"Commenting on the Causal Factors Controlling Female Decision Making"
A study of Female Decision Making Regarding Paid Employment: Punjab, Pakistan

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Introduction

As societies grapple with incorporating the concepts of gender equality and gender sensitivity, female decision making is quickly losing its designation as a peripheral issue. Indeed the United Nations Division for the Advancement of Women in support of the Commission on the Status of Women has been exploring the question of women and decision making for some time. In 1997 it called upon governments to take into consideration diverse decision making styles and to enhance the images of women in political and public spheres [UN, (2000)].

Decision making in Pakistan, as in much of South Asia has been regarded as a predominantly male prerogative. Although some progress, albeit slowly, has been made in the emancipation and enhancement of women in all areas of society, in comparison with their male counterparts, women are largely neglected in economic, social, legal and political spheres. This can be ascertained by the fact that only 28% of women are present in the labour force in Pakistan in comparison with 42% in Bangladesh and 32% in India and an average of 33% for South Asia. (Haq, 2000). Female literacy in Pakistan still remains only 25%; representation in civil service remains a negligible 5.4% whereas female judges in 1999 were 1.5% of the total (Haq, 2000).

A multitude of factors contributes to the subservient role played by women in Pakistani society. They include conservative and traditional elements in Pakistani society; misinterpretation and lack of knowledge of religious doctrines; as well as social factors, which have perpetuated cycles of poverty, under-nutrition and low education levels amongst the women of Pakistan. Neoclassical economists consider education to be one of the key determinants of women entering economic life. As women attain higher educational levels, women's participation in the labour force increases. However, as our study is analytical on a small scale, women's decision to

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work also depends on her marital status, family system, income and other household head characteristics.

The independence of women in our culture has a profound influence on other important factors such as population growth in the economy, education of female offspring, health and nutrition of her children etc. In fact, because a woman's sphere of influence extends well beyond herself and is in fact focussed on all members of the household, improvement of her status will act as a catalyst for their advancement as a whole.

To understand the role of women in Pakistan it is important to investigate the role that they play not only in legal and public spheres but also through the level of influence they exercise in their own household. One such important factor is the amount of leverage they hold in determining whether they will enter the labour force or not. Factors determining decision making of paid employment are reflective of the power females hold in decision making and present an interesting analysis of various factors which lead women to make decisions themselves.

The low labour force participation rates of women in Pakistan constitute a large human resource yet to be tapped and uptil now all attempts in increasing employment in the country have been focussed on demand side factors. Supply side factors especially in the case of women have largely been ignored and one such factor is the ability of women to make their own decisions regarding paid employment themselves. It is only after analysing who actually makes the decisions relating to female participation in the labour force that the government can launch schemes to motivate greater female labour force participation.

This paper is an attempt to identify household related factors that influence female decision making by using data from the Pakistan Integrated Household Survey (1998-99) and by estimating a Probit model. In recent years there has been a shift in the focus from only quantification to econometric analyses of the determinants of female decision-making. Empirically the challenge is to estimate a model which captures female decision making behaviour on their own, with respect to market participation. This paper aims to analyse the nature and degree of participation of women in Pakistan, in their own decision making concerning employment compensated by some form of payment.

Some key empirical findings of this paper are that female decision making is influenced by a variety of factors, the most important of them

being per capita income, households headed by females, education and marital status.

Data & Variables

In its attempt to ascertain the factors which impel females to make their own decisions regarding paid employment, this paper uses micro level data from the Pakistan Integrated Household Survey (1998-9).[1] This study, conducted by the Federal Bureau of Statistics, Government of Pakistan was the first time in Pakistan that information on female decision making was gathered at a national level. The data collected is through a structured questionnaire which provides information about education, employment and female decision making etc.

The total population covered by the PIHS consists of all urban and rural areas of all the four provinces, Azad Jammu & Kashmir, FANA and FATA. A two-stage stratified random sample design was adopted for the Survey. The PIHS is a survey conducted on 16,305 households and 114,996 individuals. To analyse the situational and physiological reasons which, influence decision making towards female employment, females of age 15-49 are interviewed and 29,954 female responses are recorded. We did not include in this paper those women whose responses included "too old to work" and "no interest in working." The number of respondents from all over Pakistan totaled 19,218 female respondents. Respondents from the Punjab[2] constitute the largest percentage of this total, with the highest percentage of women who make decisions about paid employment themselves.[3] To determine the factors which cause women to have greater control regarding their own employment decisions we focus on Punjab which offers us more data to establish what factors influence female decision-making.

The data used concentrates on women aged 15-49 resident in the Punjab in our empirical analysis. Our dependent variable POAIDEMP1 is

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[1] The purpose of PIHS is to monitor the Social Action Programme of the Government of Pakistan by data collection on various socio-economic aspects of households in Pakistan. The PIHS is characterised by integrated, pre-coded questionnaires, extensive training and supervision of field staff and a computer based data management system designed to improve data quality and reduce the time lag between the data collection and publication of the ultimate results.

[2] Out of the 19,218 households, 7333 are from Punjab, 4958 from Sindh, 3817 from NWFP and 3110 from Balochistan.

[3] In our sample 7.9% of the 19218 respondents who replied in the affirmative to whether they made decisions about paid employment themselves were in Punjab, 2.2% in Sindh, 1.0% in NWFP and 0.8% in Balochistan.

defined clearly in Table 1 as being 1 if the respondent replies affirmatively to the PIHS question with regard to females drawing their own conclusions about their paid employment.[4]

It may be pertinent to classify our explanatory variables into groups. First we observe the respondent's age followed by her marital status which is of great significance to her decision-making ability. In Pakistani society, marriage plays an imperative role in defining the lives of its inhabitants especially women. The stage a woman is at in her marital cycle is of significance to our dependent variable. We have chosen the variables married, widowed or divorced to establish which status gives women more independence in making decisions themselves. Third, we consider the education level of the respondent which can be classified as primary, secondary, college, professional and post graduate. Education is a great factor in determining the sociological make-up of women and it is expected that the higher the level of education the greater the probability that women decide about paid employment themselves.

It is also useful to determine the sociological contours of the respondent's household to establish the environment under which she does or does not make decisions regarding her own employment. These have been divided into household characteristics as well as characteristics of the head of the household. Features of the household such as per capita income, whether it is a joint family or whether it is located in an urban setting play an important role in the lives of the women who inhabit them. The head of the household is expected to also exert influence on all matters of the household and should have an important effect in determining the freedom available to the females of the house in decision making. To determine his/her influence we consider the age of the household head, his/her literacy as well as whether the head is a female herself.

Summary statistics presented in Table 2 offer some interesting patterns of household characteristics. The mean age of respondents is nearly 28 years within a sample size of between 15-49 compared with 26.59 years where females did not make their own decisions. Out of these 56.21% were married with 5.25% widowed and 1.5% divorced from our sample of POAIDEMP1=1.[5] Compared with our sample of 5811 females who said that they did not make their own decisions concerning paid employment 58.59%

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[4] Section 4-F, Part E Question number 2, PIHS 1998-1999 is about women in decision making for paid employment

[5] Comparing with national averages in Punjab according to the Labour Force Survey 1997-1998, 55.63% of females are married, 5.37% widowed and 0.38% divorced.

of them were married; 0.84% were widowed and 0.53% were divorced. Married women are dependent to a large extent on their husband's opinions regarding their paid employment and therefore we find women who do make their own decisions with respect to employment as less likely to be married. However there is only a difference of 2% so we cannot draw concrete conclusions about the negative co-relation between POAIDEMP1 and marriage without more evidence. Since widowed and divorced women have more say in matters of their own employment we find less females who are widowed and divorced in our sample respondents for POAIDEMP0.

In our sample of females who make their own decisions regarding employment 9.9% of the respondents have completed primary school only, whereas 18.2% had completed secondary level education, 10.32% had received a degree, 1.7% had received post-graduate education and only 0.7% had some professional qualifications. This suggests that our sample was representative of an educated populace since literacy averages in Pakistan are generally lower.[6] When compared to level of education of females who did not make employment decisions themselves, it is noted that in that group levels of education are lower for secondary and higher levels with a larger number of respondents having completed only primary education (13.87%).

In our sample 49% of respondents were located in urban areas for POAIDEMP1 and 42% females who did not make their decision about paid employment independently. This also helps in understanding the greater levels of literacy displayed in our sample since urban areas have higher literacy rates than their rural counterparts.

Of our sample, female headed households made up 9.27% compared with only 3% of our sample of 5811 households where females do not make their own decisions. This provides evidence in establishing the case that female-headed households facilitate females making their own decisions.

The household head's age indicates the lifecycle stage at which he/she is and is expected to influence the household's decisions on female employment. The mean age in both cases where the women do or do not make their own decisions is the same nearly, 47 years. The household head's literacy is also a determining factor and in our sample the literacy rate was 54.64% higher than the national average of 39.68% (GOPb, 1998). The

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[6] Distribution of Population of 10 years and Above By Level of Education: 5.56% (Primary), 2.94% (Middle), 2.76% (Matric), 1.09% (Intermediate), 0.75% (Degree & Post Graduate) 1996-97. (GOPb, 1998)

literacy in the case of POAIDEMP=0 is lower at 51.28% but still higher than Pakistan's national average.

In our sample of female respondents who claimed to make their own decisions regarding employment only 31.82% of POAIDEMP1 and 37.43% of POAIDEMP0 belonged to a joint family system which shows that our sample consists of more liberal, less traditional and an educated section of the society.

Estimates of the Probit model

We estimate a Probit model by using data from the Pakistan Integrated Household Survey (1998-99). Three sets of numbers are reported in Table 3, which are probability derivatives (marginal effects), estimated parameters and their t-statistic (in parenthesis). The probability derivative indicates the change in probability on account of a one-unit change in a given independent variable which in our case is POAIDEMP1 after holding all the remaining variables as constant as their mean.

We identified marital status, education level, family type and the household's per capita income as the main causal factors behind women making their own decisions about paid employment.

To capture the effect of age composition of females on their decision making towards paid employment, the age and age square of females is taken under consideration. Age has a positive effect on POAIDEMPL1 which is also significant. The mean age of females who do not make their own decisions is also relatively lower than the ones who do. This result is not surprising since it is generally believed that older people can make better decisions about themselves. Moreover with age a female's role in the household also evolves and they are included in individual decision making panels.

This is also apparent by looking at the marital status of the female respondents. Widowed and divorced women have a greater likelihood of making their own decisions with the probabilities being 25.49% and 14.12% respectively. Widowhood especially is highly significant reflecting the process by which they are instated as the head of the household after their spouse's demise. Married women have a negative relation with female decision making which is also significant. This contradicts some theories which state [Hamid (1991)] that married women are considered independent and their status is equal to their male partners, perhaps in comparison with their roles as daughters and sisters. Our sample establishes a negative co-relation since it is understandable that husbands will have a say in their spouse's decision

to enter the work force, especially if it conflicts with their roles as a wife or a mother. It is generally accepted that in Pakistani society the husband's approval or disapproval is an important factor in whether a wife will perform a certain activity or not [Shah, (1986)].

Education is an important factor in determining the amount of decision-making powers with the women concerned. The higher the education the greater the probability that the female makes her own decisions. Coefficients of secondary, college, professional and post graduate study are all positive and significant with the highest significance being related with postgraduate study . Females having undertaken post graduate education have a probability of 25.29% of making uninfluenced decisions about their employment status. This result bodes well with claims that with university education the likelihood of a woman being in the labour force increases by nearly three times as much as it increases the likelihood of a man being in the labour force [Kozel and Alderman (1990)]. With education females invest greatly in their own capabilities and gain confidence in exercising their own judgement. Education yields both higher female labour force participation [Kozel and Alderman (1990)] and higher female independent decision making with regard to employment [Aly and Al-Quisi (1996)]. Primary schooling has a slightly negative effect on female decision making which may be attributed to the females having a lower level of education as well as them being younger.

Socio-economic status of the household is also an important factor in determining women's status among the households. It is generally believed that women's decision to enter the work force are caused by a low level of income available to them [Hamid, (1991)] and their entry into the labour force is necessitated by their lack of income. However, our study is focussed on a situation where females make their own decisions regarding employment and not factors which result in greater female employment in the workforce. Our coefficient PC INCOME is positive and highly significant. It may be expected that with greater household income females will have a greater chance to influence their work status as greater income might also be attributed to other positive factors such as higher level of literacy, an urban setting etc.

Literacy of the household head in our model should have been positive but in our model it is negative yet insignificant. If the household head is literate there is a probability of 0.26% that the female in question will not make her own decision. Although greater literacy should translate into more open-mindedness, perhaps with a better-educated spouse, women

may feel that he knows better regarding their future and would leave important decisions to him.

Likewise our co-efficient of female residence in urban areas is negative but insignificant. Again our model does not produce expected results but perhaps the outcome can be explained by greater male migration (within Pakistan and abroad) which has resulted in rural women having a greater say in decision making as well as heading the household itself. Also, male migration abroad has generated greater foreign exchange which, when remitted to rural homes in Pakistan means greater income for the household and hence greater decision making capabilities.

The co-efficient of female-headed households FHEAD is positive and also highly significant which is to be expected. The female could be the head in case of demise of the husband, migration, unemployment or incapability rendered because of illnesses or disability. The reason for high POAIDEMP1 is that in female-headed families, female heads are more concerned about the well being of both male and female members of the family and give them equal rights.

The set-up of the family in which women live has a significant relationship with POAIDEMP1. The co-efficient of JOINTFAM is negative and significant. Since in nuclear families there are no adverse pressures of relatives, women have greater liberty to decide about their employment. The presence of other members in a joint family setting is expected to have a positive effect on female employment because of the presence of other members in the family to help with child care and domestic tasks [Hamid, (1991)]. However, an extended family is likely to exert its influence on the woman's decision to enter the labour force and therefore is negatively related to our variable POAIDEMP1.

The life-cycle stage at which the head of the household finds himself/herself is expected to be an influencing factor on female decision making. In our model the HAGE1 is negative but insignificant. The negative co-relation arises because the greater the age of the head the more influence he/she will exercise although it may be expected that after a certain age, the ability of the head to make coherent decisions will be limited. At that point other members of the family may have more say in the decisions taken within the household.

Summary of Major Findings:

This study was an attempt to fill the void created by lack of research on female decision making in Pakistan. Our examination of Pakistan's largest, most populated province with the greatest number of self-deciding women is to determine the causal factors of this phenomenon. We find that the greatest determinants revolve around a woman's marital status especially whether she is widowed or not. We have also determined that the level of education she has completed exerts a great influence on her decision making abilities especially if she has received some form of post-graduate study.

The income level of the household which is itself caused by factors which catalyse female decision making such as literacy levels, urban settings etc, is an important influencing factor on our dependent variable. The gender that heads the household is another element in determining female decision making as are whether the family is nuclear or joint (negative effect) and the age of the female (positive effect).

Needless to say that Pakistani women's decision to enter the labour force remains a largely undiscovered field and a great deal of more research needs to be done at a national level to determine empirically and analytically the causes and consequences of a woman's decision to enter the labour force.

Table-1: Definition of Variables

Variables	Description
Dependent Variables	
POAIDEMPL1	= 1 if the female in the household makes decisions about undertaking paid employment herself
POAIDEMPL1	= 0 if the female in the household does not make decisions about undertaking paid employment herself.
Explanatory Variables	
Female Characteristics	
AGE	Female age 15-49 years in completed years
AGE^2	Female age 15-49 years in completed years squared
MARRIED	= 1 if the female is currently married and 0 otherwise
WIDOW	= 1 if the female is a widow and 0 otherwise
DIVORCED	= 1 if the female is divorced and 0 otherwise
PRIMARY	= 1 if the female has received primary education and not beyond, 0 otherwise
SECONDARY	= 1 if the female has received metric education and not beyond, 0 otherwise
COLLEGE	= 1 if the female has received degree education, 0 otherwise
PROFESSIONAL	= 1 if the female has professional degree in engineering, medicine or agriculture, etc, 0 otherwise
POSTGRADUATE	= 1 if the female has a post-graduate degree in any subject, 0 otherwise.
Household Head Characteristics	
HEADAGE	Age of the head of household in completed years.
$HEADAGE^2$	Age of the head of household in completed years squared.
HEADLIT	= 1 if the head of the household is literate[7] 0 otherwise
Household Characteristics	
FHEAD	= 1 if head of the household is female and 0 otherwise.
FTYPE	= 1 if female lives in a joint family[8] and 0 otherwise.
Economic Status of the Household	
PERINCOME	Per capita household income in rupees
Residence of Household	
REGION	= 1 household is geographically located in what constitutes an urban area and 0 otherwise

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[7] Literacy is defined as individuals who can read, write and solve simple sums.
[8] Nuclear Family is one consisting of a head, spouse and unmarried sons or daughters.

Table-2: Summary Statistics of Selected Sample for Pakistan (Sample Means and Standard Deviations) *(N = 7333)*

Variables	POAIDEM1=1	POAIDEM=0
Females Characteristics		
AGE	28.402	26.599
	(9.617)	(9.407)
AGE²	899.121	796.010
	(585.427)	(561.522)
MARRIED	0.562	0.585
	(0.496)	(0.492)
WIDOW	0.052	0.008
	(0.223)	(0.091)
DIVORCED	0.015	0.005
	(0.122)	(0.072)
PRIMARY	0.099	0.138
	(0.300)	(0.345)
SECONDARY	0.182	0.146
	(0.386)	(0.353)
COLLAGE	0.103	0.049
	(0.304)	(0.216)
PROFESSIONAL	0.007	0.001
	(0.084)	(0.039)
POSTGRAD	0.017	0.002
	(0.132)	(0.052)
Husband's Characteristics		
HEADAGE	47.424	47.896
	(13.723)	(13.778)
HEADAGE²	2437.307	2483.913
	(1372.888)	(1397.586)
HEADLIT	0.546	0.512
	(0.498)	(0.499)
Household Characteristics		
FHEAD	0.092	0.038
	(0.290)	(0.191)
JOINTFAMILY	0.318	0.374
	(0.465)	(0.483)
Economic Status of the Household		
PERINCOME	9205.867	5772.084
	(15803.388)	(7654.000)
Residence of Household		
URBAN	0.487	0.423
	(0.500)	(0.494)
	20.74%	79.44%
Sample Size	1521	5811

Notes: Numbers in parentheses are standard deviations.

Table-3: Probit Estimates for Pakistan *(N= 7333)*

Variables		
CONSTANT	**-0.360**	**0.360**
	-1.337	
	(-4.738)**	
Females Characteristics		
AGE	**0.010**	**-0.010**
	0.038	
	(2.578)*	
AGE²	**-0.0001**	**0.0001**
	-0.004	
	(-1.894)*	
MARRIED	**-0.034**	**0.034**
	-0.128	
	(-2.273)**	
WIDOW	**0.254**	**-0.254**
	0.946	
	(7.182)**	
DIVORCED	**0.141**	**-0.141**
	0.524	
	(2.857)**	
PRIMARY	**-0.024**	**0.024**
	-0.081	
	(-1.668)*	
SECONDARY	**0.053**	**-0.053**
	0.199	
	(4.038)**	
COLLEGE	**0.101**	**-0.101**
	0.375	
	(5.177)**	
PROFESSIONAL	**0.159**	**-0.159**
	0.590	
	(1.994)**	
POSTGRAD	**0.252**	**-0.252**
	0.939	
	(4.598)**	
Husbands Characteristics		
HEADAGE	**-0.002**	**0.002**
	-0.098	
	(-1.333)	

HEADAGE²	**0.000**	**-0.000**
	0.001	
	(1.401)	
HEADLIT	**-0.009**	**0.009**
	-0.034	
	(-0.911)	
Household Characteristics		
FHEAD	**0.144**	**-0.144**
	0.534	
	(7.371)**	
JOINTFAMILY	**-0.003**	**0.036**
	-0.134	
	(-3.403)**	
Economic Status of the Household		
PERINCOME	**0.0000**	**-0.000**
	0.0001	
	(7.894)**	
Residence of Household		
URBAN	**-0.015**	**0.015**
	-0.055	
	(-1.466)	
Log Likelihood	-3533.96	

Note: Numbers in bold indicate probability derivatives.

** Indicates significant at the 5 per cent level and * indicates significant at the 10 per cent level.

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