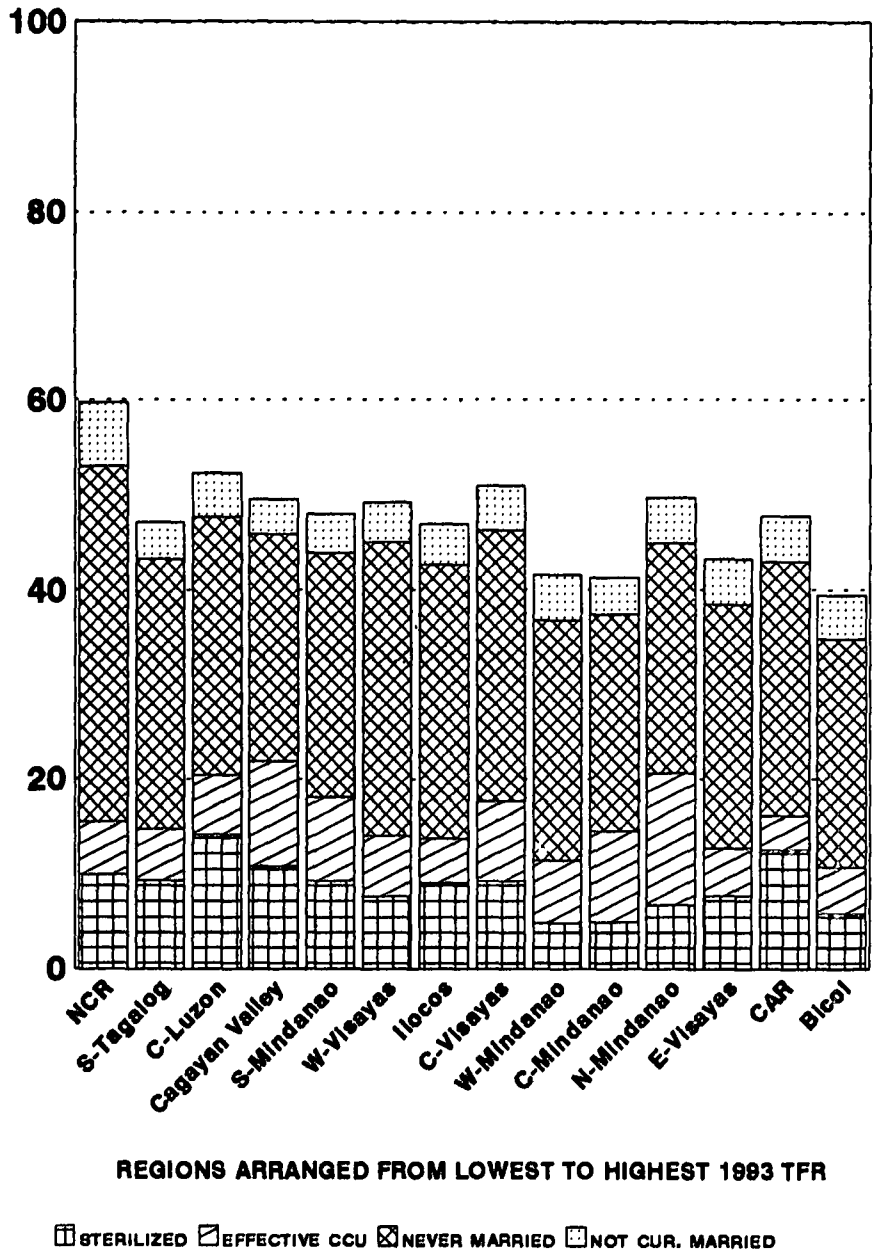
Synthetic Cohort Measures of Other Proximate Determinants

Bongaarts (1978) has shown that fertility differentials among populations can always be attributed to differences in one or more of the eight biological and behavioral factors through which social, economic, and cultural conditions operate. These proximate determinants affect fertility differently and their degree of influence varies within and between societies. Bongaarts has also shown that four of these variables - marriage, contraception, lactation, and induced abortion -- were found to largely account for differences in fertility among populations. As explained earlier though, breastfeeding and abortion will not be considered in this analysis.

Marriage Pattern

Using the synthetic cohort approach, Figure 6 adds the two marriage variables (time spent in the married or not currently married state) for the Philippines in 1993. Note that they partly account for the relatively low fertility in the NCR and relatively high fertility in the Bicol Region. The amount of time spent never married and not currently married in the National Capital Region is high relative to the amount of time spent not currently married in the Bicol Region. Furthermore, we are beginning to see a more orderly progression for the bars in Figure 6: the bars are generally lower as we move from left to right on the chart, which is what we would expect if the proximate determinants and fertility are well correlated. Marriage variables, however, are more important in Western Visayas than in Southern Tagalog, Central Luzon, and Southern Mindanao.

Figure 6. Percentages of Person-Years Lived by the Synthetic Cohort as Sterilized, Effective CCU , Never Married and Not Currently Married by Region



Infecundity

Another proximate determinant also needs to be considered: infecundity[1]. Following the conventional Demographic and Health Surveys (DHS) definition, we defined women being infecund in all cases where they are married, not using contraception, and not having a live birth - all in the last five years. This definition falls short of the criterion that the couple must be in union. In the absence of information in the 1993 PNDS about temporary separation of the couple during the last 5 years, it is assumed that the couples were not temporarily separated. This measure may therefore be an overestimate of infecundity since some women or their partner could have worked as overseas contract workers during the last 5 years.

As can be seen in Figure 7, there was substantial variation in the synthetic cohort measures of infecundity in 1993. The Bicol Region, for example, had less infecundity than the Western Mindanao or Southern Tagalog regions. Moreover, the percentages infecund in all regions are higher than in Northern Mindanao, Eastern Visayas, and the Bicol Region, thus partly explaining the high fertility of the latter regions.

In Figure 7, there is a much more orderly progression in the bars: the height of the bars becomes shorter as one reads the chart from left to right. In fact, the correlation between the accumulated proximate determinants and the TFR is now quite high, as shown in Figure 8. The correlation for Figure 8 is .92 and R^2 is .84[2].

Data on natural family planning methods can further shed light on the impact of contraceptive use. Natural family planning methods can be considered less effective because they are heavily affected by the unequal power relations between husband and wife. Gender inequality aside, the methods can still be ineffective if women using the method do not even know when during the menstrual cycle they are most likely to get pregnant.

In Figure 9, if we include the percentage of person-years lived by women using natural family planning who could correctly answer the 1993 PNDS question on when during the menstrual cycle they were most likely to become pregnant, the correlation is still reasonably high (r=.90 and $R^2 = .81$).

Coital Frequency

The percentages of person-years lived by the synthetic cohort with low coital frequency were also calculated but are not added to the figure in the same way as the other "non-exposed" states. This is because this information may be somewhat less reliable than the other indicators and because it is probably more subject to fluctuation. Low coital frequency is defined as not having sexual intercourse in the last month preceding the survey. But women with low coital frequency are not likely to remain that way.

[1]This somewhat differs from the conventional definition of infecundity which is the woman's biological capability to reproduce.

[2]This is somewhat inflated and tautological since we have fertility indicators on both the left and right-hand sides of the equation.

Figure 7. Percentages of Person-Years Lived by the Synthetic Cohort as Sterilized, Effective CCU , Never Married and Not Currently Married and Infecund by Region

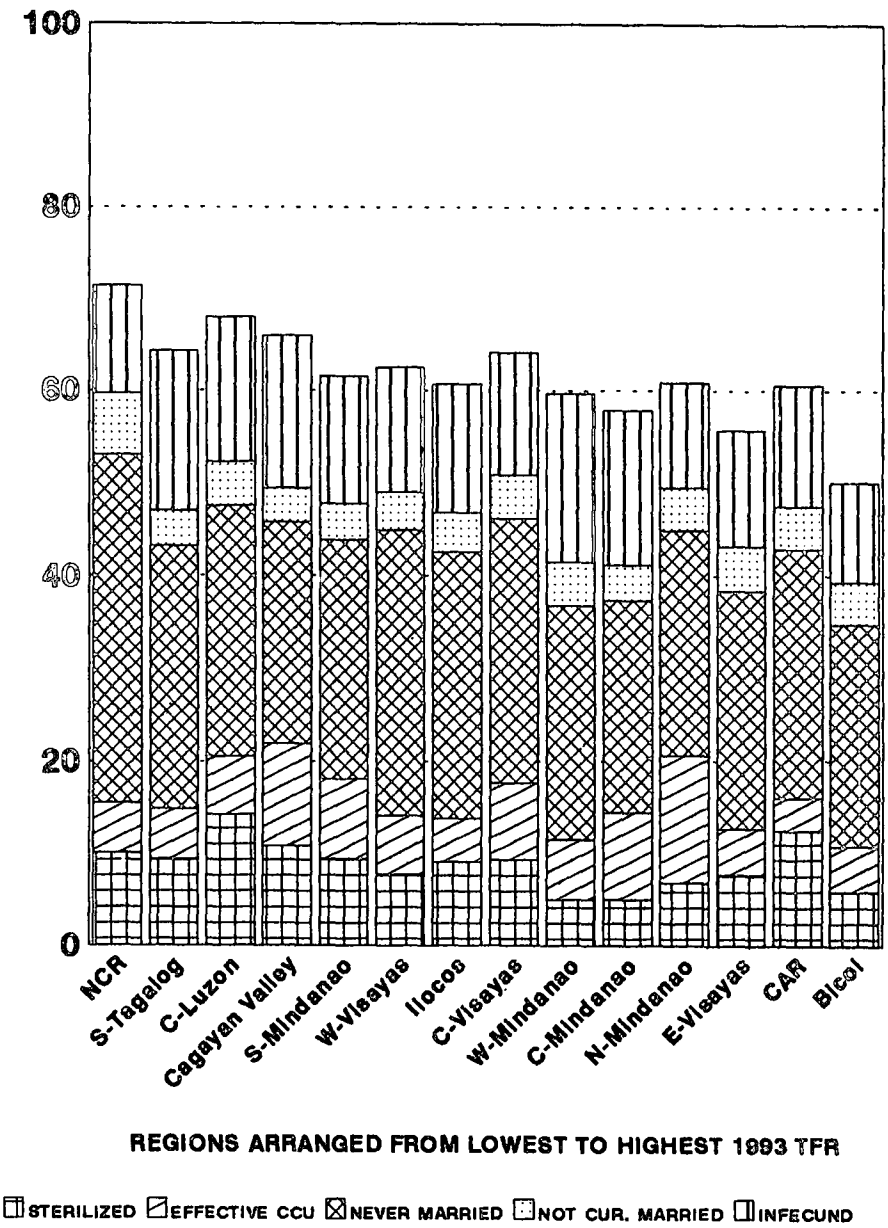


Figure 8. TFR and Cumulative Percentage Never Married, Not Currently Married as Sterilized, Effective CCU, and Infecund in the Synthetic Cohort

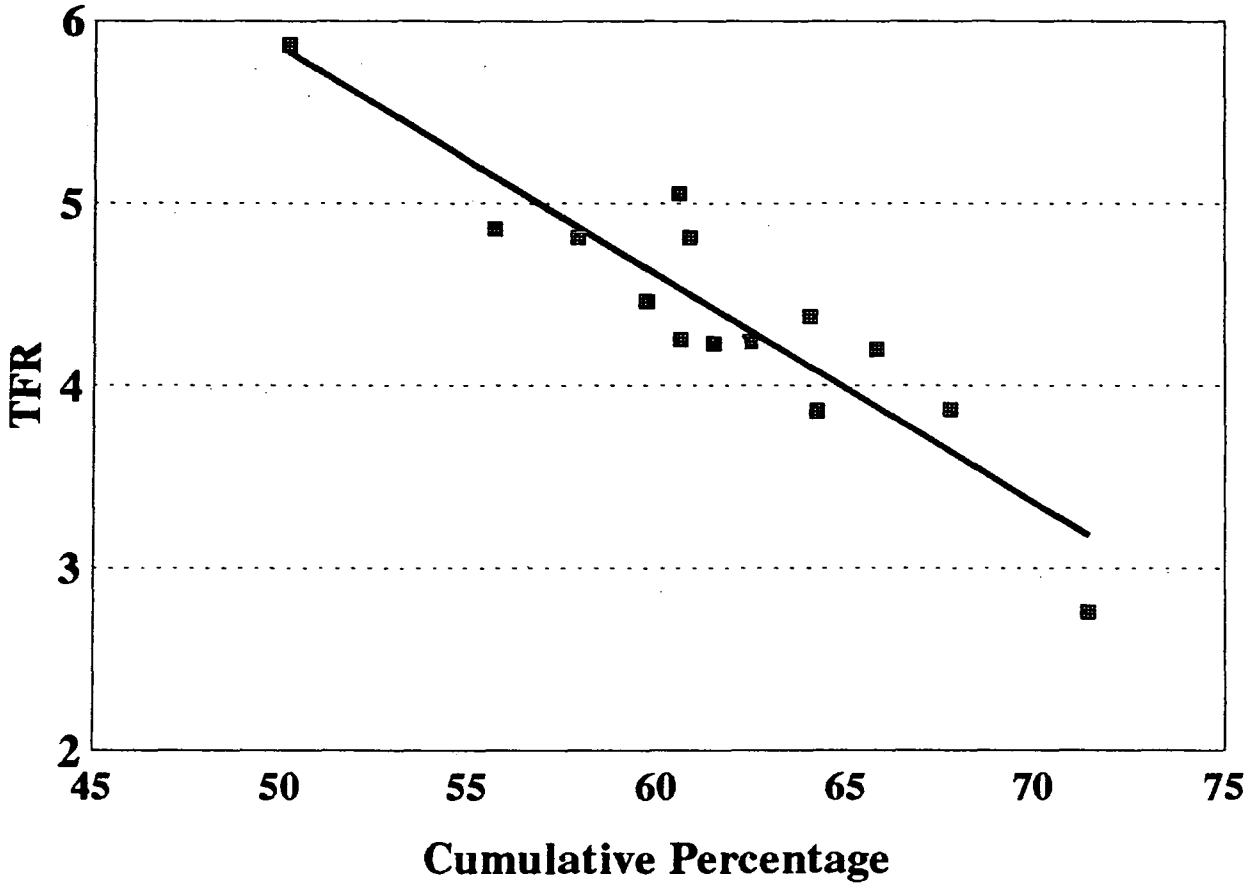


Figure 9. Percentages of Person-Years Lived by the Synthetic Cohort as Sterilized, Effective CCU , Never Married and Not Currently Married, Infecund and NFP Know Mens. by Region

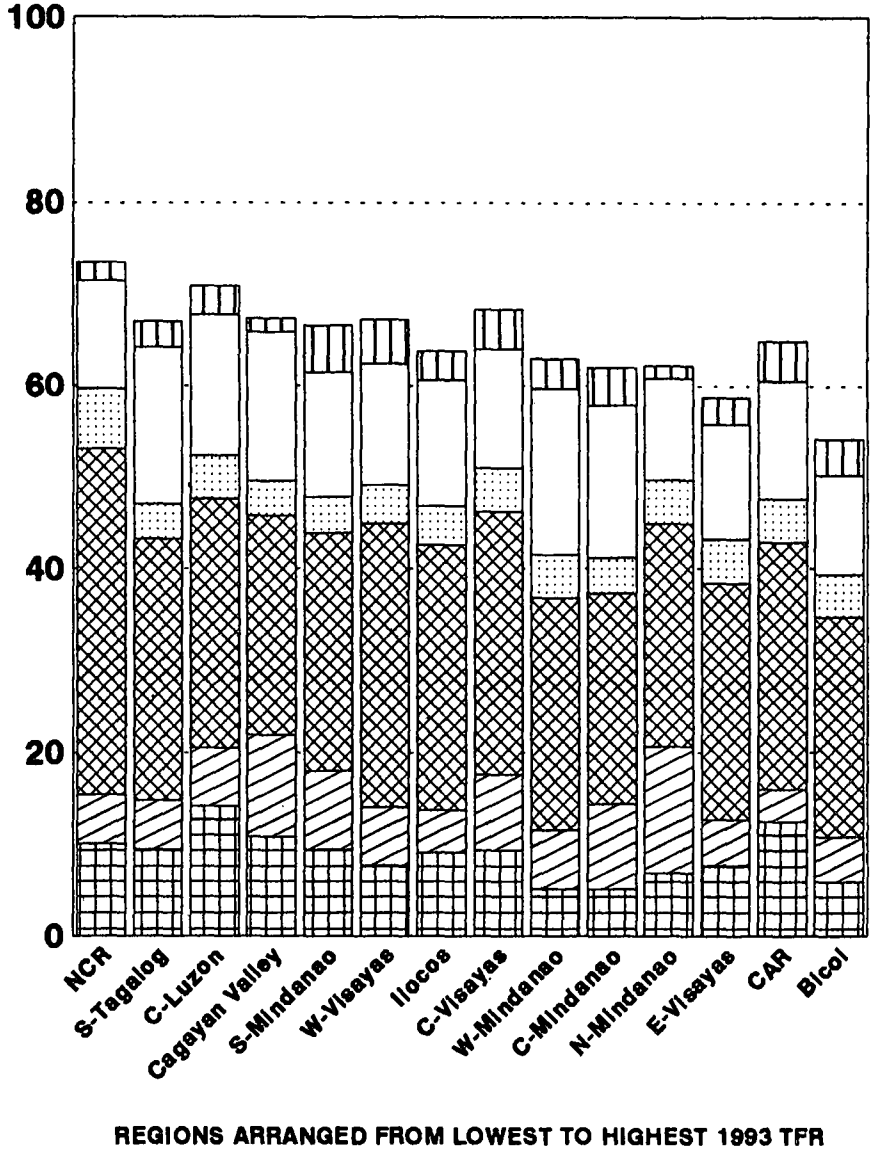


Figure 10 shows the percentages with low coital frequency. A different scale was used to show the differences, since the highest percentage is less than 10 percent. The high percentages with low coital frequency partly explain the low TFR in the NCR and Regions 4 and 3. An inconsistency exists in high TFR areas like the Eastern Visayas and Bicol since low coital frequency is also common in these areas. It, therefore, seems that high fecundity of women is a more important factor than lower coital frequency.

Person-Years Lived as "Exposed" by the Synthetic Cohort

We now turn to information about the synthetic cohort that may be of more interest to persons active in promoting family planning, whether in the Department of Health or in the various non-government organizations. What should interest these organizations is the Filipinas "exposed" to the "risk" of becoming pregnant. These are women who are currently married, fecund, and either not using contraception or using contraception ineffectively. These women are those shown as the solid parts of the bars in Figure 11. Included in this group are women who have an unmet need for family planning or who are otherwise in need of counseling or services from organizations active in family planning. These person-years "exposed" can be divided into four components:

(1) person-years spent using ineffective contraception or using natural family planning incorrectly;
(2) person-years with an unmet need for family planning;
(3) person-years with a "health risk" need for family planning; and
(4) person-years when family planning is not needed.

The first group we included in the "exposed" category refers to the person-years lived while using ineffective contraceptive methods or while using natural family planning without knowing the correct answer to the DHS question on when during the menstrual cycle they are most likely to become pregnant. (See Figure 12 -- which, incidentally, changes the scale from previous figures to allow easier visual inspection.) These women are "exposed" because they are at greater risk of becoming pregnant and need counseling about more effective methods of contraception or how to use natural family planning correctly.

The second group is person-years lived by women with an unmet need for family planning. These person-years lived are spent by women who are not currently using contraception and who do not want any more children (limiting need), or intend to space their next child (spacing need).

As shown in Figure 12, there is more unmet need in the high fertility regions. This is the pattern one would expect.

The third group is person-years lived by women who would place either their own or their next child's health at risk by having another child. (See Casterline, 1991 and Perez and Palmore, 1995.) This group we have labeled "health risk" need. These are person-years lived by women who are not using an effective FP method while being in one or more of the following categories:

(1) under age 20;

Figure 10. Percentages of Person-Years Lived by the Synthetic Cohort With Low Coital Frequency by Region

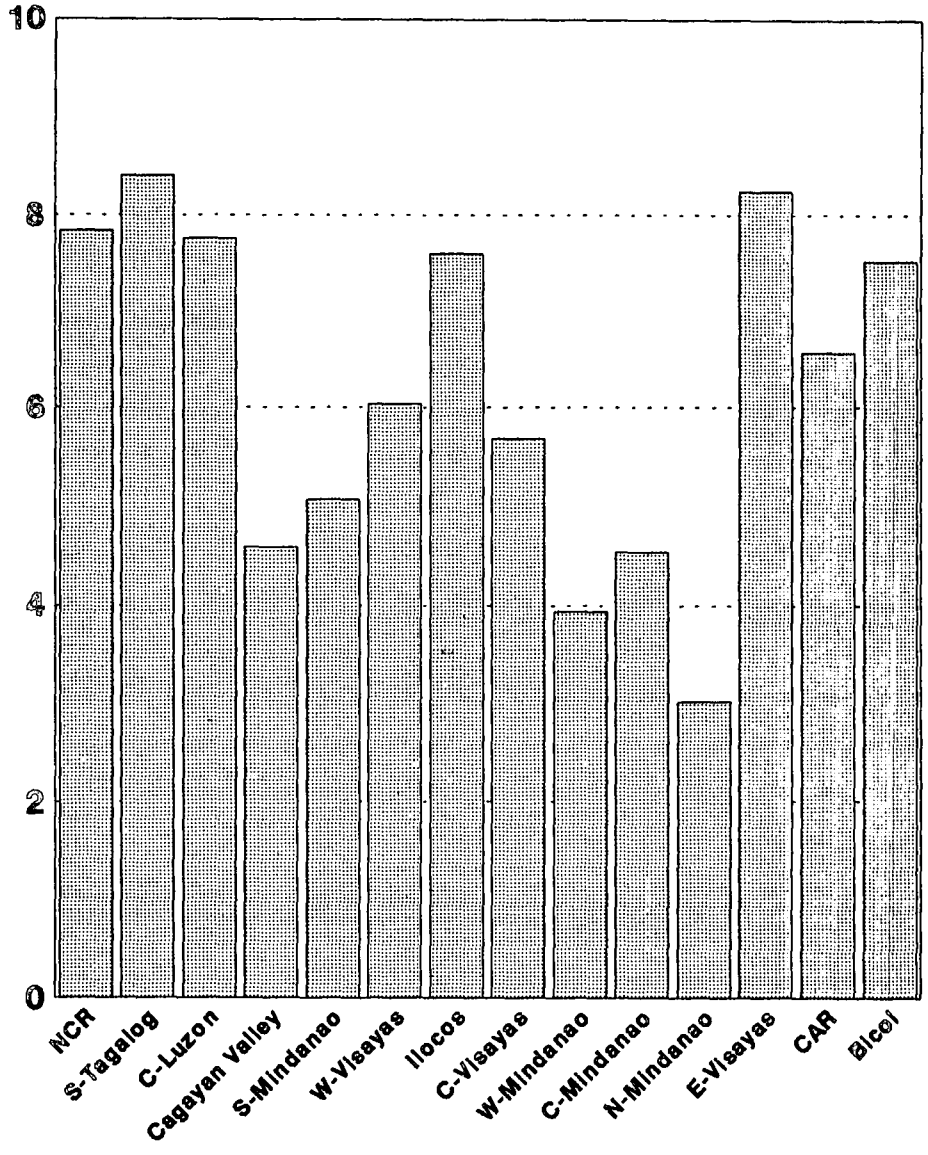


Figure 11. Percentages of Person-Years Lived by the Synthetic Cohort Adding the Percentages " Exposed" by Region

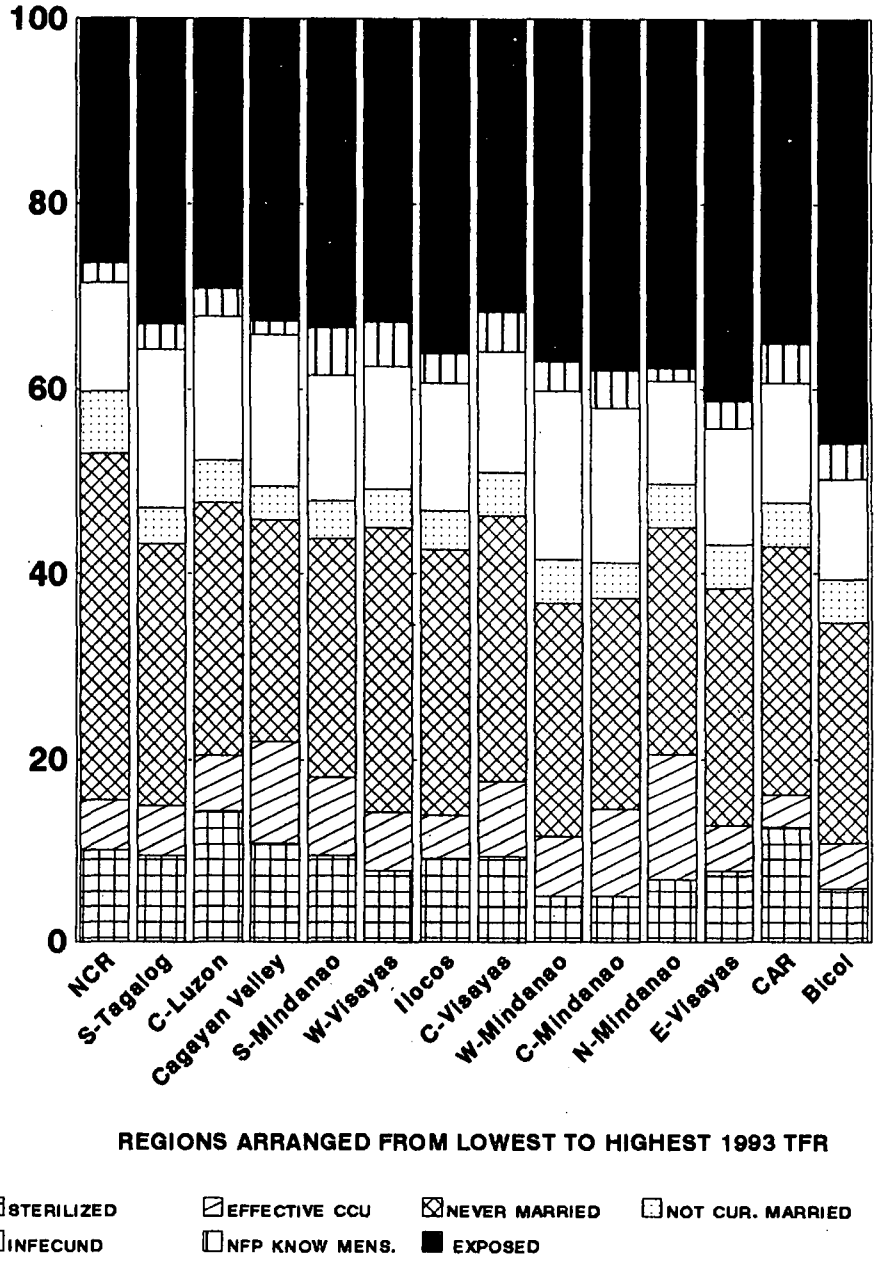
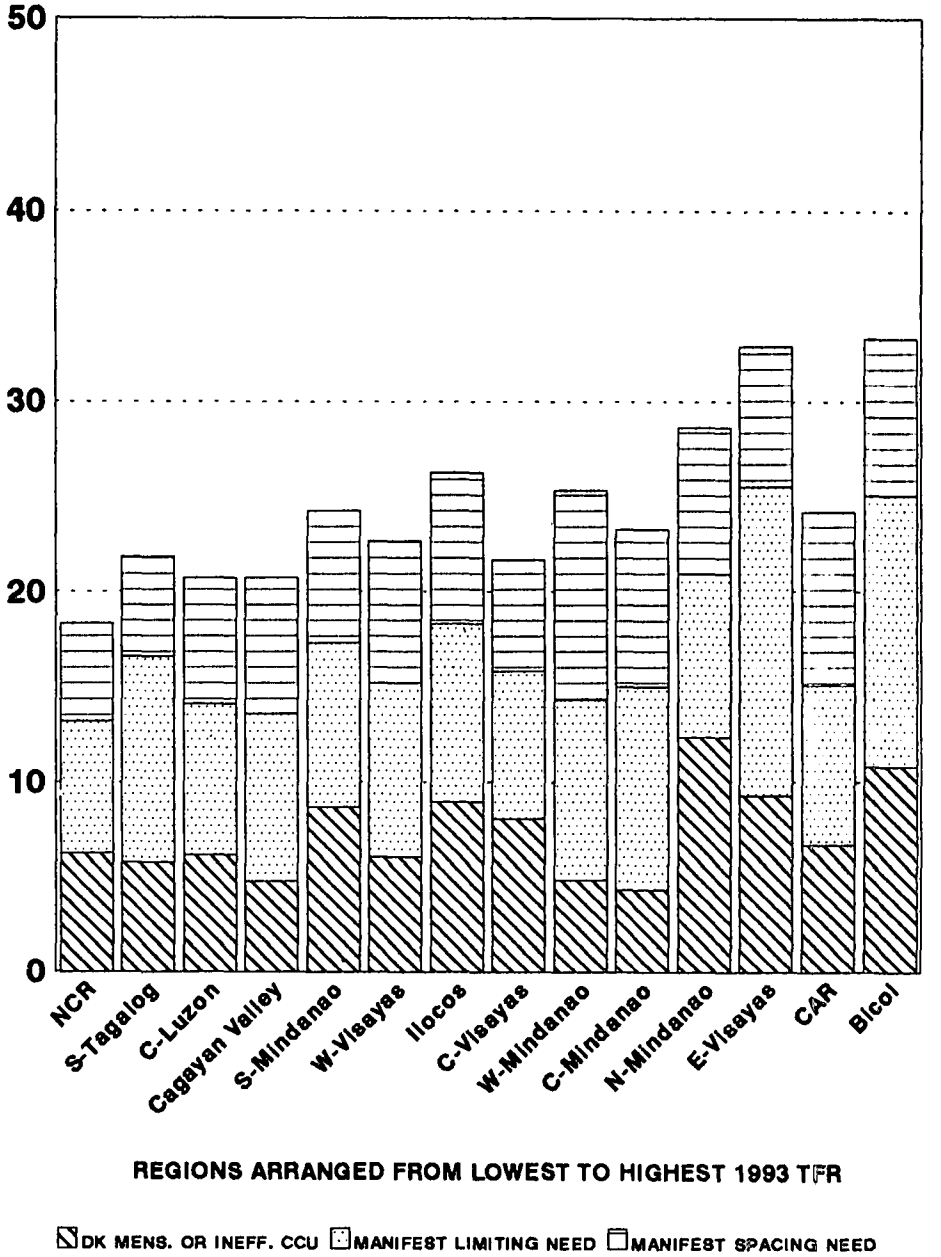


Figure 12. Percentages of Person-Years Lived by the Synthetic Cohort As Don't Know Menstrual Cycle and Ineffective CCU and Manifest Need by Region



(2) having had more than four previous live births;
(3) having had their most recent birth less than 15 months ago; or
(4) above age 35.

These person-years lived are added in Figure 13. As was true in Figure 12 as well, the bars increase in height as one moves from left to right, showing that the levels of exposure are generally in the high fertility regions. Limiting and spacing needs are highest in Western Mindanao, followed by CAR and the Bicol Region.

The final group consists of those with "no need" -- person-years lived by the synthetic cohort who have just married, have few children, are in the healthy age range to have children, are fecund, and have not had a child within the last 15 months. These person-years are shown as the topmost bars on Figure 14. Notice that Figure 14 disaggregates all the person-years lived by the synthetic cohort into each of the "exposed" and "not exposed" states.

DISCUSSION AND CONCLUSIONS

Having completed the exposure analysis for the Philippines in 1993, it is clear that both the proximate determinants and the "exposed" person-years lived are highly correlated with the total fertility rates for the various regions. For this analysis, we relied on the concept of a synthetic cohort so that the proximate determinants and "exposed" measures would be similar in calculation and meaning to a total fertility rate. We could also, however, simply use direct standardization. (See Palmore and Gardner 1994: 19-28 for an explanation of direct standardization.) We, therefore, prepared Figure 15 based on this type of calculation, using the country as a whole as the "standard" population. Clearly, the results look similar to those on Figure 14. In other words, using either a "rectangular" age distribution as the "standard" population (calculations for the synthetic cohort use a "rectangular" age distribution -- Palmore and Gardner 1994: 92) or the whole country's actual age distribution does not affect the conclusions we reached.

The total fertility rates for the regions in the Philippines are not highly correlated with contraceptive prevalence rates, even when these rates are converted to synthetic cohort measures. They are, however, highly correlated with a fuller set of proximate determinant measures. Marriage patterns, contraceptive use of effective methods or sterilization, and infecundity together account for the wide variation in regional fertility rates for the Philippines in 1993.

The low TFR in the NCR can be attributed to higher percentages of person-years lived by the synthetic cohort in the never married state, as well as in being separate from spouse or widowhood. Lower coital frequency may possibly play a role in this case, too.

For Southern Tagalog, the percentages infecund and never married are more important relative to Central Luzon which has about the same level of fertility. For Central Luzon, higher percentages sterilized and using effective methods accounted for its relatively lower fertility. As in the NCR, lower coital frequency may be

Figure 13. Percentages of Person-Years Lived by the Synthetic Cohort As Don't Know Menstrual Cycle and Ineffective CCU and Manifest Need and Health Risk by Region

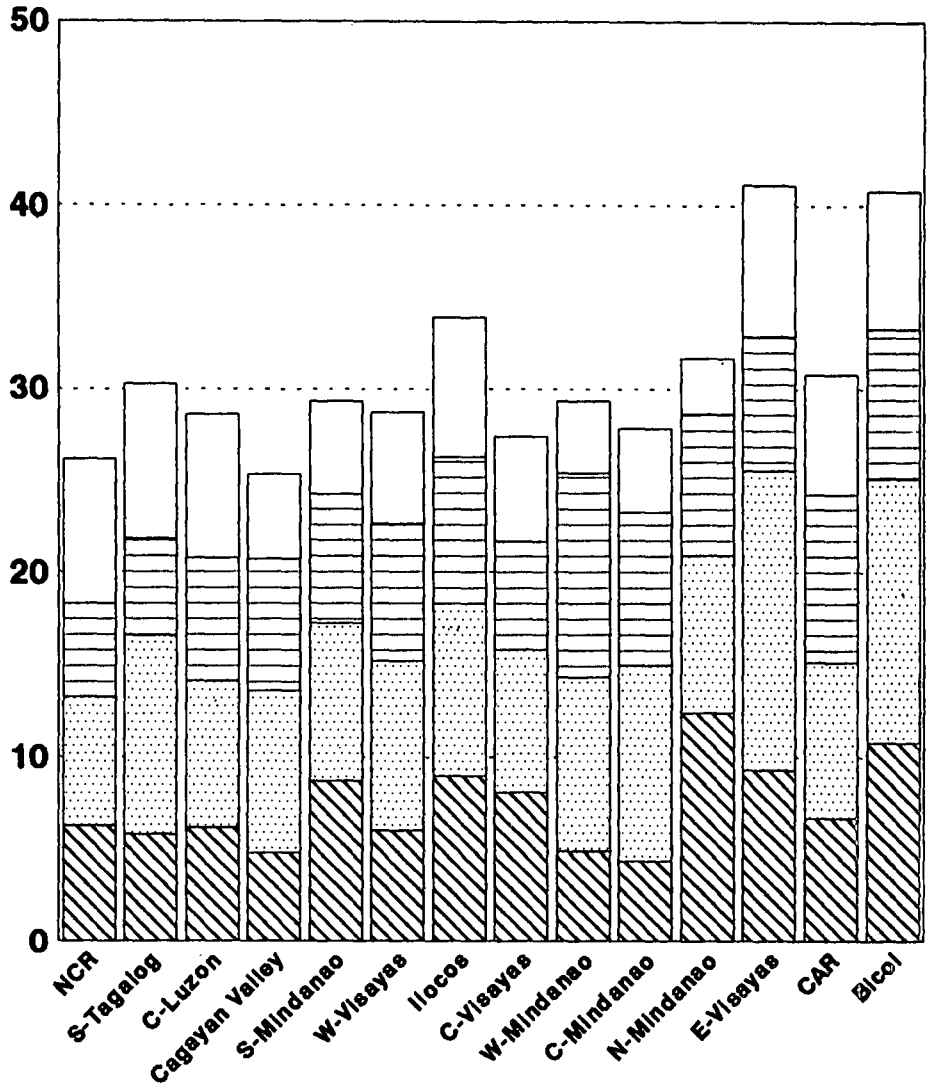
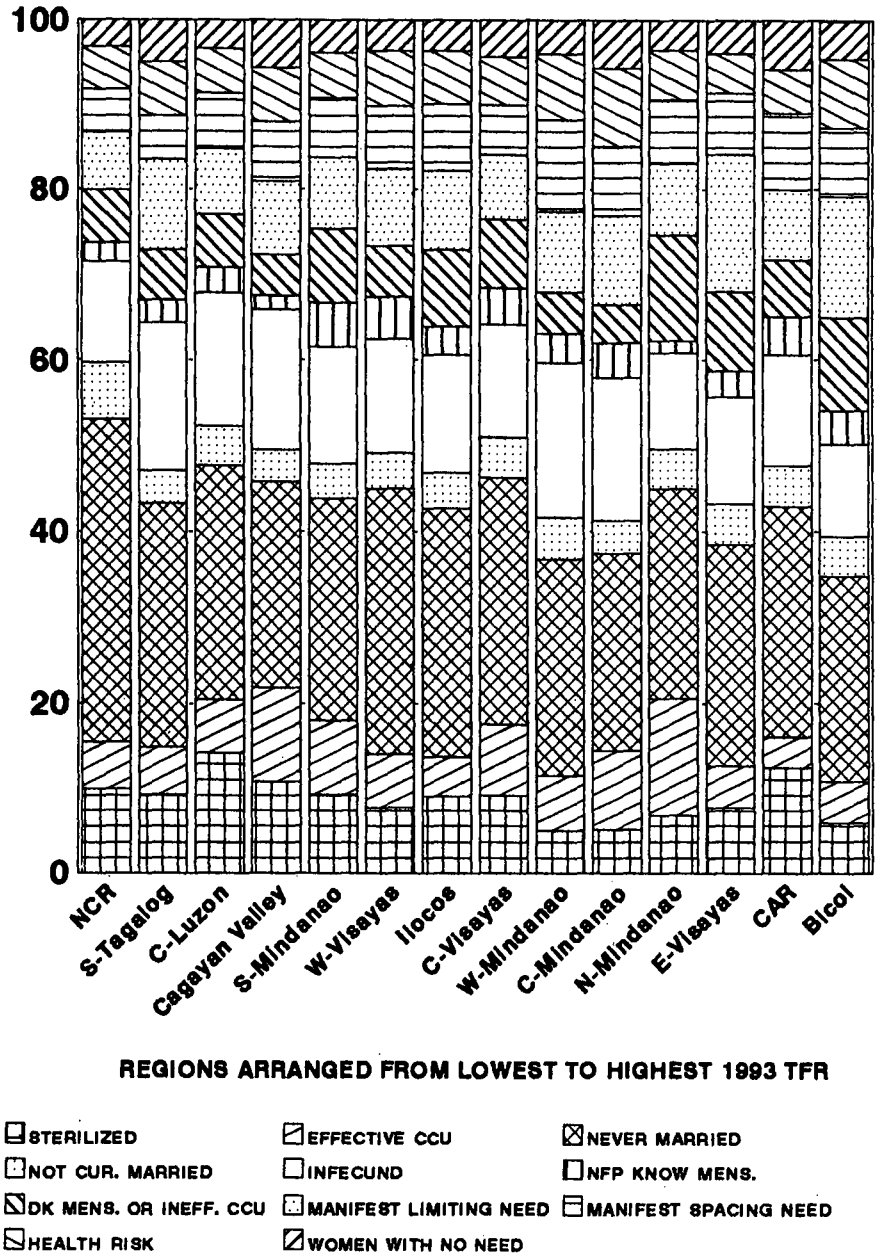


Figure 14. Percentages of Person-Years Lived by the Synthetic Cohort in Each 'Not Exposed" or "Exposed" State by Region



prevalent in provinces contiguous to the NCR because of work stress, fatigue, and long hours needed to commute between workplace and home.

Relatively lower fertility in Cagayan Valley, Southern Mindanao, Western Visayas, Ilocos Region, and Central Visayas can be attributed to an interplay of the four factors, with slightly larger effect of sterilization and use of effective methods in the Cagayan Valley and never married in the three latter regions.

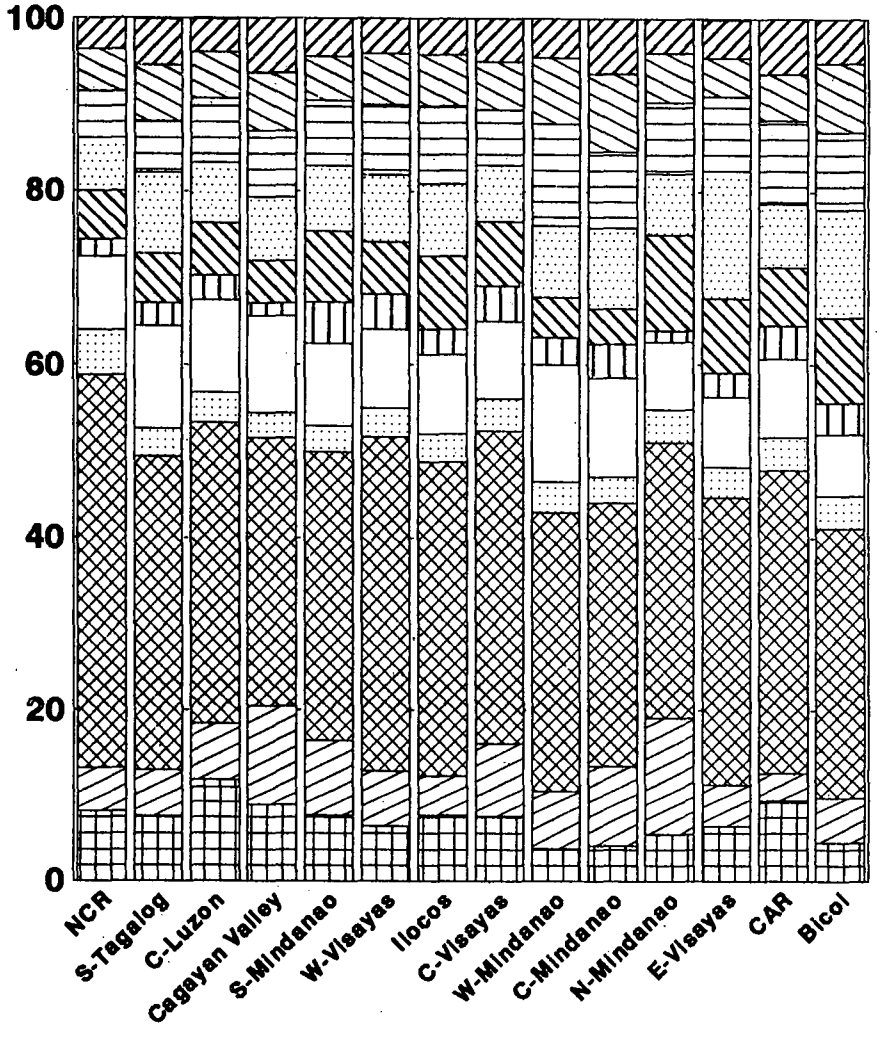
The high percentages infecund in Western Mindanao and Central Mindanao offset the effect of low percentages never married, divorced or widowed, sterilized, or using an effective method. On the other hand, in Northern Mindanao, Eastern Visayas, CAR, and Bicol, the low percentages infecund, using ineffective method, never married, and not currently married all contributed to their high fertility. Poor reliability and continuity in using contraception and in the timing of sterilization could have negated the benefits which would have been derived from these methods.

For the country as a whole, in the absence of family planning, about 60 percent of the women's reproductive years are spent in the "exposed" state. One way to reduce this "exposure" is for women to delay marriage, thereby increasing the person-years lived as never married. Delaying marriage would allow women to complete higher education and become productive rather than reproductive at an early age. Poor educational and economic opportunities (and sexual exploitations) have been seen to result in high adolescent fertility in many communities (UN Secretariat, 1994). Women's education has also consistently been associated with child survival (Fatbalia, 1987: 11). Thus, national programs should focus on the improvement of education, motivation for women to stay longer in school, and the provision of employment opportunities to enable women to actively participate and contribute to socioeconomic development, thereby enhancing the status of women.

The Family Planning Program can also have significant impact on improved reproductive health and slower population growth. Longer birth spacing improves the quality of life of both the mother and her child and reduces the burden from excessive births (Hobcraft, 1991). National programs should stress the deleterious effect of wrong timing of birth on mother's health and child survival (UN, 1994). Family planning education, information and motivation campaigns are needed to raise consciousness among women on how they can take control of their own lives, to make choices about the timing of their marriage and childbearing, to make them aware of the benefits of planning family size, and to guide current and prospective contraceptive users in making decisions about the choice of contraceptive method to use. These efforts could also allay fears about the side effects and disadvantages of using contraception (McCauley, 1994). Needless to say, the choice of contraceptive method depends on one's need at a particular time.

The finding that relatively high contraceptive use in some regions results in high fertility has some policy implications on the reliability and continuity of contraceptive use, particularly the pill and the condom This

Figure 15. Standardized Percentages in Each "Not Exposed" or "Exposed" State by Region Using the National Percentages as the Standard Population



also points to the importance of involving the husband in family planning education, an area which IEC programs need to intensify. In Metro Indonesia, husband's approval on contraceptive use was shown to be the most important factor in contraceptive use (Joesoef *et. al.*, 1988). The use of traditional methods could be reliable and effective if both husband and wife fully understand how the method works and are committed to practice the method properly. In fact, greater use of rhythm and withdrawal is seen in more developed than in less developed countries while the overall prevalence of modern methods is nearly identical for both (UN Secretariat, 1994: 18).

Regional programs should take into consideration the varying conditions affecting fertility and the level of unmet need in the region, given the findings that the regional differences in fertility can be attributed to an interplay of various factors. Regional planners and policy makers should examine their current delivery systems to see which components need strengthening.

Ten key lessons about what makes a family planning program work are given in Robey et al. (1994). At the local scene, lessons can also be learned from the fertility and family planning experience of the relatively more developed regions in the country, if the relatively less developed regions are to benefit from the vast and untapped human resource represented by their women.

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