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Analysis of Joint Hours of Work Function of Currently Married Working Couples: A Case Study of Pakistan

Amtul Hafeez[1*] --- Eatzaz Ahmad[2]

[1]Assistant Professor of Economics, National University of Modern Languages, Islamabad, Pakistan
[2]Professor and ex-Vice Chancellor, Quaid-E-Azam University, Islamabad, Pakistan

Abstract

This study highlights various socio-economic and demographic factors, which influence the hours of work of currently married couples in Pakistan. The study is based on Pakistan *Labor Force Survey* data 2007-08. We have employed ordinary least square (OLS) technique in order to empirically investigate the effect of different factors on combined hours of work of couples. The study finds that education level has strong and positive impact on work hours of couples. Moreover, couples in the households belonging to urban areas work more hours than those in rural areas. Among demographic factors, age, family set up and small children (0-5years) have important effect on hours of work of couples.

Keywords: Labor supply, Currently married couples, Hours of work, Husbands, Wives, Pakistan.
JEL Classification: 22.

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1. Introduction

Decision of labor supply can be devised as the decision whether to work at all and, if so, how long to work. Labor supply is an important factor in socio-economic development of a country. It has strong bearing on income generation and its distribution, and thus helps to alleviate poverty. In the past few decades, labor force participation (LFP), labor supply and, therefore, the time allocation by individuals and households have been important issues of concern among economists. Almost, 57.2 million of entire population is observed as currently active, termed as labor force in 2010-11 (Government of Pakistan, 2011-12). Early literature focused almost entirely on allocation of time to market work in order to generate knowledge on the household labor force behavior. There is an extensive body of empirical work that explains individual's LFP decisions – whether to work, how intensively, at what minimum wage, and in which sector of the economy.[1]

In addition, analysis of labor supply and earnings provides important information concerning the relative economic returns to physical capital and human capital in different sectors of the economy. This information is useful to examine income distribution and poverty issues. An understanding of differences in the wage rate and labor market participation rates, which results from productivity endowments such as education, experience, household characteristics and labor market conditions; is critical to achieving both the objectives of income generation and income distribution.

Typically two types of factors can cause individuals to engage in extensive labor market work. The first one is known as push factors like financial pressure, which can push individuals to the labor market. Those belonging to the poorest families are pushed into the labor market due to strict economic needs (Kazi and Raza, 1986). However, in the view of Oreffice (2011) there are many other demographic factors like age, number of children and family set-up, which cause individuals to participate in labor market. The other kind of factors is termed as pull factors like education, training and experience, which can pull individuals to the labor market. Human capital investment in the form of education and on-the-job training improve productivity level, which as a result leads to high labor earnings. Neoclassical economists (Becker, 1965) believe education to be one of the key determinants of the labor market work. Verbakel (2008) find that education has strong relationship with labor market work of couples. The study also find that there is positive association between education and labor market work. Examines how relative education levels influence labor market participation within marriage. The study finds that when wives have higher education level relative to their husbands, they are more likely to participate in labor market. Furthermore, wives with higher education supply more hours in the labor market than the wives who have acquired less or same education as their husbands.

This paper analyzes the combined hours of market work of heads and their wives (aged 15 years and above) in relation to the various socio-economic and demographic factors in Pakistan. At yet few studies have analyzed combined hours allocated by couples to the market work at international level. No study is conducted on this issue in Pakistan at yet. The study is based on Federal Bureau of Statistics (2007-08). Therefore, we estimate regression model in which hours of work is a function of a number of explanatory variables. Since hours of work are a continuous variable, we can adopt ordinary linear regression model. We follow the studies by Hill (1988) to estimate the labor supply equations[1].

2. Review of Literature

This section reviews some selected articles on labor supply of husbands and wives.

Kaufman and Hotchkiss (2003) formulated a household labor supply model. According to the study, the husband and wife do not take independent LFP decisions; rather they plan a mutual labor supply decision in order to maximize utility of the whole family. Thus, the labor/leisure model is developed in a manner to expand to take into account the possible effects that wage rate and income of one family member may have on the labor supply decisions of other members in the family.

According to life cycle labor supply model, couples have tradeoff between present and future leisure and consumption, considering leisure as a normal commodity. That is, during early years they consume less leisure by working more number of hours, enabling them selves to consume more leisure and work less hours during older years of their lives. Among the married couples more creative and competent member at market activities is supposed to supply more hours in the labor market whereas less capable member either chooses less hours of labor market work or stays at home to take care of children and other household chores.

Chau (2007) presented a household labor supply model base on the assumption that a household comprises of two decision makers: (husband and wife). The study assumes that husband and wife do not make their labor supply decisions independently. They undertake joint decisions regarding consumption, leisure and market work, so that the whole family can attain maximum utility. Household labor supply decision can be taken as two steps procedure. At first step, the husband and wife communally decide how much non-labor income one of them can obtain or how much money one spouse can relocate to the other one. At second step, each person decides about his/her labor supply and consumption of goods and leisure. Bar and Leukhina (2011) presented a model for heterogeneous couples in which the potential market earnings of husbands and wives are mutually and log-normally distributed. Husbands and wives mutually decide on their time allocation between market activities, non-market work and leisure. The study assumes that consumption goods are produced by combining market purchased home appliances and male's and female's time inputs. Couple's potential earnings and prices of home appliances are assumed to be given exogenously. The model assumes that hours of market work are more or less fixed at different levels for men and women. The direct effect of changes in earnings and prices of home appliances on time allocation choices of household members are analyzed. That is, a decline in the prices of home appliances causes a substantial increase in

1See, for example, Kozel and Alderman (1990). ibid. and Malik (1994).

1Both of these studies use total number of annual hours of work as the dependent variable. However, we use hours of work per week as the dependent variable in our labor supply equations.

the leisure time of non-working wives rather than working wives. An increase in the wage rate would bring a decline in the time spent on non-market activities and an increase in labor market work by working husbands and wives because time would become relatively more expensive.

3. Data

The data is based on FBS (2007-08) which is a nation-wide survey conducted by Federal Bureau of Statistics (hereafter *FBS*) and provides widespread information on different dimensions of the country's civilian labor force. The *LFS* of Pakistan collects data at individual as well as at household levels using a multipurpose household questionnaire. The *LFS* covers all urban and rural areas of the four provinces of Pakistan defined as such by 1998 *Population Census*, excluding Federally Administered Tribal Areas (FATA) and military restricted areas.

This study focus on currently married heads and their wives who belong to 15-64 years of age and are currently living together in four provinces of Pakistan. Our sample size comprises of 2870 households in urban areas and 4677 households in rural areas. We exclude the households where one member of couples is missing or a male head has more than one wife or wife is the head of household. We also exclude the observations where we have missed information of households.

4. Methodology

Our labor supply model uses combined hours worked per week (for working husbands and wives jointly) as the dependent variables. We divide the independent variables into seven categories. These are 1) hourly wages of couples; 2) wife's characteristics; 3) husband's characteristics; 4) wife's occupations[2]; 5) husband's occupations; 6) household characteristics; and 7) residential characteristics. The complete list of dependent and explanatory variables is provided in Table 1.

4.1. Hourly Wage Rate of Couples

The first set of independent variables include log of combined average wage rate per hour of couples.Couple's wage rate is expected to bring positive change in the labor supply of Couples. Higher wage rates increase the opportunity cost of couples to engage in non-productive activities outside the labor market. Therefore, they have a tendency to work for longer hours and forgo rest hours if substitution effect dominates. If income effect dominates, husbands and wives either continue to work similar hours or work for fewer hours.

4.2. Characteristics of Wives andHusbands

Wife's characteristics comprises of, dummy variables of wife's primary and secondary or higher education level, wife's age and wife's age square. Husband'scharacteristics includes dummy variables for husband's primary and secondary or higher education level, husband's age and husband's age square.

Age: Independent variables like age and age square are important to determine the combined labor supply of couples. Age is expected to have positive relationship whereas age square has negative relationship with labor supply. Younger husbands and wives are expected to exert less hours of work due to lack of required qualification and experience during early years of their lives as compared to those at older ages. Wives may have different appointments at home regarding child bearing and raising during their early years. Labor supply of couples with husbands and wives belonging to peak productive age is expected to be higher than the labor supply of those comprising of relatively younger husbands and wives. This could be because husbands and wives gain experience with age, though at diminishing rate and are consequently expected to earn high wage rates. The quadratic term may indicate that labor supply of husbands and wives would decline at older ages due to low working potential of husbands and wives during older years of their lives. Hence, the age-labor supply relationship is expected to be a concave function.

Table-1. Description of Dependent and Independent Variables

Notations	Description	Measurement of Variable
Dependent Variables		
HOUR_coupl	Couple's total hours of work	Number of combined hours of work supplied by couple to the labour market in a week[3]
Explanatory Variables		
LAWAG_c	Couple's average wage rate per hour	Log of wage rate per hour of couple computed from total weekly average wages divided by total weekly hours of work of working couple
Wife's Characteristics		
PRIM_wif	Education category of wife	= 1 if wife's highest level of completed education is primary, = 0 otherwise
SEC_{highr}*_wif*	Education category of wife	= 1 if wife's highest level of completed education is higher than primary i.e. secondary, intermediate, B.A/B.Sc, M.A/M.Sc and M.Phil/Ph.d , = 0 otherwise
AGE_wif	Age of wife	completed years
AGE^2*_wif*	Age square of wife	completed years squared
Husband's Characteristics		
PRIM_hus	Education category of husband	= 1 if husband's highest level of completed education is primary, = 0 otherwise
		Continue

[2] These are standard occupational categories used by Pakistan LFS. Since occupation is a choice variable it can be used as separate dependent variable. However in our analysis we use it as right hand side variable to determine the hours of work of husbands and wives.

[3]Combined hours of work are aggregate of total hours of work supplied by couple to the labour market in a week.

SEC_{highr}_hus	Education category of husband	= 1 if husband's highest level of completed education is higher than primary i.e. secondary, intermediate, B.A/B.Sc, M.A/M.Sc or M.Phil/Ph.d, = 0 otherwise
AGE_hus	Age of husband	completed years
AGE^2_hus	Age square of husband	completed years squared
Wife's Occupations		
SCPA_wif	Occupation category of wife	= 1 if wife is service worker, crafts worker, machine operator, and skilled agriculture worker, = 0 otherwise
TCLRK_wif	Occupation category of wife	= 1 if wife is technician, associate professional and clerk, = 0 otherwise
PLEG_wif	Occupation category of wife	= 1 if wife is professional, senior official, manager and legislator, = 0 otherwise
Husband's Occupations		
SCPA_hus	Occupation category of husband	= 1 if husband is service worker, crafts worker, machine operator, and skilled agriculture worker, = 0 otherwise
TCLRK_hus	Occupation category of husband	= 1 if husband is technician, associate professional and clerk, = 0 otherwise
PLEG_hus	Occupation category of husband	= 1 if husband is professional, senior official, manager and legislator, = 0 otherwise
Household Characteristics		
HHS	Household size	Number of family members
JOINT	Family type	= 1 if individual lives in a joint family, = 0 otherwise
NCHILD_0-5	Number of small children	Number of children in the age group (0-5 years) in the household
Residential Characteristics		
PUNJAB	Residential province category	= 1 if currently residing in the province of Punjab, = 0 otherwise
SINDH	Residential province category	= 1 if currently residing in the province Sindh, = 0 otherwise
BALOCHISTAN	Residential province category	=if currently residing in the province of Balochistan, = 0 otherwise

Educational Characteristics: The educational characteristics of husbands and wives, as presented in the Table 1, are carefully selected after going through preliminary estimation rounds. In both sets of independent variables, the base category for education level is chosen as no formal education (that is 0-4 years of schooling). Education indicates a number of factors. First, education is a human capital indicator. It improves the productive efficiency of husbands and wives by polishing their skills. Second, it also creates awareness among husbands and wives and guides them to undertake important decisions regarding household labor supply. Third, education makes better job opportunities available to both husband and wife. Fourth, education brings change in husbands' attitude so that they allow their wives to work in productive activities outside the home. All these factors are expected to positively influence the labor supply of Couples. Couples comprising of more educated husbands and wives are expected to supply longer hours as compared to those with less educated ones. Therefore, combined labor supply of couples with more educated husbands and wives tends to be higher than that of the couples with less educated husbands and wives.

4.3. Occupational Characteristics

The fourth and fifth sets of independent variables include occupations categories. It is expected that occupation of husband and wife has an important effect on their labour supply behaviour. We have constructed four dummy variables of occupation keeping unskilled workers as the base category.

4.4. Household Characteristics

The household characteristics include household size, joint family system and the number of small children (0-5 years of age).

Household size: It is hypothesized that household size has considerable contribution in determining labour supply behaviour of husband and wife. Since large households face excess financial burden, couples living in the large household are expected to work longer hours in the labor market as compared to those living in small household.

Joint families: The husbands and wives belonging to the joint families tend to supply more hours in the labor market as compared to those living in nuclear family set up. This is so because the presence of many persons in the joint family increases the financial pressure on households' resources. Also joint families can more effectively exploit the economies of scale through the division of labor.

Small children: It is hypotheses that the number of small (0-5 years old) children has significant effect on the pattern of household labor supply. Since the presence of small children increases pressure on family resources and may cause parents to work for longer hours in order to earn livings for their families**.** On the other hand, small children increase the mothers' responsibilities at home and therefore, may inversely influence their labor supply.

4.5. Residential Characteristics

To capture the effect of various attributes of residential province we consider three provincial dummies for Punjab, Sindh and Balochistan using Khyber Pakhtunkhwa as the base category.

We have applied Hausman endogenity test to determine the possible presence of endogenity between hour of work decision (the dependent variable) and suspected endogenous variables namely the joint family set up, small (0-

5 years old) children and household size.[4]However, all the three suspected endogenous variables namely the joint family set up, the presence of small children and household size are found to be exogenous for combined hours of work function for couples under Hausman test. Therefore, we use OLS method to estimate these two models. The analysis is conducted for urban and rural samples separately. Our sample is reduced to 518 households in urban areas and 477households in rural areas due to the problem that wages are not properly reported in the LFS.

In order to analyze the hours of work of couples in Pakistan, we construct a model following the basic structure of the model presented by Brick *et al.* (2005).The proposed function is as follows.

Combined Weekly Hours of Work Function for Couples[5]

$$HOUR\_coupl=\gamma_0 + \gamma_1 LAWAG\_coupl + \gamma_2\ PRIM\_wif + \gamma_3 SEC_{highr}\_wif + \gamma_4 AGE\_wif + \gamma_5 AGE^2\_wif + \gamma_6 SCPA\_wif + \gamma_7 TCLRK\_wif + \gamma_8 PLEG\_wif + \gamma_9 PRIM\_hus + \gamma_{10} SEC_{highr}\_hus + \gamma_{11} AGE\_hus + \gamma_{12} AGE^2\_hus + \gamma_{13} SCPA\_hus + \gamma_{14} TCLRK\_hus + \gamma_{15} PLEG\_hus + \gamma_{16} HHS + \gamma_{17}\ JOINT + \gamma_{18}\text{NCHILD\_0-5} + \gamma_{19} PUNJAB + \gamma_{20}\ SINDH + \gamma_{21}\ BALOCHISTAN + e$$

5. Estimation Results

In this section, parameter estimates of weekly hours of work for couples are presented in Table 2. The analysis is conducted for rural and urban samples separately.

It is observed that the dummy variable representing Balochistan appears to be redundant variable which indicates that there is no statistical difference in labor supply of couples across Balochistan and Khyber Pakhtunkhwa. This implies that re-estimating the regression equation excluding this variable would not have much effect on the parameters estimates.

Analyzing the contribution of individual variables, we find that increase in average wage rate of couple has positive effect on couple's labor supply in the urban and rural areas. An increase in the couple's hourly wage rate by one rupee results in about four additional hours of work per week and about sixteen additional hours per month in the urban area.[6] If wage rate of this couple increases by rupees four hundred per month, it will tend to work extra 10 hours per week or 40 hours per month. In the rural sample, increase in couple's hourly wage rate by one rupee results in about 1.5 additional hours of work per week and about six additional hours per month. Based on the information used for urban sample we find that increase in wage rate by rupees four hundred per month, will make this couple to work about four more hours in a week or about 15 more hours in a month. The regression coefficients are found to be statistically significant.

Table-2. OLS Estimates of Hours of Work Function for Working Couples

Explanatory Variables	**Urban**		**Rural**	
	Coefficients	**T values**	**Coefficients**	**T values**
Constant	-1.557	(-1.13)	60.148	(6.55)*
LAWAG_c	3.862	(1.73)***	1.456	(2.21)*
Wife's Characteristics				
PRIM_wif	2.283	(1.12)	2.608	(1.31)
SEC$_{highr}$_wif	5.649	(1.68)***	3.852	(2.02)*
AGE_wif	0.555	(1.73)***	0.734	(2.56)*
AGE^2_wif	-0.003	(-1.52)	-0.006	(-1.77)***
Wife's Occupation				
*SCPA*_wif	1.620	(2.73)*	1.557	(1.98)**
*TCLRK*_wif	4.020	(1.72)***	3.794	(2.08)*
*PLEG*_wif	7.356	(2.56)*	6.114	(1.65)***
Husband's Characteristics				
PRIM_hus	5.492	(1.71)***	1.893	(1.47)
SEC$_{highr}$_hus	7.243	(2.08)*	3.647	(3.10)*
AGE_hus	0.874	(1.88)***	0.595	(1.74)***
AGE^2_hus	-0.005	(-2.21)*	-0.002	(-1.37)
Husband's Occupation				
SCPA_hus	4.726	(1.99)**	2.656	(3.49)*
TCLRK_hus	7.750	(2.46)*	7.019	(3.36)*
PLEG_hus	9.001	(2.42)*	8.020	(3.75)*
Household Characteristics				
HHS	3.128	(2.14)*	2.947	(1.75)***
JOINT	7.128	(2.90)*	6.226	(2.41)*
NCHILD_0-5	-2.136	(-1.66)***	-2.338	(-2.20)*
Residential Characteristics				
PUNJAB	13.014	(2.83)*	9.695	(1.90)***
SINDH	12.903	(2.69)*	10.912	(1.59)
BALOCHISTAN	0.963	(0.41)	0.663	(0.18)
N	518		477	
R-squared	0.367		0.370	

Note: The dependent variable is set equal to total weekly working hours of working husbands. The statistics significant at 10%, 5% and 1% levels are indicated by*** , ** and * respectively. The sample size has been reduced due to missing observations on wage rate.

[4] See, for, example, Greene (1992).
[5]Many studies have estimated combined hours of work for husbands and wives, see for example, Brick, Garvey and Cuddy (2005).
6Average hours of work per week for a couple are eighty seven hours.

Wives' primary education appear to be an insignificant variable, indicating that couples with wives having primary education display almost similar hours per week as those with wives having no formal education. It is observed that couples with wives having secondary and above education undertake more work hardship than those with wives having no formal education and the regression coefficient is statistically significant at 10% level in urban areas and at 5% level in rural areas. Couples with wives having secondary or higher education level tend to supply about six more hours in the urban areas and about four more hours in the rural areas as compared to those with no formal education. Since education improves the productive capabilities of wives and hence, that of the couples, they spend more hours in market for cash income. The result is similar to Michaud and Vermeulen (2011) who found that couples with wives having college degree tend to increase the collective labor supply of husband and wife than wives having less than this degree in the USA. The data is based on the *Health and Retirement Study* during 1992-2008.

We see from regression coefficients of wives' age and age-square that couple' labor supply would increase with age at diminishing rates both in urban and rural areas and form an overall concave and possibly inverted u- shaped relationship between labor supply of couples and wives' age. The result shows that couple's labor supply would increase by 0.31 hours per week or by 1.25 hours per month in urban areas, for average wives' age of thirty eight years, for each additional year of age. Couple's labor supply tends to increase with wife's age by 0.3 hours per week and by 1.12 hours per month in rural areas.

The result indicates that wife's occupation has quite important effect on couple's hours of market work. We observe that couples with wives belonging to the first occupational category (machine operators, service workers, skilled agriculture workers and craft workers) supply about two more hours per week than unskilled (elementary) workers (base category) in urban and rural areas. Similarly, couples with wives belonging to the second occupational category (technician, associate professionals and clerks) work about four more hours per week than unskilled workers in urban and rural areas. Similarly, the couples with wives belonging to the third occupational category (professionals and legislators) work for even longer hours. The differences in hours of work across the specified occupational categories are statistically significant in both the urban and rural samples.

Couples with husbands having primary education appear to be significant variable in urban sample but insignificant in rural sample. The empirical results indicate that couples with husbands having primary level education work five extra hours per week in urban areas and about two extra hours per week in rural area than the couples with husbands having no formal education. Couples comprising of husbands having secondary or higher education level are found to supply more labor market hours and the regression coefficients are statistically significant at 1 percent level in both the urban and rural samples. We observe that such couples tend to supply seven more hours in the urban labor market and about four more hours in the rural labor market. Since, productive efficiency of husbands improves with the increase in education level, couples comprising of such husbands tend to involve in productive market activities for longer hours by sacrificing their hours of rest. This result is in conformity with Michaud and Vermeulen (2011) who find that couples with husbands having college degree tend to work for more hours than those with husbands having less than this degree in the USA.

Discussing the role of the husbands' age in the determination of labor supply of couples, we notice from coefficients of husbands' age and age-square that couples' labor supply increases with age at diminishing rates both in urban and rural areas of the country and the relationship is statistically significant. The result shows that average husband's age would increase couple's labor supply by 0.44 hours per week or by 1.78 hours per month in urban areas or by about 0.42 hours per week and by 1.69 hours per month in rural areas.[7]This indicates that age tends to increase experience level of husbands. The signs of regression coefficients indicate an overall concave relationship of couples' labor supply with husband's age.

Husbands' occupation is found to have quite considerable and statistically significant effect on couples' hours of work. The results show that couples with husbands belonging to various occupations tend to display similar labor supply behavior across urban and rural areas. However, couples with husbands' belonging to different occupations tend to supply more hours in urban labor market than in rural labor market. It is observed that couples with husbands who are machine operators, service workers, skilled agriculture workers and craft workers rather than unskilled (elementary) workers (the base category) supply about five more hours in urban areas and about three more hours per week in rural areas. The couples with husbands who are technician, associate professionals and clerks work even longer hours per week. Couples with husbands who are professionals, legislators, managers and high officials work for even longer hours as compared to the other three categories. According to the estimates provided in equations with correction for selectivity bias, couples in which husbands are professionals and legislators supply about nine more hours per week in urban areas and eight more hours per week in rural areas as compared to couples with unskilled husbands. This is so because professional and legislator husbands are engaged in such jobs that require longer hours of work as compared to those belonging to other occupations.

Belonging to a larger household has positive relationship with labor supply of couples. The estimate reveals that couples belonging to a larger household size work for longer hours in both the urban and rural areas as compared to those belonging to smaller households. Presence of one additional person in the households would cause couples to work for three more hours per week in both the urban and rural areas and the regression coefficients are found to be statistically significant. The larger households being comprised of more persons exploit the economics of scale through division of labor. They facilitate relatively more productive household members to more labor market work and cause relatively less productive ones to stay in the household domain to take care of household responsibilities.

The results indicate that couples living in joint family work seven more hours per week as compared to those living in nuclear family set up in urban areas and about six more hours per week in rural areas and the difference is statistically significant in both the cases. Since other relatives are expected to be present in joint families rather than in nuclear families, joint families exploit the economics of scale through division of labor. They facilitate relatively

7 We calculate these values at mean husbands' age of forty three years.

more productive household members to work longer hours in the labor market and cause comparatively less productive ones to perform household responsibilities.

We find that the presence of small (0-5 years old) children in the household significantly results in reduced labor supply of couples. Presence of one additional small child in the family causes couples to work two hours less per week in urban as well as rural areas. This is so because; presence of small children in the family increases the burden of households' chores. Therefore, it is difficult for both husband and wife to work for longer hours in the labor market at the same time. Verbakel (2008) finds that both husband and wife in a couple having no children tend to get full time work. Among couples with small children, both marriage partners do not acquire full time job. That is, one of two spouses acquires full time while the other one gets part time job in the Netherlands.

The regression results show that in Punjab and Sindh, labor supply of couples tends to be greater than the ones in Khyber Pakhtunkhwa and the regression coefficients are mostly statistically significant. We find that couples belonging to Punjab would work for 13 more hours per week in urban areas and about 10 more hours in rural areas. Couples belonging to Sindh would supply about 13more hours per week in urban areas and about 11 more hours in rural areas as compared to those living in Khyber Pakhtunkhwa. This is so because Punjab and Sindh are considered more prosperous than Khyber Pakhtunkhwa where more formal job opportunities are better available. The regression results further show that labor supply behavior of couples does not differ significantly between Balochistan and Khyber Pakhtunkhwa.

6. Conclusion

A number of demographic and socio-economic factors explain variations in labor supply behavior of couples. Labor supply behavior of couples is induced by higher wage rates. Substitution effect of wage increase dominates the income effect. Increase in average wage rate of couples induces them to work for more hours in the labor market. Couples' hours of work increases at diminishing rate with their ages both in urban and rural areas.

Education plays an imperative role in shaping the labor supply performance of couples. Couples with more educated husbands and wives supply more hours in the labor market as compared to couples with less educated ones. However, couples with wives having primary education display almost similar hours per week as the couples with wives having no formal education.

It is observed that professionals and legislators display extra combined labor market hours as compared to ones belonging to other occupations.

Husbands and wives living in larger households work for more combined hours than those in smaller households. The joint family set up exploits economies of scale through division of labor and facilitate more productive household couples to work longer hours as compared to nuclear family set up. Presence of small (0-5 years old) children negatively affects the labor supply behavior of couples. Combined labor supply of couples is higher in the larger provinces Punjab and Sindh than labor supply of those in Khyber Pakhtunkhwa. Labor supply pattern of couples is found to be more or less similar in smaller provinces.

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