Are Adolescents and Young Adults More Likely Than Older Women to Choose Commercial and Private Sector Providers of Modern Contraception?

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Abstract

This study tests the hypothesis suggested by many smaller studies that young people prefer to use private providers to access contraceptive methods. It examines the patterns in young women's levels of sexual activity, use of modern methods of contraception, and sources of modern contraception by age group and union status, using Demographic and Health Survey (DHS) data. In addition, while controlling for other important explanatory variables, the study seeks to answer the question of whether young women are more likely to choose private sector providers than older women. Results indicate that young women ages 15–24 have higher levels of sexual experience in Africa than in the Latin American, Caribbean, or Asian countries included in this analysis. Overall proportions of young women currently using modern contraceptive methods in Africa, however, are quite low when compared with countries included in the analysis from the Latin American, Caribbean, and Asian regions. Data examining whether young women are more likely than older women to choose private sector providers—while controlling for important explanatory variables—reveal mixed results. In Africa, data for most countries indicate that young women are significantly more likely to choose private and commercial sector providers. In two of the four countries examined in Asia, young women were significantly more likely to choose the private sector. Only in the Latin American and Caribbean (LAC) countries were young women generally less likely to choose private and commercial sector providers than older women.

I. Introduction

Adolescents and young adults represent a large and growing proportion of the populations of developing countries around the world. While youth are generally among the healthiest of any age group, they have special biological needs and other vulnerabilities to reproductive health problems such as sexually transmitted infections (STIs), HIV/AIDS, and unwanted pregnancies. Throughout the world, most young people will have sexual intercourse by age 20, but the circumstances of that sexual activity will vary tremendously.

For adolescents who are sexually active, access to contraceptive services is necessary to prevent pregnancy or STIs, including HIV/AIDS. However, there are indications that many important barriers limit young people's health-seeking behavior and access to pregnancy and disease-prevention services (Brindis and Davis, 1998; De Belmonte et al., 2000; Nelson and Magnoni., 2000; Senderowitz, 1999). Several small studies have found that perceived provider biases against providing reproductive health services to youth—especially unmarried youth—deter young people from seeking services at public health establishments (De Belmonte et al., 2000; Nelson and Magnoni, 2000; Agha, 2000; and Lane et al., 2002). Other studies report that young people prefer the ease and anonymity of pharmacies or other private or commercial providers over navigating government health systems (De Belmonte et al., 2000; Meekers et al., 1997.)

To what extent are these findings applicable to the large number of sexually active young people around the world in need of pregnancy and STI/HIV prevention services? Do young people prefer the private or commercial sector over the public sector for contraceptive methods? If so, to what extent does a young person's marital status, education, standard of living, and area of residence affect this preference? This paper seeks to begin to answer these questions to determine whether some of the findings suggested by smaller studies are borne out.

This study uses large, nationally representative DHS data sets to examine the relative importance of the commercial and private sector providers as sources of contraception for young women ages 15–24 that currently use modern contraception as compared with the patterns of behavior of women ages 25–49. While these data sets are not ideal for a complete examination of the factors that determine young peoples' choice of their modern contraception provider, they do allow us to begin examining empirical patterns of how young women who do use contraception access their method (Rosen, 2001). The data also permits us to examine some of the sociodemographic variables that may be associated with the choice of provider of modern contraception. Consequently, policy and program development can better address young peoples' reproductive health needs in accordance with where they are in their reproductive lives.

II. Data and Methods

All surveys in DHS III available at the time the analyses began were included. Surveys for 29 countries—four from Asia, seven from Latin America and the Caribbean, and 18 from Africa—were available.

The descriptive stage of this analysis utilizes the data for 15–24 year-old women only and identifies the proportions that are sexually active.[1] With the exception of the Philippines, however, the surveys for the Asian countries do not include single, sexually active women. Thus,

[1]For purposes of these analyses, all young women in union are assumed to have had sexual intercourse. For those respondents who are not in a formal union, those who report having experienced sexual intercourse at least once are defined to be single and sexually active.

for Bangladesh, Indonesia, and Nepal, all the data presented is for young women who are in union or married. For all the countries included in the analyses that do interview single and married women ages 15–24, the union status for those women who are sexually active is then presented. Additionally, for all young women who are sexually active, information on whether they use modern methods of contraception[2] is presented by union status. Source of modern contraception[3] is also presented for young women by union status.[4]

In contrast to the descriptive stage, the multivariate modeling stage of the analysis includes all sexually active women, regardless of age. Sexually active 15–24 year-old women who use contraception are compared with women 25 years and older with regard to where they get their modern methods of contraception. In addition to age and union status, total years of education, urban/rural residence, and modern method type are included in the model—all variables known to be associated with contraceptive use. The standard of living of a woman was tested in the multivariate analyses but was not included in the final model because the results were insignificant due to the presence of other socioeconomic status variables, such as residence and education.

III. Results

A. Descriptive Analyses of Sociodemographic Factors and Outcome Variables

1. Sexual Activity and Union Status

Sexual activity patterns for young women appear to be quite different by region, as does the proportion of sexually active women who are married or in union. As identified by Blanc and Way (1998), levels of sexual experience are higher in Africa for the 15–24 year-old age group than in Latin America and the Caribbean, and in the Philippines (the one Asian country for which data is available for both single and married women). Figure 1 shows that in 13 of the 18 African countries for which data are presented, 70 percent or more women in this age group have had sex and only the surveys for the Comoros Islands, Senegal, and Zimbabwe show proportions of sexually active women in this age group of less than 60 percent.

In contrast, absolute levels of sexual experience in Latin America and the Caribbean are not much higher than 50 percent of all respondents ages 15–24 and in Bolivia and Peru, only about 40 percent of all young women in this age group have had intercourse. Because all women included in the sampling frames in Bangladesh, Indonesia, and Nepal are married, levels of sexual activity for these samples are considered to be 100 percent, and thus are not presented. In the case of the Philippines (not shown), levels of sexual activity are lower than any of the African and LAC countries included in this survey, at 25 percent of the age group 15–24.

Additionally, the proportions of sexually active women ages 15–24 that are unmarried are much higher in Africa than in the LAC countries, as shown in Figure 1. In over one-third of the African

[2] Oral contraception, injections, condoms and other barrier methods, Norplant, IUDs, female sterilization

[3] Public, private (clinic, pharmacy/shop, NGO, other)

[4] Although male modules exist for many of the DHS III countries, young men, unfortunately, are not asked where they obtain their contraceptive methods.

countries examined, the proportions of single and sexually active young women are nearly equal for the proportion of women sexually active through marriage. In these countries, the single, sexually active women represent 40–50 percent of the overall levels of sexual activity.[5] Furthermore, even in those countries where the levels of women who are single and sexually active are much lower, they still range from nearly 15–20 percent of the age group in most cases. In Latin America, only in Brazil is the proportion of young women who are single and sexually active close to the proportion who are sexually active through marriage. In nearly every other country in the region included in these analyses, single, sexually active women only represent approximately 30–40 percent of overall levels of sexually active women, and the absolute levels of single, sexually active young women are much lower than in Africa.

2. Modern Method Use and Union Status

The proportions of sexually active young women ages 15–24 who are using modern contraception are presented in Figure 2 by union status. The proportions of young women currently using modern contraceptive methods in Africa are quite low. In six of the 18 African countries, less than 10 percent of all sexually active single women ages 15–24 are using modern contraception. In an additional five countries (Cameroon, Ghana, Côte d'Ivoire, Kenya, and Uganda), only slightly more than 10 percent of single young women are using modern methods of contraception. Only in Burkina Faso, Tanzania, and Zimbabwe do levels of modern contraceptive use approach or exceed 20 percent for this age group, peaking in Burkina Faso at 32.2 percent.

In Latin America and the Caribbean, three of the seven countries (Bolivia, Guatemala, and Haiti) have modern method use levels in the 15–24 age group for single, sexually active women only slightly higher than the bulk of the African countries reporting (with 9.3, 6.5, and 7.6 percent, respectively). However, in more than half of the Latin American and Caribbean countries, the levels of method use for single women are considerably higher than those found in Africa. Peru, the Dominican Republic, and Colombia have levels of modern method use of 15–22 percent, while Brazil reports a level of approximately 40 percent.

As mentioned previously, no data are available for single women in the Asian countries on modern method use, except for the Philippines, where only 4.2 percent of single women are using modern methods of contraception.

Levels of modern method use differs for married women. As shown in Figure 2, levels of modern method use among married women 15–24 are relatively low in Africa. However, in five of the 18 countries with data, married women have higher levels of modern method use than single, sexually active women (Kenya, Madagascar, Niger, Zambia, and Zimbabwe). In all the other countries for which data are available, single, sexually active women appear to be more likely to be using modern contraception, with the exception of Ghana, where the proportions of sexually active women (married and single) currently using modern contraception are the same.

For married women in LAC countries, the pattern is opposite to the one observed in Africa, and there is a clear tendency for women in union to be using modern contraception at higher levels than the single, sexually active women in all seven countries for which data are available.

In Asia, Nepal reports the lowest level of modern method use among married women of only 10.1 percent. However, the Philippines reports a level of 21.1 percent, Bangladesh 33.4 percent, and

[5] Cameroon, Ghana, Côte d'Ivoire, Kenya, Madagascar, Tanzania, Togo, and Zambia

Indonesia 55.8 percent. These levels are more comparable to those seen in Latin America than in Africa.

3. Sources of Modern Contraceptive Methods and Union Status

Sources of modern contraceptive methods are recorded in several ways in the DHS. The responses to the question, "Where did you last obtain the modern contraceptive method you are currently using?" are available in a detailed set of about 30 different response categories, which are not quite equivalent across all surveys. The responses to this question are also available in a recoded variable with government (or public), private (including clinics and pharmacies), NGOs, and shops/churches or friends (as well as a residual "other" category).

For purposes of the initial descriptive analyses, commercial sector outlets such as pharmacies and shops, private sector providers and other providers, are classified as private/other. Thus, Figures 3 and 4 present categories of public sector providers and private/other providers for sexually active youth using modern methods of contraception. Figure 3 contains the results for the married women, and Figure 4 displays the results for unmarried women. As in the case of sexual activity, union status, use of modern methods, and type of modern method use, the patterns of where young women obtain their contraception vary by region.

As seen in Figure 3, in Africa, the public sector emerges as a fairly important source of modern contraception for young women in union. In only two of the 18 countries (Cameroon and Côte d'Ivoire), does the public sector account for less than 25 percent of all modern method use by married women between the ages of 15–24. In seven countries (the Comoros Islands, Mozambique, Niger, Tanzania, Togo, Zambia, and Zimbabwe), the public sector accounts for 75 percent or more of all modern method use. In four countries, the public sector provides 25–49 percent of all modern contraception to young women in union (Benin, the Central African Republic (CAR), Ghana, and Mali), while in five countries (Burkina Faso, Kenya, Madagascar, Senegal, and Uganda), the public sector provides 50–74 percent of all modern contraception to young women in union.

Despite the relative importance of the public sector among married women in sub-Saharan Africa, the private sector provides contraception to sizable proportions of single female modern method users between the ages of 15–24. As seen by comparing Figures 3 and 4, in all countries in Africa, the proportion of women between the ages of 15–24 seeking modern contraception from the private sector and other sources is lower among married women than single women. In 14 out of the 18 countries in sub-Saharan Africa included in this study, the private sector and other sources, are providers of more than 60 percent of all modern contraception to single young women. Even in the remaining four countries (Niger, Mozambique, Senegal, and Zimbabwe), no less than 20 percent of the women obtained contraceptives from a private sector or other source.

In Latin America and the Caribbean, as seen in Figure 3, the private sector is the majority provider of modern contraception to married young women ages 15–24 in 6 out the 7 countries included in this study. Thus, in Brazil, Colombia, the Dominican Republic, Guatemala, and Haiti, the private sector is the largest provider of contraception, providing 75.9 percent, 81.9 percent, 72.7 percent, 68.7 percent and 75.3 percent, respectively, of all modern contraception. Only in Peru does the private sector provide less than 25 percent of all modern methods used by young married women.

As seen in Figure 4, in LAC countries, the private sector is an even more important provider of modern contraception to single young women ages 15–24, as it is the majority provider in all 7 countries. The private sector provides contraception to large majority of users in Brazil, Columbia, Guatemala, and Haiti, 93.3 percent, 89.2 percent, 84.6 percent, and 96.9 percent, respectively. Even in the Dominican Republic and Peru, the private sector provides 63.2 percent and 56.9 percent of modern contraception, respectively, to single young women.

The Asian countries included in this study (Bangladesh, Indonesia, Nepal, and the Philippines) present a more mixed picture of the relative importance of the public and private sectors. As seen in Figure 3, in Nepal and the Philippines, the public sector provides approximately 70 percent of all modern contraception to young married women. In Indonesia, the public sector accounts for approximately 50 percent of modern method use, while in Bangladesh it accounts for only about 20 percent.

Where young women get their modern methods of contraception varies quite a bit by their union status, especially in Africa. While married women report high usage of the public sector to access their modern methods, single women report much lower usage of the public sector. In virtually every country in Africa, the private sector appears to be the preferred source of higher proportions of single women as compared with married women. A similar pattern is observed in all of the Latin American countries. Single young women are less likely to report the public sector as their source of contraception than married young women, but with somewhat less dramatic differences than the other regions, given that the public sector is the dominant provider in Peru only.

B. Multivariate Analyses

As mentioned earlier, the multivariate analyses included all sexually active women, regardless of age. Thus, the findings discussed in this section apply to all women, not just women ages 15–24. The main findings from the logistic regression results are presented for all countries in Figures 5–8. The hypothesis tested in these analyses is that young women will be more likely to access their contraceptive methods in private and commercial sector establishments. This hypothesis seems to be only partially supported by the data, with strong regional differences. The influence of other covariates on source of modern contraception is also analyzed and discussed.

As in the data previously presented, the various categories for the source of modern contraceptive method were collapsed into the two principal categories of interest: 1) commercial and private sector providers and 2) public sector providers and other. Because the outcome variable of interest (source of modern method of contraception) was transformed into a dichotomous outcome variable, the appropriate statistical procedure for multivariate analysis is logistic regression. As the estimates for the covariates in a logistic regression equation are expressed in terms of odds ratios, the variables used to model the source of contraception were also recoded into categorical variables for easy interpretation of the odds ratios. The covariates include age (15–19, 20–24, and 25+); marital status (single, in union); education (none, 1–6 years, 7+ years), residence (urban, rural); and type of modern method currently used (clinical, supply).

As shown in Figure 5, in nine of the 18 African countries included in the analyses, younger women are significantly ($p<.05$) **more** likely to obtain their methods in the private or commercial sector than women 25 years and older. Several other countries show odds ratios which, although not significant, are in the same direction. Thus, most of the African countries included in the analyses show reasonably convincing evidence that younger women are more likely than older women to prefer the private and commercial sector, with only one African country posting

significant results in the opposite direction (Zimbabwe). Two of the four Asian countries (Bangladesh and Indonesia) also support this hypothesis, with younger women significantly more likely than older women to acquire their methods in the commercial and private sector. However, the results from Latin America do not support the hypothesis that younger women are significantly more likely to use the private sector than older women. In fact, young Latin American women are significantly less likely to use private sources of contraception than older women in four of the seven countries included in the analyses.

Aside from the affect of age on source of modern contraception, Figure 6 demonstrates that marital status is not a significant predictor of contraception source. Only in five of the 25 countries was this variable significantly associated with the source of contraception, with single (and probably younger) women more likely to seek their methods from private providers.[6] This finding is somewhat surprising in that in the descriptive analyses, young married women seem to have different behavior patterns than single women in terms of where they obtain their contraceptive methods. However, younger women using modern methods of contraception represent a much smaller proportion of the overall numbers of all women (15–49) using modern methods, and the marital status variable provides us with the direct effects of marital status, for women of all ages. However, it is probable that marital status is correlated with the age variable included in the multivariate model, and thus the effects of marital status in the case of younger women may also be captured in the direct effects of the age variable.

Although not shown in Figures 5–8, years of education was also significantly associated with source of contraception in six of the African countries, and was marginally significant in another, in the same direction. Those women with seven or more years of education are significantly more likely than those with one to six years of education to access their contraception in commercial or private sector establishments. The effects of education were remarkably similar and significant in six of the seven LAC countries, and in all four Asian countries.

Women who use supply methods are more likely than women who use clinical methods to use private or commercial sources of contraception, as seen in Figure 7. In all of the LAC and in three of the four Asian countries, and in eight of the 18 African countries, those women are significantly more likely than women using clinical methods to use private or commercial sector sources of supply.

In most countries, women in urban areas are significantly more likely than women in rural areas to report accessing their contraception in commercial or private sector delivery points (as seen in Figure 8).

IV. Discussion

Although the descriptive analyses demonstrate that commercial and private sectors are the most important sources of contraception for young women in nearly all of the LAC countries, the results from the multivariate analysis suggest that young women are significantly less likely than older women to obtain their methods in those sectors. This finding is somewhat surprising and merits further validation with a larger number of countries from the region. One possible reason for this finding is that young women in this region are more likely to be married and using clinical methods; as a result, they are less likely to use the private sector. Conversely, although the descriptive analyses illustrate that the public sector is the main provider of contraception to

[6] Three of the five are African countries, and an additional two African countries show marginally significant associations in the same direction at the $p < .10$ level of significance.

young women in at least half of the sub-Saharan African countries studied, the multivariate analyses suggest that young women seem more likely than older women to seek modern contraception in the private sector. Among the Asian countries studied, the results are mixed. The descriptives demonstrate that in two of the four countries, the public sector provides approximately 70 percent or more of modern contraception to married young women. In Indonesia and Bangladesh, the private sector competes equally for the contraceptive market share among married young women. The multivariate analyses suggest that in these same two countries (Bangladesh and Indonesia) younger women are more likely than older women to acquire their methods in the commercial and private sector.

Thus, the key message from these findings is that young women are more likely than older women to seek modern contraception in the commercial and private sectors in sub-Saharan Africa and in some parts of Asia. Programs and policies should be designed to take into account young women's preference for private and commercial sector providers where it exists. However, in the LAC countries, young women appear to favor the public sector, and thus, it is important that policies support youth-friendly services in public sector settings.

Additional research should examine these potentially important regional and country differences in younger women's use of the private and commercial sectors as sources of contraception. Further research needs to include an examination of economic barriers and also should look into the policies that help or hinder young people's access to contraception in the public, private, and commercial sectors; provider attitudes in relation to providing contraception to young people; and youth's accessibility to services from all sources.

The data and analyses presented here represent a starting point for the discussion of young people's preferred source of modern contraception. DHS empirical data are presented and describe where young women currently using modern contraception obtain their methods, and whether there are differences between the patterns of younger and older women in terms of their use of private and commercial sector providers.

However, the low levels of use of modern methods of contraception, especially in sub-Saharan Africa overall, result in fairly small sample sizes for multivariate analyses, as do the lower levels of sexually active young women in Latin America and the Caribbean. The limited data in Asia prevent a more thorough analysis of the effects of marital status on source of contraception in the region. Additionally, because men are not asked where they obtain their current method of contraception in the DHS, we are unable to look at men's use of the private and commercial sector or the factors that might affect that choice.

Nonclinical and private sector programs may appeal to young people because they either take services to the clients or offer the services in a way that does not publicly identify young people as seeking contraception or other sex-related services. DHS data do not permit us to examine the effects of such programmatic initiatives, although the findings presented here suggest that this may be the case, particularly in Africa where there are significant proportions of young, single, sexually active women. These nonclinical and private sector efforts to reach young people need to be further explored and evaluated (FOCUS on Young Adults, 2001).

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Figure 1: Proportion of All Sexually Active Women Ages 15-24 by Union Status and Country: Latin America and Africa

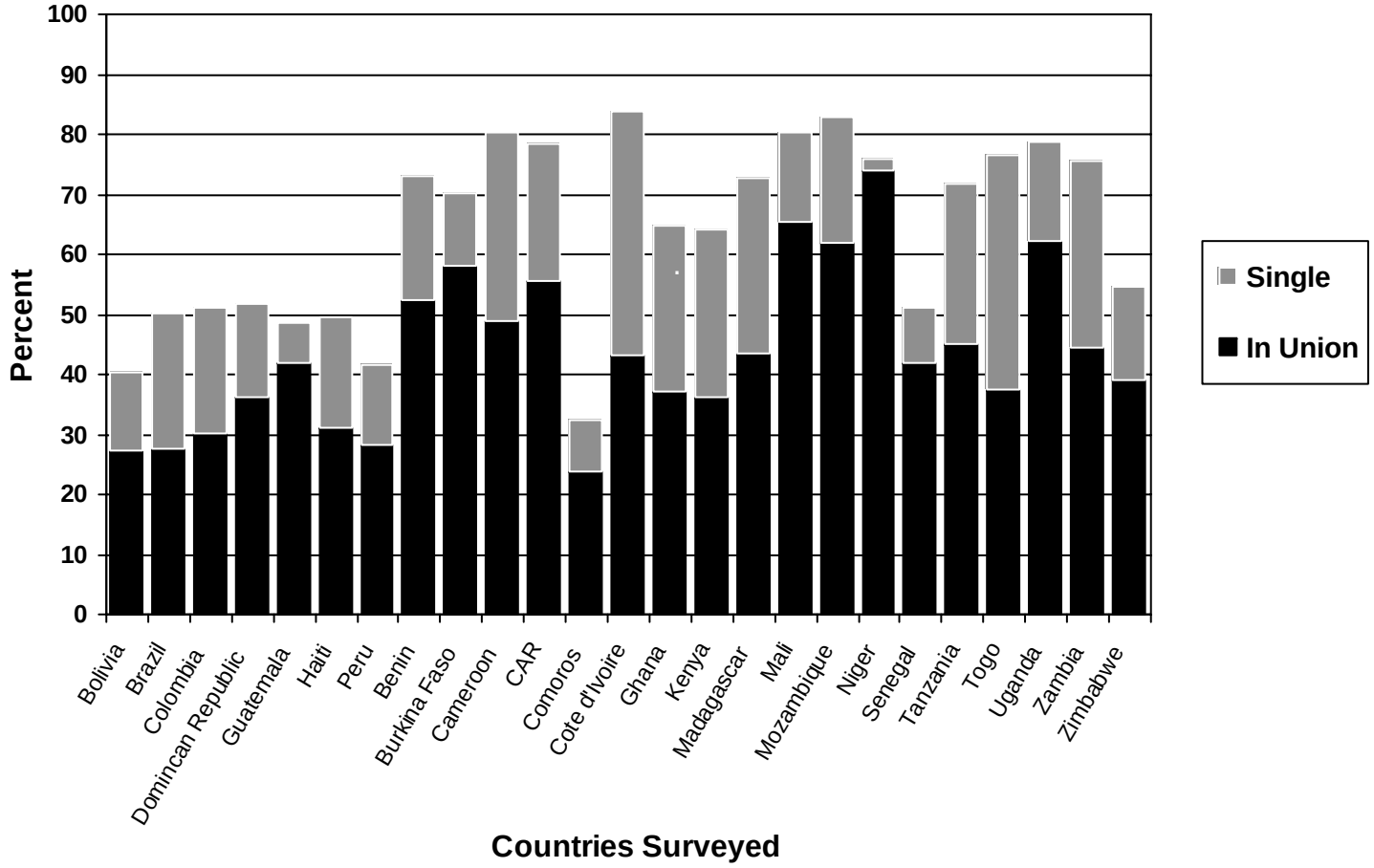


Figure 2: Proportion of Sexually Active Women Ages 15-24 Using Modern Contraception, by Union and Country in Latin America, Africa, and Asia

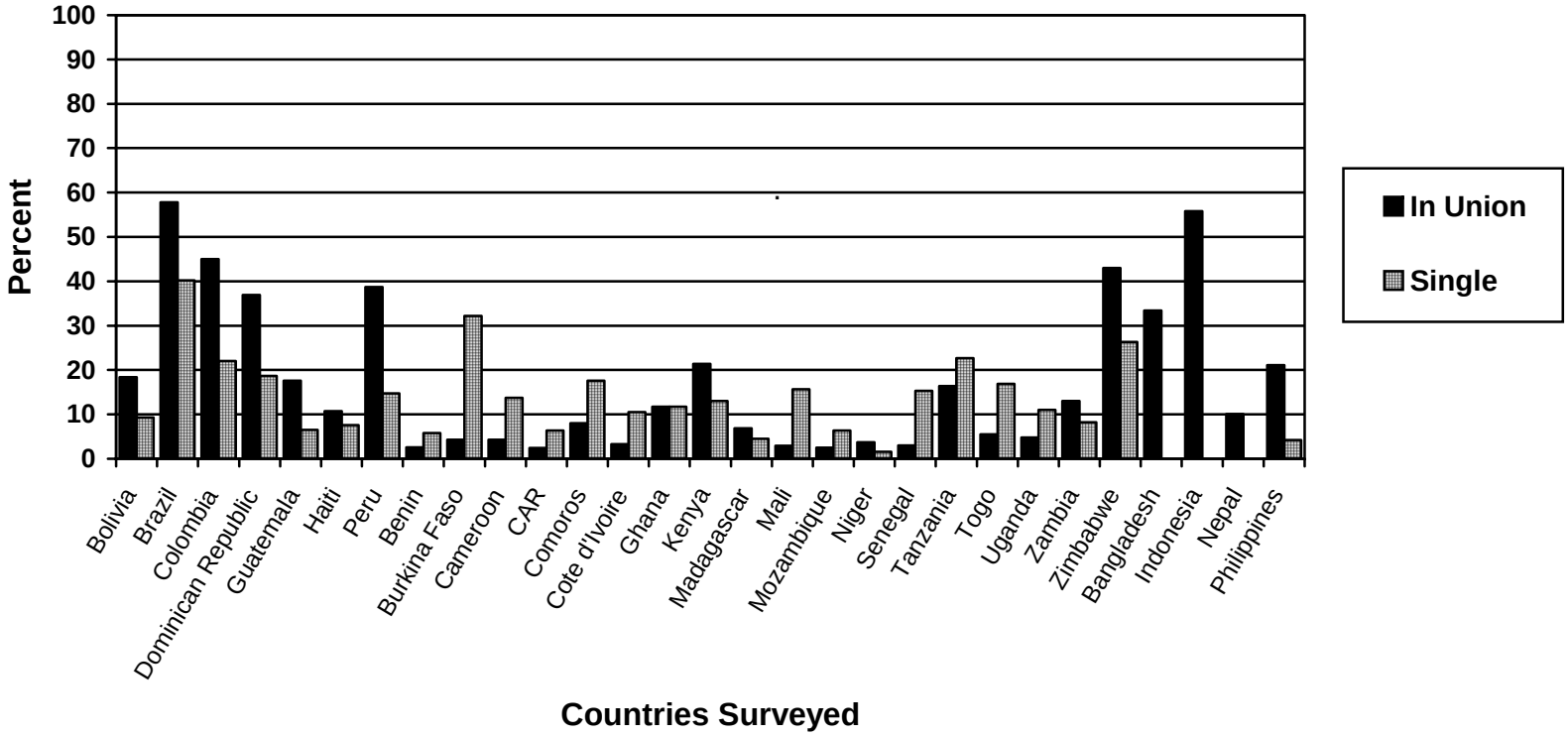


Figure 3: Sources of Modern Contraception for Married, Sexually Active Women, Ages 15-24, Using Modern Methods, Latin America, Africa, and Asia

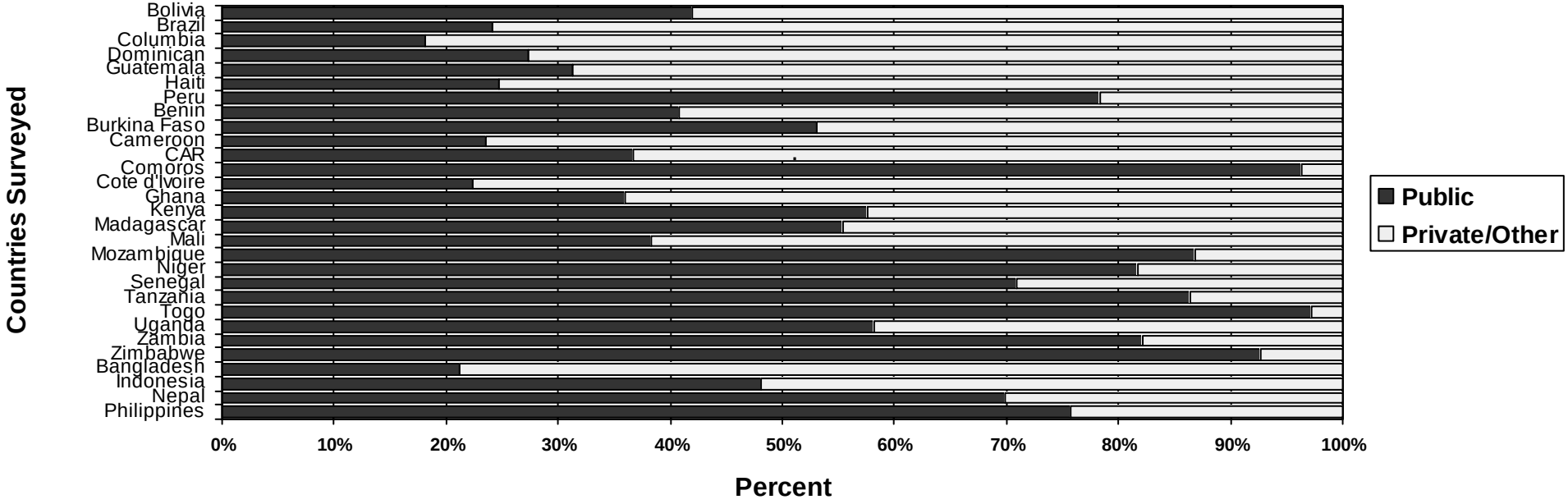


Figure 4: Sources of Modern Contraception for Single, Sexually Active Women Using Modern Methods, Ages 15-24 in Latin America and Africa

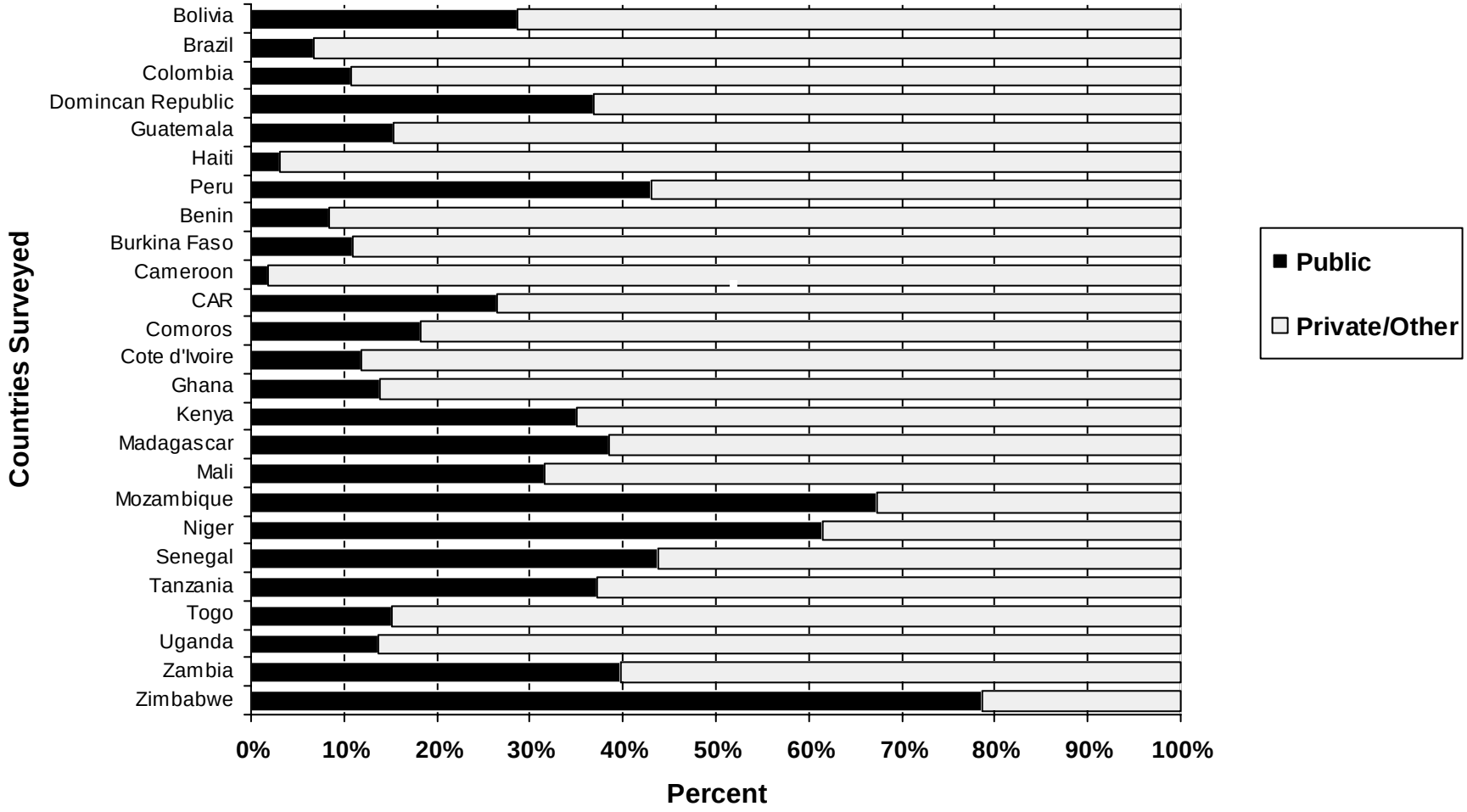
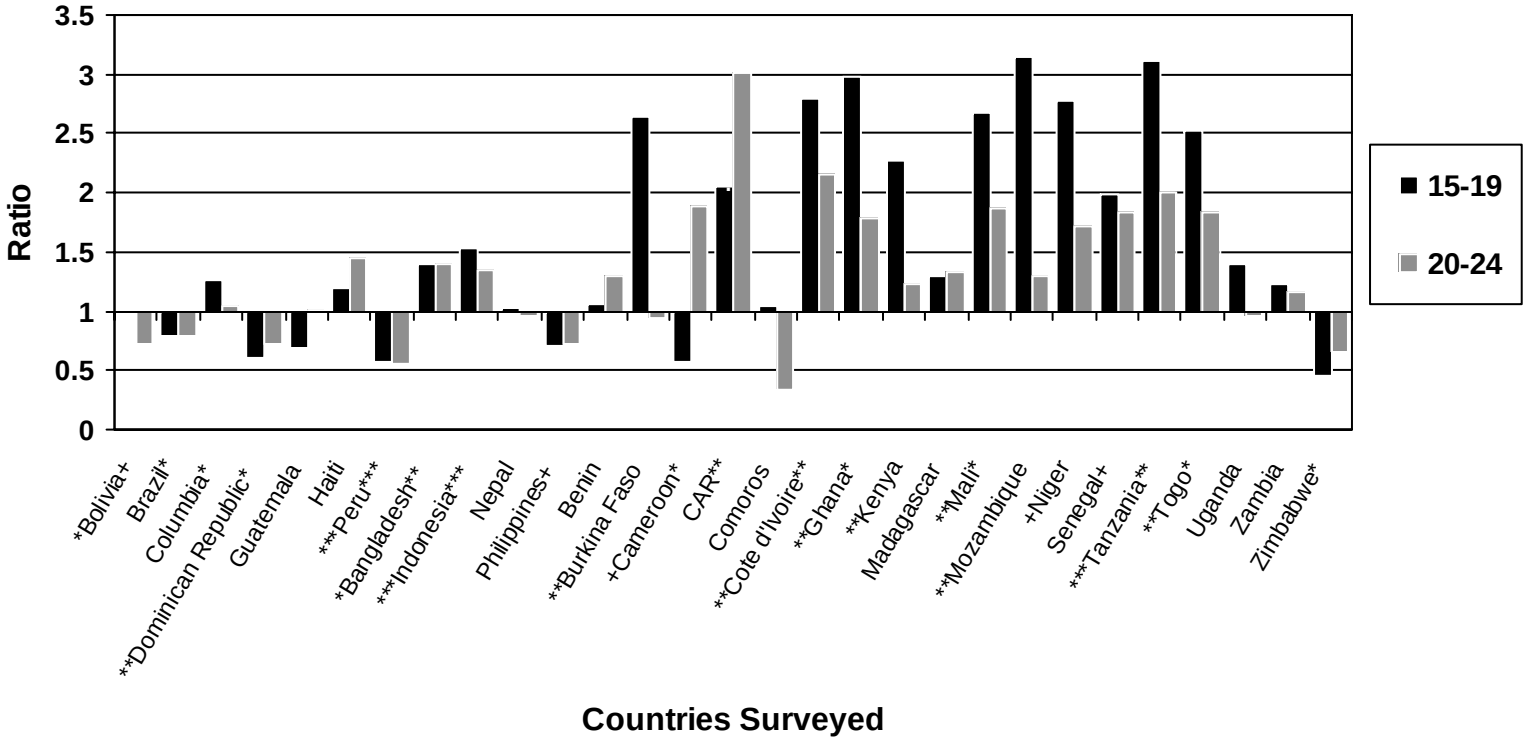


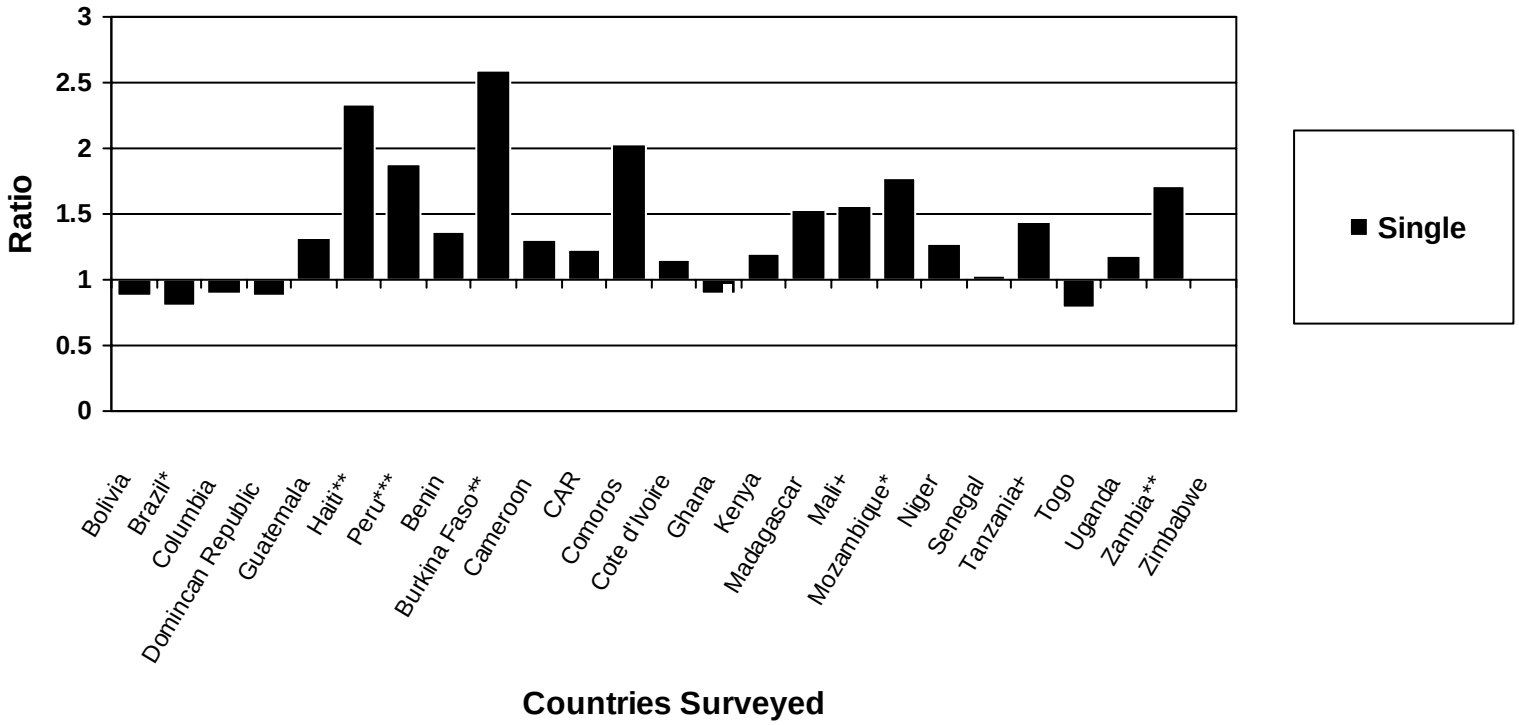
Figure 5: Odds Ratio for Private Sector Sources of Contraception as a Function of Age



Reference group is 25+,
+ p <.10, * p < .05 , ** p<.01, *** p<.001

The symbols *before* the name of the country represent significance for differences between 15-19 age group and the reference age group (25+). The symbols *after* the country names represent significance for differences between the 20-24 age group and the reference age group (25+).

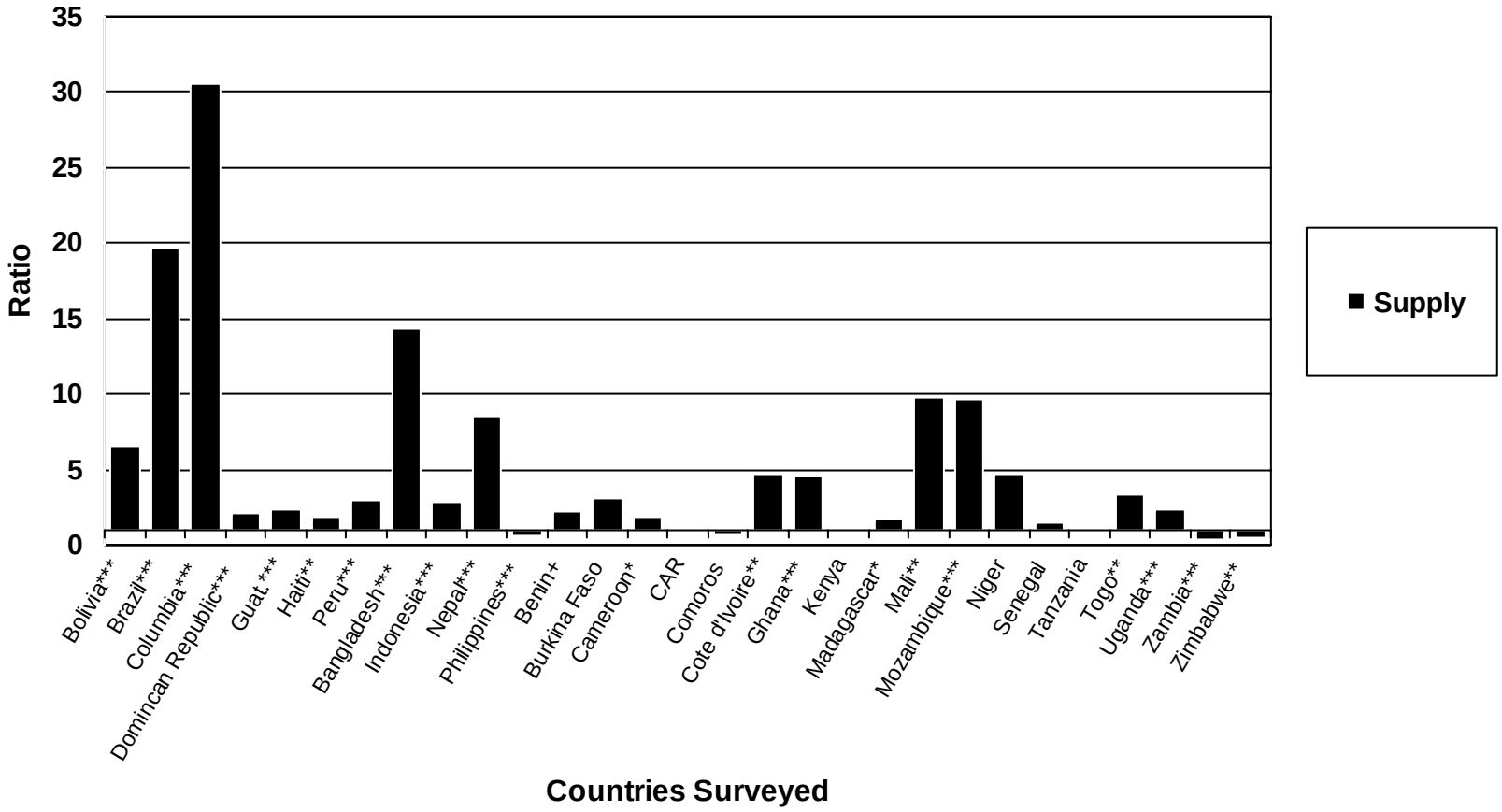
Figure 6: Odds Ratio for Private Sector Sources of Contraception as a Function of Marital Status



Reference group is married women
+ p <.10, * p < .05 , ** p<.01, *** p<.001

The multivariate analysis includes all women ages 15–49

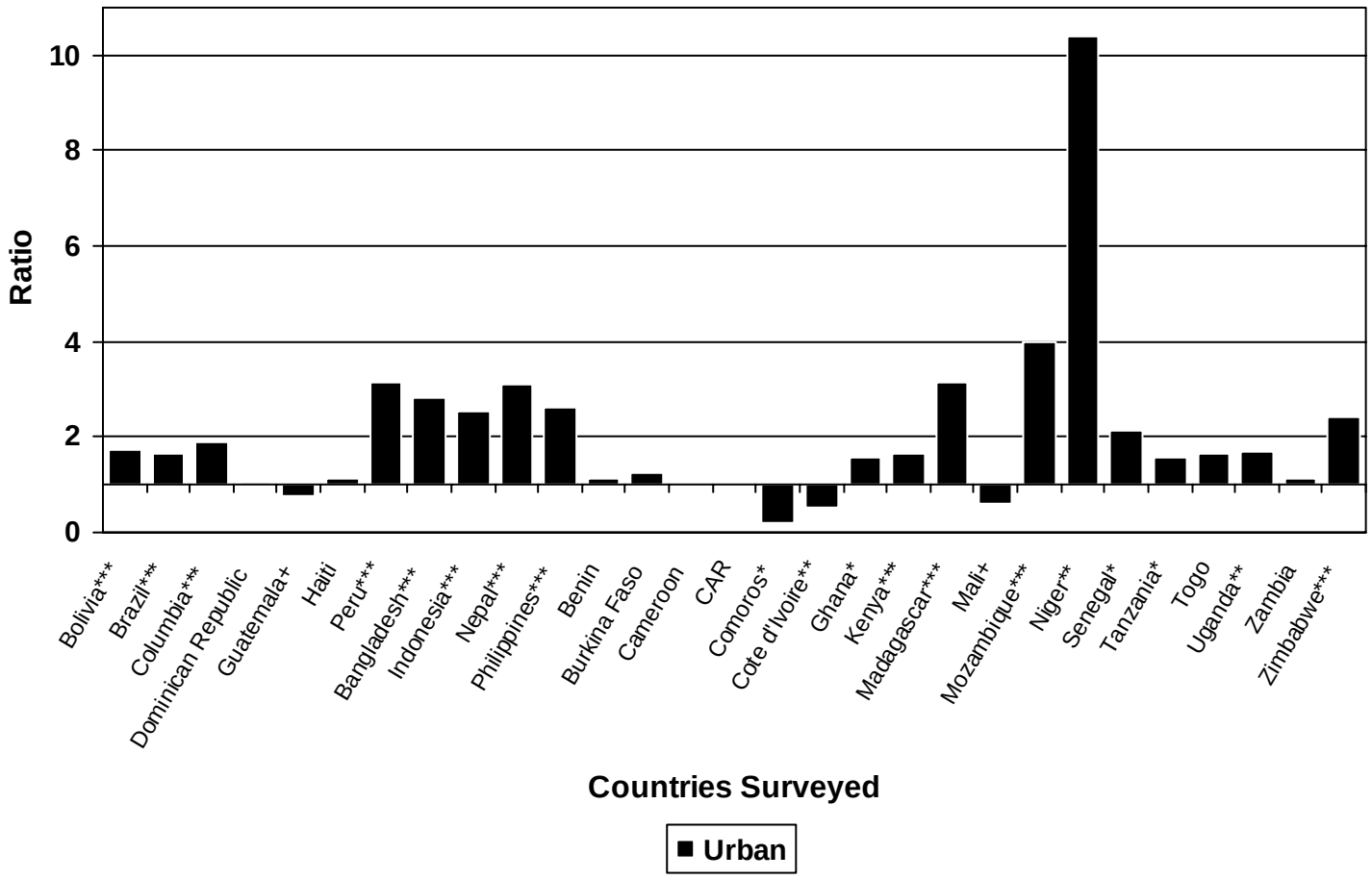
Figure 7: Odds Ratio for Private Sector Sources of Contraception as a Function of Modern Method Type



Reference group is clinical method use
+ p <.10, * p < .05 , ** p<.01, *** p<.001

The multivariate analysis includes all women ages 15–49

Figure 8: Odds Ratio for Private Sector Sources of Contraception as a Function of Residence Status



Reference group is rural women
+ p <.10, * p < .05 , ** p<.01, *** p<.001

The multivariate analysis includes all women ages 15–49