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Informally Employed Women: Their Characteristics and Contribution in Household Budget

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Abstract: The study highlights the contribution of working women (in the age group of 16-60 years) in their household budget. These women are involved in informal economy. Employing the OLS model on 1780 observations it is found that women as head of household, women's education, ownership of assets by woman have positive effect on their contribution. Age of the woman has a non-linear effect. First the contribution increases and then decreases by increase in age of the woman. Married women contribute more to household budget.

Key words: Women, household economics (J160), labour supply (J220), female employment (J13), poverty (O150)

INTRODUCTION

Labour force participation of women in Pakistan is very low as they suffer from poverty of opportunities. The women's access to money-earning activities, among others is one of the important means to improve their position. Furthermore, employment is the main bridge between economic growth and the opportunities for human development. Women access to labour market is determined by gender role ideology, social and cultural norms about women mobility and integration in the work place, segmented labour market and employers, gender biases. Women are largely neglected in social, economic, political and legal sphere. That is why they have gained disproportionately from the development process.

In Pakistan, like many other developing countries the housekeeping is considered as the main activity of women. There exists a segregation of allocation of time by sex, i.e., men work for wages generally outside their home while women and female children have overlapping household chores. Along with household tasks, a small ratio of women participates in economic activity and majority of them is involved in informal sector.

The formal and informal employment appears to differ significantly in terms of skill requirement, compatibility with child-care and costs of entry. The informally employed women include factory workers, informal sector jobbers such as domestic servants, casual workers, vendors and home-based women workers. The deterioration of economic circumstances, like deaths of husband or bread-earners, divorcee, separation are the major causes of their work. This draws attention to analyze their contribution in household income which is

generally more fluctuated than men. The earlier scholars have mostly focussed on labour force participation of the women, their productivity, wage discrimination and health status. Most recently Azid *et al.* (2001) have analyzed the economic behaviour of female workers involved in the business of embroidery in Multan (Pakistan). The econometric analysis has shown that poverty force the female members of the household to engage in economic activity in informal labour market. There exists a linear relationship between the age of the woman and labour force participation (Sultana *et al.*, 1994) for determinants of time allocation). The study further found that number of children, especially under five years of age played an important role in female labour force participation. Purda (veil) and distance from the market also hinders the labour participation of females. Mehrotra and Biggeri (2002) have analyzed the determinants of income and health status of the home-based workers in five Asian countries, two low-income (India and Pakistan) and three middle-income (Indonesia, Thailand and Philippines) where home-based work is widespread. The study revealed that mostly home-based workers face exploitative conditions, work longer hours and have low piece rates due to the fact that they are isolated and have no collective action. The education of the woman influences the health status of home-based women workers positively, while number of children negatively affects their health status. It is strange that for Pakistan, the household per-capita expenditures and ownership of assets by the household have no significant effect on home-based women workers. For the earned-income by women in India and Pakistan, the age of the woman, inputs like the use of electricity and years of experience have shown non-significant results. Education

of the women influence the earned-income positively and health status negatively. Membership of women's associations also influence the earned-income positively. Fafchamps and Quisumbing (2003) have investigated that how human capital, learning by doing, gender and family status affect the division of labour within household. The data was taken from 12 rounds of household survey conducted by International Food Policy Research Institute (IFPRI) in 4 districts of Pakistan. The results indicated that intra-household division of labour is influenced by comparative advantage based on human capital. Human capital variable include the age, education in completed years of schooling and childhood nutrition. Escriche *et al.* (2004 for India) have explained the gender discrimination in labour market and focussed on the intergenerational transmission of preferences related to womens approaches towards jobs. Two types of preferences for women population were taken, they were job preferences and family preferences. The results explained the process of convergence to non-discrimination in wages and ultimately in job preferences in Kerala state. Such type of narrowed gender gap has been evidenced in western countries. Eapen (2004 for India) analyzed the issue of sex segregation of jobs and its perpetuation overtime as a disadvantage of women workers. The econometric analysis proved that education of women and collective action by the group of working women can play an important role to increase their earnings. The core of the present study is to analyze the contribution of working women in their household income that is the neglected aspect of the working women.

MATERIALS AND METHODS

The official data on women's labour force have serious problems and underestimations, inconsistencies and biases. Some of the data-bases are based on projections rather than actual figures, others have known biases and many are extrapolated from partial information. Even the reliability and compatibility of the gender-disaggregated tables produced by UNDP or the World Bank are also questioned (Srinivasan, 1994). For the present study, the primary data collected by cluster sample technique has been used. A survey of 1780 urban and rural households having at least one working woman in the age group of 16-60 years made the information valid. Though a significant part of the females under 16 years of age is economically active in Pakistan and they are contributing a lot in household income but we assume them child labor. The data was collected in October 2004 and April 2005 in District Bahawalpur, primarily for Ph.D research. To capture the contribution of these women in the household budget we have estimated

OLS model in which contribution of a woman is a function of the characteristics of women. The contribution of woman in household income is defined as the ratio of the woman's earned income to the total income of the household. The use of wage rate and working hours as continuous variable is conventional in the literature to proxy for employment status and contribution of income in the household (Azid *et al.*, 2001; Hartog and Theevwes, 1986 who have used working hours). As the wage rate or working hours in the informal sector is much fluctuated and it is difficult to obtain the information in the survey due to preconceptions of the individual, so we have taken the ratio of the monthly income to household income as contribution of women in household income. Doss (1996) concluded that income controlled by the woman is spent differently as compared with income controlled by men. We have assumed that income earned by a woman working in informal sector becomes the part of the household budget. The economic activity is defined as the paid-employment, self-employment, or in family enterprise. If all the activities of women would have been taken in the model for the allocation of time, the activities would be paid-employment, unpaid-employment (household enterprises), self-employment, home-care activity, and/or combination of some or all of these. But we are concerned with only economic activities of the women.

Some studies (Pangestu and Hendytio, 1997) have defined the working women as women who are working for other people or legal entities and are compensated in financial terms or payment in kind. They have ignored the self-employed and women involved in family enterprises. In Pakistan specifically in informal sector, a number of women are involved in these two kinds of employment. So we have considered these women as labour force participating women. Sultana *et al.* (1994) have analyzed the determinants of female time allocation between market and housework of females in rural Pakistan applying OLS and tobit model on the International Food Program Research Institute (IFPRI) survey data. They analyzed the effect of womens age, education, household per-capita income, number of dependents in the household and male and female wages on time allocation of women. They have found that home-time allocation for participating women is significantly and negatively dependent upon the women's age, education and wages of the males in the household. Another significant variable was the distance of main market from home because this increases the cost of employment as well as the cost of market goods for which substitutes can be produced at home. An increase in this distance indicated a decrease in a womans time in market work. Naqvi and Shahnaz (2002) have estimated the women's participation in economic activities by using

multinomial logit model and probit model on data by Pakistan Integrated Household Survey 1998-99. The results indicated that the women who are older, better educated, head the household, or come from smaller, better off urban families are more empowered to take employment decisions on their own. Mehrotra and Biggeri (2002) have used ordered logit model to estimate the relationship between health status of the working women and woman's age, number of children, educational attainment, hours worked, type of jobs, household income and assets owned by the household. They have also used the OLS model to measure the productivity of working women.

The official definition of literacy in Pakistan is one who can read a newspaper and write a simple letter. Though the literacy so defined cannot be accepted functional literacy that is what an individual needs to function in a society which is becoming increasingly complex, still we have included the official definition of literacy in the model because working women in informal sector are poorly literate in the perspective of functional literacy.

According to our knowledge no study still exists exploring the contribution of woman in the household income. We have estimated contribution of women in the household income through OLS model. The variables included in the model are concerning with the individual characteristics of women though other socio-economic variables also effect the contribution of women in the household income. The function is

$$COW = f(X_1, \dots, X_n) \quad (1)$$

Where COW is the contribution of women in household budget. X_1, \dots, X_n are the variables related to women characteristics influencing her contribution. The definitions of dependent and explanatory variables are presented in Table 1.

Table 1: Definitions of dependent and explanatory variables used in the model

Variables	Definitions
Dependent variable	
COW (Woman's contribution in household income)	Ratio of woman's earned income to the total income of the household
Independent variables	
WAGE (Woman age)	Her age in completed years
WAGESQ (Womans age squared)	Her age squared
WEDU (Woman's education)	Her completed years of education
WLIT (Woman's literacy status)	1 If she is literate, 0 otherwise
WMAR (Woman's marital status)	1 If she is married, 0 otherwise
WHEAD (Woman as head of household)	1 If she is head of household, 0 otherwise
WASST (Woman's ownership of assets)	1 If the household owns assets, 0 otherwise

RESULTS AND DISCUSSION

The summary statistics and OLS results are given in Table 2. The majority of the results is consistent with the theoretical implications of woman's contribution in household budget.

The following features of the results are worth noting.

Woman's age: Conceptually the life cycle of an adult affects his/her contribution in household income. Two hypotheses may be postulated about the effect of a woman age on her contribution. Firstly, the increase in age may raise the labour force participation due to (i) larger family size and ultimately income dilution effect (ii) work experience and high wages in the latter age, (iii) awareness positively correlates with age, (iv) presence of offspring in the household to look after household chores freeing mothers for labour and (v) the fact that older women have more and relaxed social contracts as compared to younger ones. Second hypothesis is that elder women have comparatively elder off-spring as compared to younger mothers and in poor households the children enhance the financial status of the household by participating in the economic activities so mothers in latter age are less required to contribute in household budget. Hartog and Theeuwes (1986) have concluded that younger women are more concerned with participation decision while older women are more concerned with working hours decision. Lokshin *et al.* (2000) have estimated that mothers in the age group of 26-35 years are more likely to be economically active. As concerns the formal and informal sector, formal sector employees reach at their maximum earnings between 35-45 and informal sector employees reach at their maximum earnings between 35-54 years of age (Kozel and Alderman, 1990). La Ferrara (2002) has estimated a negative relationship between age and woman's time allocation to work. Azid *et al.* (2001) have found a linear positive relationship between age and woman's participation in economic activities. Earnings of the women increase with age

Table 2: Summary statistics and OLS results for women' contribution in household budget

Variables	Standard coefficient beta	T-values
Constant	141.253	2.7671
WAGE	1.79092	1.4256*
WAGESQ	-1.2589	-1.9678**
WEDU	0.1380	2.0667**
WLIT	0.3009	2.6291**
WMAR	6.0191	1.7072**
WHEAD	1.2714	1.7674**
WASST	2.9886	1.2674*

**Indicates significant at 5% level and * indicates significant at 10% level

(Fafchamps and Quisumbing, 2003), although the job experience increases but returns increase at decreasing rate (La Ferrara, 2002). In the present study, for the women in the age bracket of 16-60 years we have estimated a non-linear relationship between age of the woman and her contribution in household income. The contribution increases by increase in age but in the later age the contribution decreases. It explains that job experience does not affect the productivity in informal sector. The explanation have different aspects, firstly, when a female enters the labour market in the beginning she has no experience of job and consequently contribute less, as the age increases she gets experience and contribute more. Secondly, in the age group of 16-60 years, the comparatively younger women are physically more productive where unskilled labour is concerned and that is the characteristic of informal sector, while in the older-age group the women are physically less productive. Thirdly, in the older-age group when the women have adult offspring, she spends less time in labour market and contributes less to the household income.

The other possible explanation for a positive relation between the age of the woman and her contribution up to a specific age may be that for younger women social constraints are strict which hinders hours of labour supply. The younger women, if they are married, due to child-care activities they have less time for paid-work.

Women's education: Individual characteristics of the women influence the level of her contribution in household budget. Education is perceived as the major characteristic for the process. The educational level of a woman may work in two ways to affect on the allocation of her time in market and at home. For example, if education increases her productivity in home tasks then she would prefer to stay at home but if the opportunity cost of staying at home is larger, then she would devote time in the market for earning. But the higher level of education of women indicates that they do not come from poor households. They come from families that at least hope that their women will get either good earning jobs otherwise no job. While women with lower level of education or no-education have work aspirations simply to get paid and contribute in household budget. Coady *et al.* (2001) have found a positive relationship between woman's education and her participation in economic activities (Azid *et al.*, 2001). But some studies have found inverse relationship between education and work participation of females. However, for the informal sector, the correlation between education of a woman and

her economic activity rate in non-linear. The women having the primary or middle level of education less participate in economic activity than the illiterate women. The jobs in the informal sector are of low status and educated women have inclination to switch informal to formal sector increases (Irfan, 1983).

To capture the effect of women's education on their contribution, we have included two types of explanatory variables regarding women education, i.e., continuous variable representing the number of completed years of education of women and binary variable representing whether the woman is literate or illiterate (The educational level of females stands proxy for wages or earned income, so we have not included the wage rate of women in our analysis as an explanatory variable). We have found a positive relationship between the number of years of schooling (as a continuous variable) and literacy status (as a binary variable) and contribution of woman to family income.

The possible explanation may be that level of education among women implies to improve their skill through training. It creates an opportunity for them to adopt changing technology. The better-trained females lead to increased productivity and wages. The other aspects of effect of women's education on her contribution may be: the education increases a woman's efficiency in household tasks and reduces the time in home production, so more time is devoted to paid work and more contribution is done in household income; education is positively associated with women's control over income, which provide an incentive to paid-work; education makes the exposure of a woman to the other world and enhance aspiration for quality of life, which give motivation to earn more and spend on household items, children's education and family health and education positively influence a woman's health and it reduces the probability of being sick, which results into higher earned income and higher contribution in household budget. From the policy perspective, provision of education generally and adult female education specifically may play an important role to boost the contribution of women in household budget.

Marital status of women: The empirical evidences (Pangestu and Hendytio, 1997; La Ferrara, 2002) have shown that socio-economic status of an individual within household is determined by his/her marital status. On average married women with or without children devote more time to work than never married and childless women. A single woman devote less number of weekly hours to work as compared with married women.

Jones *et al.* (2003) have also concluded that there are different approaches of married women and single women towards hours worked and wage rate. In the informal sector, the employment pattern of working women in their marital status seems quite different specially in low-income occupations. Majority of the women in this strata does not work before marriage and if they work they show a casual approach towards work. They do not have prior commitment to their work but after marriage they are forced by their circumstances to seek employment in order to support their growing families. We have concluded that married women are contributing more to household budget as compared to single women. It supports the notion that circumstances force the married women to contribute in household budget.

Women as head of household: Head of the household is a person who bears the chief responsibility of economic maintenance of the household. Alternatively, head of the household is the person, who provides most of the needs of the household and is familiar with all the activities and occupations of the household. In the absence of any male-head of household females head the household. Though Abadian (1996) reported that sometimes woman does not act as head of household, even when woman is the sole source of economic support in the household. One group of households identified as vulnerable is the female-headed households, a category considered to be increasing in number and needing policy attention. More recently, however, the use of female-headed household as a marker for poverty and vulnerability has come under criticism. Widow-headed household in this group are particularly vulnerable households. Srinivasan and Dreze (1995) found that single widows as well as widow-headed households with unmarried children appear to have among the highest poverty incidence of all household types and are significantly poorer than their counterpart male-headed households. But it is also shown that extended families that include widows are not generally poorer than those that do not. Mason and Lampietti (1998) narrated that female-headship is one of the most useful indicators of vulnerability in the absence of anything better (Rosenhouse, 1989). Ray (2000) narrated that female-headed households are more vulnerable to poverty. In South Africa, female-headed households are unconditionally poorer than the others. In Pakistan, however, in the presence of economies of household size and adult/child consumption relativities the female-headed households are poorer than others, but not in the per capita case (Quisumbing *et al.*, 2001 for Bangladesh). They are identified as indicators of family disintegration.

Life is difficult for female-heads, not least because of prejudice, but social stigma. They have far more difficulty in maintaining their families because they have less access to market economy, when they do earn, their wages are far lower. Female-headed households are generally far more common in Latin America, Africa and Caribbean than in Asia and Pacific where widows, divorcees and lone women are likely to be absorbed into extended family households. In Pakistan, second marriage for females is discouraged due to the social norms though from religious point of view, it is allowed. But the relatives usually care for widows and abandoned women, though the economic circumstances of such women are not so good at large. Present objective to include the women as head of household, as an explanatory variable, is to see if the women's contribution in household budget in such households is significantly different from their counterparts where heads of household are men. We have found that women as head of household are contributing more to their household budget. There may be a number of explanations for the phenomenon, for example, she goes outside and be involved in earning activities to financially support the household, as no-body other than children or old-age household members are present in the household and burden of household members, specifically children compel them to contribute more and more in household budget.

Ownership of assets by woman: This is an important indicator of the socio-economic standing of working women in informal sector. The ownership of assets implies a relative degree of security to women and household. It determines household expenditure and budget. Theoretically the ownership of assets may impact the contribution of women by two ways. In one way, the assets make the household richer and financially stable and women are less likely to spare time for paid work. In the other way, if the woman owns assets, it may be easier for women, specifically in informal sector to work at household-enterprises. In the low-income households, particularly, the presence of assets increases the demand for Labour, which is fulfilled by working women of the household. Sultana *et al.* (1994 for rural Pakistan) have used asset value as a proxy for non-wage income of the household and found that a change in non-wage income has a negative effect on a woman's time allocation in the market as well as at home since it increases the consumption of leisure. We have found that if the woman has assets, she contributes more to the household budget. The possible explanation may be that ownership of assets by the woman enhance the productivity,

ultimately she contributes more to the household budget. The ownership of assets makes availability of financing to the women for an enterprise which enhance the income of the enterprise and contribution of woman in household budget.

CONCLUSION AND RECOMMENDATIONS

The model and estimation we presented above allows us to analyze the characteristic of women for their contribution in household budget. These conclusions have important economic and policy implications.

- To enhance the contribution of informally employed women in household budget, the policy on women's employment is to be carefully planned. The government can intervene for the establishment of educational and training institutions for adult women, so that they can increase their productivity and contribution.
- Women as head of household have been found to contribute more in household income. As female-headed households are more vulnerable to poverty so stress is needed in the policy formation for such women from the income and wage perspective.
- The life cycle of women has shown that their contribution in household budget first increases by increase in age then it decreases. It may be sustained by providing them social security benefits, standard wages, benefits of annual increments and benefits like pension and employee's old age benefits.
- In the informal employment, the married women are contributing more to their household budget, so the benefits of met-leave and related medical facility from the social security funds should be included in the policy formation as an instrument to sustain their contribution.

REFERENCES

- Abadian, S., 1996. Women's autonomy and its impact on fertility. *World Dev. Rev.*, 24: 12.
- Azid, T., M. Aslam and M. Omer, 2001. Poverty, female labour force participation and cottage industry: A case study of cloth embroidery in rural Multan. *Pak. Dev. Rev.*, 40: 1105-1118.
- Coady, D., X. Dai and L. Wang, 2001. Community programs and women's participation: The Chinese experience. Policy research working paper 2622. The world bank: East Asia and Pacific Region.
- Doss, C.R., 1996. Women's bargaining power in household economic decisions: Evidence from Ghana. Staff paper series, department of applied economics, college of agricultural. Food and Environmental Sciences, University of Minnesota.
- Eapen, M., 2004. Women and work mobility: some disquieting evidences from the indian data. Paper presented at a national seminar on globalization and women's work. Organized by the V.V. Giri National Labour Institute, Noida Delhi on March 25-26, 2004.
- Escrive, L., G. Olcina and R. Sanchez, 2004. Gender discrimination and intergenerational transmission of preferences. *Oxf. Econ. Pap.*, 56: 85-111.
- Fafchamps, M. and Quisumbing, 2003. Social roles, human capital and the intra-household division of labour: Evidence from Pakistan. *Oxf. Econ. Pap.*, 55: 36-80.
- Hartog, J. and J. Theeuwes, 1986. Participation and hours of work: Two stages in the life-cycle of married women. *Euro. Econ. Rev.*, 30: 833-857.
- Irfan, M., 1983. The determinations of female labor force participation in Pakistan. Project report No.5. Studies in population. Labor Force and Migration, PIDE, Islamabad.
- Jones, L.E., R.E. Manuelli and E.R. McGrattan, 2003. Why are married women working so much? Staff report 317. Federal reserve bank of minneapolis. Staff report 317 (2003) (available at <http://research.mpls.frb.fed.us/research/sr/sr317.html>).
- Kozel, V. and H. Alderman, 1990. Factors determining work participation and labour supply decisions in Pakistan's urban areas. Paper Presented at 5th Annual General Meeting of Pakistan Institute of Development Economics, January 4-6.
- La Ferrara, E., 2002. Self help groups and income generations in the informal settlements of Nairobi. *J. Afr. Econ.*, 11: 61-89.
- Lokshin, M.L., E. Glinkaya and M. Garcia, 2000. The effect of early childhood development programs on women's labour force participation and older children's schooling in Kenya. Policy Research Working Paper 2376. The World Bank.
- Mason, A. and J. Lampietti, 1998. Integrating gender into poverty analysis in concepts and methods. Working paper. The World Bank, Washington, DC.
- Mehrotra, S. and M. Biggeri, 2002. Social protection in the informal economy: Home based women workers and outsourced manufacturing in Asia. Innocenti working paper No. 97. UNICEF Innocenti Research Centre, Florence.
- Naqvi, Z.F. and L. Shahnaz, 2002. How do women decide to work in Pakistan. *Pak. Dev. Rev.*, 4: 495-513.

- Pangestu, M. and M.K. Hendytio, 1997. Survey response from women workers in Indonesia's textile, garment and footwear industries. Policy research working paper. The World Bank, Washington, DC.
- Quisumbing, A.R., L. Haddad and C. Pena, 2001. Are women over represented among the poor? An analysis of poverty in 10 developing countries. *J. Dev. Econ.*, 66: 225-269.
- Ray, R., 2000. Poverty and expenditure pattern of households in Pakistan and South Africa: A comparative study. *J. Inter. Dev.*, 12: 241-256.
- Rosenhouse, S., 1989. Identifying the poor: Is headship a useful concept. LSMS working paper No.58. The World Bank, Washington, DC.
- Srinivasan, P. and J. Dreze, 1995. Widowhood and poverty in rural India Bombay: Indira Gandhi Institute of Development Research.
- Srinivasan, T.N., 1994. Data bases for development analysis: An overview. *J. Dev. Econ.*, 44: 3-28.
- Sultana, N., H. Nazli and S.J. Malik, 1994. Determinants of female time allocation in selected districts of rural Pakistan. *Pak. Dev. Rev.*, 33: 1141-1153.