

**A Family Planning Market
Segmentation Analysis:
A First Step in Operationalizing
Contraceptive Security Policies in
Romania**

by

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December 2001



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CONTENTS

1	Introduction	1
1.1	Context	1
1.2	Objectives of the analysis	2
1.3	Organization of the paper	2
2	Background	3
2.1	Existing FP commodity distribution and financing policies	3
2.2	FP commodity distribution and financing practices—the provider market	3
2.2.1	Commodity provision	3
2.2.2	Commodity financing	4
3	Methodology	5
3.1	Creation of asset index and SES quintiles	5
3.2	Analysis of data	5
4	Consumer Market	6
4.1	Consumer characteristics	6
4.2	Consumer needs	7
4.2.1	Unmet need	7
4.2.2	Abortions	7
4.3	Use of FP methods	8
4.3.1	Method use status by urban and rural areas	8
4.3.2	Method use status by age	9
4.3.3	Use of various FP methods	9
4.4	Consumer choice of method source	9
4.5	Student population	10
5	Market Segments	11
6	Analyzing Policy Choices	14
	References	16
	Annex 1: Methodological Notes	17

Context

Romania has been undergoing a series of health financing reforms designed to reduce heavy dependence on government financing, central planning, and health services monopolized by the state. These reforms include a national health insurance scheme, contraceptive security initiatives, and revolving drug funds at the subnational level.

Contraceptive security is important as Romania is trying to shift from a reliance on abortion to more widespread use of contraception. In August 2000, the government approved policies regarding contraceptive security. These policies defined contraceptive security in terms of government financing for contraceptive commodities, targeting free public sector contraceptives to vulnerable segments of the population, establishing revolving funds to enable *judets* (districts) to locally purchase and sell contraceptives to nontargeted clients, and ensuring access especially in rural areas (Dayaratna et al., 2001). Contraceptive security, this study's main concern, involves a number of issues and information needs that include:

High unmet need for family planning

Romania is facing a challenge of meeting growing unmet need for family planning (FP) commodities.¹ Among all women of reproductive age, 29 percent, or 1.5 million, have an unmet need for modern contraceptive methods (Serbanescu et al., 2000). Unmet need for contraception is closely linked to unintended pregnancies, abortions, and maternal mortality.

Romania has one of the highest maternal mortality ratio in Europe, and approximately one-half of the maternal mortality is abortion related. The lifetime abortion rate per Romanian woman was 2.2, which is very high by international standards (1999 Romania Reproductive Health Survey (RRHS)).

Scarcity and misallocation of government resources

Although funds from sources other than the Ministry of Health (MOH) increased from US \$1.287 billion in 1998 to US \$1.434 billion in 2000, most of the national health programs, including the FP program, remain severely under funded. During the same period when the funding from other sources such as health insurance increased, the MOH budget declined by one-half, from \$459 million to \$237 million (Marinescu and Cakir, 2000).

Scarce MOH resources have been insufficiently allocated to primary health care. In 1998, almost 70 percent of funds were spent at the tertiary level to treat only 30 percent of patients (Marinescu and Cakir, 2000). Government funds that were allocated to primary health care benefit the rich disproportionately: almost 20 percent of the government primary care budget went to the richest 10 percent of the population, while the poorest 10 percent received only 5 percent (Pop, 1997).

Limited access among the poor and disadvantaged

In 1998, 34 percent, or 8 million people, were poor (40 percent of rural and 28 percent of urban population), and 12 percent of them were classified as extremely poor. By year 2000, the percentage of people living below the poverty line increased to 44 percent (Research Institute for the Quality of Life and UNDP, 2001; UNDP, 2000). This sharp increase in the number of poor in just two years indicates pronounced and rapid deterioration in the standard of living. Inadequate and declining social benefits also contributed significantly to this explosive growth of poverty.

¹ The CDC definition of unmet need includes traditional users and nonusers at risk of an unintended pregnancy.

Underdeveloped private sector

The public sector is the dominant provider of FP services in Romania. The private sector is underdeveloped and concentrated mainly in urban areas; thus, it is not accessible to the majority of the population. Private sector expenditure on health was 1.5 percent of GDP during 1990–1998 (World Bank, 2000); yet, 98 percent of contraceptives are purchased using private funds.

Privatization of pharmacies and primary health care is a recent phenomenon in Romania. Today, all pharmacies, the main source of contraceptives, are in the private sector. In Romania, unlike other countries, NGOs providing FP services are in urban areas and serve those who can afford to pay, putting greater strain on public sector resources. The National Health Policy recognizes this problem and recommends greater role for the private sector.

Objectives of the analysis

The above-discussed issues emphasize the need for

- Better understanding of current FP commodity needs of different population groups;
- Effective targeting of scarce government resources; and
- Balancing public and private sectors roles to ensure access to contraceptives for all in need.

Policymakers require more market² information to develop strategies that would enable the public and private sectors to satisfy growing FP needs. Such information can also help target government resources to vulnerable and needy groups and support private sector expansion (Berg, 2000).

This study responds to the aforementioned policy needs by presenting findings from a market segmentation analysis of the Romanian FP market. Specifically, the study identifies and defines market segments for FP and presents policy options for better targeting of public and private sector resources.

Organization of the paper

This paper presents a detailed market segmentation analysis of the FP sector in Romania. Section 2 provides an overview of current FP commodity policies, commodity distribution, and financing practices. Section 3 presents the methodological framework used for the creation of socioeconomic status (SES) index and the analysis of market data. Section 4 analyzes the consumer market in terms of consumer characteristics, needs, method use, and sources of commodities. Section 5 segments the market based on specific consumer needs, preference, practices, and SES index. Section 6 presents policy alternatives based on market segmentation results.

² The **market** for FP services includes contraceptive methods, consumers (women of reproductive age between 15–44), and providers. Contraceptive methods extend to both modern methods of FP (such as pills, condoms, IUDs, sterilization, etc.) and traditional methods such as withdrawal, periodic abstinence, and vaginal douche. **Consumers** are defined as women of reproductive age (15–44), including those using a modern contraceptive method and those with an unmet need for FP. **Providers** are defined as government, private for-profit (commercial sector), and not for-profit (NGOs). How these components of the FP market fit together is referred to as the FP market structure (Cakir and Sine, 1997).

Existing FP commodity distribution and financing policies

In response to an emerging contraceptive supply crisis, the GOR passed a law in August 2000 that approved funding for the national FP program. The law provides for the following:

1. Provision of free contraceptives to target groups including students, unemployed, people with low income, and those receiving social protection allowance;
2. Sale of locally purchased contraceptives at affordable prices to nontargeted groups; and
3. Distribution of contraceptives through family doctors, primary care providers under health insurance, in rural areas without FP clinics.

Under the current MOHF's commodity distribution system,³ the centrally procured contraceptives/pills are distributed to FP clinics in each *judet*. The primary FP clinics in turn allocate these contraceptives to providers to distribute for free. In 2000, the MOHF allocated 2.8 billion lei for free contraceptives (Erhan, 2001).

The MOHF also releases special funds to each *judet*, which in turn are allocated to hospitals for the local procurement of contraceptives. These hospitals purchase multiple brands of contraceptives from local suppliers and distribute them to affiliated FP clinics for sale. The locally procured contraceptives include a wide variety of brands at a range of prices (Dayaratna, et al., 2001). Proceeds of these contraceptives sales are deposited in the revolving funds for future purchases. The MOHF allocates additional funds in each quarter to adjust the revolving fund for inflation. In 2000, the MOHF released 60.389 billion lei under Program Number 12,⁴ including the special funds for the local procurement of contraceptives (Erhan, 2001).

FP commodity distribution and financing practices—the provider market

Commodity provision

The existing FP structure, including public, private, and NGO sectors comprises three types of providers:

1. Primary health care doctors (general practice, school practices, medical units of enterprises and dispensaries) provide FP services for healthy clients without risk.
2. FP doctors, in addition to serving healthy clients, provide FP services including prescription of contraceptives to clients with risk factors.
3. Ob-Gyns, in addition to providing FP services, also insert IUDs and perform abortions.

NGO and private sector providers of FP fall mainly in the first two categories.

Public sector

There are 211 government FP clinics across 42 judets in Romania (see Table 1). Recently, the National Health Insurance House (NHH) approved the

Facilities/Staff	Number
FP Clinics	211
FP Personnel	551
▪ GPs	▪ 238
▪ Ob-Gyn	▪ 41
▪ Nurses	▪ 240
▪ Others	▪ 32

Source: MOHF Reports, 2000

³ The Ministry of Health and Family (MOHF) is the new name for the MOH.

⁴ National Health Program for the Protection of Mother and Child and Family Planning.

inclusion of FP clinic staff in the health insurance system. Family health doctors at the primary care level work on a contract basis with the social health insurance system. Although, family health doctors are the main providers of health care in rural areas, the current system does not allow them to distribute contraceptives.

Private sector

In 1999, there were 3,201 pharmacies in urban areas and 851 in rural areas. Currently, there are also 332 pharmaceutical working points⁵ in urban areas and 423 in rural areas where medicines can be purchased (NISES, 2000). All pharmacies in Romania are in the private sector. Although prescriptions are required for contraceptives (pills, injectables, and IUDs), in actuality contraceptives are purchased with or without prescriptions.

NGO sector

The NGO sector is not well developed in Romania. The Society for Education in Contraception and Sexuality (SECS) and the Marie Stopes Foundation are the two major NGOs providing FP services. Few other organizations are involved indirectly in FP service delivery.

NGOs are only active in selected areas, and SECS is the main NGO in most of them. It runs 11 clinics and 17 promotion points, which are located in urban areas. The NGO purchases low-priced contraceptives from the International Planned Parenthood Federation (IPPF), which it sells at prices comparable to public sector. Services are provided on a fee basis. It provides free contraceptives to 10 percent of its clients who are poor. It also organizes FP promotion campaigns in rural and urban areas. Most of SECS clients are young students. SECS has indicated a willingness to provide free services in case of external financial support from international agencies and/or government.

There are two Marie Stopes clinics located in big cities (Bucharest and Bacau), where they provide FP services and commodities.

Commodity financing

Romania spends about 4 percent of its GDP on health care (World Bank, 2000). Health care is financed through social insurance (65%), general taxation revenue (15%), and out-of-pocket expenditure (20%) (Lazarescu, 2001).

In contrast with other reproductive health (RH) MOHF programs, family planning is mainly funded by out-of-pocket expenditures. Total expenditure on FP was 212 billion lei in 1998, of which, 198 billion lei was the private expenditure. The purchase of contraceptives accounts for 98 percent of the private expenditures on FP (Marinescu and Cakir, 2000).

In 1999, people spent 2.4 percent of annual household expenditures on health care. In urban areas, expenditures on health care increased from 2.3 to 3.0 percent between 1996 and 1999, whereas in rural areas it increased from 1.2 to 1.8 percent during the same period (NISES, 2000). The annual household expenditure on health in rural areas is about half of the expenditure in urban areas. Medicines account for 61 percent of total annual household expenditure on health. Per capita expenditure on health among the lowest expenditure quintile was \$5.68 in rural areas and \$9.69 in urban areas during 1999 (NISES, 2000). Currently, employed people contribute 7 percent of their wages to health insurance. This is matched by a contribution of 7 percent by employers. The health insurance compensated drugs list, however, does not include contraceptives.

⁵ Pharmaceutical Working Points are small pharmacy outlets mostly in rural areas.

Methodology

Market segmentation analysis is a tool applied to identify consumer groups and the characteristics that define them, and to describe the FP provider and method choice behavior of each consumer group (Cakir and Sine,1997). This study uses the 1999 RRHS. The total sample size was 6,888 women of reproductive age between 15–44.

Creation of asset index and SES quintiles

Ability to pay for FP as defined by SES is one of the characteristics we use to identify consumer groups. The socioeconomic status (SES) is defined in terms of assets or wealth, rather than in terms of income or consumption. The 1999 RRHS collected information on 11 assets, which are listed in Annex Table 1. We constructed an asset index by doing a factor analysis of the variables. Each household asset was assigned a factor score generated through principal component analysis (For details, see Annex 1).

The poorest group consists of women from the 20 percent of the households with fewest assets, whereas the richest group comprises women from 20 percent of the houses with maximum assets. Table 2 lists the percentages of each quintile that own particular assets that help measure SES.

Table 2: Percentage of each quintile and ownership of assets

Assets	Poorest	Second	Middle	Fourth	Rich
Flush Toilet	5	28	91	97	100
Central Heating	2	7	78	85	94
Refrigerator	44	96	100	100	100
TV	79	97	99	100	100
Automobile	2	31	22	59	90
VCR	0	13	13	24	73
Phone	1	31	49	88	97
Cell Phone	0	3	6	9	55
Vacation Home	2	7	7	13	39
% Urban	18	35	87	92	95

Analysis of data

This paper focuses on all women ages 15-44 and analyzes various socioeconomic and demographic characteristics, such as education, marital status, work status, and place of residence, across the five SES quintiles. Method use and provider sources are compared across SES quintiles to determine the extent to which contraceptive use patterns and provider choice behavior differed. FP providers are categorized as:

- Government health care facilities (government clinics, FP clinics, or dispensaries);
- Government hospitals (government hospitals, Ob–Gyn wards);
- Private clinic (private clinics, private office, and SECS);
- Pharmacy (pharmacy, open market, drugstore); and
- Friends (partner, friends, and relatives).

A careful analysis of socioeconomic characteristics, method use and provider sources across SES quintiles by rural⁶ and urban⁷ areas helped in the formation of market segments. Analysis of socioeconomic characteristics, provider and method choice across SES quintiles covers the following target groups: unemployed and people with low income. Unfortunately, the 1999 RRHS data does not permit the analysis of the student population.

⁶ Rural areas include villages and communes

⁷ Urban areas include cities and municipalities.

Consumer Market

This section analyzes the consumer market in terms of consumer characteristics, needs, use of methods, choice of providers, and out-of-pocket expenditures.

Consumer characteristics

Table 3 provides a detailed analysis of socioeconomic indicators across SES quintiles.

Table 3: Socioeconomic indicators across SES quintiles

	Quintiles					Total
	Poorest	Second	Middle	Fourth	Richest	
LEVEL OF EDUCATION						
None	3.2	0.2	0.0	0.0	0.0	0.7
Some Primary	9.7	2.1	1.2	0.3	0.3	2.7
Primary	31.7	16.8	10.2	5.9	3.2	13.7
Secondary incomplete	43.0	43.7	41.3	28.1	22.3	36.0
Secondary	10.7	30.4	33.2	40.1	35.8	29.9
Post Secondary	1.6	6.8	14.1	25.6	38.5	16.9
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
REGION						
Bucharest	4.3	8.7	11.1	13.8	21.4	11.7
Vallahia	34.4	43.2	34.6	34.0	31.3	35.7
Transv	31.3	31.8	37.0	35.7	32.5	33.6
Moldova	30.0	16.3	17.3	16.5	14.8	19.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
RURAL-URBAN RESIDENCE						
Bucharest	1.4	4.7	8.7	13.1	21.2	9.6
Other Urban	16.5	29.6	74.7	78.0	73.2	53.8
Rural	82.1	65.7	16.6	8.9	5.6	36.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
AGE						
15–19	20.1	14.9	17.2	16.4	16.3	17.0
20–24	23.7	21.0	17.0	14.8	19.5	19.3
25–29	20.1	20.4	13.4	18.5	15.9	17.7
30–34	13.3	16.9	17.1	16.8	15.3	15.9
35–39	11.3	12.0	16.0	13.8	14.7	13.5
40–44	11.6	14.8	19.4	19.7	18.3	16.7
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
MARITAL STATUS						
Married	54.2	62.6	60.4	58.3	56.4	58.5
In union	12.1	5.7	4.6	3.7	4.4	6.1
Previously married	8.0	7.5	6.9	7.4	4.7	6.9
Unmarried	25.7	24.1	28.2	30.6	34.6	28.5
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
WORK STATUS						
Not working	82.5	63.9	46.2	40.4	40.1	54.9
Working	17.5	36.1	53.8	59.6	59.9	45.1
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
HUSBAND'S EDUCATION						
Never attended	4.8	0.4	0.0	0.0	0.0	1.0
Primary	28.1	11.1	9.5	5.4	2.7	11.6
Secondary	27.1	38.8	37.5	44.6	41.8	37.8
Post Secondary	40.1	49.7	53.1	50.1	55.5	49.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The analysis of the education level across SES quintiles indicates that rich women attain a higher level of education as compared to the poor women. For example, only 1.6 percent of the poorest women attained post secondary education as compared to 38.5 percent of the richest women. A significantly higher proportion (82%) of the poorest

women live in rural areas. Similarly, 45 percent of the rich women work outside of the home for more than 20 hours per week, compared to only 17.5 percent in the poorest quintile. About 12 percent poor women are in union⁸ as compared to only 6 percent in high SES quintile.

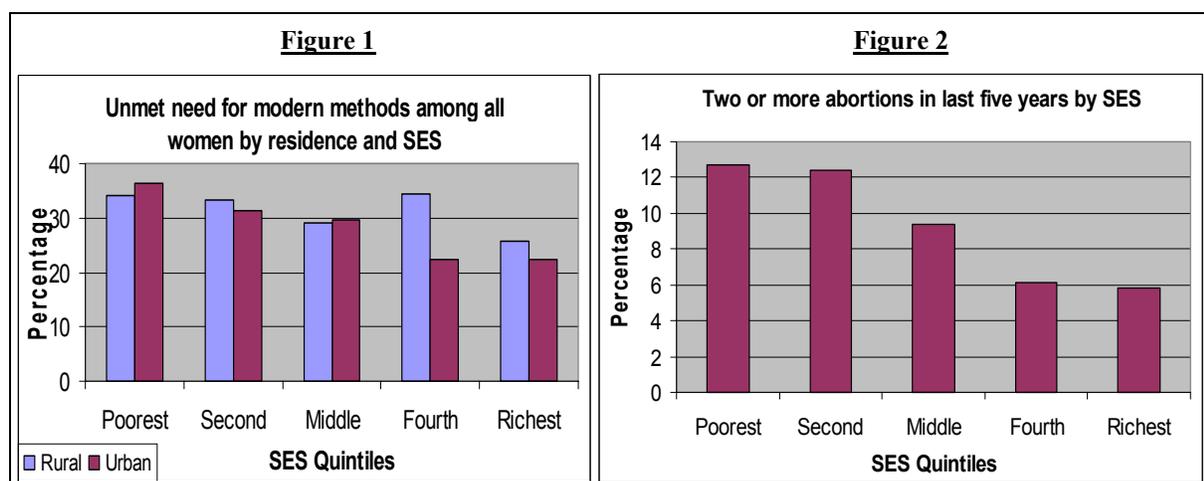
Consumer needs

Unmet need

This paper uses the CDC definition of unmet need, which includes traditional users and nonusers at risk of an unintended pregnancy. Among all women of reproductive age, 29 percent or 1.5 million, have an unmet need for modern contraceptive methods.

Unmet need for modern methods varies by place of residence. Among all women of reproductive age, unmet need was 26 percent in urban compared to 33 percent in rural areas. This difference in unmet need may be due to poor accessibility and lack of knowledge of FP methods. Figure 1 shows lower unmet need for modern methods in higher SES groups particularly in urban areas. Unmet need is 36 percent among poorest women living in urban areas as compared to 22 percent among richest women. The gap between poorest and richest is about 9 percent in rural areas, whereas it is about 14 percent in urban areas.

Abortions

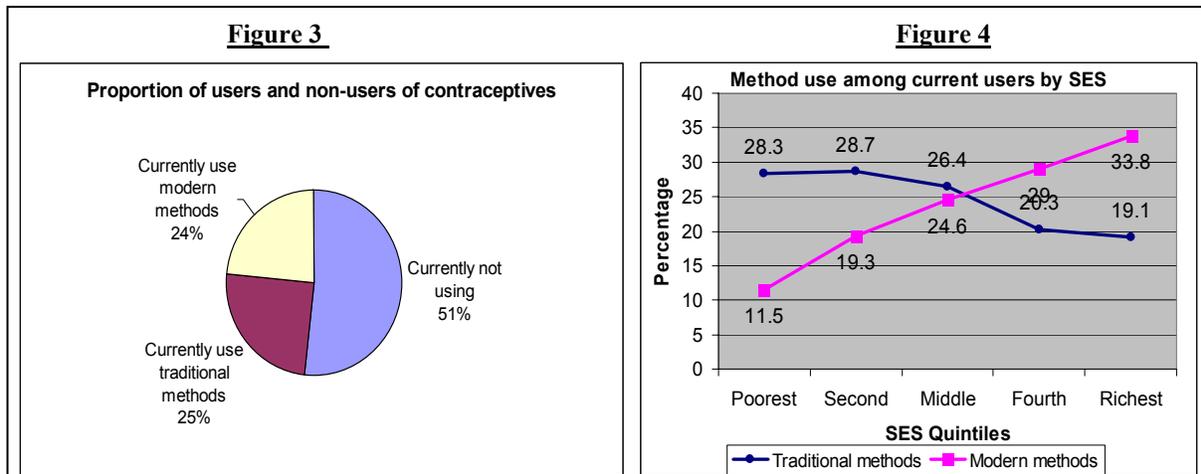


About 23 percent of the respondents had one or more abortions in the last five years. 1999 RRHS data also reveal that the abortions are more common among poor women. About 13 percent of women who belong to the two poorest quintiles had two or more abortions in the last five years as compared to 6 percent of women in the two richest quintiles (see Figure 2). The overall high rate of abortion indicates a high unmet need for contraceptives particularly among poor women.

⁸ In union refers to women who are not married but living with a partner (living together means having sexual relationship while sharing the same usual address).

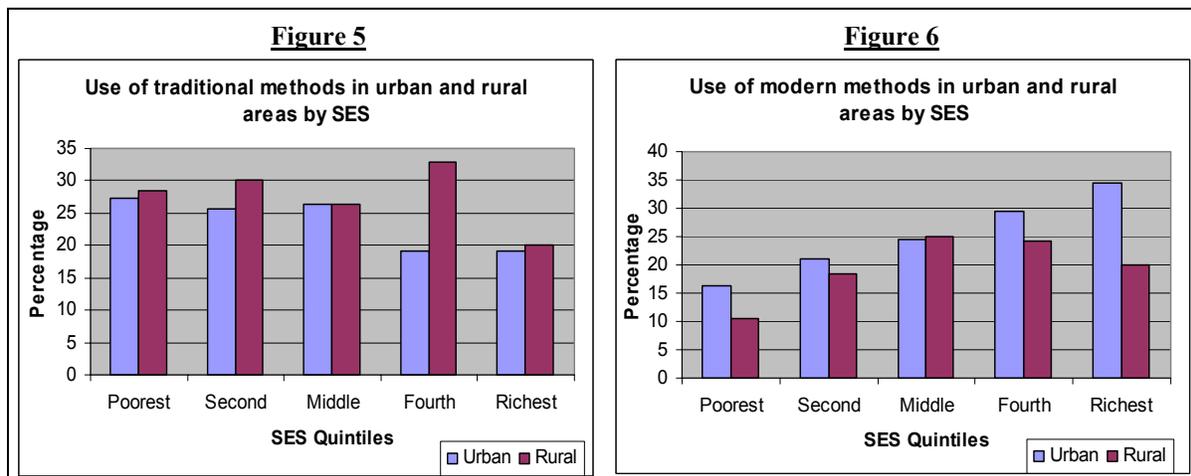
Use of FP methods

A large proportion of women (51%) are currently not using any contraceptive method. Of current nonusers, 27 percent have never used an FP method; others have used contraceptives in the past but have discontinued using them. About 25 percent women currently rely on traditional methods (see Figure 3). Figure 4 shows that the use of modern methods increases with the increase in SES. Only 12 percent of the poor women use modern methods as compared to 34 percent rich (i.e., a gap of 22 percent) across the SES quintiles.



Method use status by urban and rural areas

Women living in urban areas are more likely than rural women to use modern methods of contraception. About 28 percent of urban women use modern methods as compared to only 16 percent of their rural counterparts.



Women living in rural areas regardless of their SES quintile, are more likely to be using traditional contraceptive methods compared to their urban counterparts of the same SES quintile (see Figure 5). Use of modern contraceptive methods increases by SES quintile among those living in urban areas (see Figure 6). Among women living in rural areas, those in the top SES quintiles are not more likely than those in the other SES quintiles to use modern contraceptive methods.

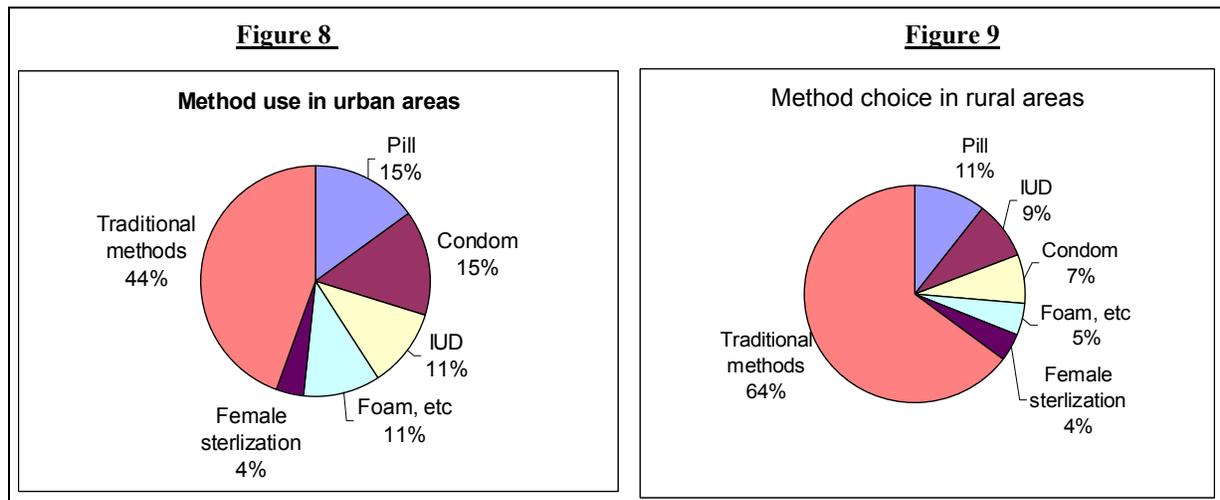
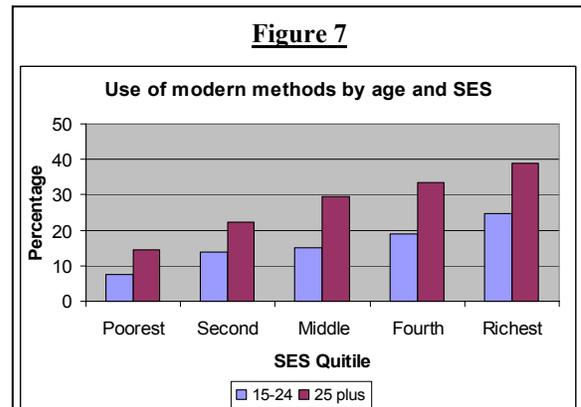
Method use status by age

The use of modern FP methods increases two to three times from the poorest to the richest quintiles in both young (15-24) and older (25-44) age groups. The gap between the two age groups decreases with increase in SES, with older women (25-44) being more likely than younger women (15-24) to use contraceptives (see Figure 7).

Use of various FP methods

Figures 8 and 9 illustrate the popularity of modern methods and specifically spacing methods in urban areas.

The use of condoms as a FP method increases two to three times from the poorest to the richest

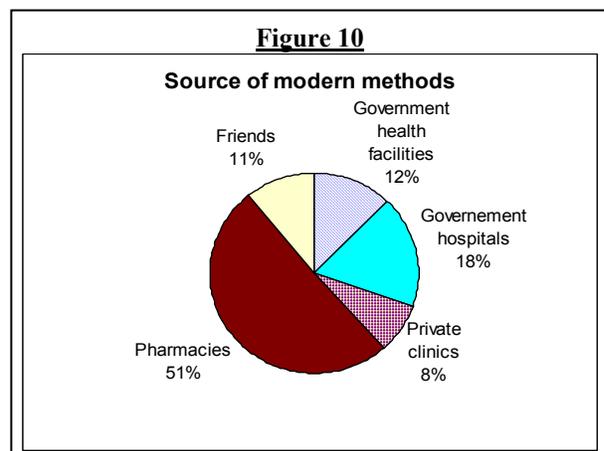


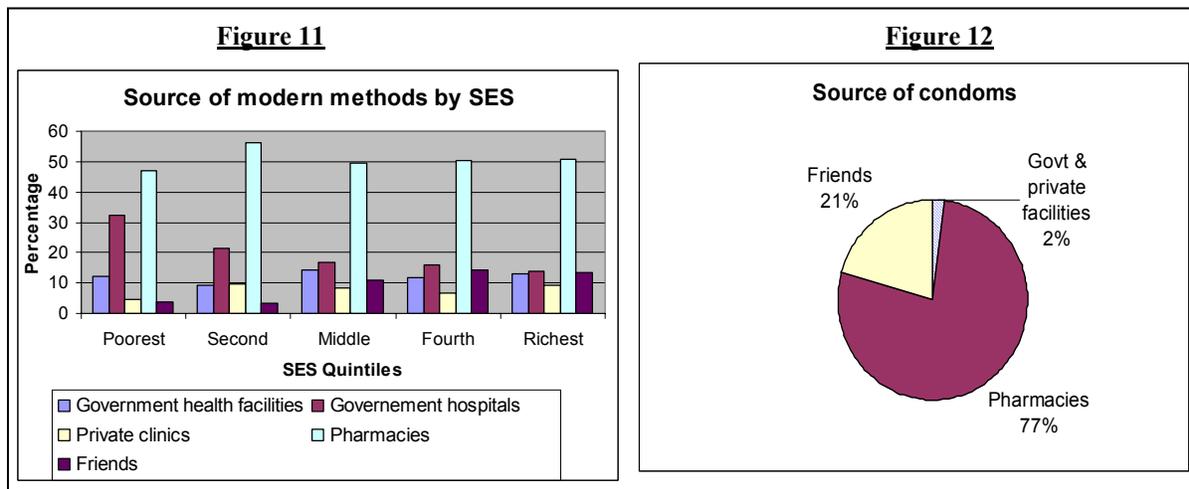
quintiles in both rural and urban areas. The use of pills declines substantially (about 50%) with the increase in SES in rural areas. IUD is more popular in urban areas among poor and middle SES.

Consumer choice of method source

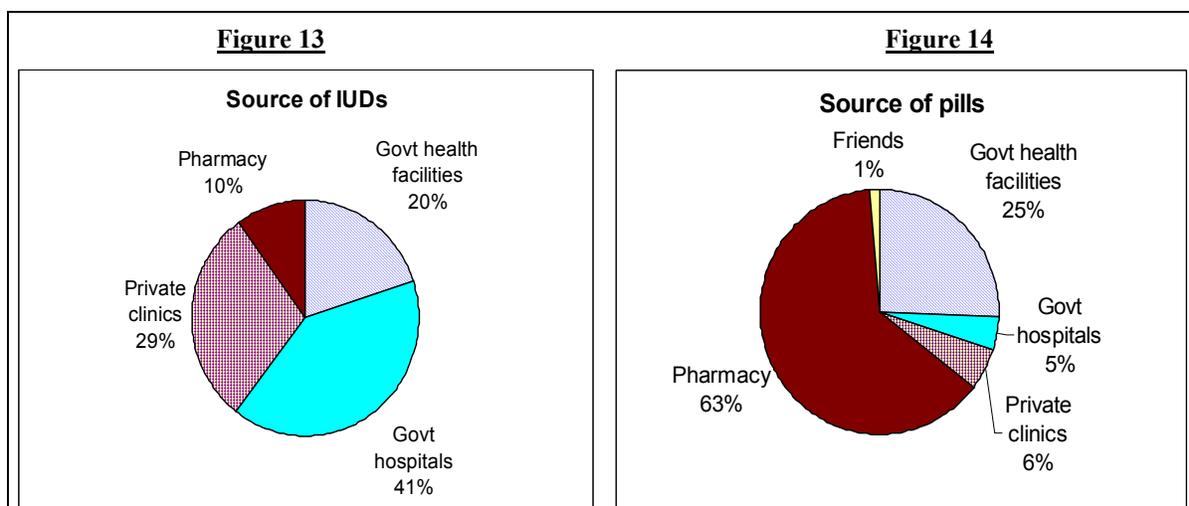
Nearly 60 percent of the FP users obtain contraceptives from the private sector, primarily through pharmacies (51%), private clinics (7.5%), and NGOs (0.5%). About 31 percent of the women receive FP methods from the government facilities including hospitals, FP clinics, and polyclinics (see Figure 10).

Figure 11 shows that pharmacies are the main source of contraceptives regardless of socioeconomic status. Women in low SES quintiles are more likely to use hospitals as compared to high SES women.





Rural women tend to go to hospitals more for FP methods as compared to their urban counterparts. On the other hand, pharmacies are more popular in urban areas. However, pharmacies are the main source of modern contraceptives both for rural and urban areas. Figure 12 indicates that pharmacies are the dominant source of condoms.



Government hospitals are the main source of IUDs. About 40 percent of women use public sector facilities for IUD insertion (see Figure 13), whereas 63 percent of the women go to pharmacies and 25 percent to government health facilities for pills (see Figure 14).

Student population

Analysis of students is important for assessing or designing the targeting strategy. We identified very few women who reported that they are students and sexually active in the sample (only 127 of 6,888 women). This is too few to do a robust analysis. Furthermore, the 1999 Romania Reproductive Health Survey (RRHS) questionnaire is designed to examine reproductive health decisions and behaviors of women in stable unions. The 1996 Young Adults Reproductive Health Survey might be more appropriate for analysis of students, but this analysis was beyond the scope of this study.

Market Segments

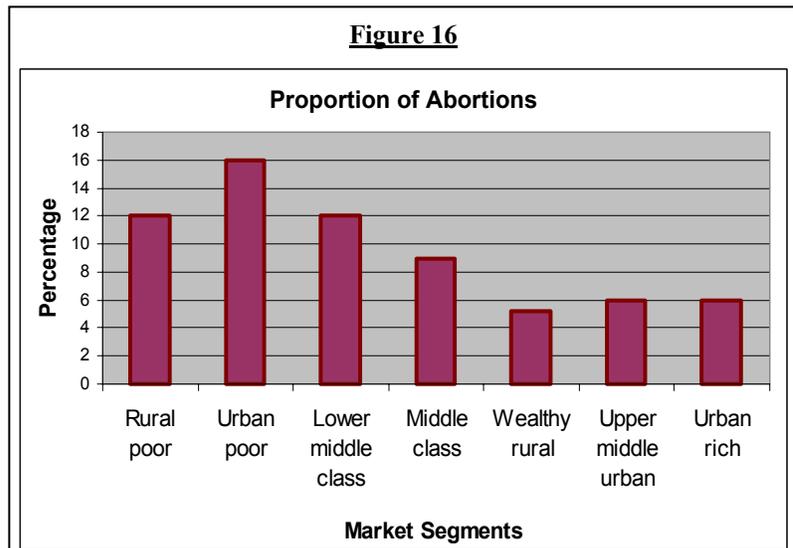
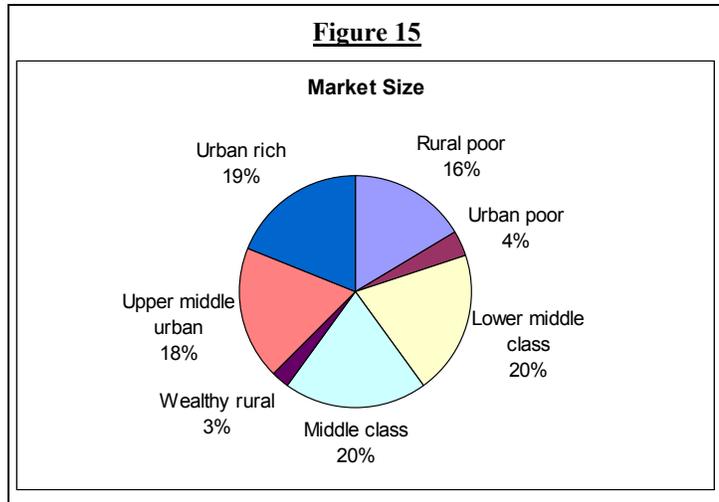
Based upon the SES and demographic data analysis, the paper divides the Romanian FP market into seven segments through a mechanical process. These groups are categorized on the basis of the following distinguishing characteristics: SES index, rural/urban residence, level of unmet need, level of education, rate of abortion, use of modern methods, and source of method. Table 4 presents the market segments and their characteristics.

Group 1—Rural Poor: The group constitutes 16.4 percent of the FP market (see Figure 15). All women in this group belong to the poorest quintile of Romanian society and reside in rural areas. Nearly 34 percent of rural poor have an unmet need for modern FP methods. A majority of rural poor women (88%) have either incomplete secondary education or lower. This group has a higher proportion (45%) of women between ages 15–

24 as compared to other groups. About 12 percent of the women had two or more abortions in the last five years. Only 10 percent of women use modern methods, with one-half of them using public sector facilities for FP services and/or commodities.

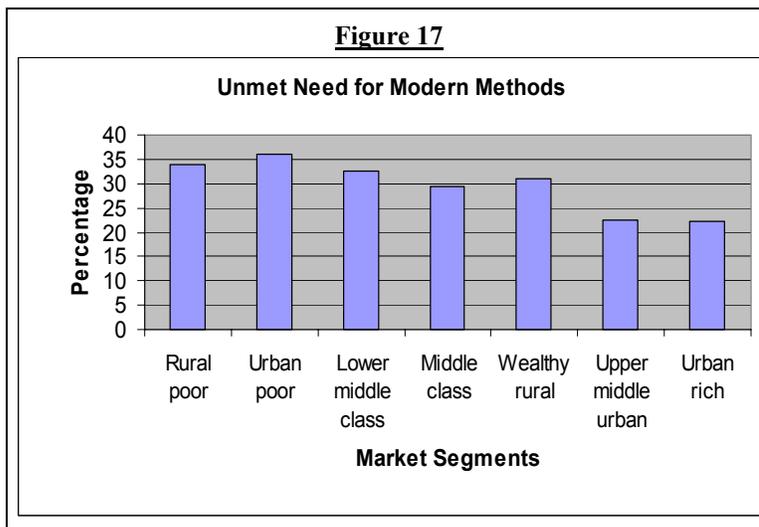
Group 2—Urban Poor: This group constitutes only 3.6 percent of the FP market. All women in this group belong to the poorest SES quintile and live in urban areas; 36 percent of them have an unmet need for modern contraceptive methods. About 16 percent of these women had two or more abortions during last five years, which is the highest among the segments (see Figure 16). Only 16 percent use modern contraceptive methods, and out of that 59 percent obtain FP commodities and/or services from the private sector.

Group 3—Lower Middle Class: This group constitutes 20 percent of the FP market. Women in this group belong to the low-income SES quintile. About two-thirds of the women reside in rural areas; 33 percent of them have an unmet need for modern contraceptive methods. About 63 percent of the women have not completed secondary education. One-fifth of these women use modern contraceptives. Only 31 percent of the modern contraceptive users obtain their FP commodities and/or services from the public sector. About 12 percent of the women in this group had two or more abortions during last five years.



Group 4—Middle Class: **This group constitutes 20 percent of the FP market.** Women in this group belong to middle income SES quintile, and 83 percent of them reside in urban areas. About 30 percent have an unmet need for modern methods. One-fourth of the women in this group use modern methods. About 31 percent obtain their FP commodities from the public sector.

Group 5—Wealthy Rural: **This is the smallest group constituting only 2.9 percent of the FP market.** About 62 percent of the women in this group belong to the upper middle class and 38 percent to the rich; 31 percent of the women have an unmet need for modern contraceptive methods (see Figure 17). Only 23 percent use modern methods, and 25 percent use the public sector for FP commodities and/or services. The rate of abortion is 5 percent, which is the lowest.



Group 6—Upper Middle Urban: **This group constitutes 18.2 percent of the FP market.** All the women in this group belong to the upper middle-income SES quintile and live in urban areas; 30 percent use modern contraceptives and about 27 percent use the public sector for FP services and/or commodities. About 23 percent have an unmet need for modern methods. The rate of abortion is 6 percent, which is lowest among the groups.

Group 7—Urban Rich: **This group constitutes 18.9 percent of the FP market.** All women in this group belong to the richest SES quintile and live in urban areas. About 35 percent use modern methods of contraception and 59 percent use the private sector (see Figure 18). However, more than one-quarter of women in this group use public sector services and/or commodities. About 22 percent have an unmet need for modern methods. About 6 percent had two or more abortions in last five years. The education level of the women is also the highest among the groups.

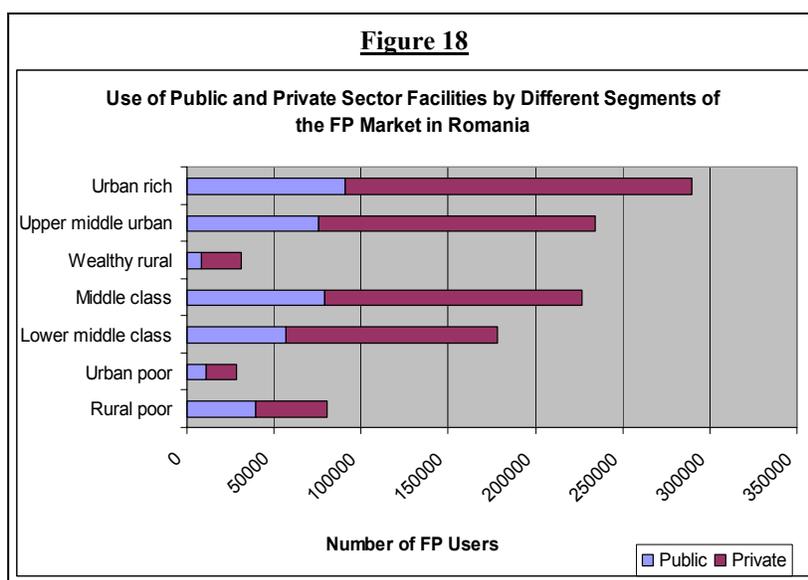


Table 4: Market segments and their characteristics

Seg-ments	Market size	Characteristics	Source of modern methods ⁹
Rural poor	16.4% (837,420 women)	<ul style="list-style-type: none"> ▪ Poorest SES quintile ▪ 34% unmet need ▪ 10% use modern methods (32% pill, 26% IUD, 14% condom users) ▪ 88% secondary incomplete or less; 1% post-secondary ▪ 45% ages 15–24 ▪ 12% women had two or more abortions¹⁰ 	<ul style="list-style-type: none"> ▪ 47% public ▪ 49% private
Urban poor	3.6% (182,580 women)	<ul style="list-style-type: none"> ▪ Poorest SES quintile ▪ 36% unmet need ▪ 16% use modern methods (35% pill, 25% IUD, 20% condom users) ▪ 84% secondary incomplete or less; 3% post-secondary ▪ 38% ages 15–24 ▪ 16% women had two or more abortions 	<ul style="list-style-type: none"> ▪ 39% public ▪ 59% private
Lower middle class	20% (1,020,000 women)	<ul style="list-style-type: none"> ▪ Second SES quintile; 65.7% rural and 34.3% urban ▪ 33% unmet need ▪ 18% use modern methods (46% pill, 22% IUD, 22% condom users) ▪ 63% secondary incomplete or less; 7% post-secondary ▪ 36% ages 15–24 ▪ 12% women had two or more abortions 	<ul style="list-style-type: none"> ▪ 31% public ▪ 66% private
Middle class	20% (1,020,000 women)	<ul style="list-style-type: none"> ▪ Middle SES quintile; 16.6% rural and 83.4% urban ▪ 30% unmet need ▪ 25% use modern methods (29% pill, 24% IUD, 26% condom users) ▪ 53% secondary incomplete or less; 14% post-secondary ▪ 34% ages 15–24 ▪ 9% women had two or more abortions 	<ul style="list-style-type: none"> ▪ 31% public ▪ 58% private
Wealthy rural	2.9% (147,900 women)	<ul style="list-style-type: none"> ▪ Fourth and richest SES quintile (61.4%) and rich (38.6%) ▪ 31% unmet need ▪ 23% use modern methods (23% pill, 19% IUD, 28% condom users) ▪ 35% secondary incomplete or less; 23% post-secondary ▪ 34% ages 15–24 ▪ 5.2% women had two or more abortions 	<ul style="list-style-type: none"> ▪ 25% public ▪ 66% private
Upper middle urban	18.2% (929,220 women)	<ul style="list-style-type: none"> ▪ Fourth SES quintile ▪ 23% unmet need ▪ 30% use modern methods (25% pill, 19% IUD, 26% condom users) ▪ 35% secondary incomplete or less; 26% post-secondary ▪ 32% ages 15–24 ▪ 6% women had two or more abortions 	<ul style="list-style-type: none"> ▪ 27% public ▪ 57% private
Urban rich	18.9% (962,880 women)	<ul style="list-style-type: none"> ▪ Richest SES quintile ▪ 22% unmet need ▪ 35% use modern methods (27% pill, 20% IUD, 27% condom users) ▪ 25% secondary incomplete or less; 40% post-secondary ▪ 37% ages 15–24 ▪ 6% women had two or more abortions 	<ul style="list-style-type: none"> ▪ 27% public ▪ 59% private

⁹ As percent of modern method users.

¹⁰ Refers to number of abortion(s) in last five years.

Analyzing Policy Choices

The market analysis clearly indicates that compared to high SES women, low SES women

- Have higher unmet need for FP;
- More often use traditional FP methods;
- Are less educated;
- Are concentrated in rural and inaccessible areas; and
- Have more abortions.

Given their relative poverty, poor women appear to have greater need for improved access to FP services and commodities. This makes the role of subsidized public sector services even more important. Per the recent estimates by Dayaratna et.al. (2001), the existing provision of free contraceptives could cover the needs of less than 15 percent of the target population that is using pills. The sharp increase in the level of poverty from 34 to 44 percent during 1998–2000 has also worsened the situation (Research Institute for the Quality of Life and UNDP, 2001). Due to rising poverty, declining resources, and increasing unmet need, it is not possible for the MOH to provide FP services and commodities to everyone. There is a need to reexamine the current target groups and implement a scaled back targeting strategy that would be more consistent with available resources. The MOH needs to target its scarce resources to poverty groups.

A majority of women including the poor buy contraceptives from pharmacies. Government resources are unable to meet the existing demand for contraceptives and are often not targeted effectively. Table 5 indicates that a disproportionate amount of public finance goes towards paying for the contraceptive services for those who can afford to pay. Thirty percent of those who use public facilities belong to the 40 percent of the population represented by the lowest SES groups. Conversely, 46 percent of the public sector users come from the richest 40 percent population. The ratio of public sector users in relation to market size clearly indicates that there is no explicit targeting in place.

Table 5: Use of public subsidies by different segments of the market

Market Segments	Percentage of total population	Percentage of Public sector Users	Ratio
Rural poor	16.4	11	0.67
Urban poor	3.6	3	0.83
Lower middle class	20.0	16	0.80
Middle class	20.0	22	1.10
Wealthy rural	2.9	2	0.69
Upper middle urban	18.2	21	1.15
Urban rich	18.9	25	1.32

This section raises a number of potential policy choices that could improve the effectiveness of government resource use for FP. The underlying premise of these policy choices is that although the public sector is vital in providing a safety net to those whose means do not allow them to make use of private sector services, it cannot grow without limits and its relative size needs to depend upon the income distribution and ability to pay of the targeted population, among other factors. This means that given limited central and state budgets, it is critical that those who can afford to pay for services in the NGO and private sectors seek services in those sectors and do not overburden the public sector.

The analysis of the FP commodity market and financing suggests a diversified approach to commodity distribution, which include public, private and NGO sources.

The MOHF may consider a range of policy choices for improving the efficiency and access to FP for the poor segments of the FP market. Table 6 provides a list of potential policy options for each segment of the FP market.

- Improving efficiency
 - Improve targeting of the public sector FP services and commodities to increase access to free contraceptives to the poorest segments.
 - Limit the brands of contraceptives/pills provided through FP clinics.
 - Encourage those who can afford to pay to get contraceptives from the commercial sector.
- Improving access
 - Include low cost contraceptives in the compensated drug list covered under health insurance
 - Train and allow family health doctors to provide FP services and commodities, particularly in rural areas
 - Support the growth of NGOs for wider coverage, particularly to students.¹¹
 - Social marketing through private and NGO sectors

Table 6: Potential policy options for each segment of the FP market

Segment	Issues	Policy options
Rural poor	<ul style="list-style-type: none"> ▪ Only 39,359, or 5%, of these women use the public sector. 	<ul style="list-style-type: none"> ▪ Ensure access to free contraceptives ▪ Train family health doctors and nurses particularly in rural areas to provide FP commodities and services. ▪ Improve targeting of free and low cost contraceptives. ▪ Devise mechanisms for the distribution of contraceptives in rural areas. For example, allow family health doctors to distribute contraceptives. ▪ Improve community outreach services. ▪ Mobilize government and donor resources to increase the number of free contraceptives. ▪ Reactivate former nurses for providing FP commodities. ▪ Limit the public sector supply of contraceptives to a couple of low cost brands to ensure that scarce government resources go a longer way.
Urban poor	<ul style="list-style-type: none"> ▪ Only 11393, or 6%, of these women use the public sector. 	<ul style="list-style-type: none"> ▪ Ensure access to free contraceptives. ▪ Mobilize government and donor resources to increase the number of free contraceptives. ▪ Improve targeting of free and low cost contraceptives. ▪ Limit the supply of contraceptives to a couple of low-cost brands at FP clinics. ▪ Support NGOs in provision of free contraceptives.
Lower middle class	<ul style="list-style-type: none"> ▪ Only 56,916, or 6%, of these women use the public sector. 	<ul style="list-style-type: none"> ▪ Include low cost contraceptives in compensated drug list covered under the health insurance. ▪ Promote social marketing of contraceptives (which includes both demand creation and supply of contraceptives) through for-profit private sectors and NGOs. ▪ Limit the supply of contraceptives to a couple of low-cost brands in the FP clinics. ▪ Involve NGOs in FP promotion campaigns.

¹¹ This market segmentation analysis was unable to determine the distribution of students across SES quintiles; thus, it was not possible to determine the suitability of including all students in the targeting strategy.

Segment	Issues	Policy options
Middle class	<ul style="list-style-type: none"> About 79,050, or 8%, of these women use the public sector. 	<ul style="list-style-type: none"> Include low cost contraceptives in the compensated drug list covered under the health insurance. Facilitate social marketing of contraceptives (which includes both demand creation and supply of contraceptives) through for-profit private sectors and NGOs. Create an enabling environment for NGOs to serve the specific target population (i.e., students) and encourage students to use NGO services.
Wealthy rural	<ul style="list-style-type: none"> About 8504, or 6% of these women use the public sector. 	<ul style="list-style-type: none"> Create enabling environment and provide incentives for growth of the pharmacies in rural areas. Encourage the use of private/commercial sector providers. Promote social marketing of contraceptives (which includes both demand creation and supply of contraceptives) through for-profit private sectors and NGOs. Create an enabling environment for NGOs to serve the specific target population (i.e., students) and encourage students to use NGO services.
Upper middle urban	<ul style="list-style-type: none"> About 75,267, or 8%, of these women use the public sector. 	<ul style="list-style-type: none"> Encourage the use of private/commercial sector providers. Create an enabling environment for NGOs to serve the specific target population (i.e., students) and encourage students to use NGO services.
Urban rich	<ul style="list-style-type: none"> About 90,992, or 10%, of these women use the public sector. 	<ul style="list-style-type: none"> Encourage the use of private/commercial sector providers. Create an enabling environment for NGOs to serve the specific target population (i.e., students) and encourage students to use NGO services.

To summarize, this paper presents results from a FP market segmentation and policy analysis. Using market segmentation approach, the paper identified seven distinctive consumer groups namely rural poor, urban poor, lower middle class, middle class, wealthy rural, upper middle urban and urban rich. These groups differ greatly in terms of socioeconomic status and their source of contraceptives and method use behaviors.

Government resources are unable to meet the existing demand for contraceptives of the target population. An analysis of the distribution of public sector subsidy across market segments reveals that there is no explicit targeting in place. A disproportionate amount of public finance goes towards paying for the contraceptive services for those who can afford to pay. There is a need to reexamine the current target groups and implement a scaled back targeting strategy that would be more consistent with available resources. The effectiveness of the FP program could be increased more by targeting the free contraceptives to the poor comprising rural poor, urban poor and lower middle class women. Considering the scarcity of government resources, the extreme poor may be given the highest priority for free contraceptives.

In the case of Romania, where the private sector is not well developed, the MOH will need to play a major role in ensuring access to contraceptives for the poor and creating an enabling environment for the growth of the private sector to serve those who can afford to pay. This market segmentation analysis is intended to help identify policy choices.

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Annex 1: Methodological Notes

Annex Table 1

Flush toilet	Automobile	Vacation home
Central heating	VCR	Number of rooms the household contains
Refrigerator	Household phone	
TV	Cellular phone	

Factor analysis is based on the theory that underlying but unobservable factors explain the variation in other sets of observable variables. In this case, we believe that the SES (not directly observable) of the household explains the ownership of certain assets (observable). Other underlying factors can also partially explain the ownership of certain assets. For example, community infrastructure can be a determinant of whether households have central heating, electrical appliances, or a vegetable garden for household use. Another important underlying factor may be occupational status. Many professions require special tools, managers and supervisors often need telephones to keep in touch with their responsibilities, and taxicab drivers require automobiles. Our working hypothesis is that household SES is the most important underlying factor; therefore, scores generated from the first principal component would be a given household's relative SES.

We standardized the number of rooms in a house into a crowding index. If a house has one or more rooms per person, we designated it as uncrowded.

In general, we used the ownership of an asset in the analysis. Following are the only exceptions:

- We eliminated the ownership of a vegetable garden/orchard/vineyard from the analysis because, theoretically, it is ambiguously related to SES. Gardens, orchards, and vineyards are most prevalent in rural households. To the extent that rural households are generally poorer than urban households, this type of asset might be confounded with relative poverty rather than wealth. However, within rural areas the ownership of a vineyard or orchard is probably a sign of relative wealth.
- We did not use the answer to the question, “How many hours per day do you have electricity,” because almost all households have electricity all day long in Romania.