

Chapter 4

Work and Wages



Female labor force participation Pakistan is one of the lowest globally and within South Asia. There are 13.3 million women in the labor force, 12 million of which are employed, mostly in the informal economy. The government of Pakistan has mandated 10% representation of women in all public sector entities, but no concerted efforts have been made to implement this directive. Labor force participation is important for women, not only as contributors to the national economy, but also because of accrued benefits for themselves and their households.

Integration into formal employment does have a positive effect, but the low wages and increased workloads that characterize much of women's work, in conjunction with the social norms about a women's prescribed role restricts any improvements in their social status because of paid employment. Cuts in public sector spending have meant a decline in the more secure public sector jobs, and an increase in (insecure) private sector employment. The resulting increase in male unemployment and economic hardship has forced women into the work force, often in vulnerable underpaid and insecure jobs. Poorly enforced labour laws and inspections⁶⁰ deprive women of employment benefits such as maternity leave, crèche's, medical and casual leaves. Few women are members of or even aware of trade unions.⁶¹

Despite the low wages and increased workloads characteristic of such work, women are able to leverage their earning capacity for modest gains in their position within the household, educating their children and improving nutrition.

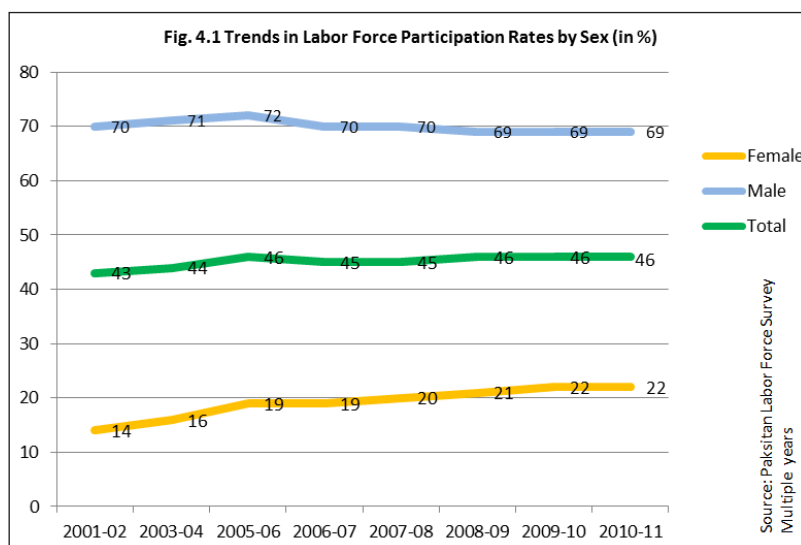
Low employment rates combined with the large proportion of youth in the population means a tightening of economic space for those without education or marketable skills. With low literacy, and limited access to skills training women are likely to be left behind once again. The returns on education for women and men with even a primary education, serves as a reminder of the investments needed in education.

The statistics in this chapter are drawn mostly from the Labor Force Survey 2010-11 and the HIES data where applicable. Both datasets have a large sample size, but in some cases it is limited to a small number of observations, skewing any discernible patterns in, for example wage gaps. Availability of data for occupational codes beyond two-digit limits currently collected by the PBS would enable drilling deeper into the specific contours of each occupation and sharpen the analysis. Such data is needed to map trends in specific occupational categories and to forecast future employment opportunities for women and men.

60 ILO Pakistan and the gender focal persons in the provincial Departments of Labor have developed an excellent resource that outlines gender sensitive labour inspection procedures for labour inspectors.

61 There are only 7000 trade unions across the country with 2% female membership. The performance of many of these unions is perfunctory at best and their effectiveness is compromised by close, sometimes familial connection with the management.

Trends in Labor Force Participation



Labor Force Participation rates have remained almost stagnant in the last decade, except for female labor force participation rates (FLFPR) which showed a steady increase.

Only 22% of the female population is employed as compared to 78% males. The rate for women rises to 37% when refined and augmented activity rates are applied.⁶²

Unemployment rate is a high 9% for women⁶³ and 5% for men. Unemployment has decreased for both men and women since 2000, indicating an increase in participation but also the economic imperatives to work as poverty levels increased after 2007.

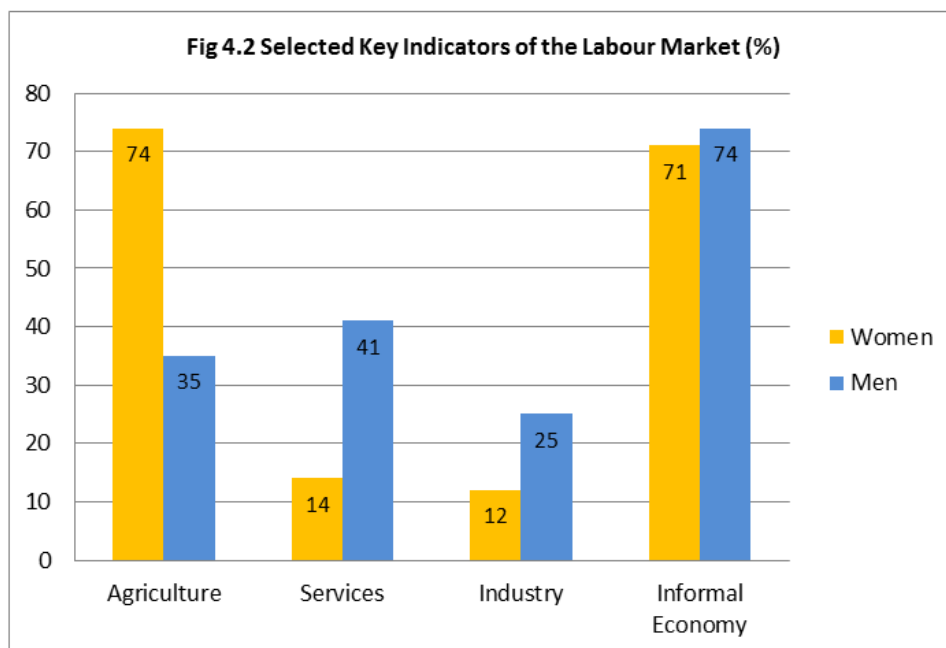
In the first half of the decade, during 2001-2006, the economy was robust, possibly opening up additional employment opportunities that increased the number of women in the labor force. However, since the largest share of women workers is in the category of unpaid “contributing family worker,” it is unlikely that this increase in FLFPR benefitted women in material terms.

Since 2008-9, economic growth has stalled, in part due to the series of crises (floods, extremist attacks) that hit the country, and inadequate fiscal policies. In such a case, one would likely see the FLFPR rise in the unpaid or home-based worker categories. Indeed economic growth rate went from a high of 6.8 in 2007, to a low of 1.7% in 2009 reviving somewhat to 2.4% in 2011⁶⁴. Growth in the agriculture sector was 1.2%, in manufacturing 3% and in the services sector it was 4.1%.

⁶² *Refined activity rate* or *participation rate* is the currently active population expressed as a percentage of the population 15 years of age and above. *Augmented* includes special probing questions to include marginal economic activities, done mostly by women.

⁶³ This is roughly half of what it was in 1999-2000 at 16%.

⁶⁴ Pakistan Economic Survey 2010-11; ADB Pakistan Fact Sheet, April 2012



Source: PBS, Pakistan Employment Trends 2010-11

74% of employed women and 35% of employed men work in the slow growing agriculture sector. Women's share in industry is a paltry 12% and that of men is 25%. In the relatively faster growing services sector, only 14% of the female labor force is employed compared to 41% of men.

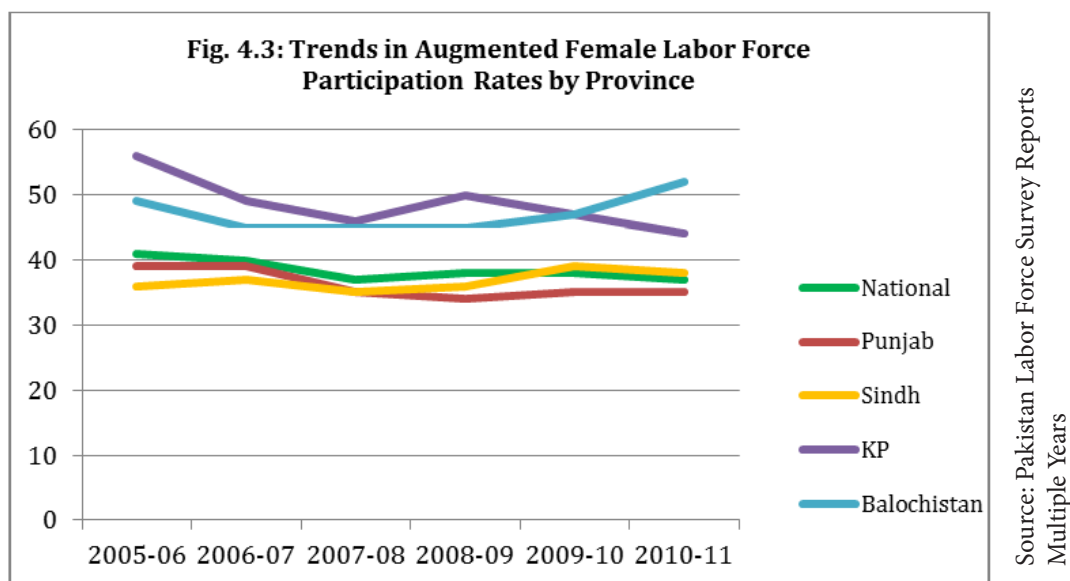
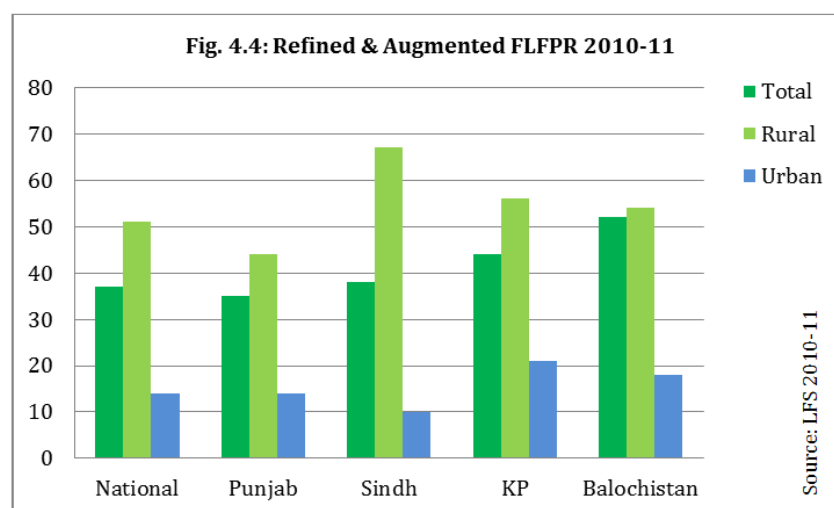


Fig 4.3 shows that since 2005 trends in augmented FLFPR have held steady or declined in all the provinces, except Balochistan that manifests a slight upward trend, surprising since the province has suffered several crisis, political and natural disasters, and its refined FLFPR (not augmented) is much lower than the other four provinces at only 9.2 in 2010-11. There could be two reasons for the increase. First, increasing poverty has forced women into home based subsistence level activities, or there are anomalies in the data itself.

The sharp decrease in the Khyber Pakhtunkhwa refined and augmented FLFPR is expected, given the upheavals and dislocation caused by the 2009 surge in militancy and the floods of 2010.



Low urban participation rates are indicative of the fewer non-agricultural activities available to women. Surprisingly Khyber Pakhtunkhwa appears to have higher urban participation rates, possibly due to the influx of displaced women in the settled and urban areas and their subsequent involvement in subsistence activities. Another possibility is the increase in donor-funded programs in the province might have stimulated women's participation, since these programs encourage women to apply for job openings and offer competitive salaries and better working conditions.

Vulnerable Employment

Roughly 6 out of 10 employed persons in Pakistan (62%) in 2010-11 were considered vulnerable i.e. 'at risk of lacking decent work'⁶⁵. Approximately 78% of women fall into this category, as do almost 61% of youth,⁶⁶ indicating that most women and youth are pushed into taking up low-productivity and poorly remunerated work. 41% of men were in a wage and salaried job compared to 22% of women.

Approximately 7 out of every 10 women, or 74.2%, work in agriculture, predominantly in subsistence-level farming under harsh conditions, with little or no economic security. Employment in the informal economy is high for both women and men at 71% and 74% respectively.

8% of women work 50 hours or more as compared to 47% men, with a similar ratio in agriculture work. However, 35 % women and 69% of men in trade work more than 50 hours per week.

65 Ibid. Decent work is defined as work that pays enough to support a family, provides social security and inclusion through trade and labor unions.

66 PBS. Pakistan Employment Trends 2011

Employment by Industry and Occupation

Table 4.1: Employed Labour Force by Major Industry Division (in %)

Major Industry Divisions	2005-06			2009-10			2010-11		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Agriculture/forestry/hunting & fishing	69	37	43	75	37	45	75	36	45
Manufacturing	15	14	14	11	14	13	11	15	14
Construction	0	8	6	0	9	7	0	9	7
Wholesale & retail trade	2	18	15	2	20	16	2	20	16
Transport/storage & communication	0	7	6	0	7	5	0	7	5
Community/social & personal services	14	15	14	11	11	11	12	11	11
*Others	0	2	2	0	3	2	0	3	2
Total	100	100	100	100	100	100	100	100	100

* Others (includes mining & quarrying, electricity, gas & water, financing, insurance, real estate & business services and extraterritorial organizations and bodies)

Source: LFS 2006-07 (table 10), LFS 2010-11 (table 13) http://www.pbs.gov.pk/labour_force_publications

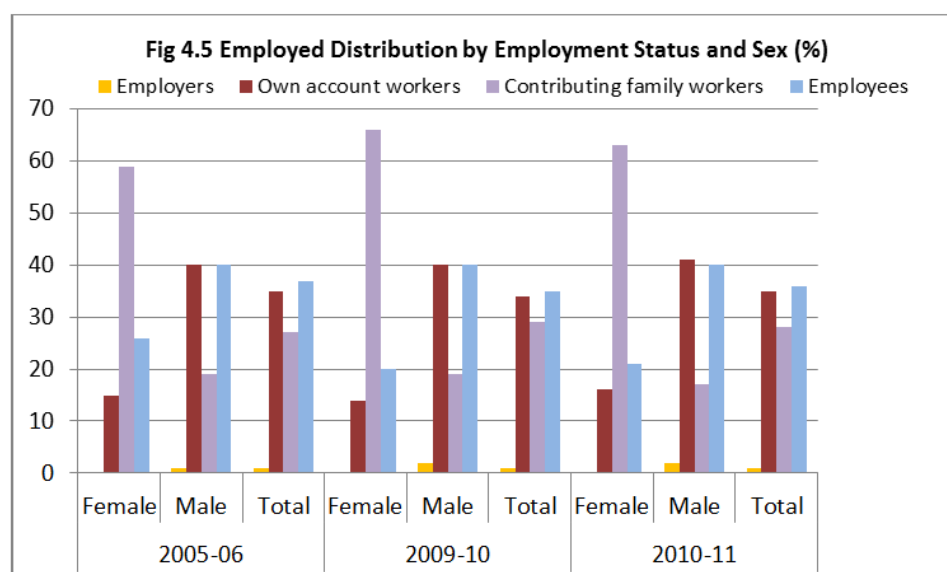
Agriculture, forestry, hunting and fishing industry recorded a modest increase in female employment between 2001 and 2010 from 69% to 75% respectively. The effects of this increase is dampened by closer analysis that reveals that while this sector has a 30% female share in employment, most of these women are crowded into the lowest paid segment of this industry (Figs 4.12b and 4.13).

The increase in employment is also reflected in the relatively better paid occupational category of Skilled Agricultural and Fishery Workers, from 54% in 2005 to 62% in 2010 (Table 4.2)—but the share of women in employment for this category is only 7%.

Table 4.2: Employed Labour Force by Occupational Group (in %)

Occupation	2005-06			2009-10			2010-11		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Legislators/senior officials & managers	2	14	12	2	15	12	2	14	11
Professionals	1	2	2	1	2	2	1	2	2
Technicians & associate professionals	8	4	5	6	5	5	7	5	5
Clerks	0	2	1	0	2	1	0	2	1
Service workers/ shop & market sales workers	1	7	5	1	6	5	0	6	5
Skilled agricultural & fishery workers	54	31	35	63	31	38	62	30	38
Craft & related trades workers	15	16	16	11	16	15	11	16	15
Plant/ machine operators & assemblers	0	5	4	0	5	4	0	5	4
Elementary (unskilled)	19	19	19	16	19	19	17	20	20
Total	100	100	100	100	100	100	100	100	100

Source: LFS 2006-07 (table 11), LFS 2010-11 (table 14) http://www.pbs.gov.pk/labour_force_publications



Overall, the majority of workers fall into the category of employees, followed by own account workers and contributing family workers. This last appears to be feminized category since women are present in more than double the numbers as compared to men. Women are more likely to be employees than own account workers, while the distribution of men is equal in these two categories. Few of those in the labor force are “employers” i.e. those who are able to employ one or more persons on a continuous basis.

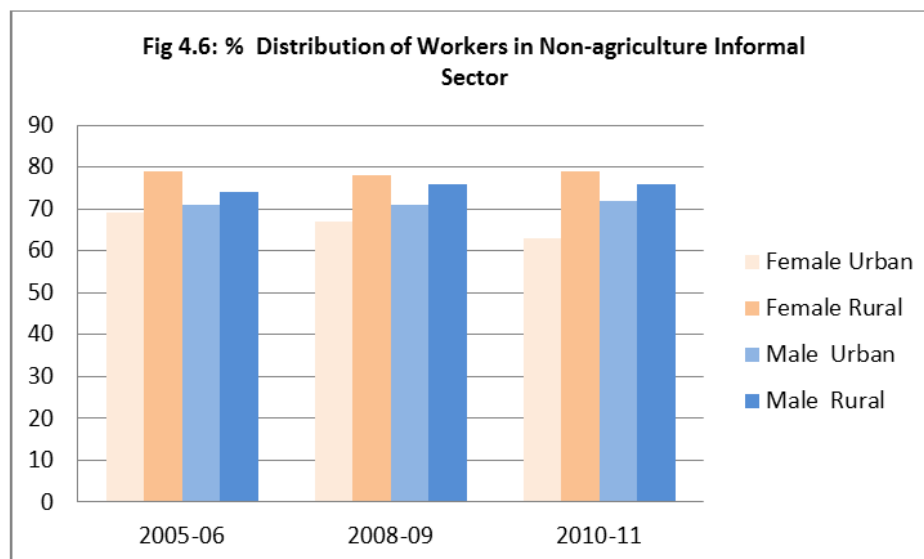
63% of women workers were unpaid contributing workers in 2010-11, as compared to 17% of men.

21% of women were employees compared to 40% of men.

16% of women were own account workers compared to 41% of men. Own account workers are self-employed who may be working with unpaid family workers, and occasionally engage a paid employee. Despite all the microcredit programs that ostensibly target women, this category has not increased since 2005, remaining at a low 14-16%.

Gains in education and employment opportunities have not translated into salaried work for women, as their percentage as employees has declined since 2005-6.

Informal and Non-agricultural wage work



Data from the Labor Force Survey 2010-11 is used to identify the determinants of labor force participation of women ages 15-64 years.

During 2010-11:

- 74% of all non-agriculture workers are employed in the informal sector.
- 77% of rural non-agriculture workers are in the informal sector and 24% in the formal sector.
- 71% of urban non-agriculture workers are in the informal sector and 29% in the formal sector.
- Non-agricultural employment in the informal economy registered an increase from 65 percent 1999 to 73.5 percent in 2010.⁶⁷

Among Urban Non-agricultural Workers:

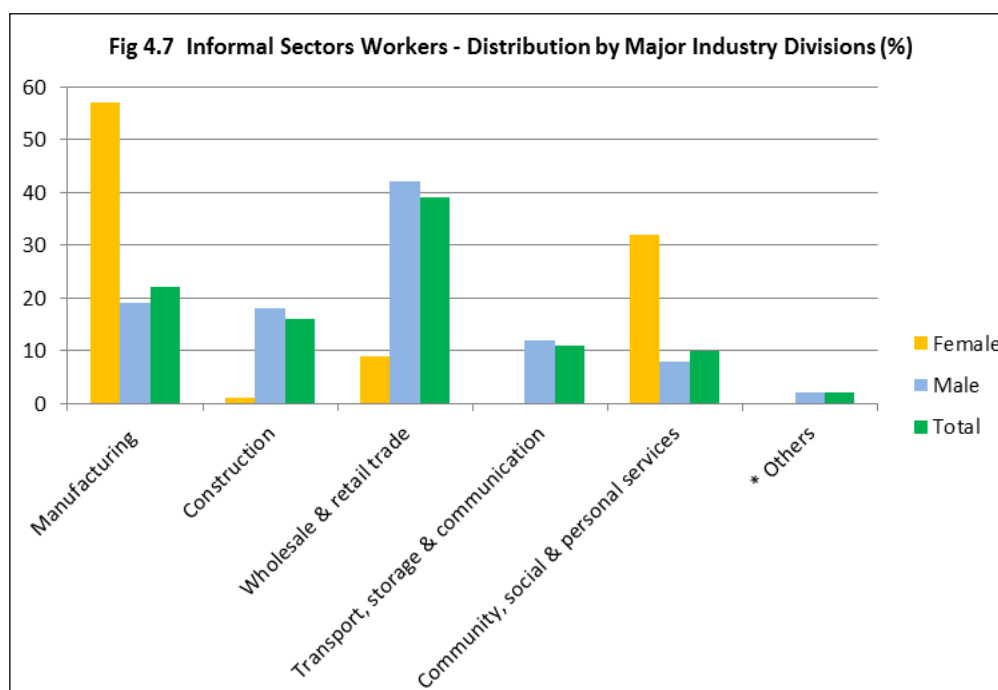
- 37 % of women and 28% of men are in formal sector
- 63% of women and 72% of men are in the informal sector

Among Rural Non-agricultural Workers:

- 21% of women and 24% of men are in formal sector
- 79% of women and 76% of men are in the informal sector

⁶⁷ PBS Pakistan Employment Trends 2011 Table 17 pg 28

Informal Sector- Industry



*Others includes mining & quarrying; electricity, gas & water and finance, insurance, real estate and business services

- 57% of female workers in the informal sector are concentrated in Manufacturing and 32% in the Services sector
- 18% of male informal workers are in Manufacturing
- 42% of male informal workers are in Wholesale and Retail Trade

Within the informal economy there is segmentation by gender and earnings. Employers earn the most followed by own account workers. Men dominate this group of workers.

Women combine household responsibilities with work and are crowded in the lower paying segments within the informal economy.⁶⁸

68 Chen et al notice this in the Progress of Women Report 2007 UNIFEM

Determinants of Female Labour Force Participation

Data from the Labor Force Survey 2010-11 is used to identify the determinants of labor force participation of women ages 15-64 years. The results of a regression analysis (Annex 1 Table 4.5) show that age is an important determinant for women's LFPR as each additional year results in an 11% increase in the likelihood of being in the workforce. Marital status exerts a negative influence on women's entry into the labor force, as does widowhood and divorce. Women are less likely to work if the head of the household is male and in paid work. If the head of the household is in unpaid work, women are significantly 63% more likely employed. Medium or high dependency households raise the probability of women entering the workforce by 16% compared to low dependency households. This means that economic pressures on the household push women into work, often into vulnerable work. Not surprisingly, given the composition of the female labor force, urban women are significantly less likely to work than their rural counterparts are. Compared to the women in Punjab, women in the other provinces are less likely to work. It is interesting that Pakistani women with higher education are less likely to seek employment. Higher education of women in urban households appears to be more a response to the demands of the marriage market than for improving employment prospects.

The results of the regression analysis reveal a similar pattern for urban women, who are more likely to join the workforce if they are older, single, illiterate, and residing

in Punjab. This comparison sheds light on the similarities of constraining factors for women in Pakistan, regardless of the urban/rural context. Higher education attainments, better infrastructure and work opportunities in the formal sector should encourage women's labour force participation. That it does not points to the resilience of entrenched social norms that discourage women from realizing their economic agency.

The LFS data does not allow an insight on how these factors work for households at different points on the income and consumption scale. The HIES data divides households based on level of consumption into five quintiles with quintile one a proxy for the poorest households. Not surprisingly the findings from the Pakistan Labor Force Survey are echoed in the regression model using HIES 2010-11 data (Annex 2 Table 4.5b) except for education and work status of head of household. Here women who have education of eleven years and above are 55% more likely to work, as are women who live in households where the head of the household is working, irrespective of paid or unpaid work. Consumption based quintiles estimated for HIES show a negative correlation between consumption and work. Compared to women in the poorest households i.e. quintile 1, women in all the other consumption-based quintiles are less likely to work. The literature on women and work suggests that as the socioeconomic status of the household improves women withdraw from paid work.

What drives employed women's participation in non-agricultural work?

The majority of women in Pakistan are agricultural unpaid family workers. It is useful then to see what effects women's participation in non-agricultural work in rural areas, since it is assumed to be paid work.

A logistic regression analysis of employed women's individual and household characteristics highlighted some "drivers" of non-agricultural work (Annex 3 Tables 4.6 and 4.6b). The LFS 2010-11 data shows that women, including those in the rural areas have a higher probability of being in the workforce as their age increases. Married women are significantly less likely to be in non-agricultural work in Pakistan and in rural areas. However, education significantly and dramatically increases the chances of women, including rural women, of being in non-agricultural work—by 137% for a rural woman with just the minimum schooling between grades 1-4. The presence of educated women in rural villages has been known to attract investments in education and health as a local literate female workforce is available.

Almost all the regression results show the adverse relation between a male head of household and women's participation in work, in this case participation in non-agricultural work. If head of household is in paid work women, including rural women are 174% more likely to take up non-agricultural work. However if the head

of household is in unpaid work, women are less likely to seek non-agricultural employment. This is in contrast to the regression results using HIES data where, irrespective of paid or unpaid work status of the head of household, women are less likely to be in non-agricultural employment.

Medium or high dependency households are negatively correlated with women's non-agricultural employment. Province wise women in Punjab are more likely to work in non-agricultural work compared to the other provinces, except for Khyber Pakhtunkhwa where women, even rural women, are over 120% more likely to work in non-agricultural work as compared to women in Punjab. In the regression analysis using HIES data women in both Khyber Pakhtunkhwa and Balochistan are more likely to take up non-agricultural work than women in Punjab.

Based on the HIES consumption expenditure based wealth quintiles, women in the higher quintiles are less likely to take up non-agricultural work as compared to the women in the poorer households. It seems that non-poor households are averse to women's paid employment, whether it is agriculture based or non-agricultural.

Unemployment

- 9% of women and 5% of men were unemployed in 2010-11.
- 21% of urban women and 7% urban men are unemployed.
- 6% of rural women and 4% of rural men are unemployed.

Unemployment rates for women in the age group 20-24 years spiked to a high of 15%, in the year 2010-11, higher than the previous year. Unemployment rates are high in the late teens and the twenties, indicative of women's marital and early childbearing responsibilities (Table 4.3).

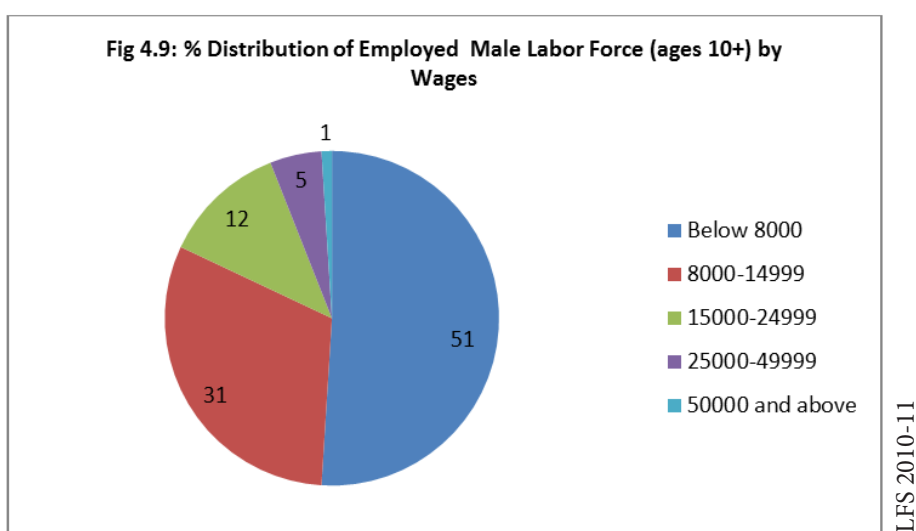
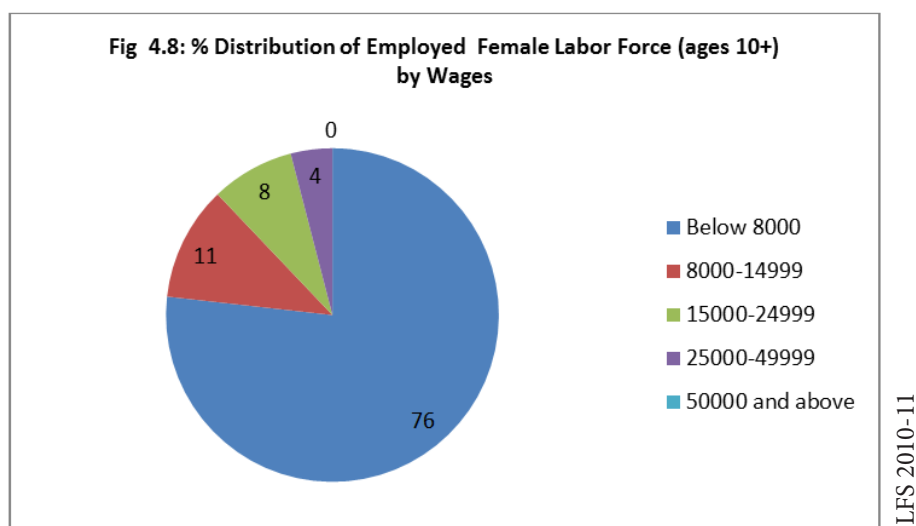
Table 4.3: Unemployment Rates by Age and Sex

Age groups	2005-06			2009-10			2010-11		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
10-14	6	9	8	13	10	10	8	11	10
15-19	10	10	10	11	8	9	11	10	11
20-24	9	7	7	12	7	8	15	8	10
25-29	7	4	5	9	3	5	9	4	5
30-34	4	2	3	6	2	3	4	2	2
35-39	5	2	2	5	2	2	4	2	2
40-44	5	2	3	4	1	2	4	1	2
45-49	6	2	3	5	2	3	4	2	2
50-54	14	5	6	10	3	4	5	3	3
55-59	20	6	8	13	4	6	9	4	5
60-64	34	7	12	25	6	9	23	7	10
65 and above	38	13	17	33	9	12	37	10	14

Source: LFS 2005-06 (table 11), LFS 2009-10 (Table 14), LFS 2010-11 (table 14)

http://www.pbs.gov.pk/labour_force_publications

Wages



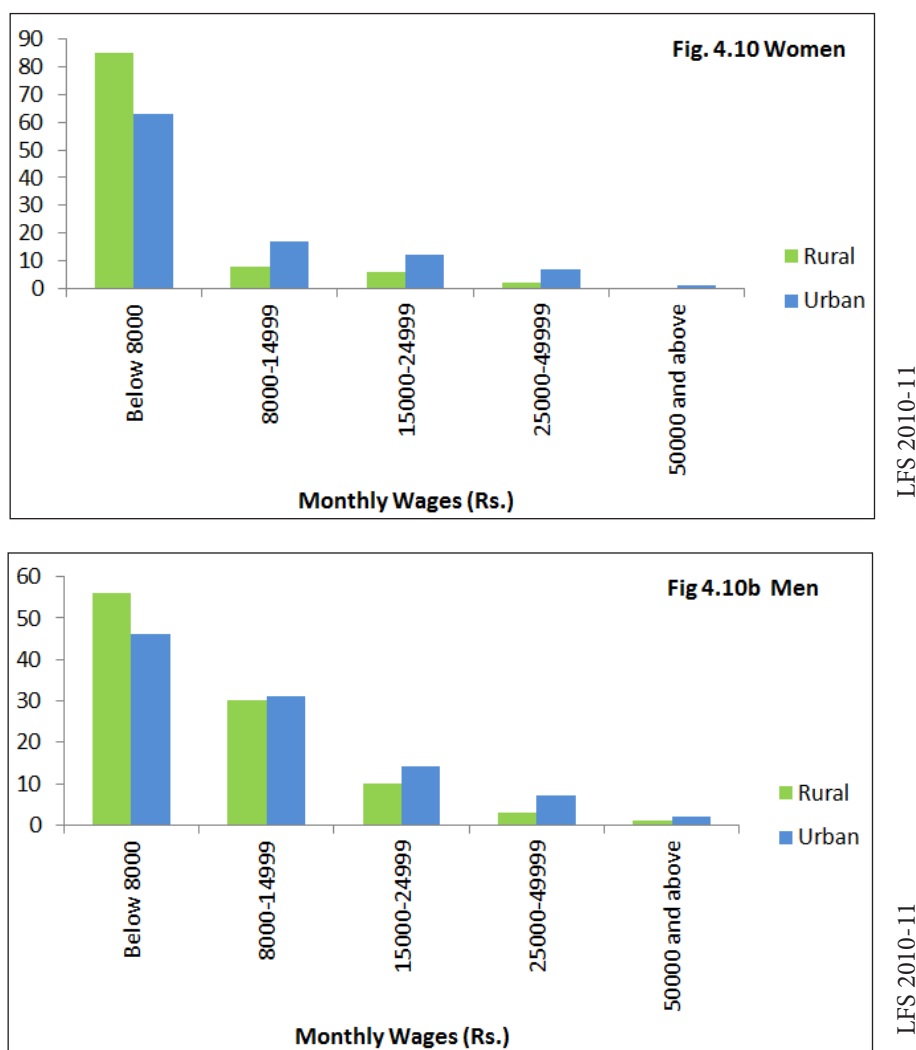
76% of women earn less than Rs. 8000 per month, the majority in rural areas vs. 51% of men.

Only 11% of women vs. 31% of men are able to earn monthly wages of Rs. 8000-14999.

Very few women and men are earning monthly wages of Rs.25000 and above. The number of women earning Rs. 50000 and above is too low to show up as a percentage point in Fig. 4.8

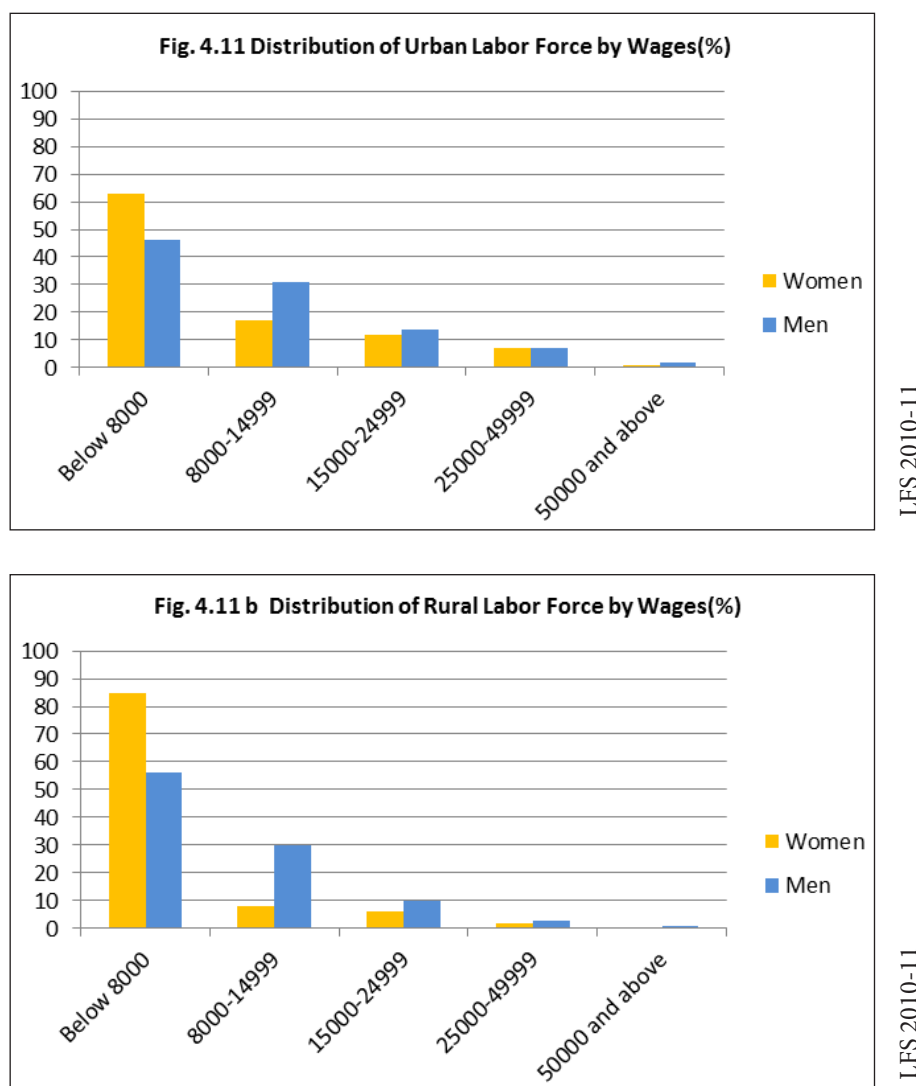
Urban/ Rural gender differentials in monthly wages

Percentage Distribution of Monthly Wages (in Rs.) of Employed Labor Force Rural/Urban



85% of rural women and 56% of rural men earn less than Rs. 8000 per month, which is hardly a living wage. Work, then, does not alleviate poverty unless it is tied to fair remuneration.

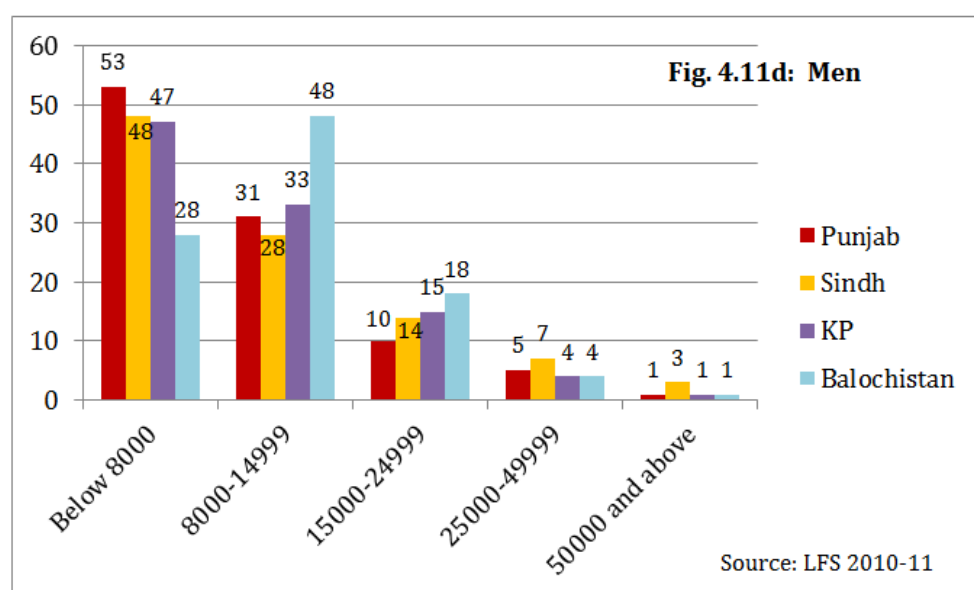
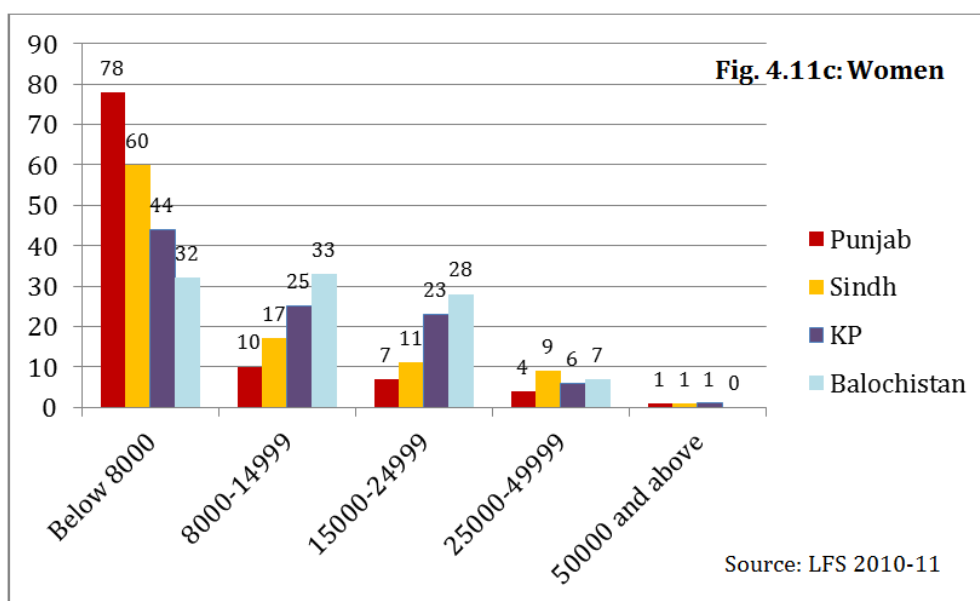
Only 8% of rural and 17% of urban employed women receive wages over Rs. 8000 and less than Rs.15000.



Figs 4.11 and 4.11b make explicit the gender differentials noted in the previous figures.

As the monthly wages increase the gender wage differential declines. Almost similar percentages of women and men earn between Rs.15000 per month to less than Rs.50000 per month, possibly because education and skill level requirements for these wage groups are similar for women and men.

Percentage Distribution of Monthly Wages (in Rs.) of Employed Labor Force by Province



As can be seen from the above figures in all the provinces the highest number of employed are working poor, earning below Rs. 8000 per month, though women are far more likely to be in this category than men. Punjab has the highest percentage of working poor, more women than men. 7% of women in Balochistan earn between Rs. 25000-49999 in contrast to 4% in Sindh and a high 9% in Punjab.

Returns on education

Table 4.4: Percentage Distribution of Monthly Wages of Employed Labour Force by Education and Sex (ages 10 +)

Monthly Wages	Gender	Below primary	Primary	Middle	Matric	Inter-mediate	Graduation	M.A/ MSc	MPhil/ PhD
Below 8000	Total	72	62	58	43	29	16	12	0
	Female	94	90	86	67	64	37	28	0
	Male	68	60	56	41	23	12	7	0
8000-14999	Total	23	31	33	38	35	25	17	14
	Female	5	9	12	15	18	26	24	6
	Male	26	33	34	40	38	25	15	16
15000-24999	Total	3	5	7	16	30	33	31	10
	Female	1	0	2	17	15	24	28	9
	Male	4	6	7	15	33	35	32	10
25000-49999	Total	1	1	2	3	5	21	31	36
	Female	1	0	0	2	3	12	19	27
	Male	1	1	2	3	6	23	35	38
50000 +	Total	1	1	1	1	1	4	9	40
	Female	0	0	0	0	0	0	2	58
	Male	1	1	1	1	1	5	12	37

Source: LFS 2010-11

Table 4.4 reflects the distribution of men and women in different wage categories who have varying levels of education. A large enough percentage of workers earning monthly wages ranging from Rs.8000 to almost Rs.25000 have a college or a Master's degree. The percentage of women who have a Master's degree earning monthly wages above Rs.25000 declines in comparison to men with the same degree. However the highest wage category, Rs.50000 and above has a higher percentage of women with an MPhil/ PhD compared to their male counterparts.

Results of a regression analysis to assess returns on education (Annex 4), using two models- one with below matric as a reference category (Table 4.7a) and one with above matric (Table 4.7b) are presented below. A third model, using illiterate as a reference category is not discussed here (Table 4.7c).

As can be expected sex is a significant predictor of earnings and men on average earn 32% to 60% more than women do. Age has a slight positive effect on earnings.

Marital status has no significant effect on earnings for both women and men when education is low; however, married women earn 15% more than single women. Overall a technical or vocation training increases wages by 16% for men, compared to men who have a less than matric education, but is only 10% more when compared to those who have at least matric. Technical education does not have any significant effect on women's earnings.

Both women and men who are employed in the formal sector earn significantly more than their counterparts in the informal sector. Women in the formal sector earn 66% to 78% more than those who are not; the increase is significant but less dramatic for men, between 24% - 41%.

Urban-based women who have less than matric education and those living in Sindh, Khyber Pakhtunkhwa and Balochistan earn significantly more than the rural and Punjab based women. The effect changes for women with higher levels of education i.e. these women earn more in Sindh and Balochistan than the women in Punjab, but the urban -rural difference is not statistically significant.

In terms of higher education, both women and men earn significantly more than those have only a matric certificate. Women need to be at least B.A graduates for their earning to show a statistically significant increase of 36 % over their Matric only counterparts, an increase of 52% with a Masters and 96% more when they have an MPhil or PhD degree.

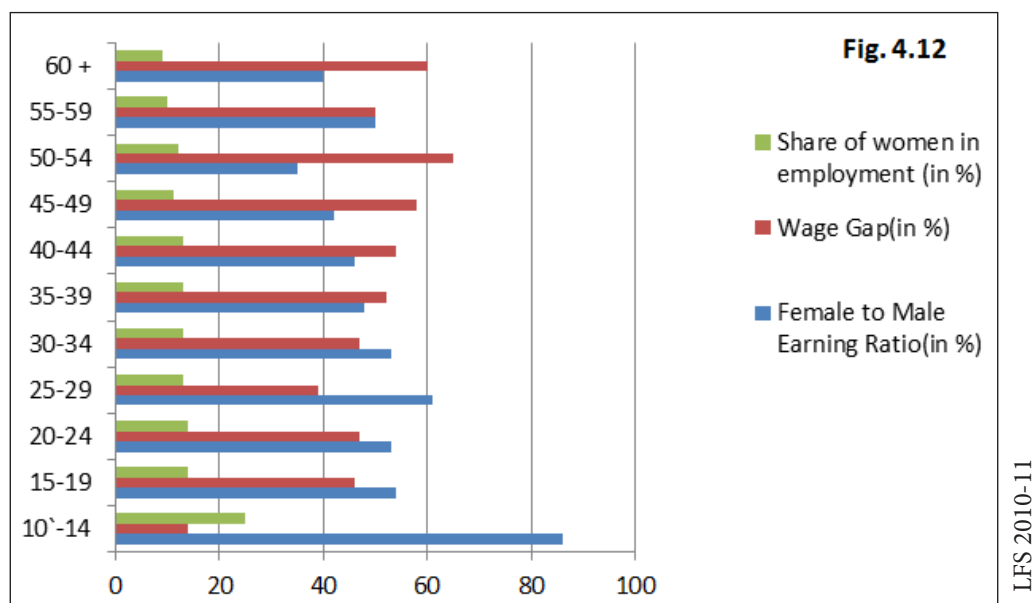
Men with two more years of education than those who have completed Matric, earn 9% more than their counterparts with only a Matric certificate do. The earning differential between matric and BA jumps to 30%, and to 46% with a Master's degree. The returns to education are highest with an MPhil or PhD degree, 86% more than what a matriculate would earn. (Table 4.7b)

Occupations matter. The returns to education are higher for a male manager, 46% more than that of a male clerical support worker. For women the returns are much higher, 52% more than what a female clerical worker earns. A male professional earns 31% more than a clerical worker, while the earnings for women professionals are not statistically significant (Table 4.7b).⁶⁹

These results show that returns to education for both women and men are significantly higher when educational attainment is Matric or above. For women this does not translate into employment opportunities due to social gendered norms that place a higher premium on marriageability than on employability. Neither does the constrained economy generate enough jobs in the formal sector, nor provide attractive remuneration that would make the trade-off between work and home a worthwhile.

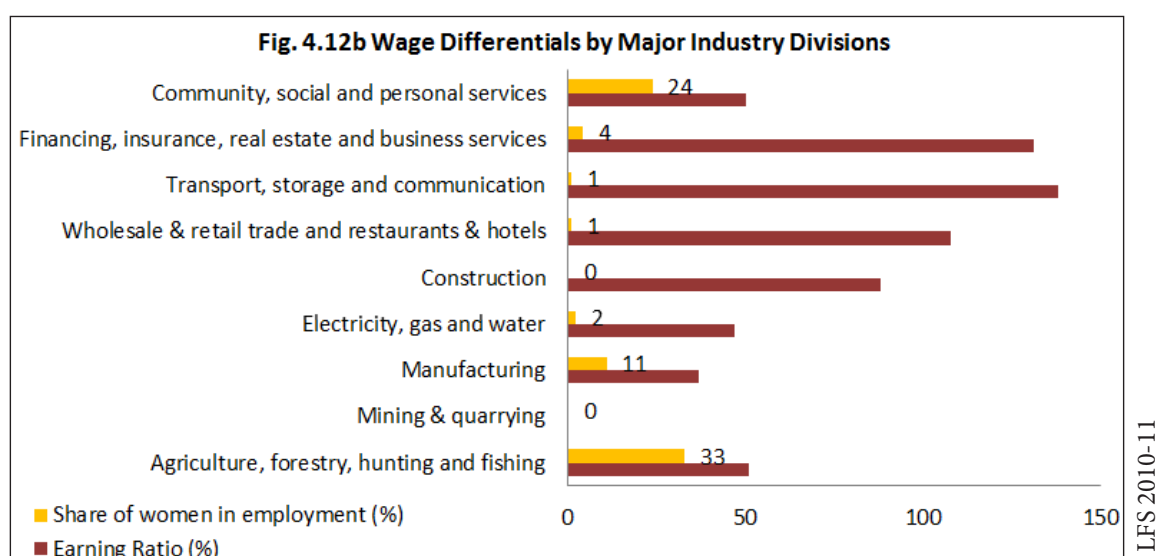
69 These results could be due to the correlation between education and occupational position

The Gender Wage Gap



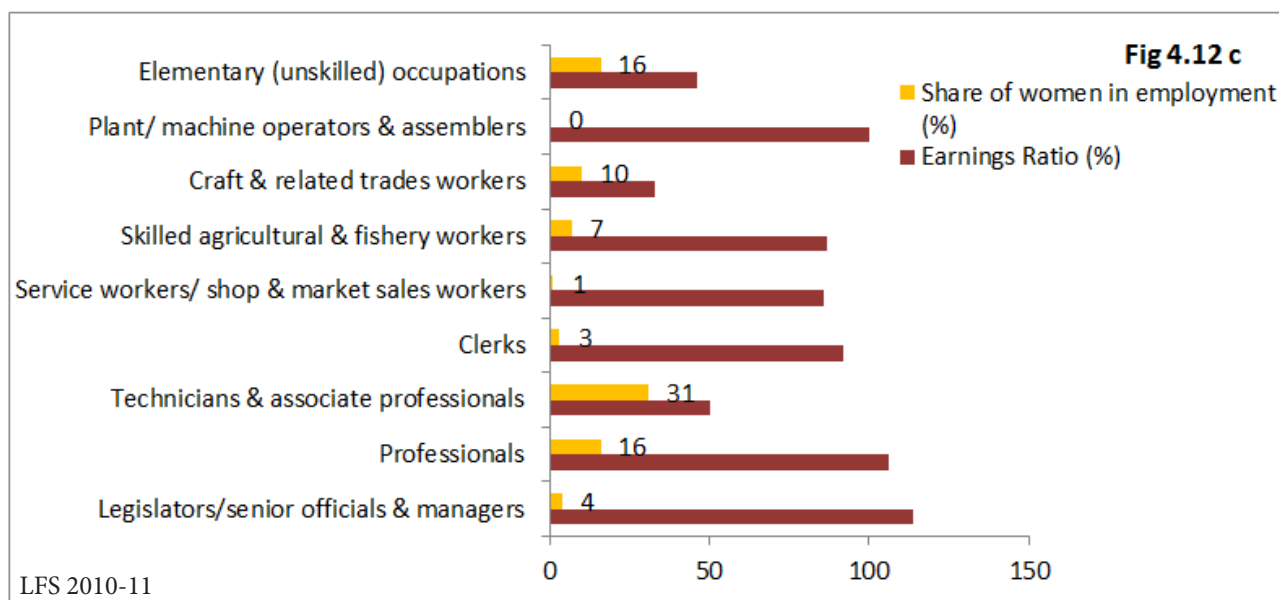
Gender Wage Differentials of Employed Labour Force (ages 10 and above) are shown in Fig. 4.12⁷⁰. The extent of child labor is evident as girls (ages 10-14) have the highest share in employment as compared to females in all the other age groups. This age group also has the highest earnings ratio of women to men, and the lowest wage gap.

As adult workers women earn between 35-61% of what men earn, and their share of employment remains at a low 10-13% of total labor force. When women's share in employment is higher the earnings ratio also improves (Fig 4.12b).



70 Female to Male Earning Ratio is calculated by the formula $[\text{Wage F}/\text{Wage M}] \times 100$. Wage gap = $[\text{Men's median earnings} - \text{Women's median earnings}]/\text{Men's median earnings} \times 100$.

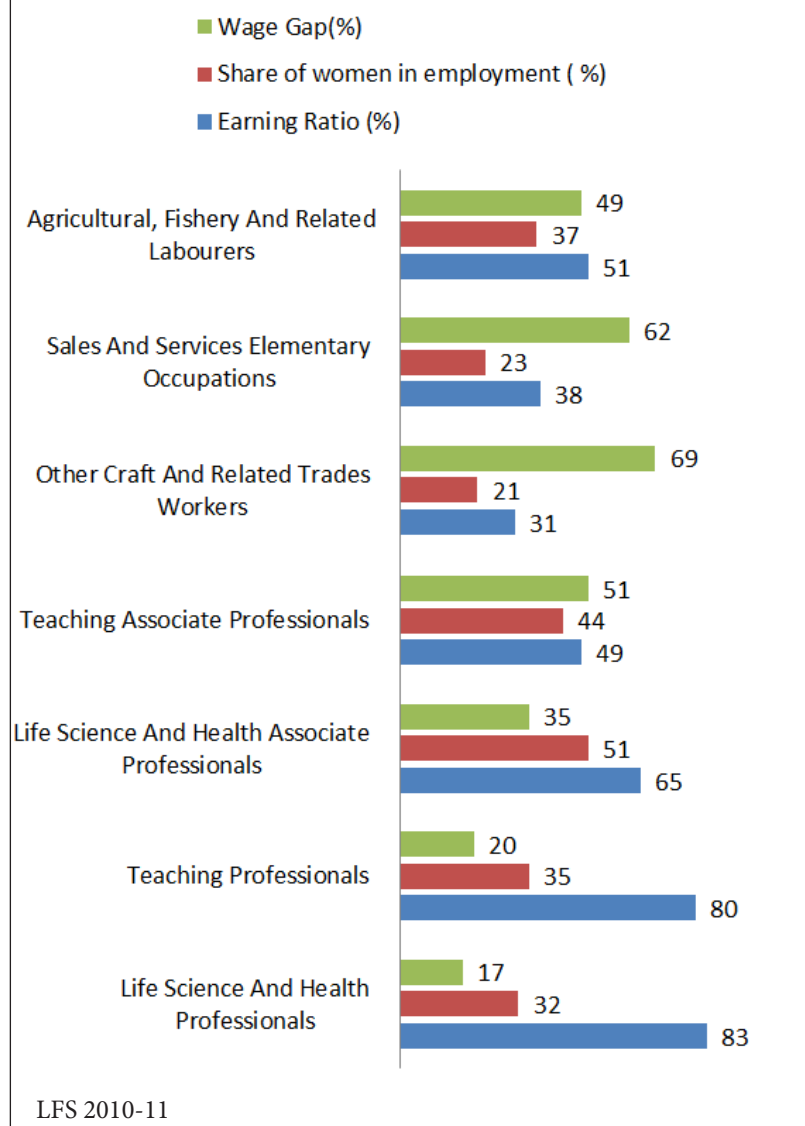
Wages of Employees by Major Occupational Groups



None of the broad occupational categories has a close to equivalent or significant proportion of women to men workers. Since the Labor Force Survey provides two-digit occupation codes only⁷¹, it is not possible to analyze the sub-occupations e.g. garment workers, within the broad categories available, to assess if these are feminized or traditionally female occupations.⁷²

71 The occupation codes can be available up to six digits, collecting data on the sub-occupations for each of the two-digit occupations noted above. With such details it would be possible to discern if the occupation is a feminized one.

72 Traditional/ non-traditional work defined as that which has at least 75% of the workers of one gender. Feminized work is one where two thirds of workers are women

Fig 4.13 Occupations with more than 20% female share in employment

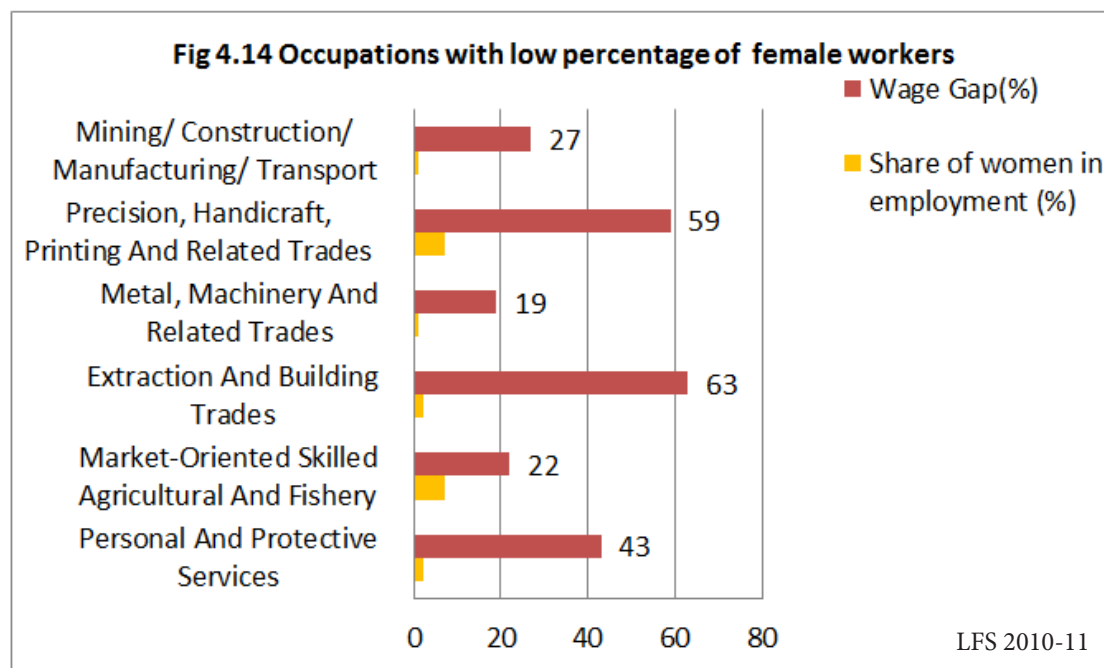
Women's median earnings⁷³ are lower than men's in all the occupations, regardless of the proportion of women present in them.

Table 4.8 (Annex 5) shows the ratio of median monthly earning of women and men, and the gender wage gap by the two-digit occupation codes. The wage gap remains even when a significant number of workers in that occupation are women — as in Teaching and Associate Professionals. Women earn 83% of men as Life Science and Health professionals, with a low wage gap of 17%. Similarly, in teaching professions the wage gap is 20%. Occupations that require higher investments in education tend to have lower wage gaps. In addition, the majority of teaching and health science professionals work in the public sector education and health system where there is relatively more pay equity.

The wage gap increases in occupations that require relatively less formal education within the same occupations, as in nursing, or technicians. In crafts related occupation, where skills are more important it seems that women are disadvantaged as the wage gap widens.⁷⁴

⁷³ Median earnings instead of average are used to avoid the bias generated by a few high earning cases in the sample.

⁷⁴ The higher female to male earnings ratio, and lower wage gap in some of the non-traditional occupations such as metal machinery and related trades, or in mining and construction is due to the inaccuracies in LFS data.



Women's share of employment slides down to 7% in the occupational category of "Market oriented skilled agriculture and fishery workers" despite their substantial presence, almost 47%, as "Agricultural, Fishery and Related" workers. Clearly, women are crowded in the least paid segments of this occupation. This also indicates the need for skills enhancement and market orientation of women in these occupations. Occupational categories related to sales and clerical work has low levels of women working, only 1%-9%.

In contrast, such pink-collar work requiring some years of schooling, placed between blue and white-collar work, is a feminized occupation in most of the world with more than two-thirds women employees. Social norms that restrict women's interaction with men in the public sphere partially explain the low percentage of women in pink-collar work, as these occupations require women to work in less segregated environments.

ANNEXES TO CHAPTER 4

Annex 1

Table 4.5: The Determinants of Female Labour Force Participation (15-64 age)—Logistic Regression Model- LFS data

Correlates	Overall		Only Urban	
	Odds Ratio	Z-stat	Odds Ratio	Z-stat
Age	1.112***	15.5	1.263***	13.58
Age square	0.999***	-14.62	0.997***	-12.72
Marital status (unmarried as ref.)				
Married	0.585***	-13.04	0.215***	-16.14
Widow/divorced	0.492***	-9.61	0.264***	-7.93
Education (illiterate as ref.)				
Grade 1-4	0.643***	-4.99	0.780	-1.14
Grade 5-7	0.508***	-16.54	0.710***	-3.51
Grade 8-9	0.304***	-20.94	0.440***	-7.44
Grade 10-11	0.294***	-21.11	0.347***	-10.07
Grade 12 and above	0.587***	-9.87	0.819***	-2.54
Sex of head (male=1)	-.891**	-2.08	0.908	-0.93
Work status of Head (not working as ref.)				
Unpaid work	1.632***	12.38	0.569	-8.3
Paid work	1.032	1.38	0.969	-1.3
Dependency ratio (low as ref.)				
Medium	1.156***	5.07	1.215***	2.8
High	1.151***	4.74	1.330***	3.59
Region (urban=1)	0.229***	-46.03	-	-
Province (Punjab as ref.)				
Sindh	0.537***	-21.53	0.426***	-11.67
KP	0.335***	-32.24	0.438***	-9.54
Balochistan	0.168***	-36.08	0.386***	-8.86
Constant	0.102***	-19.86	0.008***	-16.64
Log likelihood	-24303.124		-5080.4935	
LR chi2	7605.48 (17)		817.62 (16)	
Pseudo R2	0.1353		0.0745	
N	63031		25502	

***pvalue<0.01 **pvalue<0.05

Source: LFS 2010-11

Annex 2

Table 4.5b: The Determinants of Female Labour Force Participation (15-64 age) — Logistic Regression Model (HIES data)

	Overall		Only Urban	
	Odds Ratio	Z-stat	Odds Ratio	Z-stat
Age	1.186***	17.06	1.292***	13.72
Age square	0.998***	-16.28	0.997***	-12.8
Marital status (unmarried as ref.)				
Married	0.509***	-11.65	0.345***	-10.73
Widow/divorced	0.631***	-4.89	0.741	-1.92
Education (illiterate as ref.)				
Grade 1-5	0.558***	-10	0.735***	-2.66
Grade 6-8	0.464***	-9.8	0.826	-1.61
Grade 9-10	0.460***	-10.92	0.755***	-2.63
Grade 11 +	1.550***	6.98	2.710***	10.84
Sex of head (male=1)	0.536***	-9.15	0.602***	-4.59
Work status of Head (not working as ref.)				
Unpaid work	6.222***	7.74	3.674**	2.15
Paid work	2.024***	13.18	1.245***	2.69
Dependency ratio (low as ref.)				
Medium	1.104**	2.33	0.881	-1.63
High	1.220***	4.37	0.969	-0.36
Quintiles (Q1 as ref. ^a)				
quintile 2	1.018	0.34	0.909	-0.83
quintile 3	0.956	-0.83	0.751**	-2.51
quintile 4	0.878**	-2.29	0.537***	-5.36
quintile 5	0.721***	-5.25	0.414***	-7.38
Region (urban=1)	0.532***	-16.08	-	-
Province (Punjab as ref.)				
Sindh	0.620***	-11.58	0.852**	-2.26
KP	0.393***	-19.11	0.607***	-5.57
Balochistan	0.181***	-23.46	0.610***	-4.41
Constant	0.033***	-19.93	0.006***	-15.93
Log likelihood	-11898.438		-4063.1249	
LR chi2	2404.53 (21)		714.19 (20)	
Pseudo R2	0.0918		0.0808	
N	30644		12850	

^a PBS estimates quintiles on the basis of per capita consumption expenditure using the HIES data.

***pvalue<0.01 **pvalue<0.05

Source: HIES 2010-11

Annex 3

Table 4.6: The Determinants of FLFP in Non-Agriculture Employment (Ages 15-64) — HIES Data

	Overall		Rural Only	
	Odds Ratio	Z-stat	Odds Ratio	Z-stat
Age	1.136***	4.81	1.141***	4.54
Age square	0.999***	-4.25	0.998***	-4.05
Sex of head (male=1)	0.615***	-3.14	0.579***	-3.27
Marital status (Ref=unmarried)				
Married	0.349***	-6.39	0.372***	-5.52
Widow/divorced	1.267	1	1.324	1.09
Education (Ref= illiterate)				
Grade 1-5	2.345***	6.25	2.275***	5.47
Grade 6-8	3.575***	6.19	3.409***	5.15
Grade 9-10	12.882***	12.27	14.925***	12.08
Grade 11 and max	59.838***	14.12	84.992***	12.79
Work status of Head (Ref=not working)				
Unpaid work	0.282***	-2.52	0.356**	-2.01
Paid work	0.490***	-5.18	0.478***	-4.91
Dependency ratio (Ref=low)				
Medium	0.822	-1.73	0.928	-0.6
High	0.686***	-3.1	0.664***	-3
Quintile (Q1 as ref. ^a)				
Quintile 2	0.841	-1.36	0.751**	-2.11
Quintile 3	0.537***	-4.56	0.441***	-5.48
Quintile 4	0.446***	-5.5	0.377***	-6
Quintile 5	0.343***	-6.07	0.276***	-6.43
Region (urban=1)	20.127***	25	-	-
Province (Punjab as ref.)				
Sindh	1.193	1.65	1.255	1.9
KP	1.317**	2	1.484***	2.68
Balochistan	2.262***	3.4	2.613***	3.72
Constant	0.173***	-3.82	0.174***	-3.45
Log likelihood	-1671.4349		-1360.4101	
LR chi2	2571.10 (21)		724.44 (20)	
Pseudo R2	0.4348		0.2103	
N	4321		3094	

^a PBS estimates quintiles on the basis of per capita consumption expenditure using the HIES data.

***pvalue<0.01 **pvalue<0.05

Source: HIES 2010-11

Table 4.6b: The Determinants of Female Non-Agriculture job compared to Agricultural Job (Ages 15-64) — LFS Data

	Overall		Only Rural	
	Odd Ratio	Z-stat	Odd Ratio	Z-stat
Age	1.085***	4.4	1.068***	3.19
Age square	0.999***	-4.72	0.999***	-3.5
Sex of head (male=1)	0.478***	-6.4	0.516***	-5.37
Marital status (Ref=Unmarried)				
Married	0.504***	-6.53	0.533***	-5.48
Widow/divorced	1.098	0.54	1.145	0.71
Education (Ref=Illiterate)				
Grade 1-4	2.459***	4.64	2.371***	4.15
Grade 5-7	2.124***	7.6	2.126***	6.78
Grade 8-9	2.851***	7.96	2.734***	6.66
Grade 10-11	6.781***	15.47	6.715***	14.33
Grade 12 and above	19.053***	18.23	16.266***	15.91
Work status of Head (Ref= Not working)				
Unpaid work	0.217***	-16.65	0.238***	-14.05
Paid work	2.746***	9.49	2.741***	8.63
Dependency ratio (Ref=low)				
Medium	0.727***	-4.18	0.800***	-2.62
High	0.767***	-3.35	0.804**	-2.47
Region (urban=1)	16.223***	36.15	-	-
Province (Punjab as ref.)				
Sindh	0.534***	-6.36	0.340***	-8.23
KP	2.216***	8.96	2.191***	8.33
Balochistan	0.975	-0.15	1.592***	2.58
Constant	0.277***	-4.07	0.308***	-3.38
Log likelihood	-3590.7755		-2913.0073	
LR chi2	7615.64 (18)		2562.21 (17)	
Pseudo R2	0.5147		0.3055	
N	12420		9979	

***pvalue<0.01 **pvalue<0.05

Source: LFS 2010-11

Annex 4

Table 4.7: The Impact of Education on Monthly Earning- A Regression Analysis

	For All		Only Female		Only Male	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Gender (male=1)	0.601***	43.06	-	-	-	-
Marital status (married=1)	0.009	0.75	0.079	1.77	0.010	0.8
Age (in years)	0.054***	24.53	0.028***	3.14	0.056***	25.14
Age square	-0.001***	-19.89	0.000	-1.63	-0.001***	-20.53
Education (Ref=below matric)						
Grade Matric	0.096***	8.03	0.290***	4.49	0.085***	7.24
Grade Intermediate	0.225***	13.39	0.304***	4.25	0.233***	13.75
Grade Graduation	0.508***	28.46	0.600***	8.67	0.504***	27.56
Grade M.A/MSc	0.718***	33.01	0.758***	10.34	0.700***	30.27
Grade MPhil/PhD	1.194***	14.49	1.311***	5.37	1.161***	13.42
Get technical training (yes=1)	0.134***	13.08	-0.027	-0.65	0.156***	15.08
Formal sector (yes=1)	0.291***	31.3	0.782***	19.28	0.239***	25.72
Occupation (Ref=Clerical support worker)						
Manager	0.403***	15.09	0.543***	2.98	0.394***	15.11
Professional	0.255***	9.93	0.272	1.79	0.165***	6.37
Associate prof.	0.012	0.55	-0.261	-1.79	-0.022	-1.03
Skilled worker	-0.016	-0.74	-0.149	-0.95	-0.031	-1.49
Elementary worker	-0.047**	-2.11	-0.231	-1.46	-0.058***	-2.67
Region (urban=1)	0.024***	2.97	0.096***	2.87	0.010	1.2
Province (Punjab as ref.)						
Sindh	0.024***	2.42	0.212***	5.08	-0.001	-0.09
KP	0.065***	5.96	0.145***	3.15	0.037**	3.36
Balochistan	0.129***	9.41	0.321***	3.67	0.118**	8.78
Constant	7.416***	171.36	7.758***	40.7	8.033**	194.01
R-squared	0.4199		0.5452		0.3923	
F-stat	838.46 (20, 23168)		138.56 (19, 2196)		711.99 (19, 20953)	
N	23189		2216		20973	

***pvalue<0.01 **pvalue<0.05

Source: LFS 2010-11

Table 4.7b: The Impact of Education on Monthly Earning- A Regression Analysis

	For All		Only Female		Only Male	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Gender (male=1)	0.324***	16.23	-	-	-	-
Marital status (married=1)	0.055***	2.87	0.155***	2.98	0.037	1.81
Age (in years)	0.057***	12.95	0.070***	4.68	0.051***	11.12
Age square	0.000***	-9.09	-0.001***	-2.84	0.000***	-7.61
Education (below matric as ref.)						
Grade Intermediate	0.079***	4.52	0.079	1.27	0.087***	4.93
Grade Graduation	0.302***	16.15	0.364***	6.12	0.298***	15.36
Grade M.A/MSc	0.469***	20.65	0.524***	8.18	0.461***	18.96
Grade MPhil/PhD	0.873***	10.58	0.961***	4.1	0.858***	9.85
Get technical training (yes=1)	0.080***	4.94	-0.084	-1.51	0.097***	5.85
Formal sector (yes=1)	0.456***	28.19	0.664***	12.25	0.413***	24.78
Occupation (Ref=Clerical support worker)						
Manager	0.461**	16.4	0.520**	2.88	0.460**	16.59
Professional	0.341**	12.34	0.204	1.35	0.307**	10.92
Associate prof.	-0.016	-0.72	-0.291	-2.02	0.011	0.48
Skilled worker	0.041	1.71	-0.049	-0.29	0.017	0.72
Elementary worker	-0.086**	-2.9	0.250	1.05	-0.116**	-3.99
Region (urban=1)	0.050**	3.79	0.040	0.87	0.045**	3.31
Province (Punjab as ref.)						
Sindh	0.035**	2.33	0.137**	2.73	0.019	1.26
KP	0.006	0.34	0.090	1.7	-0.016	-0.89
Balochistan	0.083**	3.98	0.222*	2.4	0.070**	3.34
Constant	7.543**	95.34	7.223**	26.61	8.054**	99.44
R-squared	0.4635		0.5145		0.4506	
F-stat	423.65 (19, 9317)		71.01 (18, 1206)		368.72 (18, 8093)	
N	9337		1225		8812	

***pvalue<0.01 **pvalue<0.05

Source: LFS 2010-11

Table 4.7c: The Impact of Education on Monthly Earning- A Regression Analysis

	For All		Only Female		Only Male	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Gender (male=1)	0.589***	41.97	-	-	-	-
Marital status (married=1)	0.014	1.14	0.094**	2.1	0.014	1.08
Age (in years)	0.053***	24.14	0.028***	3.14	0.055***	24.75
Age square	-0.001***	-19.34	0.000	-1.52	-0.001***	-20.03
Education (Ref=Illiterate)						
Grade 1-4	0.045**	2.04	0.164	1.37	0.019	0.89
Grade Primary	0.069***	5.60	0.250***	3.75	0.045***	3.68
Grade Middle	0.101***	7.51	0.216***	2.73	0.079***	5.99
Matric	0.145***	10.74	0.399***	5.72	0.120***	9.02
Intermediate	0.277***	15.36	0.422***	5.46	0.270***	14.88
B.A	0.562***	29.44	0.722***	9.56	0.544***	27.84
M.A/MSc	0.772***	33.91	0.883***	11.1	0.740***	30.66
MPhil/PhD	1.247***	15.11	1.431***	5.84	1.201***	13.84
Get technical training (yes=1)	0.132***	12.92	-0.038	-0.91	0.155***	14.98
Formal sector (yes=1)	0.283***	30.32	0.762***	18.69	0.233***	24.98
Occupation (ref= Clerical support worker)						
Manager	0.400***	15.02	0.545***	3	0.392***	15.04
Professional	0.250***	9.72	0.264	1.74	0.162***	6.24
Associate prof.	0.007	0.35	-0.265	-1.82	-0.023	-1.1
Skilled worker	-0.015	-0.68	-0.128	-0.82	-0.030	-1.44
Elementary worker	-0.036	-1.63	-0.168	-1.06	-0.050**	-2.32
Region (urban=1)	0.022***	2.69	0.085***	2.55	0.008	0.98
Province (Punjab as ref.)						
Sindh	0.023***	2.40	0.214***	5.14	-0.001	-0.08
KP	0.065***	5.97	0.150***	3.27	0.037***	3.38
Balochistan	0.131***	9.52	0.335***	3.84	0.120***	8.87
Constant	7.387***	169.64	7.648***	39.85	8.006***	191.08
R-squared	0.4215		0.5490		0.3935	
F-stat	733.95 (23, 23165)		121.36 (22, 2193)		617.71 (22, 20950)	
N	23189		2216		20973	

***pvalue<0.01 **pvalue<0.05

Source: LFS 2010-11

Annex 5

Table 4.8: Median Monthly Wages by Occupation and Sex (ages 10 +)

Codes	Occupation	Earning Ratio (%)	Share of women in employment (%)	Wage Gap(%)
11	Legislators And Senior Officials (Legislators, Senior Government Officials, Traditional Chiefs And Heads Of Villages, Senior Officials Of Special-Interest Organizations)	97	5	3
12	Corporate Managers (Directors And Chief Executives, Production And operations Department Managers, Other Department Managers)	95	5	5
13	General Managers	331	0	-231*
21	Physical, Mathematical And Engineering Science Professionals (Physicists, Chemists And Related Professionals, Mathematicians, Statisticians And Related Professionals, Computing Professionals, Architects, Engineers And Related Professionals)	69	3	31
22	Life Science And Health Professionals (Life Science Professionals, Health Professionals (Except Nursing), Nursing And Midwifery Professionals)	83	32	17
23	Teaching Professionals (College, University And Higher Education Teaching Professionals, Secondary Education Teaching Professionals, Primary And Pre-Primary Education Teaching Professionals, Special Education Teaching Professionals, Other Teaching Professionals)	80	35	20
24	Other Professionals (Business Professionals, Legal Professionals, Archivists, Librarians And Related Information Professionals, Social Science And Related Professionals, Writers And Creative Or Performing Artists, Religious Professionals)	36	6	64
31	Physical And Engineering Science Associate Professionals (Physical And Engineering Science Technicians, Computer Associate Professionals, Optical And Electronic Equipment Operators, Ship And Aircraft Controllers And Technicians, Safety And Quality Inspectors)	86	4	14

Codes	Occupation	Earning Ratio (%)	Share of women in employment (%)	Wage Gap(%)
32	Life Science And Health Associate Professionals (Life Science Technicians And Related Associate Professionals, Modern Health Associate Professionals (Except Nursing), Nursing And Midwifery Associate Professionals, Traditional Medicine Practitioners And Faith Healers)	65	51	35
33	Teaching Associate Professionals (Primary Education Teaching Associate Professionals, Pre-Primary Education Teaching Associate Professionals, Special Education Teaching Associate Professionals, Other Teaching Associate Professionals)	49	44	51
34	Other Associate Professionals (Finance And Sales Associate Professionals, Business Services Agents And Trade Brokers, Administrative Associate Professionals, Customs, Tax And Related Government Associate Professionals, Police Inspectors And Detectives, Social Work Associate Professionals, Artistic, Entertainment And Sports Associate Professionals, Religious Associate Professionals)	83	3	17
41	Office Clerks (Secretaries And Keyboard-Operating Clerks, Numerical Clerks, Material-Recording And Transport Clerks, Library, Mail And Related Clerks, Other Office Clerks)	92	2	8
42	Customer Services Clerks (Cashiers, Tellers And Related Clerks, Client Information Clerks)	133	9	-33*
51	Personal And Protective Services Workers (Travel Attendants And Related Workers, Housekeeping And Restaurant Services Workers, Personal Care And Related Workers, Other Personal Services Workers Astrologers, Fortune-Tellers And Related Workers, Protective Services Workers)	57	2	43
52	Models, Salespersons And Demonstrators (Fashion And Other Models, Shop Salespersons And Demonstrators, Stall And Market Salespersons)	117	1	-17*
61	Market-Oriented Skilled Agricultural And Fishery Workers (Market Gardeners And Crop Growers, Market Oriented Animal Producers And Related Workers, Market Oriented Crop And Animal Producers, Forestry And Related Workers, Fishery Workers Hunters And Trappers)	78	7	22

Codes	Occupation	Earning Ratio (%)	Share of women in employment (%)	Wage Gap(%)
62	Subsistence Agricultural And Fishery Workers	125	6	-25*
71	Extraction And Building Trades Workers (Miners Shotfirers, Stone Cutters And Carvers, Building Frame and Related Trades Workers, Building Finishers And Related Trades Workers, Painters, Building Structure Cleaners And Related Trades Workers)	38	2	63
72	Metal, Machinery And Related Trades Workers (Metal Moulders, Welders, Sheet-Metal Workers, Structural-Metal Preparers, And Related Trades Workers, Blacksmiths, Tool-Makers And Related Trades Workers, Machinery Mechanics And Fitters, Electrical And Electronic Equipment Mechanics And Fitters)	81	1	19
73	Precision, Handicraft, Printing And Related Trades Workers (Precision Workers In Metal And Related Materials, Potters, Glass-Makers And Related Trades Workers, Handicraft Workers In Wood, Textile, Leather And Related Materials, Printing And Related Trades Workers)	41	7	59
74	Other Craft And Related Trades Workers (Food Processing And Related Trades Workers, Wood Treaters, Cabinet-Makers And Related Trades Workers, Textile Garment And Related Trades Workers, Pelt, Leather And Shoemaking Trades Workers)	31	21	69
81	Stationary-Plant And Related Operators (Mining And Mineral Processing Plant Operators, Metal Processing Plant Operators, Glass, Ceramics And Related Plant Operators, Wood Processing And Paper Making Plant Operators, Chemical Processing Plant Operators, Power Production And Related Plant Operators, Automated Assembly Line And Industrial Robot Operators)	-	0	-

Codes	Occupation	Earning Ratio (%)	Share of women in employment (%)	Wage Gap(%)
82	Machine Operators And Assemblers (Metal And Mineral Products Machine Operators, Chemical Products Machine Operators, Rubber And Plastic Products Machine Operators, Wood Products Machine Operators, Printing Binding And Paper Products Machine Operators, Textile, Fur And Leather Products Machine Operators, Food And Related Products Machine Operators, Assemblers, Other Machine Operators And Assemblers)	75	0	25
83	Drivers And Mobile-Plant Operators (Locomotive Engine Drivers And Related Workers, Motor Vehicle Drivers, Agricultural And Other Mobile Plant Operators, Ships' Deck Crews And Related Workers)	169	0	-69*
91	Sales And Services Elementary Occupations (Street Vendors And Related Workers, Shoe Cleaning And Other Street Services Elementary Occupations, Domestic And Related Helpers, Cleaners And Launderers, Building Caretakers, Window And Related Cleaners, Messengers, Porters, Doorkeepers and Related Workers, Garbage Collectors And Related Labourers)	38	23	62
92	Agricultural, Fishery And Related Labourers	51	37	49
93	Labourers In Mining, Construction, Manufacturing And Transport (Mining And Construction Labourers, Manufacturing Labourers, Transport Labourers And Freight Handlers)	73	1	27

*Sample sizes were extremely small (N=1,7,3,1,6) and the skewed results with women earning much more than men, is not valid.

Wage Gap: =100* [Men's median earnings – Women's median earnings]/Men's median earnings

Source: LFS 2010-11