An Economic Analysis of Intraclass Marriage[1]

Vahid Mehrbani[*]

Majid Ahmadian[**]

Farhad Rahbar[***]

Abstract

This paper investigates mate selection behavior with respect to both class position and individuals characteristics in the marriage market. The theoretical prediction of model can suggest not only those ones that belong to upper and lower class will marry within own class but also they can form the interclass marriage. Accordingly, the hypothesis is that the persons in upper and lower classes marry within own class. Logit regressions show that the ratio of probability of intraclass to interclass marriage decreases as partners belong to upper and lower classes in Tehran. This result indicates that partners' differentiations measured by love and quality in family formation, are important determinants in mate selection rather than class position of individuals in a traditional society such as Tehran.

Keywords: Intraclass marriage, Marriage market, Upper class, Lower class.

1- Introduction

The question who marries whom is of permanent interest. This subject has mostly been interest of social scientists. Their theories can be divided between (1) the homogamous and (2) the heterogamous. The theory of

---

∗ Assistant Professor in University of Tehran, Faculty of Economics; (Corresponding Author).

∗∗ Professor in University of Tehran, Faculty of Economics.

∗∗∗ Professor in University of Tehran, Faculty of Economics.

homogamy postulates that "like attracts like" while the theory of heterogamy holds that "opposites attract each other" (Hollingshead, 1950). However, analysis of decision-making about family formation has somewhat been the concern of some economists. A facet of this subject that is neglected by economists is mate selection within an economic class or out of it. Such issue can be equivalent to discussion about positive or negative assortative mating.

Though Becker (1973) developed a theory of marriage in which considered assortative mating but he didn't present any analysis in relation to stratification of marriages. In Becker's neoclassical marriage market model, matching is positively assortative if types are complements. Complements can be attributed to members of the same class (positive assortative mating) but substitutes to members of different classes (negative assortative mating).

Meanwhile, according to McElroy (1997), marriage markets answer the question namely who is matched with whom? Considering mate selection with respect to class position is undoubtedly an answer to the proposed question. Using Veblen's leisure class theory as a background, it is tried in this study to examine the mate selection behavior only on class position of individuals. Since as yet none of economists have been considered the current issue in economic viewpoint, this paper has an important contribution to the relevant literature.

The rest of the paper is organized as follows. Section 2 summarizes the related literature and some evidence. The model is outlined in section 3. Section 4 describes data and presents empirical findings and finally section 5 concludes the paper.

2- Literature

At all events, closeness of the members' condition of any specific class to each other causes the same and similar values to them. But what is the outcome of this matter? Marriage is a human being's behavior that provides to form an institution labeled family. When the members of any specific social class find themselves in closer situation regarding economic state and prestige, would tend to marry with own class members to preserve at least such situation or marry with upper class members to raise themselves.

Marring in any class also could be observed in Veblen's explanation about behavior of leisure class. Veblen (2007), according to his rigorous investigation upon the process of behavioral changes of different classes,

particularly upper class and aristocrats, believes that high level households have a marriage market which its functions harmonize and fit these households with each other and preserve them from dispersal. Monopolizing sons and daughters (intraclass marriage) induces to be stabilized the state of class in tree rules. Selfish monopolizing makes a safe environment for who can create it.

When leisure class encloses own by an invisible wall, it is inevitably causes to the poor and lower class is kept separate from others and loses its social mobility. Therefore, the member of lower class who cannot move into the leisure class, would marry with one in own class.

According to this, some researchers have been tried to provide evidence with regard to the relationship between class and mate selection. Some of these studies are explained as follows. In Hollingshead's study (1949) of high school dating, 61 per cent of all "dates" belonged in the same class and 35 per cent in an adjacent class.

Hollingshead (1950) in another study explored cultural factors in the selection of marriage mates in New Haven while one of those factors was class position of mates. He divided mates into the six classes. The analysis of 1008 marriages where the husband, the wife and their families were residents of New Haven revealed that the class of residential area in which a man's or a woman's family home is located has a very marked influence on his or her marital opportunities. In 587 of those 1008 marriages, or 58.2 per cent, both partners came from the same class of residential area. When those that involved a partner from an adjacent class area were added to the first group the figure was raised to 82.8 per cent of all marriages.

Warner and Srole (1965) designed a theoretical framework in 1930s to study stratification in New Buryport (Yankee City). In their seminal study, social classes were defined as groups including persons which have the same social status and therefore relate easier to each other. They found the members of any class tend to marry within own class.

Shimer and Smith (2000) assumed a continuum of heterogeneous agents who can produce only in pairs. They showed symmetric submodularity conditions imply negatively assortative matching while didn't provide any evidence.

Hamilton and Siow (2007) estimated assortative matching to aggregate marriage behavior in 18th century Quebec. Their estimates also like other studies show that the marriage market was segmented by social status. They considered 'bourgeois' class as high status or wealthy and surveyed the sample including 3316 marriages which 5.9% of the population were high

status. Their study revealed that 94% of marriages have been happened within low class and 1.6% of marriages have been belonged to the high class. In other words, that study also shows that the most of marriages are intraclass.

According to overall findings, one can conclude that the within-class marriage is a stylized fact in most societies. Now, it is tried to analyze this behavior to understand how people marry in own class and how and why they form the interclass marriage.

3- Theoretical framework

3-1- Basic model

The basic model is related to the individual utility and social welfare function to depict mate selection process in the light of class status. The basic assumptions are as follows:

a. Society includes two men and two women where one man and one woman belong to the upper (high income and wealth) class and others are members of the lower (low income and wealth) class.

b. The income and wealth of *any* person of the upper class is higher than those are members of the lower class.

c. Marriages take place as monogamy.

d. There is full information about economic status and class position of people in marriage market.

On the basis of these assumptions, the indirect utility function is defined:

$$V_j^i = V_j^i\left(I_j^i, \vec{p}; O_j\right) \qquad\qquad i = m, f \ ; \ j = h, l \qquad\qquad (1)$$

In function 1, j stands for the upper class (h) and the lower class (l), and index i symbolizes gender (m for man and f for woman). The vector $\vec{p}$ is the price of goods and services that is the same for all people. Variable I_j^i in indirect utility function represents the income and wealth of the jth class for each of ith spouse. Finally, O_j displays other factors such as love and features (as quality) of spouse who belongs to the jth class. Accordingly, the family welfare function is specified blow that is based on *purely utilitarian approach* to social welfare (Layard and Walters, 1987; Mas-Colell et al.

1995). Since both man and woman can belong to upper or lower class denoted by $j, r = h, l$; the social welfare function is written as follows:

$$W_{rk} = V_r^m(\bullet) + V_k^f(\bullet) \qquad r, k = h, l \qquad (2)$$

Where W_{rk} is welfare of a family that can be formed by occurrence of marriage between man r and woman k or a joint family welfare function determining classes of r and k for both potential spouses. In general, this is shown by matrix form as follows:

$$\mathcal{W} = \begin{bmatrix} W_{hh} & W_{hl} \\ W_{lh} & W_{ll} \end{bmatrix} = \begin{bmatrix} (V_h^m + V_h^f) & (V_h^m + V_l^f) \\ (V_l^m + V_h^f) & (V_l^m + V_l^f) \end{bmatrix} \qquad (3)$$

Any person wants to establish a family (marriage) with highest welfare and hence compares the potential mates in marriage market. The result of this evaluation is division of society (market) into classes or levels, such that the members of a specific class are ranked similarly; but the levels themselves are arranged in a hierarchical order (Goode, 1964).

In matrix (3), W_{hh} is the sum of utility functions of man and woman who both of them belong to higher income and wealth class while W_{hl} is that for the man belonging to upper class and the woman belonging to lower class[1].

3-2- Mate Selection with Equal Love or Quality

Decision-making in marriage market when love or quality of potential spouse is equal is shown by means of iso-welfare curves in figure 1.

1- For simplicity, it is assumed that the cross welfare levels in matrix (3) are equal. That is $W_{hl} = W_{lh}$.
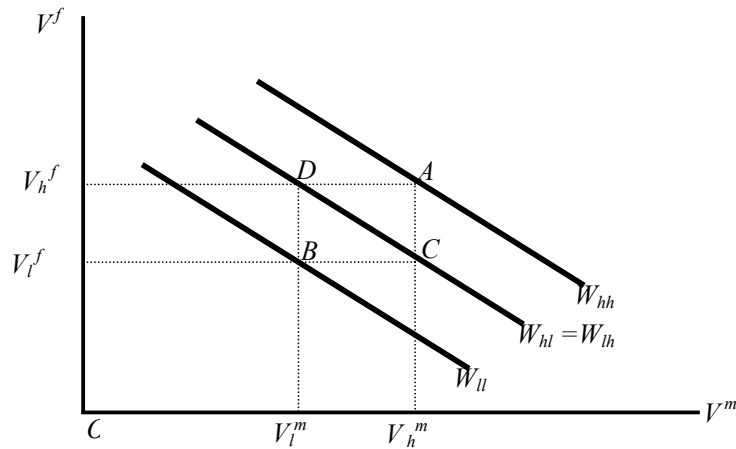
Figure 1: Iso-Welfare Curves and Marriage Options

The man who has the higher utility (V_h^m) faces two options: marring with the woman who has utility level V_h^f whereupon can form a family with welfare level W_{hh} that is the highest welfare level which is possible and accessible in society (settling down at point A in figure 1) or marring with the woman who has lower utility V_l^f whereon the welfare level of this family would be W_{hl} (settling down at point C in figure 1) that is lower than W_{hh}. Rational behavior[1] for this man is to choose the woman who has utility V_h^f since he thereby preserves his social status and prestige as a member of privileged class and thus prefers belonging to the upper class (point A) to the lower class (point C). In other words, marriage A blocks C.

On the other hand, the woman with higher utility V_h^f prefers to marry with the man who has higher utility V_h^m but not the man who has lower utility V_l^m because if she chooses the man with V_l^m, she will lodge in a family with lower welfare W_{lh} (as shown in matrix (3) and point D in figure 1) and therefore she also prefers W_{hh} to W_{lh} and accordingly prefers position A to position D. In other words, marriage A blocks D. Thereupon, both man and woman who have more utility in their sex group will prefer position (marriage) A to any state and will marry each other. Inevitably, the man and

---

1- Rational individual prefers the more to the less of anything.

woman who have lower utility in their sex group (V_l^m and V_l^f) will marry each other (lodging in position *B* in figure 1 and obtaining welfare level W_{ll}). In a way, not only the man with utility V_l^m cannot lie in position *D* rather than *B* to reach the higher welfare but also the woman with utility V_l^f cannot lie on position *C* rather than *B*. Finally, these less privileged individuals form a family that is defined as a lower class of society in contrast to upper (leisured) class.

This marital sorting is compatible to perfect segregation in terminology of Becker and Murphy (2000). "There is a unique equilibrium marital sorting with perfect segregation by quality if characteristics of men and women are complements in the production of marital output. By "segregation" we mean that the "best" of one sex is matched to the "best" of the other sex, the "next best" are also matched, and so on until the "worst" of each sex are matched" (Becker and Murphy, 2000: 32). In other words, intraclass marriage takes place when spouses are complement to each other.

3-3- Mate Selection with Unequal Love or Quality

Another case that can be evaluated in marriage market exists when a man (woman) differentially love women (men) in market. In this case, the quality[1] of same sex persons is not equal. For example, when the man who has the higher utility (V_h^m) love the woman who has lower utility (woman from lower class), V_l^f, more than the woman from upper class, it would be possible that marriage can be happened as interclass. This marriage can be shown by position *C* in figure 1. This kind of marriage is also possible when the quality of woman from lower class is greater than the woman from upper class. Since the sum of utilities of these man and woman is higher than any other situation, the mentioned persons accept to marry each other.

The same is true when the woman from upper class love the man from lower class more than the man from upper class or the quality of former man is higher than the latter. Such kind of marriage is shown in position *D*. In all of these cases, income and wealth are not important in mate selection and hence the sum of utilities resultant love or quality is main determinant in mating. Therefore, welfare in position *C* or *D* is higher than position *A*. So,

---

1- Quality can be interpreted as beauty, attractiveness, education and so on.

the model can predict not only the intraclass marriage but also the interclass one[1].

Such marriages can be interpreted as mixed ones. It would appear that love and altruism weaken the degree of positive sorting in marriage, since falling in love depends on many idiosyncratic factors that may not be closely related to characteristics, like income and education, that determine the production of marital output (Ibid: 36).

Table 1: Marriage Market and Class Position

		Supply side	
		High class woman	Low class woman
Demand side	**High class man**	First best marriage.	Second best marriage for woman.
		Result: Intraclass marriage (position A in figure 1)	Result: No marriage (or interclass marriage; position C in figure 1)
	Low class man	Second best marriage for man.	Neither first not second best marriage for man and woman.
		Result: No marriage (or interclass marriage; position D in figure 1)	Result: Intraclass marriage (position B in figure 1)

The whole marriages can be interpreted in marriage market framework where men are in demand side and women form the supply side. Table 1 provides this market in which the first and second best marriages are symbols for intraclass marriages. The first best marriage is the bliss point for all people but this position is achievable only for persons who belong to high class of society. The second best marriage is potential only in interclass marriage. If marriage market is classified by intraclass marriage, only one first best marriage can be observed. If marriages are sorted by interclass behavior, two second best marriages can be achievable. It is remain for another study which of these cases is better in social welfare perspective.

1- The figure 1 has been depicted on the basis of income and wealth situations not love or quality of spouse.

4- Data and evidence

The hypothesis that is proposed on the basis of theoretical prediction of model and in direction to other studies, asserts that persons in upper and lower class marry within own class. Empirical results are presented using data from Tehran – the capital and the most populated city of Iran. Four samples are used to test intraclass marriage and the above hypothesis. The first two samples include married men and women that are at least 35 years old. The sample size is 415 observations for married men and 409 observations for married women. The second two samples belong to single men (including 414 observations) and women (including 410 observations) aged at least 20. It is necessary to point out that the samples of single persons are used to study their willingness to marriage. Data have gathered by questionnaire in 2012.

The aim of study is to investigate decision-making in mate selection for de facto and potential marriages. Accordingly, three socioeconomic classes is defined which include individuals. They are lower, middle and upper class that any of them is measured as a dummy variable. When a person knows himself (herself) as a member of any of those classes, the relevant dummy variable will be equal to 1 and otherwise 0. In other words, class status is a subjective measure that is determined by own persons. The combination of marriages is shown in table 2.

Table 2: Combination of Marriages in Tehran (2012)

	Kind of marriage (per cent)	
Sample	Within-class	Upward-class
Married men	81.2	8.9
Married women	75.4	9.5
Total	78.3	9.2

Resource: Current research

It is observed in table 2 that 78.3% of marriages are intraclass which is higher than the results of Hollingshead (1950) but lower than Hamilton and Siow (2007). In addition, women have more incentive to marry men higher than own class (9.5% versus 8.9%). This is similar Goode's explanation when cross-class marriages occur, the woman is more likely than the man to marry upward (Goode, 1964).

Table 3: Mate Selection of Married Persons (Logit Regressions)

Dependant variables:	Men's sample			Women's sample			Total sample		
	Marring to sameclass woman	Marring to woman from upclass		Marring to sameclass man	Marring to man from upclass		Marring to upclass	Marring to upclass	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Upper class	-2.15* (-5.3)			-2.3* (-6.2)			-2.24* (-8.2)		
Middle class		-2.45* (-4.9)		-2.02* (-5.5)				-2.18* (-7.7)	
Lower class	-0.86* (-3.06)		2.85* (5.7)	-1.35* (-4.4)		2.91* (7.6)	-1.09* (-5.2)		2.89* (9.5)
Gender							0.52* (2.7)	-0.45** (1.78)	-0.81* (-2.9)
Constant	2.02* (10.2)	-1.4* (-7.2)		1.6* (10.6)	-1.08* (-4.7)	-3.2* (-11.4)	1.61* (11.6)	-1.02* (-5.04)	-3.2* (-12.8)
McFadden R^2	0.075	0.151	0.208	0.115	0.129	0.241	0.099	0.139	0.225
Number of observations	415	415	415	408	408	408	823	823	823

Note:
* coefficient is significant at 0.01, ** coefficient is significant at 0.10. Numbers in parentheses are z statistics.

Table 4: Decision to Marry of Single Persons (Logit Regressions)

Dependant variables:	Men's sample			Women's sample			Total sample		
	Marring to sameclass woman	Marring to woman from upclass		Marring to sameclass man	Marring to man from upclass		Marring to upclass	Marring to upclass	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Upper class	-0.42 (-0.97)			0.55 (1.2)			0.1 (0.3)		
Middle class		-1.47* (-5.9)			-0.52** (-1.8)			-1.06* (-5.8)	
Lower class	-2.14* (-7.4)		2.37* (8.1)	-2.78* (-5.4)		2.94* (5.7)	-2.29* (-9.3)		2.5* (10.2)
Gender							0.07 (0.4)	0.05 (0.3)	-0.22 (-1.2)
Constant	1.34* (9.5)	-5×10-11 (-2×10-10)	-1.5* (-10.8)	1.26* (9.5)	-0.73* (-2.9)	-1.41* (-10.9)	1.2* (10.06)	-1.3* (-11.2)	-0.3** (-1.8)
McFadden R^2	0.122	0.075	0.157	0.097	0.007	0.103	0.108	0.036	0.131
Number of observations	407	407	407	406	407	407	813	814	814

Note: * coefficient is significant at 0.01,
** coefficient is significant at 0.10. Numbers in parentheses are z statistics.

To consider intraclass marriage, the sameclass marriage variable is regressed on the lower and upper class variables. Sameclass marriage is a dependant variable that refers to a marriage that is taking place between a man and a woman within a specific class. In this case, the variable is equal to 1 and otherwise 0. However, the upclass variable is used as an another dependant variable that is equal to 1 if a man (woman) has married to a woman (man) who belongs to higher class than himself (herself) and otherwise 0. The estimated logit regressions are shown in tables 3 and 4.

In columns 1 and 4 of table 3, it is clear that belonging of both married men and women to lower and upper class decreases the ratio of probability of intraclass to interclass marriage whereas belonging to middle class increases that ratio. These findings contradict the hypothesis. Columns 2, 3, 5 and 6 of table 3 show that the ratio of probability of marriage between married men (women) of middle class and upper class women (men) to probability of any other marriage is decreasing whereas that probability for lower class is increasing. Gender variable which is measured by 1 for men and 0 for women shows that men have greater tendency than women to marry in own class. In addition, women have greater tendency than men to marry higher class themselves. These findings are fairly observed in singles samples, shown in table 4.

5 -Conclusion

Since none of the economists have been modeled the occurrence of marriage within or between social classes, our aim in this paper is to examine the mate selection behavior of individuals with respect to intraclass marriage by using economic theory. The basic idea is Veblen's contention whereon leisure (upper) class members marry within own class. Accordingly, the presented model that is based on some assumptions in marriage market shows how this market is stratified into intraclass or interclass marriages. In contradiction to the hypothesis, evidence stemmed from Tehran show interclass marriage behavior in upper and lower classes while the intraclass ones is found in middle class. Perhaps, these findings are owing to factors such as love or quality of spouses in decision making about marriage. There is a room for thinking which type of mate selection is better for society in welfare viewpoint.

References

1- Becker, G. S. (1973), "A Theory of Marriage: Part I," Journal of Political Economy 81(4): 813-846.

2- Becker, G. S. and Murphy, K. M. (2000), Social economics: market behavior in a social environment, Cambridge and London: The Belknap Press of Harvard University Press.

3- Goode, W.J. (1964), The Family, New Jersey: Prentice-Hall.

4- Hamilton, G. and Siow, A. (2007), "Class, Gender and Marriage," Review of Economic Dynamics, 10: 549-575.

5- Hollingshead, A. B. (1949), Elmtown's Youth, New York: Wiley.

6- ———. (1950), "Cultural Factors in the Selection of Marriage Mates," American Sociological Review 15(5): 619-627.

7- Layard, P.R.G., and Walters, A. A. (1987), Microeconomic Theory, New York: McGraw-Hill Book Company.

8- Mas-Colell, A., Whinston, M.D. and Green, J.R. (1995), Microeconomic Theory, New York: Oxford University Press.

9- Shimer, R. and Smith, L. (2000), "Assortative Matching and Search," Econometrica 68(2): 343-369.

10- Veblen, T. (2007), The Theory of the Leisure Class, New York: Oxford University Press.

11- Warner, W. L. and Srole, L. (1965), The Social Systems of American Ethnic Groups, New Haven and London: Yale University Press.