

| DRAFT: September 2008.

Presented at the Central Eurasian Studies Society annual conference, Georgetown, Washington DC, September 2008

Comments welcome.

I) Introduction

The post-socialist transition resulted in a well-known, radical decline in GDP. In countries where downturns were deeper and longer, the associated dislocation had a negative impact on human development indicators (Meurs and Ranasinghe, 2002). Health indicators worsened in some places, especially during the mid-1990s, and many countries experienced an initial increase in infant and maternal mortality rates. In most cases, these mortality rates fell again over time. In Tajikistan, the death rates have remained stubbornly high.

In this paper, we draw on the broad literature on infant and maternal death in developing and developed countries to highlight factors which may contribute to this poor performance. Based on this literature, we focus in the rest of our analysis on two particularly important factors: women's use of prenatal care and trained assistance during birthing. While women's right to a non-medicalized birth has become an important issue in global debates, and especially in developed countries, studies consistently show a positive impact of access to trained assistance and emergency medical support on maternal and infant outcomes. We review socio-economic conditions which may play a role in women's use of prenatal care and trained assistance at birth, and their dynamic in Tajikistan over the post-Soviet period. Then, drawing on data from the 1999 and 2003 Living Standards Measurement Surveys of the World Bank, and building on previous work by Jane Falkingham (2003), we document the trends in the use of these services,

and develop a model of service use as a function of household and socio-economic conditions. We examine both “demand side” factors, including household income, mother’s education, and previous birthing experience, as well as supply side factors, including proximity of medical facilities and measures of remoteness.. We find that higher household income has a consistent, positive impact on use of both prenatal care and the presence of professional assistance at birth, while living farther from the polyclinic or women’s clinic had a significant negative impact. Having had more children also significantly reduces the likelihood of using these services. Women’s voice in the household also seems to matter however. Controlling for income, female headed households and those with more educated female elders were more likely to use some kinds of services. Culture may also play a role. With household income and distance to services controlled for, region of residence also had a significant impact on the use of services, with living in Khatlon and the RRS having particularly consistent negative effects.

II) Understanding Maternal and Infant Outcomes:

The literature on maternal and infant outcomes in developed and developing countries has identified a number of factors correlated with relative performance. Among these are the use of ante (pre) natal care and the presence of trained assistance during child birth (Flegg, 1982; Pampel and Pillai, 1986; Shiffman, 2000). Ante natal care is important in identifying underlying conditions which contribute to poor maternal outcomes, including anemia (found in 41% of Tajikistan’s women of childbearing age, and related to bleeding and low birth rate) (UNICEF, n.d.) and high blood pressure

(preeclampsia), in identifying likely women at high risk for other complications at birth, and also in informing women about nutrition and hygiene, which may contribute to better infant outcomes (Shiffman, 2000). The presence of trained assistance is particularly important to both mother and infant in the case of high-risk births.

Researchers have also identified the education of women and wealth as important factors related to maternal and infant outcomes (Flegg, 1982; Pampel and Pillai, 1986; Shiffman, 2000), partly because these increase the likelihood of using of prenatal care and having trained assistance in birth (Flegg, 1982; Shiffman, 2000). A. T. Flegg notes that more educated women are more likely to seek out medical care and demand quality care, but are also to have a different role in household relations and thus contribute differently to decision-making about their own and children's health (1982: 443). Wealth also contributes to better nutrition, and access to clean water and sanitation, which are to both maternal and infant outcomes (Flegg, 1982).

Availability and quality of health care facilities obviously also play a role (Flegg, 1982: 444). Measures of doctor and nurse availability per population show a positive correlation in some studies (Flegg, 1982; Shiffman, 2000), although authors note the problem of getting a good measure of access. The effect of quality, while obvious, has not been measured statistically to our knowledge, probably due to measurement problems, although interview evidence does highlight this effect (Rivkin-Fish, 2005).

Decisions about the kind of care to use during pregnancy and birth are also driven by what David Ransel described (when writing about birthing practices in Soviet Russia and Tatarstan during the 1920s and 30s) as a “generational chain of knowledge, norms, and assistance.” Ransel notes the way that the intergenerational transfer of knowledge

related to pregnancy and birthing can slow change which might otherwise result from increased education or income, while also acknowledging the potential for state policy to promote such change (through, for example, support for education or subsidized medical care).

Researchers have noted the difficulty in specifying the specific structural relations between this complex of factors. Roughly, a model might look like Figure 1.

Figure 1 here (pending).

III) Tajikistan: Background

Pre-soviet Tajikistan was characterized by very low levels of modern health care delivery. Soviet officials undertook a major campaign to increase the use of prenatal care and medical assistance in birth, relying heavily on feldshers (physician's assistants or paramedics) in the early 20th century due to insufficient number of doctors. Particularly after the 1950s, health care and health outcomes improved significantly (Harris, 2006:28).

But facilities in the Soviet Union started to deteriorate as early as the 1960s (Ransel, 2000:146), and by the 1980s a crisis in Soviet health care was widely recognized (Becker, 1998: 2057). People began bringing their own bedding and food to maternity hospitals, and even refusing to go there to give birth (Ransel, 2000).

In the 1980s, Tajikistan rated at or below the average for all Soviet Republics on most health indicators (Curtis, 1996). Maternal and infant health care does not appear to have been better than other forms. Exact figures vary by source, but a representative source is UNICEF, which gives 43.2 infant deaths per 1000 live births in 1989, much

higher than any Soviet republic except Turkmenistan¹. Maternal deaths were also high (38.9 per 100,000 births) although they were the lowest in Central Asia and lower than in Russia (49 per 100,000 births) (Transmonee, 2007).

Infant health outcomes have not improved since the collapse of the Soviet Union. Infant mortality figures have varied greatly from year to year, but reached a peak of 47 and 48 per 1000 in 1996 and 1997 before falling back to between 43 and 44 in the period 2000-2005, and these figures are likely to be significant under-counts. Charles Becker finds evidence of likely undercounting in neighboring Kyrgyzstan, due to the failure to record deaths during the first week, especially in rural areas (Becker, 1998: 2059). Another factor in the undercount, in both Kyrgyzstan and Tajikistan, is the recent imposition of fee for registering a birth (UNICEF, n.d.). As fewer mothers give birth in hospitals now than did in 15 years ago (see below) and households are poorer, many are choosing not to record births (and subsequent deaths) at all.² Even with the probable under-count, infant mortality rates in Tajikistan rose as they fell in all other former Soviet republics, including Turkmenistan (if those data are to be believed), leaving Tajikistan as an outlier of poor performance (Table 1).³

Maternal outcomes have improved somewhat, but only after worsening significantly in the mid-1990s. Maternal mortality first rose dramatically from 1992 to 1994, reaching a peak of 74 maternal deaths per 100,000 births. Maternal death rates then gradually fell over the next decade, reaching 33 per 100,000 births in 2005

¹ Soviet era infant mortality figures are sometimes argued to be distorted by the practice of failing to include deaths very close to the time of birth, up to the first 7 days. However, the US National Research Council found that reporting was fairly accurate in the 1980s (Becker, et. al. 1998: 2059).

² For further reading on the suspicion with which one must view infant mortality data, see FN 8 in Flegg, 1982).

³ Although note that high infant mortality rates are a widespread problem in the former Soviet Union. Michele Rivkin-Fish reports a rate of 60 per 100,000 live births in St. Petersburg (2005).

(Transmonee, 2007). Although Tajikistan has one of the lowest maternal death rates in Central Asia, it is among the highest in post-Soviet states, and very high by global standards. And while maternal death rates have fallen in most countries over the post-socialist period, little progress has been seen in Tajikistan (Table 1).

Research outlined above suggests that these poor outcomes may be related to changes in the use of prenatal care and medical assistance at birth which, in turn, may be related to a number of socioeconomic factors. In the next two sections of the paper, we outline these underlying socioeconomic conditions for the Soviet and post-Soviet periods, before econometrically examining the relationship between these conditions and the use of prenatal and natal medical care in the current period.

Underlying Factors: Soviet Period

During the Soviet period, Tajikistan continued to suffer from many of the conditions which contribute to poor maternal and infant outcomes world-wide, including low incomes, poor infrastructure, persisting gender inequalities in education, employment and voice. Tajikistan was among the poorest of the Soviet Republics. GDP per capita was \$501 (USD 2000) in 1989, the second lowest of any republic of the former Soviet Union. In the later part of the 1980s, almost 70% of the population lived in rural areas, and fewer than half of these households had piped-in water. Hundreds of villages had no electricity (Curtis, 1996). Analysts report that nutritional levels were poor. In 1991 Tajikistan had the lowest human development index in Central Asia, around the level of Iran (Asian Development Bank, 2000).

Despite relatively severe repression of Islamic practices during the Soviet period, and the general replacement of the veil with a headscarf, researchers report continued preferences for female (quasi) seclusion and early female marriage for girls (Harris, 2006). The practice of living in extended families where daughters-in-law made up an important source of household labor, and decisions were made by the eldest male and female members of the family, meant that education of girls might not directly improve their economic outlook or affect decisions about fertility and childbearing. Women's information and their decision making power may also have been limited by low labor force participation rates. Women in Tajikistan had lower labor force participation rates than in other parts of the Soviet Union, 52% in 1990 (UNDP, 2007/8: 340). Further, few couples understood or practiced contraception. Women continued to have their first child in their teens and continue bearing children into the 40s. In 1990, the total fertility rate for women in Tajikistan was just over 5 (Asian Development Bank, 2000: 24).

State spending on health care was low by Soviet standards (Curtis, 1996). The number of hospital beds per 1000 population was well below the average for the Soviet Union as a whole, and rural areas had about half the number per population as the capital, Dushanbe. Some reports note a general lack of sewage and hot water in hospitals, and even some hospitals (20%) with no running water (Komsomol'skaia Pravda, 1988, cited in Olcott, 1991: 252; countrystudies.us/tajikistan).

Still, health care was universally accessible and free. While hospital beds were in short supply, the system offered a number of possible ways of accessing prenatal and natal care. Urban centers featured neighborhood polyclinics for prenatal care and more centralized hospitals or maternity centers for giving birth, while rural areas were more

likely to receive periodic visits by ambulatory polyclinics and offer fieldshers (physician's assistants) for birthing (Rivkin-Fish, 2005). In 1989, 93% of births in Tajikistan were attended by personnel with at least some training (physicians, nurses, midwives, primary health care workers or trained traditional birth attendants) (Transmonee, 2007). Perhaps this widespread access contributed to the relatively good maternal outcomes (high but lower than in Russia or the rest of Central Asia). Poor infant outcomes might be attributable to poor quality of care, or instead to the lack of infrastructure, poverty and poor nutritional standards.

Underlying Factors: post-Soviet period

Economic conditions worsened in the post-Soviet period. The general post-socialist economic downturn was exacerbated by a civil war, from Oct 1992-May 1993, and skirmishes which continued into 1996 and even in 2001 (Gomart, 2003; Jeffries, 2003: 269-272). GDP per capita collapsed, falling more dramatically than any other Central Asian country, from \$501 in 1989 to \$139 in 1996, before recovering somewhat, to \$222 in 2005 (Transmonee, 2007) (Table 1). Tajikistan is now one of the poorest countries in the world (ADB, 2000: 98).

The employment ratio has fallen continuously, from 72% of the working age population in 1991 to 59% in 1999 and 52% in 2003 (Transmonee, 2007). The government of Tajikistan reports a poverty rate of 64% in 2003, although poverty has shown a significant decline since 1999. Poverty rates are highest in the regions of Gorno-Badakhshan and Khatlon (www.stat.tj), traditionally poor regions which also suffered negative effects of the civil war.

A severe weakening of state capacity accompanied the economic collapse and civil war (ADB, 2000). As a result, infrastructure and service provision have worsened. The share of GDP spent on health care fell from 3.4% in 1993 to 0.9 from 2000-2004, and 1.1% in 2005-6, as the GDP was itself collapsing (Table 1). The number of hospital beds per 10,000 population fell from 107 in 1991 to 60 in 2004, while the capacity of polyclinics remained about the same (www.stat.tj). As the Soviet Union disintegrated and civil war broke out in Tajikistan, many doctors, many of whom were non-indigenous nationalities, left the country (Countrystudies.us/tajikistan). From 1991-2004, the number of doctors per 10,000 population fell from 26 to 19. The number of paramedical personnel fell even more dramatically, from 77 per 10,000 to 42 (www.stat.tj). Conditions in health care facilities, which had been very poor, deteriorated further.

The civil war damaged important infrastructure, while continuing skirmishes and road blocks perpetuated fear and limit population movement (Gomart, 2003; Jeffries, 2003: 269-272). Some children, especially girls, were withdrawn from school due to security issues. While girls' enrollment rates in lower secondary school were 97% of boys in 1990, they had fallen to 89% of boys' in 1998 (Asian Development Bank, 2000). For all secondary school programs, 68% of girls were enrolled in 1999 and 74% in 2003, compared to 80 and 89% of boys (stats.uis.unesco.org) (Table 1).

Women's rate of employment may have increased temporarily (Asian Development Bank, 2000:50), but in 2005, female economic participation rates were only 90% of their 1990 level (UNDP, 2007/8:340). In 1999, 18% of households were headed by women (Asian Development Bank, 2000: 28), the highest rate in Central Asia (www.fao.org...flash_tajikistan_fao_profiles_2008.pdf) and a new development in this

socially conservative country. This change is clearly related to the economic crisis, but also to the civil war which killed an estimated 50,000 people (Asian Development Bank, 2000: 25) and the migration of male workers to other parts of the FSU. Increased female-headship, as well as the general economic crisis, may have contributed to the decline in fertility rates, which fell to 4.1 in 1999 and 3.42 in 2003 (Transmonee, 2008) (Table 1).

One additional post-socialist change which may contribute to women's changing use of medical care is the "reassessment of the role of Islam" in Tajikistan (Tett, 1994). The 1992 civil war was partly driven by conflicts between secular and Islamic visions of the new state in Tajikistan. Still, even the more "pro-communist" areas, Islamic symbols and practices have become much more predominant since 1989 (Tett, 1994:146-7). Just as the ideological battle in Central Asia centered on the role of women in the 1920s and 1930s (unveiling, ending seclusion) (Northrop, 2004), current ideological battles emphasize the need for Tajikistani women to distinguish themselves from "Russian" (colonialist) women (Tett, 1994), as part of creating a new (old) national identity. These pressures to change behavior do not come mainly from the state, however, but from numerous "grassroots" and international forces operating in Tajikistan. This creates a distinct dynamic from the usual efforts of the state to "modernize" traditional values, which are passed down through Ransel's "chain of generational knowledge, norms and assistance." Instead, "traditional" practices (including perhaps birthing practices) may be reinstated (or even introduced for the first time), but by a range of social actors, in the absence of state policy or even against it.

Since 1991, nearly every factor outlined in Figure 1 has deteriorated (with the possible exception of women now having some additional voice in household decisions

due to female headship), although some have subsequently shown some improvement. Failure to improve maternal and infant outcomes is thus not surprising. Below, we document more precisely the changes in the use of prenatal care and medical assistance at birth which have accompanied these socioeconomic developments. We then evaluate the relative role of these socioeconomic factors in households' use of the medical services.

IV) Explaining Use of Prenatal Care and Medical Facilities for Birth

Jane Falkingham has already done some important research on the issue of maternal health care in Tajikistan (2003). Using the 1999 Tajikistan Living Standards Survey (see below), Falkingham examined changes in the use of prenatal care and women's use of medical assistance during birth. She documented a significant (and continuous) decline in use both of prenatal care and medical assistance at birth from 1989-1999 (Falkingham, 2003). Falkingham also showed that significant differences existed in care across groups of women, by education, location, wealth, and time of last birth. More educated women were more likely to get prenatal care, and poorer women were much less likely to have skilled assistance at birth.

We develop a model similar to that used by Falkingham (2003) for the 1999 data, incorporating more recent data, from the 2003 Tajikistan Living Standards Survey. During the 1999 survey, the country was at the lowest point of its post-Soviet trajectory—still reeling from the effects of the civil war and at the bottom of the post-Soviet economic downturn. The later data allow us to examine possible impacts of the recent, partial, economic recovery. We also make some modeling choices distinct from those made by Falkingham, using more variables in their continuous form, adding some

different controls, and using a slightly different modeling approach, a simple dprobit model in STATA. We hope to shed further light on the post-Soviet trends and on Tajikistan's efforts to meet its Millenium Development goals in this area, as well as isolate potential avenues for effective policy intervention.

Data and Methodology

The 1999 and 2003 Living Standards and Measurement Survey in the Republic of Tajikistan was conducted jointly by the State Statistical Agency, the Center for Strategic Studies under the Office of the president, the United Nations Development Programme, and the World Bank. Both cross-sectional surveys were based on a stratified random probability sample, with the sample stratified according to oblast and urban/rural settlements and with the share of each stratum in the overall sample being in proportion to its share in the total number of households as recorded in the 1989 and 2000 Censuses. The 1999 survey was based on a sample of 2,000 households consisting of a total of over 14,000 individuals. The 2003 survey was based on a sample of 4,156 households for a total of over 26,000 individuals.

This analysis relies on a subsample of women between the ages of 15 and 50 who report having been pregnant at least once, and who answered a series of questions regarding the medical attention that they sought and received *for their last (most recent) pregnancy*. These samples consisted of 2,339 women in the 1999 survey and 3,739 women in the 2003 survey. Not all women answered the questions regarding use of prenatal care or presence of skilled assistance at birth, however. Further losses of cases result from the inclusion of certain explanatory variables. We note changes in the sample

size as we proceed. We do not limit our analysis to the set of cases for which complete data is available, however, in order to retain as much relevant information as possible.

Analysis

In Table 2, we report the percentage of sample women who reported having access to prenatal care by year of the reported birth (always the most recent birth). As can be seen in the table, the downward trend in use of prenatal care, reported by Falkingham based on the 1999 data, has continued. Although the number of women recalling access to prenatal care is consistently higher in the 2003 data than in the 1999 data, the downward time trend in access is consistent across the surveys and continues to the most recent period. Table 2 reveals a similar, consistent downward trend in the percentage of women reporting giving birth in a medical facility, accompanied by a rising share of women giving birth at home without skilled assistance.⁴

Lacking adequate time series data to explain this change over time, we adopt a cross-sectional model similar to that used by Falkingham (2003), and examine factors correlated with three outcomes: use of prenatal care, birthing in a professional birthing facility, and birthing with professional assistance (see footnote 4) at any location. We are interested in the role of household characteristics (which might affect demand for these services), as well as the availability of these services. In particular, we examine the role of women's education (measured by years of schooling). Education may affect women's understanding of the choices available to her, as well as her ability to influence decisions

⁴ Note that our definition of "skilled assistance" is more restrictive than that used in the UNDP data cited above. We define "skilled" to include: doctor, nurse, and midwife with a diploma, but to exclude midwife without a diploma, feldsher and other. We make this decision based on work like Ramer's (20XX), which highlights historical distinctions between the two categories of midwives. However, although the World Bank dataset ranks feldsher as less skilled than midwife, we are not sure about this. Ramer suggests that feldshers were more skilled than even diploma'd midwives, at least in the sense that they received broader basic medical training. Comments welcome on these coding choices!

about medical care. We include a dummy for female headship and also the education of the eldest female household member as further measures of women's decision-making power within the household. We include household income (measured as expenditure per capita, in log form) as a measure of households' ability to pay for the increasingly fee-based care. After multiple births, women may also be less likely to seek care, relying instead upon their own experience. To capture this possible effect, we include the number of children born to this woman, including the most recent birth.

To evaluate the role of access to medical care, we include several measures of remoteness: distance to the capital city, distance to the nearest polyclinic, and distance to the nearest women's clinic. As the inclusion of variables measuring distance to medical facilities results in a loss of cases, we provide versions of the regression both with and without these variables. The results are consistent, however, and we will restrict our discussion to the fuller model, presenting the other simply as a robustness check.

We also include regional controls. Regions differ significantly in their level of development and infrastructure, which could also affect access. But regions also differ in terms of ethnic makeup and culture, a possible demand-side factor. Dushanbe, the capital city, has the best infrastructure and access to medical care. It is also the most ethnically mixed of the oblasts, with only 62% of the population ethnically Tajik, and a heavy representation of Uzbeks. Like Dushanbe, Khatlon has a large Uzbek population. Khatlon is an unequally developed region, with the western part traditionally quite well off, while the eastern part has been among the poorest areas on Tajikistan. Khatlon was also heavily affected by the civil war. RRS administrative district, which envelopes the capital city Dushanbe, also has a large Uzbek population and reported the lowest regional

poverty rate in 2003, 45%. Gorno-Badakhshan, a particularly mountainous region, is sparsely populated and probably has the worst infrastructure and access in the country. Eight-four percent of the population in this region lived in poverty in 2003, the highest share of any region. The region also shares a long border with China and has the highest share of Russian population in the country (4%), creating a distinct cultural mix. The more densely populated Sughdian has a large Kyrgyz population (Gomart, 2003; Provinces of Tajikistan, en.Wikipedia.org; www.stat.tj).

Finally, we include two additional controls. We control for year of the reported birth, as this may affect quality of available care (deteriorating from the 1980s onward), as well as prevailing social norms. For this control, we use three periods (1991 and before, the socialist years; 1992-1997, years of civil war and economic collapse, and 1998-2003, partial stability and economic growth). And we control for the year of the survey, in order to control for differences in reporting caused by changing social conditions, as well as sampling differences (2003=1).

Table 3 reports the means and standard deviations for the included variables for all women 15-50 years old. Although means are often quite similar between years, all means are significantly different between the years with the exception of the share of the population living in Sughdian. Notable differences are the rise in log per capita household expenditure between the years, the decline in the average number of births (fertility) and the (surprisingly) the decline in average distances to polyclinic and women's clinic. And although official statistics do not show population shifts between oblasts, the survey sample in 2003 is more heavily concentrated in Gorno-Badakhshan and Dushanbe than the 1999 sample.

To examine the relationship of household characteristics and service availability to use of services we develop a standard probit model model: $\Pr(Y=1|X) = \Phi(X\beta)$ where Y is the binary outcome (use of the service=1), X is a matrix of explanatory variables discussed above, Φ is the cumulative distribution function of the standard normal distribution, and β is a vector of parameters. We estimate separate models of use of prenatal care and medical assistance at birth. For the later, we estimate the model twice, once including all births, and once including only at-home births. Not all women answered all questions. Therefore, we have slightly different sample sizes for the two estimations: 4324 for the model of prenatal care use, and 4171 for the model of use of a medical birthing facility and professional assistance at any locations. Results of the estimations can be found in Table 4.

Because the factors which have a significant impact on the likelihood of a woman using the service are fairly consistent across services, we will first discuss those with consistent impact, and then note factors which seem to play a role in the likelihood of using some services but not others. Household income (ability to pay) and access (proximity of a polyclinic) are two factors which positive impact on the use of prenatal care, the use of professional birthing facilities and the use of professional assistance of at birth, regardless of the location of the birth. An additional 10 kilometers distance to the polyclinic reduces the likelihood of using services by 2%, for a woman with mean characteristics. Having experienced more previous births also has a negative impact, although of a smaller magnitude. Even controlling for income and distance to services, region of residence also consistently affects the likelihood of using maternal health services. Women in Khatlon are almost 6% less likely to get prenatal care than those in

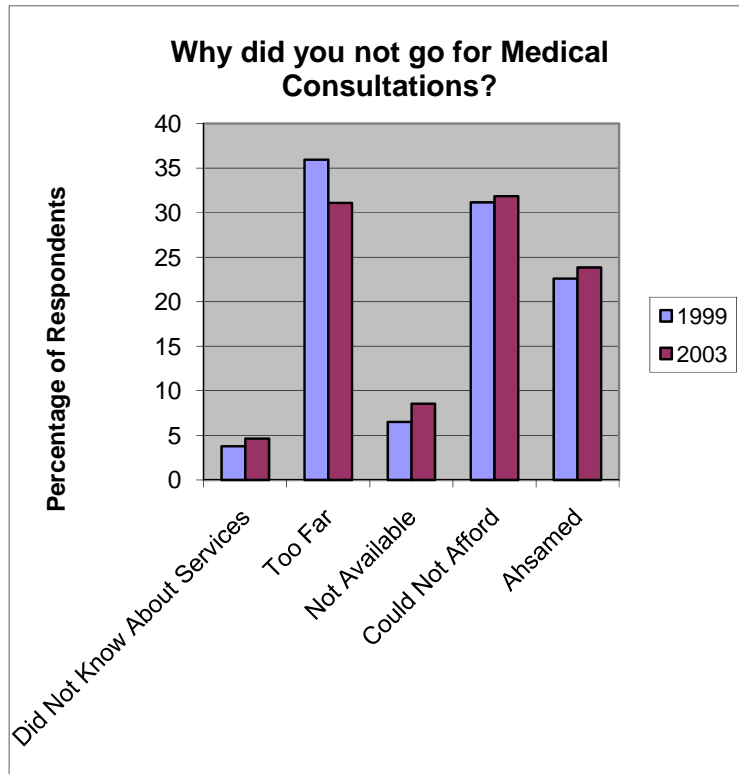
Dushanbe, for example, and 25% less likely to give birth at a medical facility. Residence in the Region of Republican Subordination has a similar, consistently negative effect.

Residence in Sugdian had a positive impact.

While not as consistent as the above factors, other factors also seem to play a significant role in service use. Women's voice in the household, as measured by female headship, significantly increases the likelihood of getting prenatal care (by 3% compare to a woman in a male-headed household with otherwise average characteristics) and some sort of professional assistance at birth (by almost 7%). An additional year of schooling for the eldest female in the household raises the likelihood of getting prenatal care and birthing in a professional facility by 1-2%. Residence in the Gorno-Badakhshan region raises the likelihood of getting prenatal care and professional assistance at birth, but seems not to affect the likelihood of going to a professional birthing facility, compared to living in Dushanbe.

Finally, we note a negative time trend in the use of birthing facilities and professional assistance at birth, with births in the 1998-2003 period (the period of economic recovery) significantly less likely to benefit from these services than births in either earlier period. The later survey had a negative impact on the use of prenatal care. General remoteness, as measured by distance to the capital, was not significantly related to use of maternal healthcare services. Education of the mother was also not significant in this version of the model, where education is measured in years of schooling, although Falkingham did find education to play a significant role when using categorical education dummies. In future work, we will consider alternative ways of measuring maternal education.

Our findings are closely aligned with self-reported reasons for not using services, taken from the 1999 and 2003 TLSS, as seen in Figure 2. Respondents report cost, distance and cultural issues as the top reasons for not using prenatal services.



Note the typo above “Ashamed”... did I make this? I can fix it either way.

Figure 2: Reasons for Not Using Prenatal Services

Source: TLSS 1999, 2003.

V) Discussion:

Our examination of the use of maternal health care services in Tajikistan reveals a continuation of the downward trend in service use documented by Jane Falkingham on

the basis of the 1999 TLSS. Each year, fewer pregnant women report getting prenatal care, going to a birthing facility or having professional assistance at birth. This trend cannot contribute to improved maternal and infant outcomes in Tajikistan or the attainment of Tajikistan's Millenium Development Goals.

Our work suggests that a number of different factors are at work in the decline in service use. Although poverty has reportedly declined somewhat in recent years (www.stat.tj), income is a very significant factor in the likelihood of using services. And although households report shorter distances to clinics than they did in 1999, access is also a significant factor in use. Standard deviations of distances are very high, even if average distance is rather low. And perhaps deterioration of infrastructure and public transport have made clinics less accessible, even if they are now closer in actual distance.

Cultural factors also appear to play a significant role, however. Households where women have more voice seem more likely to make use of services, as do households from certain regions, even when important cross-regional differences (like income and clinic access) are controlled for.

A mix of policies thus seems important in order to increase use of maternal health care services. One obvious issue is the cost of services. Addressing this will go beyond ensuring subsidized services however. It will require adequate salaries to health care professionals, to reduce the need for bribes, gifts and so on, adequate supplies for health care facilities, to reduce the costs of supplies required for admission, and it will require affordable public transportation. Affordable and available public transport will also help address the issue of access, but in some areas additional clinics are clearly needed if women are to obtain services. Finally, there is the question of enhancing women's voice

in the decision about service use when households are headed by men, and also the question of what drives, and how best to address the regional differences in use.

Even an adequate mix of policies can be put into place, however, and rates of access to maternal health services can be returned to previous levels, there will still remain much work to do in order to reduce infant and maternal mortality in Tajikistan, in improving quality of maternal and infant care, as well as water access, sanitation, and nutrition.

References:

Becker, Charles, 1998. "Maternal Care vs. Economic Wealth and the Health of NewbornsL Bishkek, Kyrgyz Republic and Kansas City, USA," *World Development* Vol 26, No. 11, pp. 2057-2072.

Flegg, A. T., 1982. "Inequality of Income, Illiteracy and Medical Care as Determinants of Infant Mortality in Underdeveloped Countries," *Population Studies* 36:441-458.

Gomart, Elizabeth, "Between Civil War and Land Reform: Among the Poorest of the Poor in Tajikistan," in Nora Dudwick, Elizabeth Gomart, and Alexandre Marc, eds. with Kathleen Kuehnast, *When Things Fall Apart: Qualitative Studies of Poverty in the Former Soviet Union* (Washington, DC: The World Bank, 2003).

Harris, Collette

Northrop, Douglas, *Veiled Empire: Gender and Power in Stalinist Central Asia* (Ithaca: Cornell University Press, 2004).

Olcott, Martha Brill, "Women and Society in Central Asia," in *Soviet Central Asia: The Failed Transition*, William Fierman, ed. (Boulder: Westview Press, 1991), pp. 235-254.

Pampel, Fred and Vijayan Pillai, 1986. "Patterns and Determinants of Infant Mortality in Developed Nations, 1950-1975," *Demography* 23 (4): 525-542.

Schiffman, Jeremy, 2000. "Can Poor Countries Surmount High Maternal Mortality?" *Studies in Family Planning* 31(4): 274-289.

Tett, Gillian, "Guardians of the Faith? Gender and Religion in an (ex) Soviet Tajik Village," in Camillia Fawzi El-Solh and Judy Mabro, eds., *Muslim Women's Choices; Religious Belief and Social Reality* (Providence: Berg, 1994), pp. 128-151.