

# **DIVORCE UNDER QUANTITY CONSTRAINTS: WHAT CAN WE LEARN FROM THE FORMER SOVIET UNION?**

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## **ABSTRACT**

*This study examines the determinants of divorce in the former Soviet Union using data on both standard demographic variables and also factors unique to both planned economies and times of economic disruption, such as rationing. A survey of 2793 former Soviet citizens who immigrated to the United States during the late 1970's and early 1980's is used for the investigation. Data on weekly workweek, income and conventional socioeconomic factors are combined with economic information appended by rationing (being subject to quantity constraints) to conduct the empirical investigation.*

*Findings of this study support the hypothesis that there is a positive relationship between women's weekly workweek and the divorce rate. Our results, however, do not support the prediction that the women's level of income is positively related to the divorce rate. Socioeconomic and demographic variables such as age, gender, number of children, education, and living space affect the divorce rate. Also, our result shows that the probability of divorce is lower among quantity constrained respondents as compared to those who are not; thus, the pressure of shortages bonds families together. This finding implies that relaxation of shortages should increase the divorce rate, ceteris paribus. Furthermore, the conclusion of this study is unique because its finding shows that macroeconomic policies that induce shortage would affect micro-decision making regarding divorce.*

## **INTRODUCTION**

This study examines the determinants of divorce in the former Soviet Union using data on both standard demographic variables and also factors unique to both planned economies and times of economic disruption, such as rationing. Conventional variables used are workweek, income, number of children, age, education, and living space. Additionally, we examine the effects of quantity

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constraints (rationing) on the decision to divorce, using a cross-sectional survey of 2,793 former Soviet citizens taken during the last normal period of the centrally-planned economy.

It is essential to examine the determinants of divorce for the households living in the former Soviet Union to see if Soviet households are behaving differently in terms of their decision to get divorced compared to households in the capitalist countries. The findings of this paper and other microeconomics studies (e.g., Gregory & Collier, 1988; Collier & Mokhtari, 1989; Ofer & Vinokur, 1992; Mokhtari & Asgary, 1993; Mokhtari & Gregory, 1993; Asgary & Mokhtari, 1996; Mokhtari 1996; Asgary, Mokhtari & Gregory, 1997) that use western economic theories to investigate the behavior of households living in the socialist countries would provide useful information for demographers and policymakers. The conclusions of this paper may aid policymakers in evaluating *ex ante* the effectiveness of related policies in the current transition to a market economy. Furthermore, the findings of this study may provide some explanation regarding the influence of income and/or quantity constraints on divorce in capitalist societies.

There are more than three hundred studies on different aspects of divorce for the capitalist (developed, developing, and underdeveloped) countries (e. g., Willcox, 1981; Nation, 1981; Sander, 1985; Trent & South, 1989; Greenstein, 1990; McCrate, 1992; Peter, 1986, 1992, 1993; Finnie, 1995). A large number of these studies are from other areas of social science than economics. Most of the articles that used data for their analysis have used cross-sectional data. However, there are very few studies that investigate the same issue for the former Soviet Union (Chinn, 1977). According to our literature survey, there is no study on the determinants of divorce under the condition of quantity constraints for the former Soviet Union from the late 1970s to the early 1980s, the last relatively normal period before the economic transition began.

In the former Soviet Union, the overall divorce rate increased from 3.4 per 100 marriages in 1950 to 27 in 1971. In major cities of the Slavic and Baltic republics such as Moscow, Leningrad, Kiev, Regia, etc., the divorce rate has been higher than the overall average. Regia had the highest divorce rate in the country, 54 divorces per 100 marriages, in 1971 (Chinn, 1977).<sup>1</sup> Statistical reports of the industrialized countries show that more than half of all married women were in the labor-force by 1980 (United Nations, 1985). In the meantime, the divorce rate has increased significantly. Some studies (i.e., Chinn, 1977; Finnie, 1995) have shown that the government marriage/divorce policy has affected the divorce rate. Chinn (1977) stated that after the governmental reform of 1965 in the former Soviet Union, the number of divorces increased drastically.

There are some factors that have affected the divorce rate in the former Soviet Union, which may not be applicable to most of the capitalist countries. First, essential goods and services are subsidized, which may affect the short-term and

long-term financial cost of divorce (Chinn, 1977). Second, free education, low housing cost, and medical care lessen the opportunity cost of divorce. Third, the absence of capital markets (Asgary, Gregory & Mokhtari, 1997) would affect wealth accumulation and therefore divorce. Fourth, the existence of consumer goods shortages, black markets, and privileges may influence divorce rates.

### LITERATURE SURVEY

Some economists (Becker, Landes & Michael, 1977; Becker, 1981) have argued that marriage is a contract between two partners in which both parties perceive they will be better off by marrying. The marriage partnership will continue as long as the benefit of staying married outweighs its cost. In the case that a marriage leads to divorce, a wife, a husband, or both parties reach to a conclusion that in the cost-benefit analysis, benefits fall shorter than the costs. There are many economic variables that influence cost/ benefit analysis. Researchers have found that women's labor-force participation, income, wage rate, number of children, urbanization, socioeconomic and demographic variables, and legal costs are the most important determinants of divorce. Cameron (1995) has done an in-depth review of literature on the econometric aspects of the determinants of divorce.

Some scholars (i.e., Willcox, 1981; Nation, 1981; Sander, 1985; Trent & South, 1989) found that there is a positive relationship between married women's income, employment, and divorce. They also found that employment and income make married women economically independent of their husbands; as a result, they will not tolerate unsatisfying relationships. Nation (1981) in a review of Willcox's work concluded that the real increase of women's independence due to new opportunities for self-support is one of the factors causing the increase of divorce in the United States. Trent and South (1989) stated that "Increase in economic opportunities for women provide the requisite independence for dissolving unhappy marriages." (p. 393).

Ross and Sawhill (1975) concluded that married women's income has two contradictory effects on divorce. First, the employment of wives reduces their economic dependence on their husbands, which in turn will increase the probability of divorce. Second, women's employment brings more income to the family's overall income, which may serve as an incentive for staying together.

Mott and Moore (1979) found no relationship between a woman's potential wage rate and the probability of divorce. In addition, they reported that direct economic factors (such as income) are less important as determinants of divorce than other socioeconomic and demographic variables (such as educational attainment, age, duration of marriage, and family history).<sup>2</sup> D'Amico (1983) concluded that there is a positive relationship between predicted wages and divorce for women aged

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between 35 to 49. He suggested that women's expected income (permanent income), not current income, would lead to divorce.

Women's investment in human capital, such as education, work experience, and job training, will increase their productivity, which tends to increase their potential earnings and their standard of living. However, a large percentage of women work in lower-paying sectors of the economy as compared with men, and on the average, they earn 70% of what men receive for similar jobs. Some of the recent studies (i.e., Ofer & Vinokur, 1992; Mokhtari & Asgary, 1993) on the earning of the work force in the former Soviet Union have found that females earned 70% of what males did. Arendell (1987) reported that on the average married employed women contributed only 22% of the total family income during the mid 1980s in the United States. He stated that "Indeed, the total family incomes of most divorced women and their children is less than 50 percent of their family income prior to divorce" (p. 128). Low paying jobs mean relatively fewer benefits and often longer time to recover after divorce for women, especially if they have children, unless they remarry. As a result, employment is necessary, but not completely adequate, for women to become economically self-sufficient.

The results of the studies that examined the effects of number of hours of work on divorce are mixed. Some studies (Mott & Moore, 1979) found that there is no relationship between number of hours of work per week and probability of divorce, while others (Greene & Quester, 1982; Booth *et al.*, 1984) found that there is a positive correlation between the two. South and Spitze (1985), however, found that the number of hours of work was positively related to the probability of divorce only for women who worked at least thirty-five hours per week. Some of the studies (i.e., Becker *et al.*, 1978; Peters, 1986; Koo, 1989; Lillard & Waite, 1990; Ermisch, 1991; Starkey, 1991; Allen, 1992) concluded that having children as young as 2 years of age and as old as 18 years would effect divorce negatively, while others (i.e., Ross & Sawhill, 1975; Sawhill *et al.* 1975; Jensen & Smith, 1990) reported no impact of children on divorce.

Kawashima and Steiner (1960) examined the hypothesis that there is a positive correlation between industrialization, urbanization, and the divorce rate for urban Japanese. They found that from 1883 to 1943 the divorce rate actually decreased from 3.39 per thousand to .66 per thousand. They concluded that the urban divorce rate is not always higher than rural divorce rate for pre-war Japan. Other scholars (i.e., Nimkoff, 1955, 1965; Hareven, 1976; Ross & Sawhill, 1975; Lee, 1982; Peters, 1992; Allen, 1992) who studied the relationship between modernization, urbanization and family changes found that as modernization increases family disruption increases accordingly. Modernization in turns leads to urbanization and therefore, will reduce the role of the family unit as a necessity for survival, so the likelihood of divorce will increase. Of course, liberal family laws that are a bi-product of modernization have made it easier for women to get divorce.

There are some studies (i.e., Ferber & Sander, 1989; Allen, 1992) that concluded that there is a negative relationship between the legal cost of divorce and the divorce rate. The cost of divorce could be both monetary and non-monetary (social costs).

Peters (1993) discussed that both monetary and non-monetary factors are arguments in women's utility functions and showed that "the probability of divorce will be negatively related to the financial opportunity cost of divorce." (p. 71). She used NLS data and concluded that the short-term financial status of women would affect women's decision to divorce.<sup>3</sup> Finnie (1995) used data from the 1992 statistical of Canada and analyzed the status of the each family member after divorce. She found that after divorce the poverty rate for the "...lone-mother is well over double that of any other family type" (p. 115).

### SIP DATA

This study uses data from the Soviet Interview Project (SIP) survey questionnaire. The SIP is a retrospective survey of 2,793 former Soviet citizens who left the former Soviet Union and immigrated to the United States during the late 1970s and early 1980s. SIP survey was conducted between April and December 1983. Respondents were stating the status of their life before they made any decision to leave the former Soviet Union. This database is a rich source of information and addresses questions such as economic, social, and political aspects of life in the former Soviet Union. There are questions related to marital status, education, occupation, age, number of children, labor force participation, income, wealth, etc. These questions referred to the late 1970s, which is the last normal period of respondent's life in the former Soviet Union.

Respondents came from medium to large cities in the former Soviet Union and possessed many characteristics in common with the current Soviet urban population. The means that the economic variables (e. g., household income, wealth, labor-force participation, marital status, etc.) of the respondents are comparable to those of the Soviet population (see Ofer & Pickersgill, 1980; Gregory & Kohlhase, 1988). Nevertheless, SIP respondents are relatively more educated than the referent population. This data set (SIP) has been analyzed by other researchers (see Anderson & Silver, 1987b; Swafford *et al.*, 1987; Millar, 1987; Gregory & Kohlhase, 1988; Gregory & Collier, 1988; Mokhtari & Gregory, 1993; Mokhtari & Asgary 1993; Asgary & Mokhtari, 1996; Mokhtari 1996; Asgary, Mokhtari & Gregory, 1997).

The number of useable observations for this study is 1,085 females. In response to the question of "What was respondent marital status in END-LNP [end of last normal period]?" 977 of the respondents stated that they are married and 108 are divorced. The rest of the sample consists of male, widowed, never married, remarried, separate, and extreme values, and therefore, they were dropped. Table 1 presents the overall descriptive statistics of the sample.

**Table 1**  
**Descriptive Statistics of the Sample (Females Married and Divorced)**

Variables	M/V	SD
HW	41.17 (m/w)	15.92
Y	161.0(m/r)	127.0
WT	74966.7	230118.4
AGE	40.78(m/y)	12.75
EDL	14%	--
EDM	46%	--
EDH	40%	--
HH	3.47(m/p)	1.31
NC	1.47(m/p)	1.046
WH	16%	--
LS	37.60(m/sm)	29.53
RE	46%	--
QC	77%	--
NA	54%	--
PR	12%	--

**Table 1**  
**Descriptive Statistics of the Sample (Females Married and Divorced)**

HW:	hours of work per week;
Y:	monthly income;
WT:	total wealth;
AGE:	age of the respondent;
EDL:	continued education up to grade 8;
EDM:	earned high school diploma;
EDL:	cont. education beyond high school;
HH:	family size;
NC:	number of children;
WH:	had white-collar job;
LS:	square meter of living space;
RE:	residing in Moscow;
QC:	very dissatisfied with availability of goods=1, otherwise=0;
NA:	participated in the underground economy=1, otherwise=0;
PR:	had at least one of the following privileges: access to closed shops, access to closed clinics, use of an official car, or permission to travel to the West (=1, otherwise=0);
M/V:	mean/values;
SD:	standard deviation
m/w:	is the mean of the variable in hours of work per week;
m/r:	is the mean of the variable in rubles;
m/y:	is the mean of the variable in years;
m/p:	is the mean of the variable in persons;
m/sm:	is the mean of the variable in square meter;

Respondents were asked, "On the average, how many hours a week did you work at that job?" Table 2 shows that divorced women worked almost twice as much as married women. This variable is defined as weekly workweek (HW). Total monthly income (Y) is the sum of wages and salaries before deductions and from private income of the family at the end of the last normal period. Table 2 reveals that, on the average, divorced women work more hours per week, have higher earning and wealth, attained higher education levels, and that the majority of them reside in urban areas as compared to non-divorced. It is conceivable that divorced women are more educated and so they are economically more self-sufficient than non-divorced women.

Respondents were asked about their level of satisfaction with the availability of goods in the former Soviet Union. More than 75% of the respondents stated that they were "very dissatisfied" with the availability of goods. The remaining stated that either they are somewhat dissatisfied, somewhat satisfied or very satisfied. Very dissatisfied respondents are classified as quantity constrained (QC). Respondents were questioned, "About how much did (you/your family) spend on all goods and

services *Ana levo*".<sup>4</sup> About 54% of the respondents stated that they participated in the underground economy. The variable (NA) represents respondents who traded in the underground economy. Respondents were asked, "Did you have legal access to special shops?" The same question was asked about medical clinics, use of official cars, and permission to travel to the West. The respondents were classified as "privileged" (PR), if they reported receiving at least one of these perks.<sup>5</sup> Mean values of the data are presented in Tables 1 and 2.

Variables	Divorced Women			Married Women		
	M/V	SD	# Obs	M/V	SD	# Obs
HW	89.5(m/h)	21.16	54	40.1(m/h)	15.15	945
Y	170.38(m/r)	100.37	108	159.7(m/r)	129.6	975
WT	110099	278478.7	104	72348.5	224039.6	966
AGE	44.33(m/y)	12.9	108	40.4(m/y)	12.67	977
EDL	15%	---	16	14%	---	132
EDM	35%	---	37	47%	---	455
EDH	50%	---	54	39%	---	383
HH	2.42(m/p)	1.28	108	3.58(m/p)	---	977
NC	1.54(m/p)	.73	91	1.63(m/p)	1.07	903
WH	16%	---	16	16%	---	153
LS	31.92(m/sm)	15.21	100	40.6(m/sm)	30.60	926
RE	54%	---	58	45%	---	440
QC	76%	---	82	77%	---	754
NA	47%	---	51	55%	---	535
PR	10%	---	11	12%	---	117

Note: the definition of variables are the same as in Table 1.  
# Obs: number of non-zero observations;

## MODEL

Construction of the model begins with equation (1), where weekly workweek and income are the independent variables and divorce (binary) is the dependent variable. In equation (2), socioeconomic and demographic factors are added as independent variables to equation (1).<sup>6</sup> In equation (3) quantity constraint (QC) variable is added as dummy variable to equation (2). The addition of QC variable enables us to investigate its effects on divorce. These three stages method have been performed to evaluate the effects of employment, earning, socioeconomic and demographic factors, and consumer goods shortages on marital dissolution. The model would be misspecified if the effects of quantity constraints variables were not examined. Consumer goods shortage have shown to affect households decision making process in many aspects (i.e., Mokhtari & Gregory, 1993; Asgary & Mokhtari, 1996; Mokhtari, 1996; Asgary, Mokhtari & Gregory, 1997).

The dependent variable is dichotomous (1, 0), where DIV=1 stands for divorced and DIV=0 stands for married.

$$\text{DIV} = \alpha_0 + \alpha_1 \text{HW} + \alpha_2 \text{Y} \quad (1)$$

$$\text{DIV} = \alpha_0 + \alpha_1 \text{HW} + \alpha_2 \text{Y} + \alpha_3 \text{NC} + \alpha_4 \text{AGE} + \alpha_5 \text{AGE}^2 + \alpha_6 \text{ED} + \alpha_7 \text{LS} \quad (2)$$

$$\text{DIV} = \alpha_0 + \alpha_1 \text{HW} + \alpha_2 \text{Y} + \alpha_3 \text{NC} + \alpha_4 \text{AGE} + \alpha_5 \text{AGE}^2 + \alpha_6 \text{ED} + \alpha_7 \text{LS} + \alpha_8 \text{QC} \quad (3)$$

where:

DIV	:	divorce=1, married=0;
HW	:	hours work per week;
Y	:	monthly income;
NC	:	number of children;
AGE	:	age of the respondent;
AGE2	:	age squared;
FED	:	continued education beyond high school=1, otherwise=0;
LS	:	square meter of living space;
QC	:	very dissatisfied with availability of goods=1, otherwise=0;

The independent variables are either quantitative, qualitative, or dummy variables, and are, except for quantity constraints (QC), assumed to be exogenous. QC variable is assumed to be endogenous because the pressure of shortages affects family stability.<sup>7</sup> Hence, unobservable factors that affect the family unit also affect the quantity constraint. To estimate the quantity constraint variable, which is endogenous, we utilize instrumental variable (IV) estimation techniques to estimate QC.<sup>8</sup> Since QC is a binary variable, we employ a logit model to estimate QC. The estimated maximum likelihood of QC has been substituted for the values of QC in

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our empirical model. For the empirical estimation of the equations (1, 2, and 3) a logit model is employed and the method of maximum likelihood estimation technique is applied. The estimation results are reported in Table 3.

### EMPIRICAL RESULTS

Table 3 shows that the estimated parameter for female weekly workweek (HW) is positive and statistically significant at 1% level for all three models.<sup>9</sup> This result demonstrates that as a female works more hours the likelihood of getting a divorce increases. This finding is in agreement with western studies (i.e., Willcox, 1981; Nation, 1981; Sander, 1985; Trent & South, 1989) that report a positive correlation between employment and divorce.<sup>10</sup> Moreover, this finding supports the idea of autonomy of wives and husbands as the critical factor in the relationship (i.e., Hill, 1988; Spitz & South, 1985). Our results, however, do not support the prediction that women's level of income (Y) is positively related to the divorce rate.<sup>11</sup>

Table 3, columns 3 and 4, reveals that as number of children increases the likelihood of divorce decreases. As the number of children increases, the opportunity cost of divorce increases for both parties; therefore, the likelihood of getting a divorce decreases, *ceteris paribus*. Moreover, divorce will limit access to the children by one partner, and thus reduces the expected value of that partner's investment, so there is less likely that partner would ask for a divorce, holding everything else constant. Also, having more children increases the cost of childbearing and rearing for women, more than for men (given that women get custody of the children) so there is less probability that women would ask for a divorce. This finding supports the concept of exchange theory in which the spouse examines the cost and benefit of divorce and reconciliation (i.e., Becker, *et al.*, 1979; Kitson, Holmes & Sussman, 1983; Peters, 1986; Morgan, 1988; Ermisch, 1991; Starkey, 1991 estimated). Table 3, column 3, shows that divorce is a nonlinear function of age. As the respondents get older, the likelihood of a getting divorce is less. This finding is consistent with studies (South & Spitze, 1986; cf. Balakrishnan, *et al.*, 1987; Thornton & Rodgers, 1987) that concluded that early marriage increases the likelihood of a divorce.<sup>12</sup> Our finding is in accord with Fergusson *et al.* (1984) and Thornton and Rodgers (1987) who described that "divorce is less likely when respondents age and marriage are older".<sup>13</sup>

The estimated parameter for education (ED) is statically significant and has the expected sign (Table 3, column 3). Holding everything else constant, the likelihood of getting divorced is higher for those respondents who continued education beyond high school. More educated women have higher earning power and are more aware of their opportunities in society and their ability to succeed.

Intercept	-2.88 <sup>a</sup> (.25)	-4.95 <sup>a</sup> (1.26)	-.93 (1.69)
HW	.015 <sup>a</sup> (.005)	.016 <sup>a</sup> (.0056)	.015 <sup>a</sup> (0.058)
Y	-.00023 (.00078)	-.00012 (0.0009)	-.00003 (0.0009)
NC	----	-.79 <sup>a</sup> (0.17)	0.956 <sup>a</sup> (.018)
AGE	----	0.144 <sup>a</sup> (.062)	0.13 <sup>a</sup> (0.06)
AGE2	----	-0.0011 <sup>c</sup> (0.0006)	-.001 <sup>c</sup> (.0007)
ED	----	.38 <sup>c</sup> (.23)	1.14 <sup>b</sup> (0.33)
LS	----	-.032 <sup>a</sup> (0.0077)	-.03 <sup>a</sup> (0.007)
QC	----	----	-4.66 <sup>a</sup> (1.32)
Log likelihood Ratios	8.95	73.67	86.16
HW	: hours worked per week;		
Y	: monthly income;		
NC	: number children;		
AGE	: age of the respondent;		
AGE2	: age squared;		
ED	: female continued education beyond high school=1, otherwise=0;		
WH	: had white-collar job=1, otherwise=0;		
LS	: square meters of living space;		
QC	: very dissatisfied with availability of goods=1, otherwise=0;		
<sup>a</sup>	: denotes significant at the 1% level;		
<sup>b</sup>	: denotes significant at the 5% level;		
<sup>c</sup>	: denotes significant at the 10% level;		
( )	: figures in parentheses are standard errors;		

The estimated parameter for living space (LS) is negative and statistically significant at 1% level. As the square meters of living space decreases the probability that a woman will ask for divorce increases, *ceteris paribus*. Greater living space provides higher utility for the family, especially for woman who uses

the space as a working space, so the likelihood of divorce is decreased.<sup>14</sup> This result may temper the effect of wealth on divorce.

Table 3, column 4, shows the estimated parameter for equation (3), where the quantity constraint (QC) is added to the equation (2), as an additional independent variable.<sup>15</sup> Column 4 reveals that the estimated parameters for HW, NC, AGE, AGE2, ED, and LS have the expected sign (similar to column 3) and are statistically significant. Since the results for these variables are consistent with the findings in column 3, the explanations are the same.

The estimated parameter for quantity constraints (QC) is negative and statistically significant at 1% level. This finding suggests that the probability of divorce is lower among quantity constrained respondents compared to those who are not. This indicates that the pressure of shortage bonds the families together. Holding everything else constant, increases in the level of shortages may lead to increases in the opportunity cost of getting a divorce, because each partner has to spend considerable amounts of time in acquiring goods.<sup>16</sup> This finding is unique because it is the first study to investigate the effect of shortages on divorce and to find that economic policies at the macro level (such as price controls, supply targets, etc.) would affect the micro decision-making process regarding divorce. Our finding shows that disequilibrium in the goods market would affect household decision-making. This is somewhat similar to great Depression in the United States.

The log likelihood ratio tests show that model (3) is a better predictor of the determinants of divorce as compared to the other two models (1 and 2). Thus, incorporation of the quantity constraints as an explanatory variable in the divorce model is required. This two step method (model 2 and 3) approach shows that the exclusion of the quantity constraints as a regressor (model 2) would lead to specification error.

Our finding for female labor-force participation, socioeconomic, and demographic factors is consistent with those of the western researchers. These results show that people living in both socialist and capitalist societies behave similarly in terms of decision-making regarding divorce. This conclusion suggests that women's decisions to get divorced is relatively more influenced by their individual well being. Holding everything else constant, in a centrally planned economy such as the former Soviet Union, macroeconomic policies that lead to shortages may effect the divorce rate.

## CONCLUSIONS

This study has examined the determinants of divorce where there are quantity constraints. Our findings reveal that compared to non-divorced woman, divorced women work more hours per week, have higher earnings and wealth, attained higher educational levels, and that the majority of them reside in urban

areas, as compared to non-divorced women. It is conceivable that divorced women are more educated and so they are economically more self-sufficient than non-divorced women. Moreover, we can conclude that the determinants of divorce in the former Soviet Union depend on female weekly workweek, age, age squared, number of children, education, and square meters of living space.

Furthermore, our finding shows that those households that stated that they were subject to quantity constraints had less likelihood of getting a divorce than those who were not. Therefore, the probability of divorce is lower among quantity-constrained respondents as compared to those who were not. This suggests that the pressure of shortages bonds families together. Thus the relaxation of shortages in the current transition to a market economy should increase the divorce rate, *ceteris paribus*. The conclusions of this study are unique because the findings show that macroeconomic policies that induce shortages would affect microeconomic decision-making regarding divorce. Thus it is also possible that income constraints caused by recession or depression may also tend to reduce divorce rates, *ceteris paribus*.

#### ENDNOTES

- 1 Since the late 1940s, the labor-force participation rate of married women and incidence of divorce have been doubled in the industrialized countries (Australia, Great Britain, France, Germany, Sweden, United states, and former Soviet Union). Also, divorce rate has increased at a higher rate between 1965 and 1980 (United Nations 1985; Greenstein 1990). Finnie (1995) examined the divorce rate in Canada and stated that "In 1951, one couple divorced for every 24 marriages. In 1987, when marriage dipped and divorce peaked, there was one divorce for every two marriages, meaning that the ratio of divorce to marriages had changed by a factor of twelve." (P. 111).
- 2 Hum and Choudhry used micro data (income) from Canadian households and examined the effect of income and work on marital dissolution. They concluded that it is "...the social roles expected of each partner and not merely the amount of money that the family has to spend that determine family stability," (1992, p. 263).
- 3 Peters (1983, p.84-85) argued that "...women do take the financial consequences into consideration when making decisions about divorce. However, it is the short-term consequences that matter more".
- 4 The word *ana levo* is the Russian word for underground economy.

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- 5 For an in depth discussion of this variable (QC) see Mokhtari and Asgary (1993), Mokhtari and Gregory (1993), Mokhtari (1996), and Asgary, Mokhtari, and Gregory (1997).
  - 6 Respondents were asked “How satisfied were you with the availability of consumer goods in your town? About 77% of the respondents stated that they were very dissatisfied with availability of goods. The remaining 23% stated that either they were somewhat dissatisfied or somewhat/very satisfied.
  - 7 For more discussion on the endogeneity of QC see Mokhtari and Gregory (1993), Mokhtari (1996), and Asgary, Mokhtari, and Gregory (1997).
  - 8 The instruments are income, weekly workweek, age, age squared, education, experience, number of children and their age, square meters of living space, and dummy variables for place of residency, satisfaction with the standard of living, occupation, and privilege.
  - 9 We run similar regressions (equations 1-3) for married and divorced male respondents. Our empirical result shows that level of education, number of children, and quantity constraints are statistically significant and have the same sign as we found for female respondents. We find factors such as labor-force participation, living space, and age do not effect divorce rate for male respondents. It seems that factors that affect male respondents in asking for a divorce are less influenced by economics variables. This result may suggest that non-economic factors (such as preferences) cause men to ask for divorce.
  - 10 Other studies (Chinn, 1977; D’Amico, 1983; Greenstein’s 1990) found that marriages of women who work more than 40 hours per week and earn low income may lead to a higher probability of divorce, since women were not able to increase the family’s wealth considerably and at the same time, they had to spend many hours away from home.
  - 11 Low variation of income among Soviet women could be one possible explanation for the insignificant estimated parameter for income.
  - 12 Other variables such as the duration of marriage for divorced women have been used as explanatory variables, but this information is not furnished in the SIP data.

- 13 Other variables such as the duration of marriage for divorced women have been used as explanatory variables, but this information is not furnished in the SIP data.
- 14 This finding is consistent with Peters (1993) conclusions who examined the effects of wealth on divorce. We also used place of residency (RE) as another independent variable in our model, but it was not statistically significant; therefore, it was dropped.
- 15 The interaction of QC with income and wealth were included as independent variables to capture the marginal effects of income and wealth on divorce, but the estimated parameters were not statistically significant, therefore, they were dropped. Also, we incorporated dummy variables for those respondents that participated in the under ground economy (NA) and privileged respondents (PR) but the estimated parameters were not statistically significant in either case, so we dropped them.
- 16 Ogburn and Nimkoff (1955) argued for two sets of variables that affect the probability of divorce desire (motivation) and opportunity (affordability).

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