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Measuring and Interpreting Urban Fertility and Family Planning Indicators by Wealth in Two South Asian Countries

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October 2010

WP-10-113

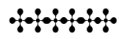


MEASURE Evaluation PRH is funded by the U.S. Agency for International Development (USAID) through cooperative agreement associate award number GPO-A-00-09-00003-00 and is implemented by the Carolina Population Center at the University of North Carolina at Chapel Hill, in partnership with Futures Group, Management Sciences for Health, and Tulane University. The opinions expressed are those of the authors and do not necessarily reflect the views of USAID or the U.S. government.

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Planning Indicators by
Wealth in Two South Asian Countries**

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MEASURE Evaluation Project

October 2010

Contents

Abstract.....	3
Introduction	4
Methods.....	5
<i>Data</i>	5
<i>Reclassification of Wealth</i>	6
<i>Fertility and Family Planning Variables</i>	7
<i>Analyses</i>	8
Results.....	8
Discussion	11
References	13

Acknowledgements: The authors wish to express their appreciation to Karen Foreit for her valuable methodological insights. This paper was supported by the U.S. Agency for International Development-funded project Population and Reproductive Health Associate Award of the MEASURE Evaluation project, cooperative agreement GPO-A-00-09-00003-00.

Measuring and Interpreting Urban Fertility and Family Planning Indicators by Wealth in Two South Asian Countries

Abstract

As the population of the world becomes increasingly urban, there is a need to examine the fertility and family planning needs of urban populations, particularly among the urban poor. While it is often assumed that urban residents are better off than their rural counterparts, the reality in many settings is that the urban poor are equally disadvantaged because of overcrowding, high demand for limited resources, increased cost of services in urban settings, and lack of access to clean water and sanitation. The definition and measurement of poverty in a population has become increasingly important as reduction of poverty is identified as the first Millennium Development Goal. This study applies new approaches proposed by the MEASURE Evaluation project to classify wealth using nationally-representative surveys such as the Demographic and Health Surveys (DHS). These approaches are particularly important in cases where identifying and targeting of services to the urban poor are of interest. Applying these new approaches to DHS data from Bangladesh and Pakistan, this paper demonstrates that the standard DHS wealth measures under-estimate the percent of the urban population that is poor and demonstrates that, using the re-classified wealth indices, women in the lowest quintiles remain worse off on fertility and family planning indicators. Even in Bangladesh, where family planning services are easily available, distinctions are still found between the urban poor and non-poor in terms of family planning method use and sources of methods. Larger differences are found in Pakistan, where programmatic efforts have been less widespread. Without reclassification of standard DHS wealth measures, programs risk misrepresenting the urban poor and may miss some of the women and households most in need of family planning services. Ensuring access to family planning among all women, men, and households, but particularly among the urban poor who lack access to some of the urban advantages available to their better-off counterparts, will lead to improved health outcomes for women and children, especially in concentrated urban areas.

Measuring and Interpreting Urban Fertility and Family Planning Indicators by Wealth in Two South Asian Countries

Introduction

At the aggregate level, urban residents generally have better health status than rural residents (Panel on Urban Population Dynamics, 2003). This health status advantage stems from both individual and contextual level differences in urban and rural areas. In particular, urban residents generally have higher education (and educational opportunities) which corresponds to greater knowledge of preventive behaviors. Moreover, urban residents tend to have greater access to the local currency that can be used for health care services. Finally, urban residents tend to have greater access to and use of health services in the public and private sectors (Vlahov, Galea, & Freudenberg, 2005; Montgomery, 2009; Ezeh, Kodzi, & Emina, 2010).

These urban advantages, however, are not equally distributed among all urban residents (Montgomery, 2009; Ezeh et al., 2010). In particular, in some settings, the urban poor are equally disadvantaged as their rural counterparts due to over-crowding, high demand for limited resources, increased cost of services in urban settings, and lack of access to clean water and sanitation (Montgomery, 2009). With increased urbanization (i.e., continued rural to urban migration), urban centers are becoming over-burdened by people seeking employment, housing, and a better way of living. As of 2010, about half (50.5%) of the world's population was living in urban areas (United Nations, 2010). While Asia and Africa are less urban (40% and 42%, respectively), they are both projected to attain populations that are two-thirds urban by 2050 (United Nations, 2010).

The definition and measurement of poverty in a population has become increasingly important as reduction of poverty is identified as the first Millennium Development Goal (MDG 1). The standardized poverty measurement typically used (and used for MDG 1) comes from the World Bank — those living on less than one U.S. dollar a day. Notably, there have been numerous discussions and critiques of this measure in terms of the conceptual aspects of using the dollar-a-day approach, as well as the data requirements to attain this type of measure (Woodward, 2010). For large cross-sectional surveys on the health and well-being of populations, often the data requirements to attain the dollar-a-day measure (or another consumption-based measure) are not feasible.

The common sources of data and information on fertility and family planning for developing countries come from large-scale, nationally representative surveys, such as the Demographic and Health Surveys (DHS). DHS have a household module that is used to obtain information on household composition, structure, and assets. Asset information is used to develop wealth quintiles – that is, a national-level indicator of wealth that divides the population into five

equally-sized units (20% each) (Rutstein and Johnson, 2004). The lowest quintile is often categorized as the “poorest” group in the population. This is the approach used in a recent analysis on equity and family planning program benefits in 64 countries by Ortayli and Malarcher (2010), where they demonstrate wealth (as well as education, residence, and age) differences in the proportion of family planning demand satisfied. In particular, examining women who report that they want to delay (two or more years) or limit childbearing, the authors examine what percent of this sample are currently practicing contraception. In most of the regions they studied, there was a wide variability in the proportion of demand satisfied between the lowest and highest wealth quintiles. Interestingly, the authors demonstrate that in Bangladesh and Pakistan, the two countries used in this study, the patterns are different such that in Bangladesh the difference between the lowest and highest quintiles on proportion of family planning demand satisfied is small, whereas in Pakistan there is a large difference between the lowest and highest quintiles; the authors suggest that this reflects programmatic differences in the two countries.

One challenge with the standardized categorization approach to develop wealth quintiles is that it ignores that the wealth of urban and rural residents is based on different criteria (Foreit, 2008). The DHS standard national wealth quintile results in the rural population being generally classified as poor (in the lower two quintiles) and the urban population ends up being considered not poor (in the highest two quintiles) (Foreit, 2008). A recent guide developed under the MEASURE Evaluation project (Foreit, 2008) presents problems with the standard DHS wealth quintiles and proposes alternative measurement approaches.

This paper applies the methods proposed by Foreit (2008) to DHS data from urban Bangladesh and urban Pakistan to examine the measurement of wealth indices and how this affects the interpretation of fertility and family planning indicators, including parity, ever and current use of family planning, and source of modern family planning methods. In addition, we extend the work by Foreit to consider alternative break-points of the asset index based on World Bank cut points from income data of extremely poor, poor, and non-poor for Bangladesh (World Bank, 2008); the indices developed from the World Bank classification are compared to the alternative wealth quintile approach using the same fertility and family planning indicators.

Methods

Data

The data for this study come from DHS from Bangladesh (2007) and Pakistan (2006-07). The DHS use a multi-stage sampling design, first selecting primary sampling units (PSU) with probability proportional to size, and subsequently selecting a random sample of households from within selected PSU. In selected households, ever-married women ages 15-49 were

surveyed and asked questions on the women's background characteristics; reproductive histories; contraceptive use knowledge and experiences; prenatal and postnatal care; child immunizations, health and nutrition; fertility preferences; breastfeeding practices; women's work; and husbands' background characteristics. To create the information on the wealth quintiles, information from the household-level questionnaire is used. The household questionnaire obtains information on usual residents of the household, as well as the characteristics of the households and household assets; these factors are used to calculate the household wealth indices described below.

For this analysis, because the focus is on urban women's access and use of family planning and how this varies by wealth measures, it was decided to drop the rural sample for the examination of the fertility and family planning indicators.

Reclassification of Wealth

This study examines the varying approaches to measuring wealth using standardized DHS by starting with a number of key questions from the household survey. The standard DHS approach to coding the asset measures is to apply principal components methods to all of the household assets (such as ownership of a number of consumer items, for example a television, bicycle or car; as well as dwelling characteristics, such as source of drinking water, sanitation facilities, and type of material used for flooring) and from the factor score, create quintiles of the lowest to highest population groups (Rutstein & Johnson, 2004). In this analysis, this standard classification at the national level is labeled the "DHS Standard Wealth Quintile."

Typically, wealth is relative and it is not expected that people living in rural areas would have the same access to consumer goods as those living in urban areas. In particular, if a rural area does not have electricity, it is unlikely that rural residents would have a television, refrigerator, or some of the other electricity-dependent assets. However, in rural areas, having many cows or goats may be indicative of wealth, while urban residents typically do not have the open space and other resources needed to raise livestock. Thus, to account for these types of differences in resources between urban and rural areas, we recoded the DHS-calculated factor score so that it is classified differently for rural and urban residents. In particular, we recoded the quintile classification stratified by place of residence such that we can determine the poorest 20% of the population in urban areas as compared to better-off counterparts; this classification would be separate from the classification of the poorest 20% from rural areas. We label this revised wealth quintile as the "DHS Recoded Wealth Quintile." Notably, with the recoded approach, there will be a poorest group that represents the lowest 20% of the population in both urban and rural areas; however, it is important to remember that these poorest quintiles are relative by comparing only urban to other urban residents (or rural to other rural residents).

The final approach employed to reclassify the wealth measures is specific to Bangladesh. In particular, the determination that 20% of the population represents the poorest segment of the population in urban or rural areas is a somewhat arbitrary cutoff. There are no theoretical reasons to divide a population into quintiles rather than, say, into the quartiles or tertiles. Moreover, given that the cut points are based on a continuous scale, in some cases the classification is being made based on small differences in values between the nineteenth percentile and the twenty-first percentile. To identify better where the cut points should be, we used a recent World Bank report on poverty measurement in Bangladesh. In this report, the authors measure poverty using poverty lines developed by the Bangladesh Bureau of Statistics and the World Bank. The poverty lines represent the level of per capita expenditure for a household to meet its basic needs. It is measured based on food expenditures for 11 key food items and adjusted for non-food expenditures. From these poverty line estimates, separate poverty rates are calculated for urban and rural areas over time. In the most recent report (World Bank, 2008), it is estimated in 2005 that 14.6% of the urban population was in “extreme poverty” and another 13.8% were classified as “poor”; the remaining 71.6% of the urban population was classified as “non-poor.” Notably, there were larger differences in rural areas where 28.6% of the population was classified as “extremely poor,” 15.2% was classified as “poor,” and the remaining 56.2% of the rural population was classified as “non-poor” (World Bank, 2008). Using the DHS wealth index factor score, we used these World Bank estimated cut points to divide our urban household sample into these three groups: extremely poor (15%), poor (15%), and non-poor (70%). The results based on this three category classification (called “World Bank Poverty Group”) are compared to the “DHS Standard Wealth Quintile” and the “DHS Recoded Wealth Quintile” described above.¹

Fertility and Family Planning Variables

For this analysis, we explore key fertility and family planning indicators and compare these by the multiple measures of wealth. The indicators examined include: number of children born, ever use of family planning, current use of family planning by method, and source of current modern method. Each of these indicators was calculated using standard methods from validated survey questions. Current use of family planning was based on a question that asks women if they are currently using any method to space or avoid a pregnancy and, if so, what method they are using. Women are classified by whether they are using a method and, among users, they are presented by type of method. For this analysis, users of an intrauterine device (IUD) are joined with Norplant users, since these methods were not commonly used. In addition, male and female sterilization are grouped together as “sterilization”; most

¹ Note that in Table 1 where the wealth quintiles and poverty groups are presented, the percentages in each group are not exact since the scores were classified based on weighted household data and then merged back into the women’s file; with the weighted women’s data, there are not exactly 20% in each group (and likewise for the size of the poverty groups).

sterilizations reported were female sterilizations. For all women who reported being a current user of a modern method, there was a follow-up question on where they most recently received this method, and responses were recoded to reflect the source as public sector, private sector, nongovernmental organization (NGO), or other. Within the public and private sectors there are large hospital facilities as well as smaller community-based sites.

Analyses

The data for Bangladesh and Pakistan are first presented in descriptive tables to demonstrate the characteristics of the samples. Additional descriptive analyses provide the cross-tabulation of source of the method by type of method, stratified by wealth categorization for the poorest groups for each wealth measure. Where there were too few family planning users (fewer than 10), the cross-tabulations are not presented because of a lack of variability to generalize. Finally, multivariate analyses are presented to examine the role of each wealth measure on use or nonuse of modern family planning (logistic regression methods); and to compare source of method among modern method users (multinomial logistic regression). Models are run separate for each of the different wealth measures (and stratified by country). For the multivariate analyses, coefficients and standard errors are presented. All analyses were performed in Stata statistical software, weighted and adjusted for the multi-stage sampling design.

Results

Tables 1 and 2 provide the descriptive characteristics from Bangladesh and Pakistan, respectively. Examining first the classification of wealth in Bangladesh, we see that using the DHS standard wealth quintile (based on national-level categorization), only 5% of the urban population is in the lowest wealth group and another 7% is in the second wealth quintile. Conversely, nearly 60% fall in the richest wealth group. As expected, the DHS-recoded wealth quintile has closer to 20% in each wealth group (not exactly 20% because categorization is done at the household level and data presented are at the individual-level). Finally, based on the World Bank classification of poverty groups, 14% of the population is considered extremely poor with another 14% that are considered poor.

The examination of the fertility and family planning indicators for Bangladesh by the different wealth categorizations is indicative of some of the problems with the non-recoded approach. Notably, the 5% of the population that is the poorest using the DHS standard wealth grouping tend to have the highest number of children, as well as the least experience with family planning; and are the most likely to use the public sector for their modern family planning needs. That said, if programs were to target only the lowest 5% (or 12%, if the second lowest quintile is included), then many of the urban poor may be neglected. As shown for the recoded

DHS wealth quintile, those women in the lowest two quintiles have the highest mean number of children born, are the least likely to have ever used family planning, are less likely to be current users, and are more likely to use the public sector for services. Finally, using the World Bank categorization, the extremely poor women have the highest number of live births, are the least likely to have ever used or currently use family planning, and are more likely to use the public sector. The poor group is more like the extremely poor group than the non-poor group in terms of number of children, current use of contraception, and source of family planning; however, they are somewhat better off on all indicators.

A similar comparison is presented for the Pakistan urban sample, without the World Bank categorization. In Pakistan, using the standard DHS wealth quintile, only 3% of urban residents are categorized in the lowest wealth quintile with another 6% in the second quintile. This is a typical observation found for national-level wealth quintiles when examined as stratified by urban and rural residence. Using the recoded wealth quintile, there is closer to 20% of the sample in each of the two lowest quintiles, as expected. Comparing the mean number of children across the two categorizations, not surprisingly, the lowest 3% of the urban population has the most children, are the least likely to have ever used or currently use family planning, and are the most likely to use the public sector. Again, in terms of targeting, programs would be missing a large segment of the population if they simply targeted the 3% that are worse off based on the national measure. In terms of the key fertility and family planning indicators presented, as expected, the women in the lowest recoded wealth quintile (and the second lowest) have the highest number of children ever born, are the least likely to have ever used or currently use a method of family planning, and are the most likely to use the public sector. These are the women who should be targeted with family planning programs in urban Pakistan.

In Table 3, we present the source of family planning methods by method and for each of the lowest wealth groups using the different classifications. In Bangladesh, for each method presented, with the exception of condoms, the public sector is the most common source of methods. Comparing the DHS standard wealth quintile, focusing on the lowest two groups (which amounts to 12%), to the lowest quintile for the recoded measure and to the extremely poor and poor groups with the World Bank measure provides slightly different findings about where women access family planning. For example, among the most poor (standard DHS wealth quintiles 1 and 2; recoded DHS quintile 1; and World Bank extremely poor), the public sector is the main provider of pills. However, the World Bank poor group (14% of the sample) seems to use sources at all three levels presented (public, private, and NGO/other). For condom access, the pattern is slightly different. The lowest 20% (recoded DHS), and the World Bank extremely poor groups report greatest access from NGOs and other sources (e.g., faith-based organizations) whereas the World Bank poor group reports the most private sector access (e.g., social marketing).

For Pakistan, the sample size of users is small using the non-recoded DHS wealth quintile, so it is difficult to make comparisons in sources of family planning methods across the groups. That said, using the recoded DHS wealth quintile, we see that access to injections, IUDs, or sterilization is most common in the public sector, whereas the pill comes from the public and private sectors; and the condom comes most frequently from the private sector, as well as from NGO/other sources.

In Table 4, we present the multivariate analyses of contraceptive use (modern use vs. nonuse of modern methods) and the source of methods (public, private, or NGO/other). For the analyses of contraceptive use, logistic regression coefficients and standard errors are presented in the table. For the analyses of source of method, multinomial logistic regression coefficients and standard errors are presented. Three models are presented for Bangladesh (two for Pakistan). Model 1 includes the standard DHS wealth quintiles categorized as: wealth 1/2; wealth 3; and wealth 4/5 (reference group). Model 2 includes the recoded wealth groups with the following categories: wealth 1, wealth 2, wealth 3, wealth 4/5 (reference group). Model 3 (for Bangladesh only) uses the World Bank wealth classification as: extremely poor, poor, and non-poor (reference group). All models by country are presented using just the urban sample and control for age group, education, and number of children. In Bangladesh, religion is also included in the model whereas in Pakistan, employment is included.

Table 4 demonstrates that in the contraceptive use model (modern use vs. nonuse of modern methods), women who are from the lowest wealth group (using any of the classifications) are the least likely to use a modern method. There were no differences between women in the second recoded wealth quintile and the highest group (model 2) nor among women who were classified as poor with the World Bank classification and those in the highest wealth group. This suggests the need to target the poorer groups, whether measured as the 20% poorest or the poorest group, using an alternative coding approach such as the World Bank classification.

The examination of source of method provides similar findings. Comparing public to private sector use across all three models, those women who are in the lowest quintiles (with any of the classifications) are the most likely to use the public sector to obtain modern family planning methods. Less consistency was observed between NGO/other and private sector use.

At the bottom of Table 4, the results for Pakistan are presented. Examining which women are users of modern methods versus non-users of modern methods, we see that the urban poor (measured either as the first three wealth quintiles using the standard DHS coding or as the lowest quintile with the recoded DHS quintile) are the least likely to be modern method users. Furthermore, as found in Bangladesh, the poorest groups are the most likely to use the public sector; this is found particularly for the lowest recoded wealth quintiles that have a large enough sample of women who are using family planning to provide more robust results. No

differences are found by wealth group between modern method users who use NGO/other sources and the private sector.

Discussion

The findings from this study illustrate problems with the standard DHS wealth quintiles and the need to reclassify this measure to portray better the health needs among the urban poor. In particular, if programs that seek to target the urban poor with fertility and family planning activities focus only on the standard DHS wealth measure, they will likely over-estimate the problem (e.g., higher fertility than expected and lower contraceptive use) among a small sample (e.g., in Pakistan, these programs would have targeted only the lowest two quintiles and identified less than 10% of women as poor). Our analyses demonstrated that in Pakistan the use of family planning among women in the lowest recoded quintile (e.g., 20% of urban the urban sample) is significantly lower than their better-off counterparts; the difference was smaller in Bangladesh. While these two countries are similar in terms of social and economic development, there has been greater commitment to family planning services in Bangladesh, reducing the distinctions in use and source of method across the wealth groups (Ortayli and Malarcher, 2010).

In terms of program targeting, if the non-recoded DHS wealth classification is used, it is more difficult to identify appropriate cut-points on who to target. Furthermore, we observed in both countries that in the comparison of sources of methods, all three of the lowest quintiles (using the recoded approach) and the two non-poor groups (using the World Bank classification for Bangladesh) are more likely to obtain modern methods from the public sector. This is indicative of greater access to free services in the public sector.

This study uses fertility and family planning indicators to support the findings from a MEASURE Evaluation report that demonstrated the need to reclassify the wealth quintiles by location of residence (Foreit, 2008). Programs that fail to re-classify the DHS standard wealth quintile are likely to conclude inappropriately that most households in urban areas are non-poor and those in rural areas are generally poor. This is a failure to recognize that wealth is a relative concept and that there are poor and non-poor households in both settings. Therefore, the classification of wealth needs to happen by residence, as presented here.

This study is not without limitations. First, while the classification of women into the extremely poor, poor, and non-poor groups based on the World Bank estimates is unique, this coding is based on the underlying assumption that assets measured in the DHS correspond to World Bank items included in its poverty measurements. This is a strong assumption, but in the absence of better data on consumption, it is a unique approach to examine the characteristics of women by the varying World Bank wealth groups. An additional limitation of using the World

Bank wealth estimates is that these are not available for all countries; thus data are not presented for Pakistan. Another limitation of this analysis is the use of quintiles to estimate poverty levels. As mentioned above, quintiles are somewhat arbitrary cut points to determine which groups are the poorest in an urban area. That said, for targeting purposes, by dividing the urban population into five groups of equal size, it is possible to examine distinctions among these groups and determine who has the greatest fertility and family planning needs and should be the focus of program efforts. With more extensive data on consumption, it would be possible to identify better the households living below some standard measure of wealth (e.g., one dollar a day or two dollars a day) and use this approach for reclassifying households. With DHS data sets, this approach is not possible.

To conclude, this study demonstrates that reclassification of the standard national-level DHS wealth groups is pertinent for identifying and targeting family planning programs to the urban poor using DHS data. Without reclassification, programs will misrepresent the urban poor and may miss some of the women and households most in need of family planning services. Ensuring access to family planning among all women, men, and households, but particularly among the urban poor who lack access to some of the urban advantages available to their better-off counterparts, will lead to improved health outcomes for women and children, especially in concentrated urban areas.

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Table 1. Characteristics of Bangladesh Sample on Fertility and Family Planning Indicators by Residence and Wealth Group

	DHS Standard Wealth Quintiles					DHS Recoded Wealth Quintiles					World Bank Poverty Group		
	Lowest	Second	Middle	Fourth	Highest	Lowest	Second	Middle	Fourth	Highest	Extremely Poor	Poor	Non-Poor
URBAN													
Percentage	4.9%	7.1%	10.6%	18.6%	58.8%	19.0%	20.1%	21.0%	20.9%	19.0%	14.3%	14.3%	71.5%
Mean # of children born (SE)	3.21 (0.18)	2.84 (0.10)	2.98 (0.11)	2.75 (0.09)	2.26 (0.05)	2.96 (0.09)	2.72 (0.08)	2.56 (0.09)	2.27 (0.07)	2.09 (0.07)	3.03 (0.10)	2.82 (0.09)	2.35 (0.05)
Ever use family planning	80.2%	81.4%	83.5%	84.3%	87.1%	81.8%	83.2%	84.5%	88.2%	89.3%	80.6%	84.2%	86.6%
Current use													
Not using	47.6%	42.9%	46.7%	43.8%	41.1%	45.7%	45.4%	44.1%	41.2%	36.6%	46.9%	44.0%	41.5%
Pill	27.4%	32.3%	27.7%	29.7%	26.0%	29.8%	28.4%	29.5%	29.1%	19.4%	29.5%	30.5%	26.2%
Injection	5.0%	7.3%	6.6%	6.8%	4.8%	6.5%	7.0%	5.7%	6.0%	2.3%	5.6%	6.9%	5.2%
IUD/Norplant	2.4%	0.8%	1.8%	2.1%	1.3%	1.5%	2.4%	1.7%	1.1%	0.7%	1.6%	1.9%	1.4%
Sterilization	6.7%	7.2%	7.3%	6.5%	4.5%	7.1%	5.3%	6.3%	3.6%	5.1%	7.5%	5.5%	5.1%
Condom	2.0%	2.4%	2.5%	4.2%	12.7%	1.6%	4.6%	4.7%	10.0%	23.4%	1.9%	2.8%	11.3%
Traditional /other	8.9%	7.1%	7.5%	7.0%	9.8%	7.8%	7.0%	8.0%	9.0%	12.5%	6.9%	8.3%	9.4%
Source													
Public	67.7%	54.4%	51.8%	44.1%	23.2%	56.4%	42.4%	37.1%	22.1%	16.1%	58.2%	46.9%	27.3%
Private	22.4%	31.0%	33.6%	37.0%	62.3%	28.2%	41.0%	48.2%	58.4%	74.4%	28.8%	35.5%	57.5%
NGO	8.2%	5.3%	3.7%	11.5%	9.4%	6.7%	9.7%	8.3%	12.9%	6.3%	4.7%	8.4%	9.7%
Other	1.7%	9.3%	10.9%	7.4%	5.2%	8.7%	7.0%	6.4%	6.6%	3.2%	8.3%	9.2%	5.4%

Table 2. Characteristics of Pakistan Sample on Fertility and Family Planning Indicators by Residence and Wealth Group

	DHS Standard Wealth Quintiles					DHS Recoded Wealth Quintiles				
	Lowest	Second	Middle	Fourth	Highest	Lowest	Second	Middle	Fourth	Highest
URBAN										
Percentage	2.9%	6.2%	14.2%	29.1%	47.6%	19.3%	19.3%	20.4%	20.8%	20.3%
Mean # of children born (SE)	4.64 (0.34)	4.15 (0.17)	4.36 (0.15)	3.95 (0.10)	3.24 (0.08)	4.38 (0.12)	4.09 (0.13)	3.76 (0.12)	3.37 (0.11)	2.99 (0.11)
Ever use family planning	33.2%	35.5%	49.1%	63.7%	70.2%	43.7%	60.5%	65.0%	70.7%	70.0%
Current use										
Not using	83.2%	81.7%	69.4%	59.9%	58.5%	74.9%	59.9%	61.9%	58.1%	58.8%
Pill	1.0%	2.0%	2.4%	2.9%	2.3%	1.6%	3.5%	3.1%	1.9%	2.1%
Injection	3.0%	3.1%	3.8%	2.9%	1.2%	2.8%	3.8%	2.1%	1.3%	1.4%
IUD/Norplant	0.0%	1.0%	1.5%	1.1%	4.2%	1.0%	1.6%	1.2%	4.6%	4.3%
Sterilization	9.6%	5.3%	8.5%	12.3%	9.7%	8.3%	11.9%	10.7%	9.2%	10.0%
Condom	0.0%	2.7%	5.8%	9.1%	11.5%	4.0%	8.6%	10.4%	11.2%	11.1%
Trad/other	3.2%	4.6%	8.6%	11.7%	12.6%	7.5%	10.7%	10.6%	13.6%	12.3%
Source										
Public	69.3%	52.9%	56.1%	47.4%	30.7%	60.8%	45.7%	44.2%	32.7%	26.8%
Private	30.7%	18.9%	35.7%	36.8%	52.9%	25.9%	41.6%	41.2%	50.5%	54.7%
Other	0%	28.2%	8.3%	15.8%	16.4%	13.3%	12.8%	14.6%	16.8%	18.6%

Table 3. Source of Family Planning by Method, Residence, and Wealth Group – Bangladesh and Pakistan DHS

	Pill	Injection	IUD/ Norplant	Female/Male Sterilization	Condoms
Bangladesh					
Urban/Standard Wealth Quintile – Lowest Two (n=272)		n=9			n=9
Public sector	52%	*	58%	93%	*
Private sector	35%	*	27%	7%	*
NGO/other	12%	*	15%	0	*
Urban/Recoded Wealth Quintile – Lowest (n=411)					
Public sector	49%	60%	50%	93%	30%
Private sector	34%	26%	28%	7%	18%
NGO/other	17%	14%	22%	0	51%
Urban/Extremely Poor (World Bank) (n=304)					
Public sector	52%	61%	58%	91%	28%
Private sector	34%	25%	35%	9%	20%
NGO/other	14%	14%	7%	0	52%
Urban/Poor (World Bank) (n=309)					
Public sector	36%	61%	81%	92%	17%
Private sector	42%	28%	0%	4%	65%
NGO/other	22%	11%	19%	3%	18%
Pakistan					
Urban/Standard Wealth Quintile – Lowest Two (n=61)	n=10	n=11	n=4	n=28	n=8
Public sector	*	77%	*	70	*
Private sector	*	0%	*	30	*
NGO/other	*	14%	*	0	*
Urban/Recoded Wealth Quintile – Lowest (n=145)	N=20	N=23	N=12	N=63	N=27
Public sector	47%	68%	64%	82%	16%
Private sector	39%	21%	25%	18%	41%
NGO/other	14%	11%	11%	0%	43%

* Too few observations (<10); n's are unweighted.

Totals do not sum to 100% due to rounding.

Table 4. Multivariate Coefficients (SE) Using Different Wealth Measures and the Relation with Family Planning Use and Source of Method

	Modern Users vs. Non-Users of Modern			Source of Method among Modern Users (Multinomial Logistic Regression)					
	Model 1	Model 2	Model 3	Public vs. Private Model 1	NGO/Oth. vs. Private Model 1	Public vs. Private Model 2	NGO/Oth. vs. Private Model 2	Public vs. Private Model 3	NGO/Oth. vs. Private Model 3
Bangladesh - Urban									
Standard DHS									
Wealth 1/2	-0.28 (.14)+			1.08 (.22)***	0.18 (.34)				
Wealth 3	-0.19 (.13)			0.89 (.17)***	0.29 (.26)				
Wealth 4/5 (ref)	---			---	---				
Recoded DHS									
Wealth 1		-0.35 (.14)*				1.62 (.27)***	0.67 (.34)+		
Wealth 2		-0.19 (.11)				1.08 (.24)***	0.42 (.27)		
Wealth 3		-0.09 (.13)				0.75 (.25)**	0.19 (.24)		
Wealth 4/5 (ref)		---				---	---		
World Bank Wealth									
Ex. Poor			-0.32 (.13)*					1.07 (.22)***	0.28 (.29)
Poor			-0.16 (.11)					0.84 (.19)***	0.41 (.24)+
Non-Poor (ref)			---					---	---
Pakistan - Urban									
Standard DHS									
Wealth 1/2	-1.01 (.18)***			0.83 (.44)+	0.68 (.51)				
Wealth 3	-0.41 (.14)**			0.54 (.29)+	-0.57 (.41)				
Wealth 4/5 (ref)	---			---	---				
Recoded DHS			NA					NA	NA
Wealth 1		-0.62 (.15)***				1.31 (.30)***	0.11 (.44)		
Wealth 2		0.10 (.15)				0.59 (.25)*	-0.38 (.40)		
Wealth 3		-0.02 (.15)				0.65 (.23)**	-0.08 (.42)		
Wealth 4/5 (ref)		---				---	---		

Notes: All models control for age group, employment (Pakistan only), religion (Bangladesh only), education, and number of children.

NA – data not available for Pakistan; +p≤0.10; *p≤0.05; **p ≤ 0.01; ***p ≤ 0.001.