The influence of coping mechanisms and a positive outlook on childbearing during periods of economic uncertainty

Brienna Perelli
Department of Sociology and Population Studies Center
University of Michigan
426 Thompson St
P.O.B. 1248
Ann Arbor, MI 48106-1248
bperelli@umich.edu

INTRODUCTION

Economic crises, depression, and war have had massive impacts on fertility. Evidence of these effects can be seen during the Ukrainian famines induced by Stalin (Anderson 1985), the First and Second World Wars in Russia (Avdeev 1995), the Ethiopian famine of 1984-1985 (Kidane 1989), and China's Great Leap Forward (Ashton et al 1984). Lesser catastrophic events such as economic recession or high unemployment have also influenced fertility; for example, in the United States the Total Fertility Rate (TFR) declined during the Great Depression (Morgan 1996). These fluctuations show that economic change and crisis can have a massive impact on individual fertility decisions.

Yet the direct link between structural changes and fertility decline has been difficult to ascertain. Many aggregate studies of economic crises show a correlation between recession and fertility decline, but it has been difficult to disentangle these effects in light of long-term trends in fertility decline (Mason 1997). Economists have found evidence in favor of both pro- and countercyclical fertility (Butz and Ward 1979, Macunovich 1995), as well as inverted Easterlin fertility cycles tempered by policy implications (Carlson 1992). More recently, demographers have been searching for explanations of lowest-low fertility, and some have proposed that economic uncertainty caused by high youth unemployment or low economic output leads individuals to postpone or forego childbearing (Kohler, Billari, Ortega 2002). Little evidence, however, supports these arguments for all lowest-low fertility countries. Thus, the evidence for the effects of labor market crises on fertility has been mixed.

In Russia, where the population has suffered through a decade of economic shock (Gerber 2002) and the TFR has dipped below 1.3, there is no evidence for a direct link

between individual economic uncertainty and negative fertility decision-making on the micro-level. Many demographers have postulated that the decline in fertility is directly related to the fall in economic output (Khorev 1997*,* Heleniak 1995*)*, yet no study based on a representative national survey has been able to demonstrate that poor individual financial conditions lead to a restriction of childbearing (Kohler and Kohler 2002).

In this paper, I provide evidence that previously unexplored coping mechanisms and positive psychological attitudes significantly predict fertility dynamics in Russia, while conventional methods of operationalizing economic uncertainty do not. These results demonstrate that individual agency, represented as participation in additional activities for pay, predicts behavior better than consequences of structural change which are often out of the control of the individual, such as job loss or wage arrears. Positive psychological attributes, such as satisfaction with life and an optimistic outlook for the future also predict a desire for additional children. Thus, while macro-level events may create obstacles to childbearing, those people who are determined to have additional children find ways to cope with their disadvantaged positions and make ends meet.

In order to test these relationships, I use the Russian Longitudinal Monitoring Survey (RLMS), which was conducted from 1992-2001. This data is appropriate for analyzing attitudes at one point in time and behavior over the course of the transition from a state-administered to a labor-market economy. The initial stage of my study analyzes the 1994 data from the fifth round to determine the effects of coping mechanisms and positive outlook on desired fertility. Further analysis employs a hazard model to evaluate the effects of attitudes and behaviors in the fifth round on additional childbearing behavior occurring in later years.

THEORETICAL FRAMEWORK

Economic uncertainty

While all societies undergo economic recessions, the societal-level consequences of such recessions differ according to severity and historical-cultural conditions. When a society is buffeted by widespread labor market crisis, job loss and wage arrears are usually out of the control of the individual. Variations in personal reactions to such conditions depend on an individual's ability to employ coping mechanisms and maintain a positive outlook. Such mechanisms are independent of actual financial conditions or material resources and yet are not included in economic models of fertility.

Many of the hypotheses predicting the negative association between labor market crises and fertility emerge from micro-economic fertility theory. Economic or "demand" theories of fertility posit a cost-benefit framework of analysis, in which parents maximize utility by balancing decisions about consumption with income and resources (Becker 1991, Easterlin and Crimmins 1985). In such a model, children are considered one of the tradeoffs; they use up psychological, financial, and time resources that parents would otherwise spend elsewhere. In particular, couples must negotiate mother's time-use, and whether it would be more profitable for her to be engaged in childbearing and rearing or participating in the labor force (Brewster and Rindfuss 2000). According to this perspective, in times of labor market crisis, when either mother or father is unemployed or facing the prospect of job loss, the strains on income should lead couples to forego or delay childbearing.

The evidence in support of this perspective, however, is mixed; unemployment could cause one of three reactions. First, unemployment could cause couples to reevaluate plans for immediate childbearing in light of financial setbacks. They would then consciously or subconsciously delay childbearing until their position stabilized, or if the period of unemployment lasted too long they may forego childbearing altogether. Evidence for this effect is present in France, where female unemployment leads to a postponement of first births (Meron and Widmer 2002), and in Italy and Spain, where youth unemployment delays household and union formation (Billari et al 2002*).* In the United States, male unemployment also delays entry into marriage, especially during a time of economic deterioration (Oppenheimer, Kalmijn, Lim 1997), which could delay fertility. Aggregate correlations suggest that female unemployment has led to a decline in marriage and fertility rates in Eastern Germany, although these relationships do not allow for causal inference (Adler 1997).

Second, couples could take advantage of the unemployment spell as an advantageous time to have children. This work-free time of early childrearing could be combined with another activity such as advancing education. Unemployment could also be the solution to the incompatibility of competing roles, especially for women. The maternal role incompatibility hypothesis suggests that fertility levels will fall is female labor force participation rise due to the difficulty of combining work and childrearing (Brewster and Rindfuss 2000). Thus, women may feel they are better able to handle the strain of role incompatibility when they are unemployed.

Third, unemployment could have no effect on childbearing decisions. Couples could be set in their preferences for number of children regardless of financial constraints

or change their expectations as they become aware of childrearing responsibilities. Other factors working in opposition to the effects of unemployment, such as insurance against risk of income insufficiency in old age (Cain 1983), may be positively influencing desires for children. Job loss or income insufficiency may be irrelevant in relationship to other familial or personal resources. According to micro-data studies, this appears to be the situation in Russia: participation in the labor force has no consistent effect on the desire for children (Kohler and Kohler 2002). This lack of significant relationship could also be due to the average of the opposing forces described above.

Coping Mechanisms

Because labor market crises prevent individuals from maintaining power over employment and income, certain individuals turn to coping mechanisms that would provide them with a sense of control. **"**Coping is defined as behavior aimed at producing change in the objective self (change in abilities or needs) or a change in the objective environment (a change in demands or supplies)." (Caplan, Naidu, and Tripathi 1984) In a society fraught with unemployment, financial hardships, and stress, coping mechanisms could emerge in multiple forms, such as acquiring new skills or starting an enterprise. In Italy, for example, many young people are coping with the tight labor market by continuing their education (Billari et al 2002).

In settings experiencing dramatic labor market restructuring, the coping mechanism is specified as engaging in additional activities for pay. These additional activities, whether incidental or regular, would not only supplement income but provide an outlet for agency, or the means for the individual to affect change in his or her own

life. The activities could be anything from sewing a shirt to renovating an apartment, transporting someone in a car or providing care for the elderly. In most instances, this extra employment would be outside the formal labor market and either in addition to or separate from primary or even secondary employment. In some cases the additional activity may be the only source of income. The key distinction is that these activities are something that an individual does outside of the labor market.

People who employ such coping mechanisms to combat the negative effects of structural change on their daily lives should be better situated to take on another responsibility, such as childbearing and rearing. Participation in extra activities may simply be correlated with desire for additional children, or participation may be undertaken specifically because of the desire for additional children. In such a situation, it is difficult to disentangle the effects of reciprocal causality. The expectation of future childbearing may be causing people to take on extra activities, or people participating in extra activities may undergo some internal change, which could then cause the desire for additional children. Whatever the direction of causality, however, employing coping mechanisms predicts the desire for childbearing, regardless of employment status.

Positive Outlook

People who have a positive outlook on their current and future lives are more likely to want to take on childbearing and rearing responsibilities. Those who are dissatisfied with life or feel that life will be worse in the future would not want to bring a child into the world. A positive outlook may either be inherent to an individual and part of his or her personality, or it may be caused by other factors, such as marital satisfaction,

material situation, social networks, and so on. While some of these effects can be controlled in the model, others have not been measured.

THE SETTING

The past decade of economic and political transformations has had an enormous effect on Russian society. Structural changes brought about by the transition from a state-administered to a labor-market economy have led to a dramatic rise in unemployment and an increase in stratification (Gerber 2002). In the early 1990s, due to a drop in real income, living standards declined and the proportion of families living below the poverty line increased dramatically (Prokofieva and Terskikh 1998). As of late 1998, almost two-thirds of all working-aged adults were owed back wages and over half or children under age 6 were living in poverty (Mroz and Popkin 1999). Clearly, Russia represents a case in which deep recession has impacted the lives of the people.

Macro-data analysis shows that a decline in fertility has occurred parallel to the decline in economic output (Kohler and Kohler 2002). Over the past decade, total fertility rates in Russia have plummeted from 1.89 in 1991 to 1.17 in 1999 (Vishnevskii 2001). While fertility rates had been steadily declining for some time, the past decade of decline has resulted in one of the lowest fertility rates in the world, placing Russia into the category of lowest-low fertility along with 14 other countries in Southern, Central, and Eastern Europe (Kohler, Billari, and Ortega 2002). Russia and the other lowest-low fertility countries share similar conditions of labor market uncertainty (Kohler, Billari, and Ortega 2002).

Relative to Southern and Central Europe, however, childbearing in Russia is young and nearly universal (Avdeev 1995, Zakharov and Ivanova 1996, Vishnevskii 1996). Because of Russia's specific childbearing pattern, it is important to break down an analysis of fertility by parity. Throughout modern Russian history, almost all fertile women have had at least one child, and first birth rates have remained remarkably stable over time (Avdeev 1995). Strong societal norms pressure people to have at least one child, but not necessarily more. Hence in Russia, the mechanisms influencing the initiation of childbearing differ from those that affect the desire for additional children. These mechanisms also differ for women who intend to have "large families," -- more than three children. Increasing parity progression ratios for fourth or higher order births show that women who have had more than three children are on their way to forming "large families" (Avdeev 2001). Thus, Russian women who have no children in their lifetime and women who have more than three children differ from the typical one-or-two child family model.

DATA

This analysis uses data from the fifth round of the Russian Longitudinal Monitoring Survey (RLMS), conducted in December 1994 by the Carolina Population Center with the Institute of Sociology, Russian Academy of Sciences. The RLMS is based on a nationally representative sample of the Russian population and employs a stratified three-stage cluster samples of residential addresses. Two phases of this study were conducted at irregular intervals from 1992 to 2000. I use the fifth round, or the first round of the second phase, because it includes the base population that is then followed in

subsequent rounds. Each survey includes a household roster, an interview with a reference person about household activities, and an individual adult interview with each available member of the household.

For the purposes of this study, I have selected from the household roster all women between the ages of 15 to 44 who reported being married. While unmarried women are at risk of having a child, the constraints I place on the sample eliminate those who are less likely to be immediately exposed to the risk. In a few instances, two married women of reproductive age were living in one household; to prevent clustering effects, I chose the younger woman, since it would be more likely that she would continue childbearing. After combining the household rosters with individual surveys, I further selected women who reported currently having a menstrual cycle, so that pregnant, sterilized, and post-menopausal women were removed from the category at risk. I also removed women who said they were not using birth control because they are physically unable to get pregnant. Finally, as explained in the above discussion, I limited the analysis to women who already have one or two children.

Using the household roster, married women were linked to other members living in the household, including husbands and children. Of at-risk women, 4% were living separately from their husbands. While these separations may lead to divorce, some of these men may be absent due to employment in other locations and may reunite with the household; therefore I have left these women in the at-risk category. Also, not all husbands answered the individual questionnaire. To account for any systematic bias that may occur due to nonresponse, I have included a dummy variable coded one if the husband is missing in the analyses.

MEASURES

Desired fertility

While the desire for additional children does not necessarily predict future fertility, it is a good measure of expectations and intentions. The measure has long been included in fertility studies, but the degree to which desired fertility predicts actual fertility, or is even a meaningful measure has been debated in the literature (Knodel and Prachuabmoh 1973, Pritchett 1994, McDonald and Bumpass 1990). In most Western European countries, women's reproductive preferences are much higher than completed fertility outcomes (Bongaarts 2002). Nonetheless, desired fertility is useful for gauging attitudes toward future childbearing, regardless of the outcome.

Fertility decision-making is operationalized through the woman's answer to the question of whether she wants an additional baby. Responses to this question were coded as a dichotomous variable. Most respondents gave a concrete answer; only 28, or 2.5% said they did not know or refused to answer, 25% reported they did want an additional child and 72% said they did not. I have removed the ambiguous answers from the analysis. Table 1 shows the percentage of women who want another child by parity. Even though childbearing decisions are often made as a couple, the survey did not ask men about their desired fertility.

(Table 1 about here)

Childbearing behavior

This analysis will also evaluate the influences of coping mechanisms and positive outlook on the likelihood of having an additional birth. The RLMS has reinterviewed the same

women in subsequent rounds and recorded the birth dates of all family members living in the household. Using this data, I will construct a hazard model, in which the origin will be the birth date of the woman's youngest child in 1994 and additional births will come from round 5-10 household rosters, completed between 1994 and 2001.

Engagement in additional activities

In this setting, a key measure of coping mechanism is self-reported engagement in additional activities for pay. The RLMS asked respondents:

> Tell me, please, in the last 30 days did you engage in some other kind of work for which you got paid? Maybe you sewed someone a dress, gave someone a ride in a car, assisted someone with apartment or car repairs, purchased and delivered food, took care of a sick person, or did something else that you got paid for?

Only about 6% of women reported engaging in informal activities, while around 13% of men participated. Women worked an average of 33 hours at this activity in the last month, while men worked on average 37 hours. The engagement in additional activity question followed a battery of questions about primary and secondary employment. From this ordering, one can conclude that whether someone was formally employed has no bearing on whether they participated in extra activities: 43% of women engaged in extra activities reported that they were not currently working, while 57% were.

Positive outlook

Interviewers asked both male and female respondents two questions which reveal attitudes about life currently and in the future. The first question was "Do you think in the next 12 months you and your family will live better than today, or worse?" Answers ranged from 1, "you will live much better" to 5, "you will live much worse." I recoded

these variables in the opposite direction so that high values reflect a positive rather than a negative outlook. The second question asked respondents "to what extent are you satisfied with your life in general at the present time?" Again, responses ranged from 1 to 5 and were recoded so that high values reflect a positive attitude. These two Likert scales were averaged by sex, and then both women's and husbands' scales were averaged into one positive outlook scale. The alpha reliability factor for this scale is 0.48 for each sex separately, and 0.67 for the combined scale. Ambiguous answers, such as does not know or refuses to answer were treated as missing variables. All missing variables were assigned the mean outlook value, and a dummy variable for husband missing was included in the analysis.

Controls

Participation in the labor force. As discussed above, employment status could be having a very strong effect on desire for children, outlook on life, and the decision to work in another activity for pay, even though the predicted direction could be in either direction. Thus, employment status is an essential control variable in this model, and I evaluated its influence in a number of ways, none of which show significant results. First, in the version presented here, both male and female respondents answered the question "do you now work," which was recoded as a dummy variable. Second, I included dummy variables for other responses to this question, such as on maternity leave or other paid leave and used working as a reference category; again, none of these categories showed any significant difference. Third, I used another question, which asked respondents to choose a primary occupation from a list of 13 responses; the questions relating to work

were then coded into another dummy variable. The results for both men and women showed no significant difference in fertility desires between people working and not working.

Income. While unemployment in and of itself may not be driving childbearing desires, actual income or perceived satisfaction with income may be having an effect, especially according to economic theories of fertility. In this analysis I use two questions that were answered by the reference person who completed the household survey; this person may or may not have been the female respondent of interest. The log of all household income, including wages, pensions, and other assistance, is highly correlated ($p<.001$) with satisfaction with income. When both measures are placed into the models all effects disappear. Examining income using dummies for quartiles has no effect. Thus, I have decided to include satisfaction with income in the models, since the perception of income or perceived income is often a better indicator of subjective reproductive preferences (Freedman and Thornton 1982) and the effects are slightly more significant ($p<0.02$ as opposed to $p<0.05$).

Education. Female education has been one of the strongest predictors of fertility decline (Axinn and Barber 2001, Caldwell 1982), yet its effect in low fertility societies is ambiguous. Women may reduce fertility preferences because of desire for status attainment or other opportunities, which often require higher education (Kasarda et al 1986, Easterlin and Crimmins 1985). Alternatively, prolonged education could simply lead to a delay in childbearing, which is correlated with lower completed fertility (Morgan 1996, Kohler, Billari, Ortega 2002). For example, higher education has led to a delay into the entry into parenthood in the US, but levels of childbearing are still higher

than in most European countries (Rindfuss, Morgan, Offutt 1996). Finally, again in accordance with economic fertility theories, higher education could increase employment opportunities and hence income, which would then lead to greater fertility desires.

In this analysis, education is treated as a control variable. The measure is a composite of the response to two questions: completed grade level in school and other completed training, including professional courses, technical or vocational school, institute and university. The resulting measure is a scale with each level representing the following completed education:

1. less than secondary
2. less than secondary with additional technical school
3. completed secondary
4. completed secondary with additional technical school
5. completed specialized school
6. completed college or university

This analysis only includes the female respondent's level of education and not the male's, because a woman's education is highly correlated with her husband's due to educational assortative mating practice (Lewis and Oppenheimer 2000).

Woman's age. Finally, respondent's age is included in all models as a control. As women age and the interval between previous births increases, their desire for enlarging their family decreases. This is due to an accumulation of life experiences as well as an increasing awareness of the biological limits to childbearing.

Analytic techniques

Logistic regression is used to estimate multivariate models of desire for more children, which has been operationalized as a dichotomous variable. Logistic regression, or the

logit model, is an appropriate model to use when the dependent variable is dichotomous (Allison 2001). The model is in the form:

$$\log (p_i/1\text{-}p_i) = \alpha + \beta_1 x_{i1} + \beta_2 x_{i2} + \beta_3 x_{i3} + \ldots + \beta_\kappa x_{ik},$$

where p is the probability that a woman wants another baby, $p_i/1\text{-}p_i$ is the odds that a woman desires another child, x_k represents explanatory variables, β_κ represents the effects-parameters associated with the explanatory variables, and α is the constant.

Survival analysis will be used to study the effects of the independent variables on the timing of childbearing behavior. Survival analysis is a type of statistical method for studying the occurrence of events (Allison 1995).

RESULTS

The impact of participating in additional activities on fertility desires

Women who participate in extra activities for pay are more likely to want at least one additional child. Table 2 shows the strength of these results for married women who currently have one or two children[1]. In both models 1 and 2 women who participated in additional activities are more than three times as likely to want another child. Their husbands' participation, however, has no effect on the strength of women's fertility desires; in fact, it actually increases slightly when the influence of husbands' participation is controlled. This strong effect occurs regardless of employment status or educational attainment.

[1] The effects are roughly the same when women of all parity are included in the model and total number of births is treated as a control variable, or when women all non-zero parity women are considered.

(Table 2 about here)

As expected, mother's age is a strong predictor of future childbearing desires. Current employment status, however, is not significant for either the woman or her husband, which is contrary to economic hypotheses of fertility, but consistent with other analyses of the RLMS (Kohler and Kohler 2002). Satisfaction with income is moderately significant, which accords with the economic rational actor model.

Education, on the other hand, has a strong positive effect on childbearing desires, which contradicts much of the literature predicting a negative association between education and childbearing desires. The predicted odds of wanting another child increases by 30% for each additional level of schooling. Again, this result could be because women with higher levels of education are able to find better employment, which would then provide them with the resources for additional children.[2] While some of the control variables suffer from multicollinearity, the significance of the results does not change when they are added or removed from the model in different combinations. Thus, these results support predicted hypotheses that coping mechanisms will have a strong effect, while the effect of employment status will remain insignificant and ambiguous.

(Table 3 about here)

The influence of positive attitudes on fertility desires

Table 3 shows the relationship between women's and their husbands' outlook on the women's desire for additional children. The results are interesting in that the estimates are stronger for the husbands' self-reported positive outlook than for the women's own

[2] Some women with higher education may have delayed childbearing relative to their less educated counterparts and thus have only one child. When a dummy variable for one child is placed into the model, the significance of the education variable declines from p=0.0002 to p=0.0096, and the odds ratio decreases to 20%. The dummy variable, however, has no effect on the significance of engaging in extra activities.

outlook. The effect of their combined outlook is even stronger. Thus, each unit increase in the positive outlook scale is associated with a 33% increase in the predicted odds of the woman wanting another child when she answers the question, a 44% increase when her husband answers the question, and a 60% increase when they both answer the question.

The estimates for the control variables do not change much when positive outlook replaces engaged in extra activities. The significance of satisfaction with income, however, disappears, which is not surprising since it is highly correlated with positive outlook.

(Table 4 about here)

The influence of engagement in extra activities and positive outlook on fertility desires

Both being engaged in extra activities and positive attitudes continue to show a strong effect when they are placed in the same model. This indicates that the two have independent effects on desiring another child. Participation in additional activities is not causing respondents to take on a greater positive outlook, nor is a positive outlook leading to participation in extra activities. These findings are further supported by correlation coefficients showing no association.

The influence of engagement in activities and positive outlook on childbearing behavior

This analysis is in process and will be complete for the final version of the paper.

DISCUSSION

These findings show that participation in the formal labor market or sufficient household income has not been the most important factor in predicting desire for additional children in Russia during the economic crisis. Instead other coping mechanisms, such as participation in the informal economy, as well as psychological characteristics, such as a positive outlook, play a more significant role. These mechanisms are valid in a lowest-low fertility society in which childbearing is nearly universal, yet few decide to have a second or third child. When people already have one child, they are aware of the costs and responsibilities of childbearing. Those who express the desire of having an additional child are willing to take on additional responsibilities. Thus employing coping mechanisms, having a positive outlook, and expressing a desire to take on additional responsibilities are similar traits that are associated with one another. When these characteristics are expressed in a situation of labor market crisis, they become even more pronounced.

In this analysis, we cannot determine the source of these characteristics: they may be randomly distributed and inherent to the individual's personality; they could be fostered through childhood experiences, familial relations, or marital satisfaction; or they may be a product of unmeasured aspects of the current situation. In any case, women who express their agency by participating in extra activities for pay are more willing to take on future childbearing responsibilities. Women who are satisfied with their current lives and prospects for the future, and to an even larger degree have happy husbands, are more likely to want to have larger families. While these results may be somewhat intuitive, they are rarely considered in fertility analysis.

In conclusion, these findings are significant because they reveal mechanisms that operate when economic adversity is beyond the control of the individual. They show how people take charge of their lives, regardless of the structural changes that create strain and hardship. In a situation like Russia after the collapse of the Soviet Union, those people who purposively act to make ends meet are the ones who are more likely to want to take on additional childbearing responsibilities.

Table 1. Means and standard deviations of measures used in analyses

	N	Mean	Standard Deviation	Minimum	Maximum
Wants another baby – total	1398[a]	0.28	0.45	0	1
0 children	112	0.82	0.39	0	1
1 child	483	0.46	0.50	0	1
2 children	602	0.11	0.31	0	1
3 + children	201	0.07	0.25	0	1
Engaged in other paid work Woman	1158	0.06	0.24	0	1
Husband	1158	0.12	0.33	0	1
Positive Outlook -Better/worse woman	1055	2.67	1.05	1	5
-Better/worse husband	1008	2.74	1.08	1	5
-Satisf. w/ life woman	1143	2.29	1.00	1	5
-Satisf. w/ life husband	1083	2.37	1.04	1	5
Index Woman	1158	2.48	0.79	1	5
Husband	1158	2.56	0.80	1	5
Both	1158	2.52	0.68	1	5
Woman's age	1158	33.13	6.62	17	44.92
Woman employed	1158	0.67	0.47	0	1
Husband employed		0.82	0.38	0	1
Log hh income	1103	13.01	0.94	9.39	16.91
Satisfaction w/ income	1154	2.00	0.90	1	5
Woman's education	1150	4.53	1.25	1	6
Husband's education	1082	4.31	1.31	1	6

[a] 33 respondents said don't know or refused to answer

Table 2. Logistic regression odds ratios of the influence of engaging in extra activities on woman's desire for more children (standard errors in parentheses).

	Model 1	Model 2
Engaged in other paid work	3.36***	3.44 ***
Woman	(0.29)	(0.30)
Husband		0.81
		(0.25)
Woman's age	0.82***	0.82***
	(0.02)	(0.02)
Woman employed	0.922	0.93
	(0.17)	(0.18)
Husband employed	0.81	0.79
	(0.24)	(0.24)
Husband missing	1.00	0.95
	(0.38)	(0.38)
Satisfaction w/ income	1.23*	1.24*
	(0.09)	(0.09)
Woman's education	1.30***	1.30***
	(0.07)	(0.07)
N	1073	1073
Chi-Square	267***	267***
(d.f.)	7	8

* p<.05; ** p<.01; ***p<.001 (one-tailed tests)

Table 3. Logistic regression odds ratios of the influence of a positive outlook on woman's desire for more children (standard errors in parentheses).

	Model 3	**Model 4**	**Model 5**
Positive Outlook Woman	1.33* (0.06)		
Husband		1.44*** (0.05)	
Both			1.60*** (0.03)
Woman's age	0.83*** (0.02)	0.83*** (0.02)	0.83*** (.02)
Woman's employment status	0.92 (0.17)	0.95 (0.18)	0.96 (0.18)
Husband's employment status	0.80 (0.24)	0.77 (0.24)	0.79 (0.24)
Husband missing	0.99 (0.37)	0.98 (0.37)	1.00 (0.37)
Satisfaction w/ income	1.11 (0.09)	1.10 (0.09)	1.06 (0.10)
Woman's level of education	1.28** (0.07)	1.28*** (0.07)	1.27*** (0.07)
N	1073	1073	1073
Chi-Square	256***	261***	262***
(d.f.)	7	7	7

* p<.05; ** p<.01; ***p<.001 (one-tailed tests)

Table 4. Logistic regression odds ratios of the influence of engaging in extra activities and a positive outlook on woman's desire for more children (standard errors in parentheses).

	Model 6
Engaged in extra activities	3.44***
	(0.30)
Positive outlook	1.62***
	(0.03)
Woman's age	0.83***
	(0.02)
Woman employed	0.99
	(0.18)
Husband employed	0.82
	(0.24)
Husband missing	1.05
	(0.38)
Satisfaction w/ income	1.06
	(0.10)
Woman's education	1.28***
	(0.07)
N	1073
Chi-Square	279***
(d.f.)	8

* p<.05; ** p<.01; ***p<.001 (one-tailed tests)

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