Dialogue on
Promoting Female Employment in Bangladesh for Realising Demographic Dividends

Realising the Demographic Dividend in Bangladesh
Promoting Female Labour Force Participation

Keynote presentation by
Mustafizur Rahman
Distinguished Fellow, CPD

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Study Title
Role of Women in Bangladesh's Middle-Income Journey
An Exploration of Governance Challenges from Labour Market Perspective

A study being conducted by the Centre for Policy Dialogue (CPD) in collaboration with the Embassy of Denmark in Bangladesh

Study Team

Mustafizur Rahman, Distinguished Fellow, CPD
Md. Al-Hasan, Research Associate, CPD

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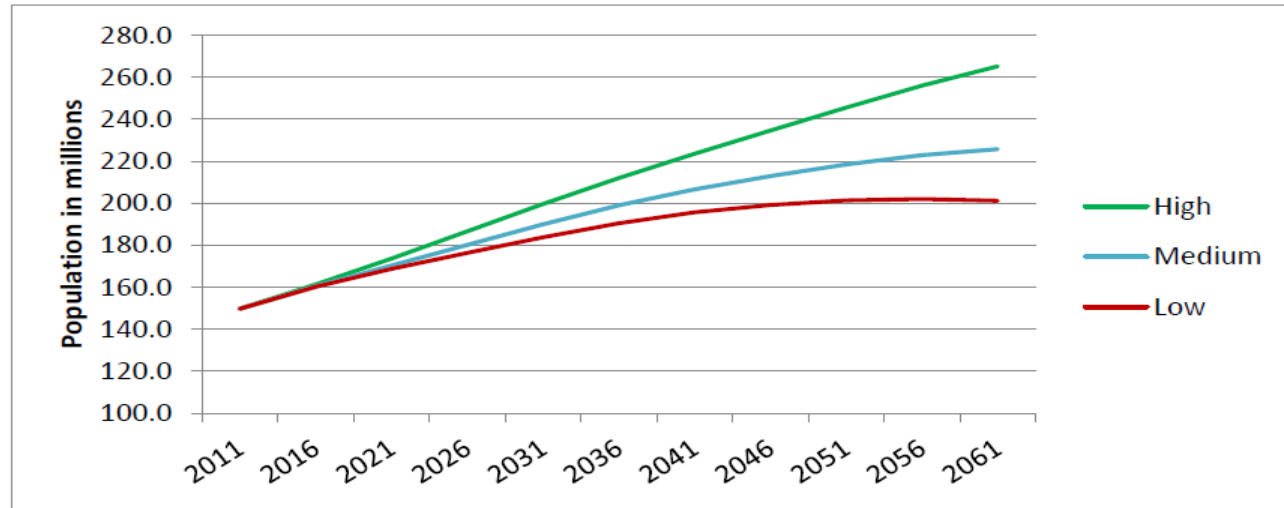Section IV. Returns to Schooling, Training, and Self-Employment: Results from Analyses

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Section I. Female Labour Force Participation (FLFP) in Bangladesh: Selected Stylised Facts

Demographic dividend and projected population 2011-2061
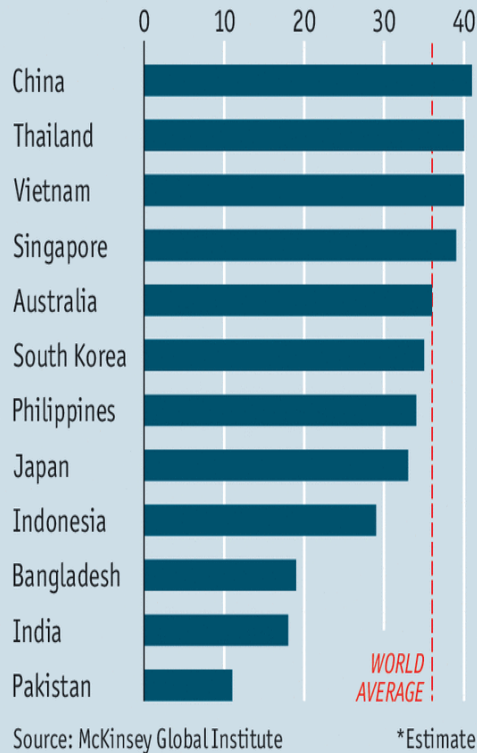
Source: Seventh Five Year Plan

- According to the 7ᵗʰ Five Year Plan, the core labour force age group in Bangladesh, between 15-59 years of age, will increase significantly by 2061. The increase will be from 86.7 million in 2011 to 152.3 million under the high scenario, 130.8 million under the medium scenario and to 117.1 million under the low scenario. The population is expected to stabilise at that level and start to decline

- Availability of a large number of young, healthy and educated workers ought to be seen as a significant advantage for Bangladesh in going forward in the twenty-first century

- Female employment will play an important role in realizing the potential benefits accruing from this demographic dividend

- Over the next three-four decades Bangladesh will enjoy the benefits of the demographic dividend, with low dependency ratio and high levels of workforce

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Some Stylised Facts

Half-hearted

Female contribution to GDP*, 2016, % of total

Country	
China	
Thailand	
Vietnam	
Singapore	
Australia	
South Korea	
Philippines	
Japan	
Indonesia	
Bangladesh	
India	
Pakistan	

WORLD AVERAGE
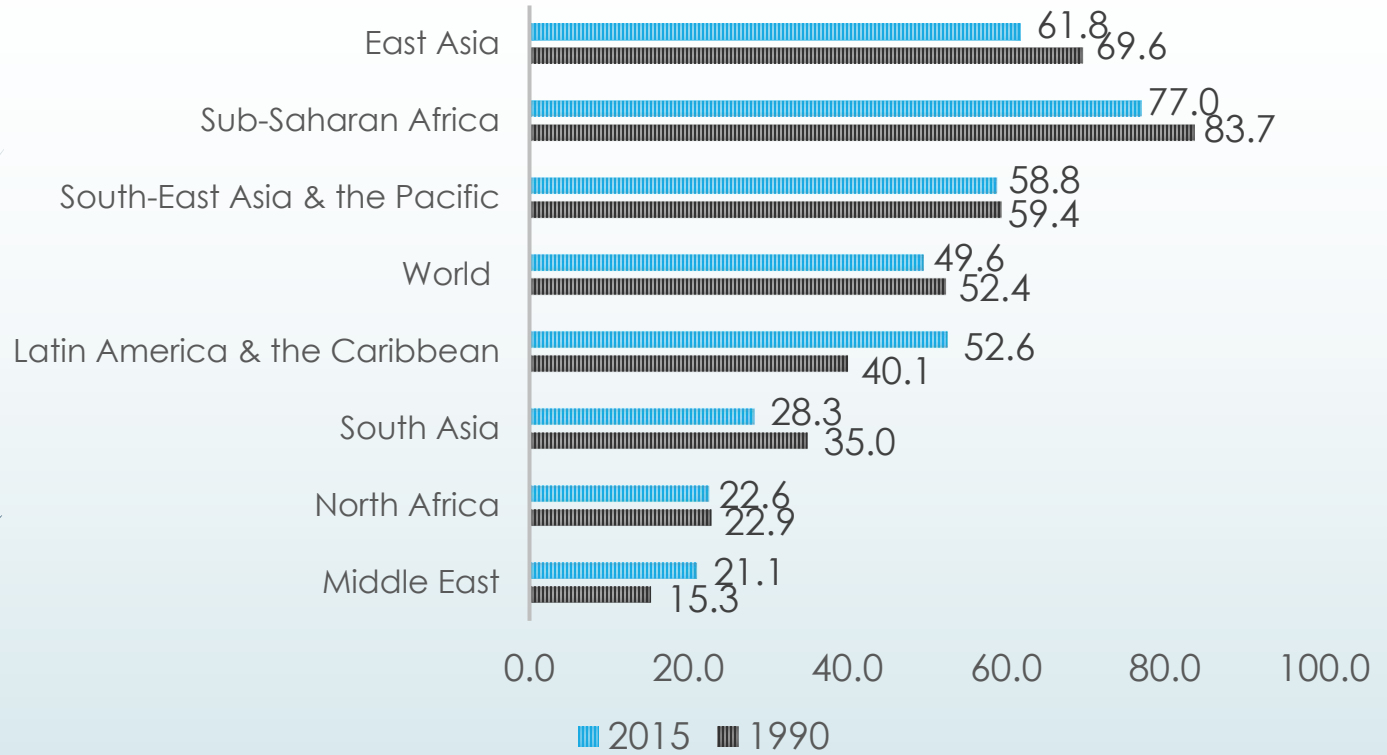
Source: McKinsey Global Institute   *Estimate

Economist.com

- Female labour force participation must be seen as an integral component of the Jobs Agenda in the Bangladesh context

- Ensuring women's full and productive participation in Bangladesh's economic life continues to remain a key concern for Bangladesh in moving forward in the twenty-first century

- Two observations:
  - ➢ Failure to account for women's true contribution to the Bangladesh GDP (value of women's unaccounted for labour was equivalent to about 77% - 87% of Bangladesh GDP according to CPD study findings)
  - ➢ Low participation of women in the Bangladesh labour market seriously undermines Bangladesh's potentials to realise the benefits accruing from the expected demographic dividend

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Global trends in FLFP

Global trends in FLFP

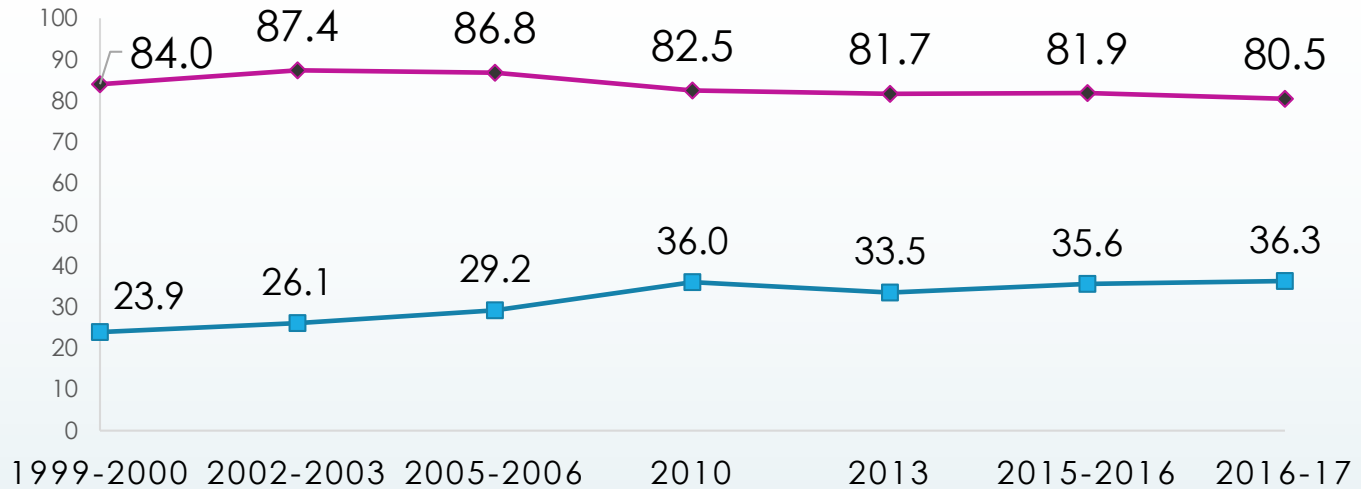| Region	2015	1990
East Asia	61.8	69.6
Sub-Saharan Africa	77.0	83.7
South-East Asia & the Pacific	58.8	59.4
World	49.6	52.4
Latin America & the Caribbean	52.6	40.1
South Asia	28.3	35.0
North Africa	22.6	22.9
Middle East	21.1	15.3

■ 2015 ■ 1990

Source: ILO (2018)

➡ Globally, FLFP is found to be lower than MLFP. The figures show that, rate of FLFP in South Asia (as also Bangladesh) is lower than the global averages

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Trends in Male-Female labour force participation (FLFP) in Bangladesh

Male: 84.0 · 87.4 · 86.8 · 82.5 · 81.7 · 81.9 · 80.5

Female: 23.9 · 26.1 · 29.2 · 36.0 · 33.5 · 35.6 · 36.3

Years: 1999-2000 · 2002-2003 · 2005-2006 · 2010 · 2013 · 2015-2016 · 2016-17

Legend: ◆ Male   ■ Female

Source: BBS (various years)

➡ Female labour force participation (FLFP) in Bangladesh is significantly lower than male labour force participation (MLFP)

➡ FLFP shows some rise between 2000 and 2010. However, it has come down between 2010 and 2013, rising somewhat thereafter to reach the 2010 level in 2016-17

➡ It is to be noted that, male labour force participation has followed a gradually declining trajectory since 2002-03

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People Not in Education, Employment, and Training (NEET) (% of Working age people)

Age Group	15-29	30-64	65+	Total
Male	8.1	6.1	52.9	10.8
Female	49.4	58.4	91.2	56.9
Total	29.8	32.4	69.0	34.0

Source: BBS (2018)

- A significant proportion of women in Bangladesh, in the various age cohorts, belong to the NEET category
- Bangladesh is missing out significantly because of absence of such large number of women from the job market

Implementing SDG 8: Attaining full employment and creating decent jobs for all
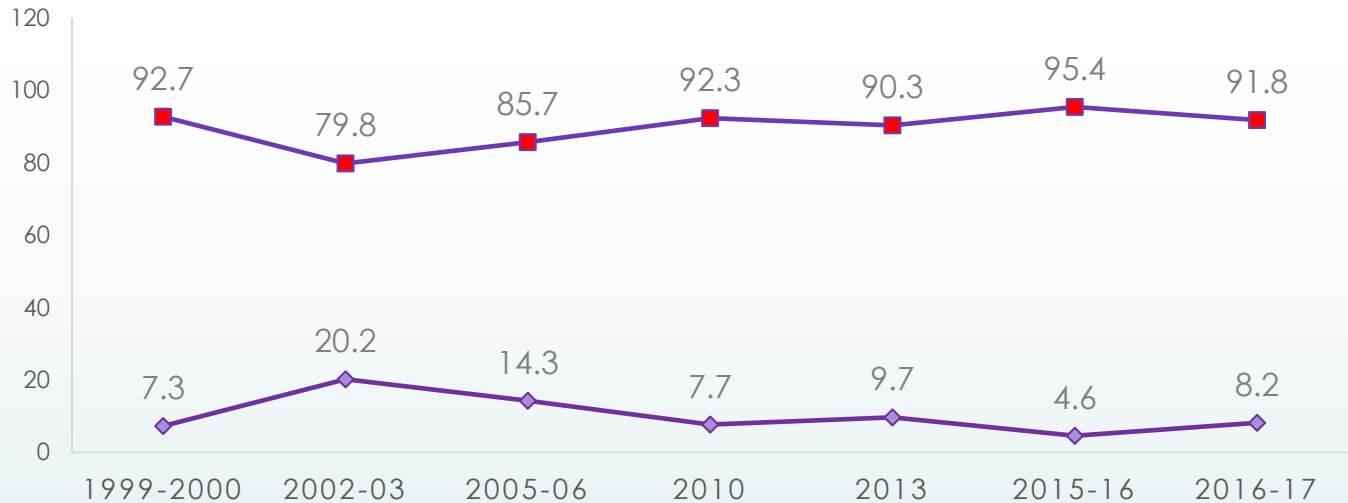
Goal 8 of the SDGs, which Bangladesh aspires to attain by 2030, include the following key targets:

8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training (NEET)

8.7 By 2025 end child labour in all its forms

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization

The above SDG targets can only be achieved only if policymakers give adequate attention to FLFP as part of implementing the job agenda in Bangladesh

Salient Features of FLFP: Trends in Formality and Informality

Source: LFS (various years)   ◆ Formal   ■ Informal

Chart data:

Year	Formal	Informal
1999-2000	7.3	92.7
2002-03	20.2	79.8
2005-06	14.3	85.7
2010	7.7	92.3
2013	9.7	90.3
2015-16	4.6	95.4
2016-17	8.2	91.8

- ➡ 85.1% of the total employed in 2016-17 were in informal employment in Bangladesh. For the female, the share was 91.8% in 2016-16 which was higher than male (82.1%)

- ➡ Evidence suggests that informality results in wage penalty and has other costs

- ➡ Move towards formalization remains a major challenge in the context of FLFP in Bangladesh

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Employed female aged 15 years and above, by economic sectors (in million)

Sector	2013	2015-16	2016-17
Agriculture	9.01	11.21	11.13
Industry	3.99	2.86	3.15
Service	3.85	3.70	4.37
Total	16.85	17.77	18.65

Source: BBS (various years)

➡ A truly disquieting trend: Between 2013 and 2016-17 female employment in industrial sector has come down by about 850 thousand

Status of Female Workers in Employment

Status in Employment	Male	Female	Share in Labour Force	Male	Female
Employer	95.6	4.4	4.4	6.1	0.6
Own Account Worker	72.8	27.2	44.3	46.5	39.3
Contributing family helper	24.4	75.6	11.5	4.0	28.4
Employee	75.5	24.5	39.1	42.6	31.2
Others	78.1	21.9	0.7	0.7	0.5
Total	69.3	30.7	100.0	100.0	100.0

Source: Estimated from QLFS 2016-17

- A large share of workers in Bangladesh was in self-employed (44.3%); 39.1% of the workers are employees, and the remaining 16.6% of the employed population were employers, unpaid family helpers, and in other types of employment

- Overwhelming majority of women are working as either own account worker, contributing family helper or as an employee

Occupational status of employed population

Indicators	Male (%)			Female (%)		
Occupation	Rural	Urban	Total	Rural	Urban	Total
Managers	1.1	4.6	2.1	0.2	1.6	0.6
Professionals	3.6	6.7	4.5	3.6	11.4	5.5
Technicians and Associates Professionals	1.6	3.8	2.3	0.6	1.8	0.9
Clerical Support Workers	1.3	2.9	1.8	0.4	1.7	0.8
Service and Sales Workers	18.1	30.0	21.6	3.8	8.4	4.9
Skilled Agricultural, Forestry and Fisharies	30.8	6.8	23.8	63.0	16.9	51.7
Craft and Related Trades Workers	15.0	21.5	16.9	12.4	33.0	17.5
Plant and Machine Operators, and Assembles	8.2	10.6	8.9	1.7	3.8	2.2
Elementary Occupations	20.1	12.5	17.9	14.1	21.1	15.8
Others Occupations	0.3	0.4	0.9	0.0	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: QLFS 2016-17

➥ Rural-bias and agriculture bias are common features of female employment in Bangladesh

➥ In urban areas, notable share of women as professionals, in crafts and trade and as service providers

Falling Real Wages

Year	2013	2015-16	Change (%)	2016-17	Change (%)
National					
Male	14,309	13,844	-3.2	13,583	-1.9
Female	13,712	12,732	-7.1	12,254	-3.8
Total	14,152	13,602	-3.9	13,258	-2.5
Urban					
Male	17,930	16,957	-5.4	17,106	0.9
Female	15,558	13,847	-11.0	13,321	-3.8
Total	17,192	16,022	-6.8	15,912	-0.7
Rural					
Male	12,512	12,211	-2.4	11,708	-4.1
Female	12,464	11,532	-7.5	11,206	-2.8
Total	12,500	12,098	-3.2	11,608	-4.0

Source: CPD IRBD 2018

➡ From 2015-16 to 2016-17 the national real average wages fell by 2.5%

➡ The average real wage decline for male was 1.9% whereas for female this was by 3.8%

➡ This is a disquieting trend having implications for the labour market, labour market participation of women and equity

Section II. Motivation, Methodology and Data Sources

Motivation and Methodology

Motivation

➡ Young (1995) shows that growth miracle in South Korea owed significantly visible rise in female labour force participation

➡ Sinha (2017), using modified Solow-Swan (1958) growth model and calibration studies, shows that if, within 5 years, female labour force participation rise by 11 % on an average, this would add one percentage point each year to the Bangladesh GDP

➡ The recent World Bank report on South Asia (Jobless Growth? 2018) states that in case of Pakistan and Sri Lanka one percentage point of economic growth would raise employment rate roughly by only 0.16 percentage points

➡ Falling employment elasticities of GDP growth observed in recent times. A decline from 0.55 for the period 2005-2010 (ADB, 2016) to 0.45 for 2016-2020 (ADB, 2016)

➡ Bangladesh's vision document target of accelerating the GDP growth rate and emerging as a developed country by 2041 will critically hinge on her ability to bring more women to the labour market and by providing them with more productive and remunerative employment opportunities

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Percentage share and Gini coefficient based on wage income: 2010 vs 2015-16

Wage inequality by Gender: 2010
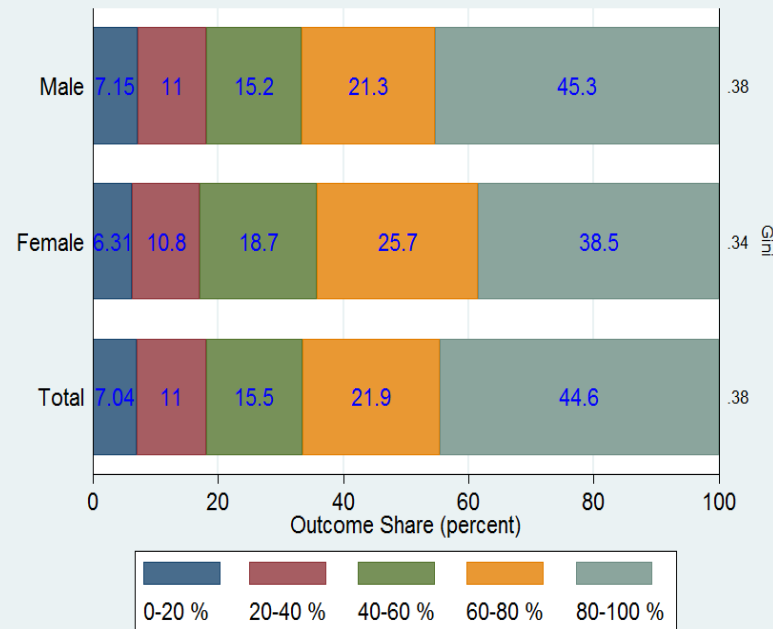
Wage inequality by Gender: 2015-16
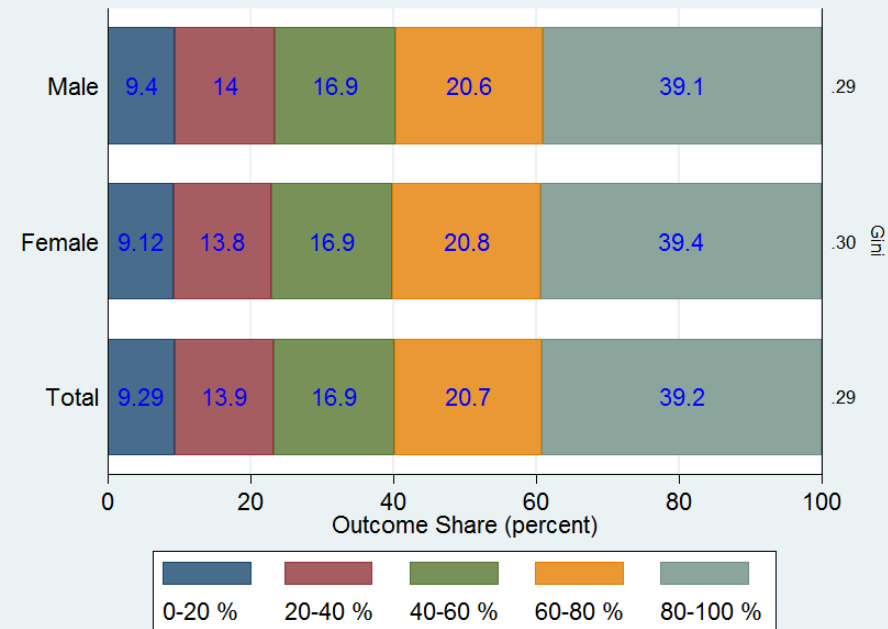
Source: Authors' calculation using LFS 2015-16 and 2010

- More participation of women in the labour market will also help reduce inequality in Bangladesh

- The graph reinforces the argument of reducing inequality through job creation, both male and female.

- Accordingly, the female jobs agenda must be seen as an integral part of inclusive growth in Bangladesh

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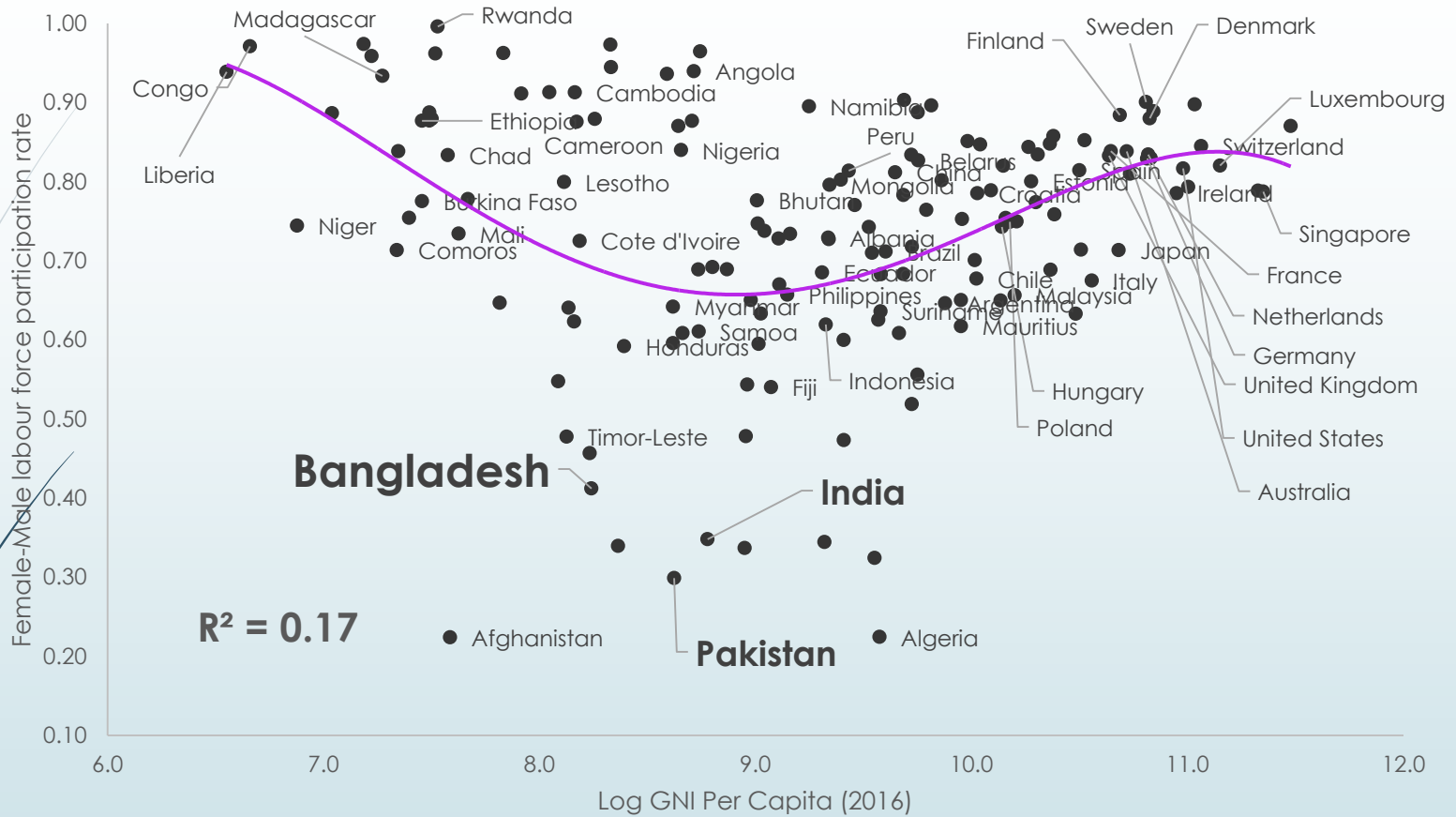# Percentage share and Gini coefficient based on female wage income: 2010 vs 2015-16

2010
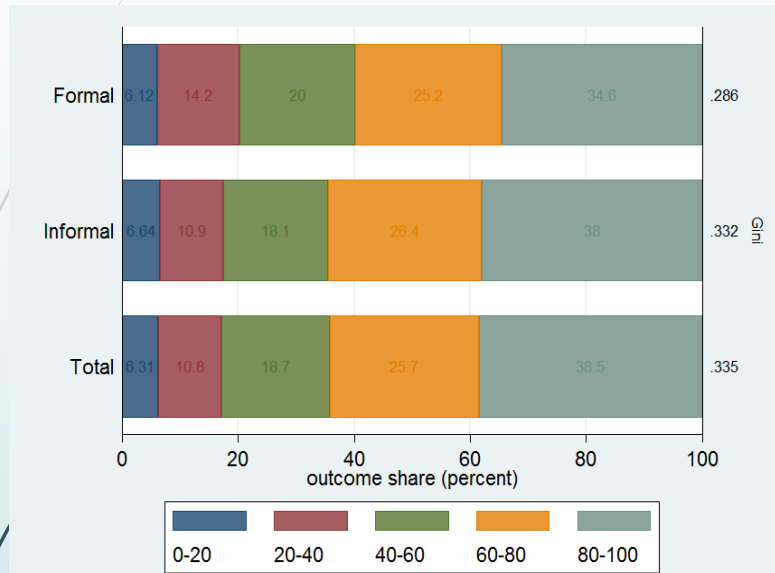
2015-16
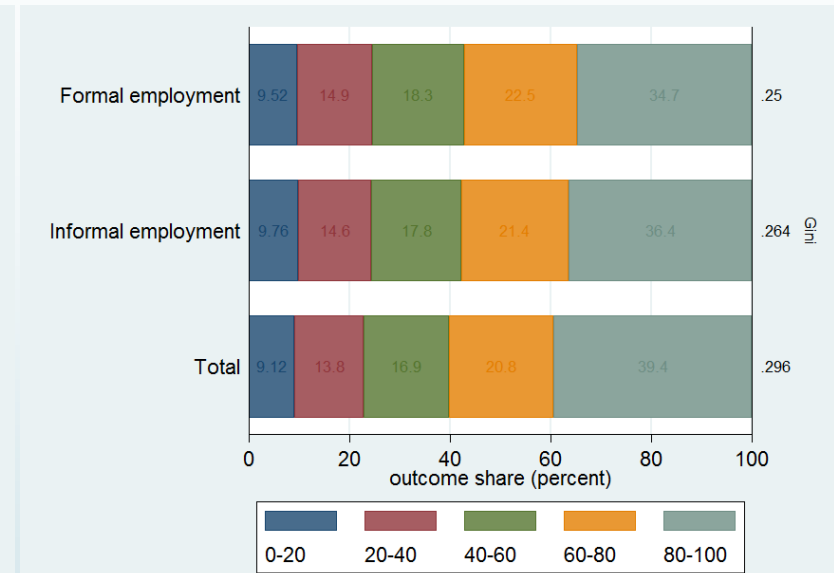
- If we consider, FLFP, and this is true for both formal and informal employment, unerring message is that higher FLFP will contribute to an equalising and inclusive development in Bangladesh

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U-Shape of FLFP: Women participation in various phases of development

Source: Authors' calculation using WDI (2018)

Can FLFP be Improved?

- ➡ Joint hypothesis test shows the validity of U-Shaped phenomena ($F = 7.3$ with P-value = 0.000, and $R^2 = 0.17$). As countries develop, at the initial stage FLFP rate tends to come down (sectoral transformation away from agriculture and higher affordability because o higher household income)

- ➡ However, the U-shaped hypothesis fitted weakly in case Bangladesh [and also for India and Pakistan]. This result is consistent with Verick (2014) and ADB (2016) since FLFP in Bangladesh has over time shown a rising trend

- ➡ On the other hand, as the U-shaped hypothesis indicates, there is a possibility that Bangladesh could potentially increase its FLFP up to 30 percentage points. This would give Bangladesh a unique opportunity to realise her demographic dividend

- ➡ There is, thus, a strong case to examine indepth the underlying factors which could stimulate greater FLFP in Bangladesh towards reaping the benefits of the demographic dividend and an SDG-aligned inclusive development

Methodology

➡ The paper is based on:

> ➢ Review of secondary literature on female employment in developing country contexts

> ➢ Analysis of labour force survey data for Bangladesh for various points in time, and WDI cross country data, from FLFP perspectives

> ➢ Results of empirical analysis by employing dissimilarity index, multiple regression analysis, binary choice models, mean decomposition, quantile decomposition, quantile treatment effect, and quantile regression methods to have a deeper understanding as regards the underlying factors driving the FLFP

➡ A number of empirical exercises was carried out to draw insights on FLFP in the Bangladesh context:

> ➢ Evidence of U-shaped hypothesis using polynomial regression analysis

> ➢ Occupational segregation using dissimilarity index

> ➢ Entry into labour force, by using discrete choice models

> ➢ Conditional gender wage gap, wage gap between formal paid –informal self employment divide, by using Oaxaca–Blinder (O–B) decomposition, and quantile decomposition

> ➢ Contribution of informality to the gender wage gap, by using quantile regression

> ➢ Return to schooling using instrumental variable quantile regression and return to Bachelor or higher degree using quantile treatment effect

> ➢ Return to training using quantile treatment effect on match sample

Data Sources

- Analysis based on seven LFSs: 1999-2000, 2002-03, 2005-06, 2010, 2013, 2015-16, and 2016-17

- World Development Indicator (WDI) from World Bank

- ILO cross country labour statistics

- Expert group meeting (EGM)

- Data from relevant literature

# Section III. Determinants of FLFP in the Bangladesh Context

U-Shaped relationship between education and FLFP

Education	Labour Force	Not in Labour Force	Total	Share in Labour Force
None	33.0	67.0	100.0	33.3
Primary	27.6	72.4	100.0	27.3
Secondary	28.6	71.4	100.0	32.3
Higher Secondary	31.7	68.3	100.0	4.8
Tertiary	52.7	47.3	100.0	2.2
Total	30.5	69.5	100.0	100.0

Source: Extracted from LFS 2015-16
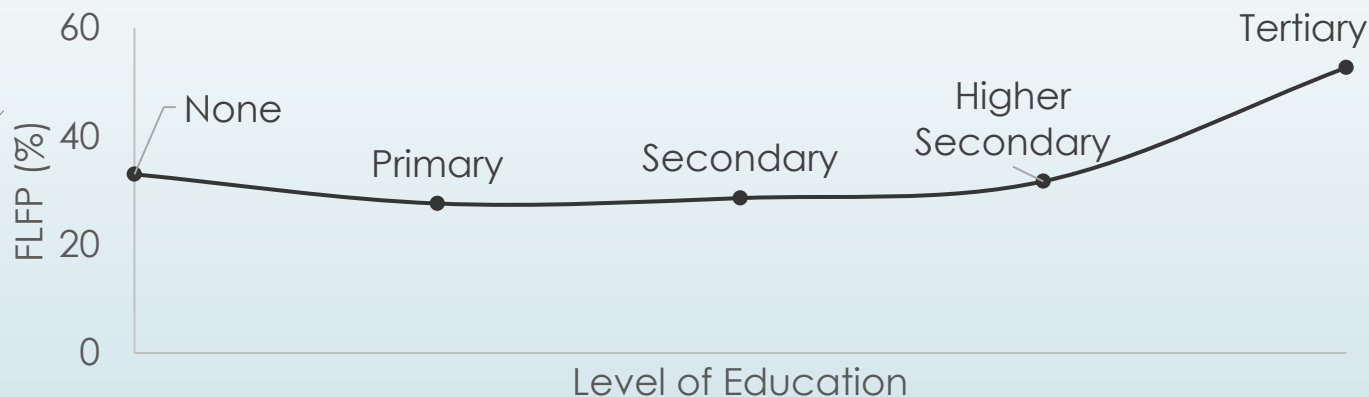
Source: Authors' calculation using QLFS 2015-16

- Education is the singlemost important determinant of FLFP (Cazes and Verick, 2013) [Details in next section]

- There appears to be a U-shaped pattern as regards the relationship between educational attainment and FLFP

- With regard to the determinants of female labour force, rate of FLFP shows a consistent rise with rise in educational attainment from primary education.

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Determinants of labour force participation for married women

Dependent variable: Labour Force Participation (age 18-40 years)

Variables	LPM	Marginal Effect	
		Probit	Logit
No Education (Base group)	--	--	--
Primary	-0.036***	-0.036***	-0.035***
	(0.004)	(0.004)	(0.004)
Secondary	-0.089***	-0.089***	-0.088***
	(0.004)	(0.003)	(0.003)
Higher Secondary	-0.107***	-0.107***	-0.108***
	(0.006)	(0.006)	(0.006)
Tertiary	0.062***	0.069***	0.068***
	(0.008)	(0.008)	(0.008)
Other Variables?	Yes	Yes	Yes
Obs.	18,130	18,130	18,130
R-squared	0.11	0.08	0.08

Source: Authors' calculation based on QLFS 2015-16

- Poorly educated women are forced to work for survival reasons and they try to combine domestic duties with paid work (Kanjilal-Bhaduri and Pastore, 2017)

- Our analysis shows interesting results. Up to higher secondary level, FLFP tends to be increasingly lower compared to those with no education. FLFP tends to rise, however, for women with education beyond the higher secondary level

Determinants of married women labour force participation

➡ We specifically chose married women of between 18-40 years for the determinants analysis as was suggested by participants at the EGM

➡ Other variables include age and its square, Log (family income) and its square, female head dummy, number of kids age under six, household size, urban-rural dummy, training dummy, rural-urban migration, divisional dummy, and religion dummy

➡ All coefficients from the regression analysis show expected signs

Male-Female Occupational segregation in labour market

Year	Overall	Rural	Urban
2016-17	29.6	32.4	34.9
2015-16	29.1	29.6	32.3
2010	28.7	24.8	41.9
2005-06	28.6	27.4	33.9
2002-03	17.6	12.9	29.3

Source: Authors' calculation based on various LFSs

➡ We have carried out occupational segregation analysis (following Duncan and Duncan Dissimilarity Index) to understand about presence of male-female occupational segregation

➡ The analysis shows a high degree of occupation segregation between male and female in the labour market

➡ The table shows that occupational segregation is on the rise in rural areas. This would suggest that new jobs created in rural areas are being taken more by men which is not a good sign

Oaxaca-Blinder and quantile decomposition of male-female wage differential
Dependent Variable: Log Monthly Wages

Quantile	$\tau(10)$	$\tau(20)$	$\tau(30)$	$\tau(40)$	$\tau(50)$	$\tau(60)$	$\tau(70)$	$\tau(80)$	$\tau(90)$	Oaxaca-Blinder
Total effect	0.117 (0.009)	0.147 (0.023)	0.133 (0.023)	0.122 (0.015)	0.080 (0.00)	0.159 (0.022)	0.194 (0.031)	0.163 (0.024)	0.083 (0.029)	0.122 (0.011)
Char. effect	0.000 (0.013)	0.000 (0.000)	0.000 (0.000)	0.080 (0.015)	0.000 (0.000)	0.143 (0.015)	0.125 (0.028)	0.105 (0.015)	0.083 (0.036)	0.065 (0.008)
Coeff. effect	0.117 (0.016)	0.147 (0.024)	0.133 (0.023)	0.042 (0.019)	0.080 (0.000)	0.016 (0.017)	0.069 (0.033)	0.057 (0.023)	0.000 (0.06)	0.057 (0.009)

Source: Authors' calculation based on QLFS 2015-16

➡ The Inverse Mill's Ratio from Heckman Two Step regression suggests no sample selection problem in estimating the wage equation. The Inverse Mill's Ratio is very small (β =0.0002) and S.E.=0.019

➡ An average woman earns 12.2% lower wage than man. Characteristics effect of 6.5% and the coefficient effect, which is labour market discrimination against women, is 5.7%

➡ Overall, we see a blend of coefficient and characteristics effect throughout the wage distribution spectrum. At the lower deciles coefficient effects (e.g. discrimination) tend to be higher, while at the higher deciles, characteristics effects (e.g. education/age etc. differential) tend to be more prominent

Oaxaca-Blinder and quantile decomposition of gender wage gap in formal employment

Dependent Variable: Log Monthly Wages

Quantile	τ (10)	τ (20)	τ (30)	τ (40)	τ (50)	τ (60)	τ (70)	τ (80)	τ (90)	Oaxaca-Blinder
Total effect	-0.080 (0.071)	-0.061 (0.038)	0.000 (0.022)	0.027 (0.027)	0.000 (0.011)	0.000 (0.019)	0.000 (0.026)	0.036 (0.039)	0.089 (0.036)	0.016 (0.022)
Char. effect	0.000 (0.031)	0.000 (0.029)	0.000 (0.029)	0.000 (0.029)	0.000 (0.021)	0.000 (0.017)	-0.040 (0.024)	-0.069 (0.028)	0.000 (0.035)	-0.009 (0.015)
Coeff. effect	-0.080 (0.064)	-0.061 (0.026)	0.000 (0.025)	0.027 (0.030)	0.000 (0.022)	0.000 (0.024)	0.041 (0.022)	0.105 0.031)	0.089 (0.047)	0.026 (0.018)

Source: Authors' calculation based on QLFS 2015-16 data

➡ The average wage gap between men and women is insignificant 1.6% (statistically insignificant)

➡ For the first decile of wage distribution, formally employed women earn 8% higher wage than male; in the second decile women earn 6.1% higher wage than male

➡ In the 3rd, 4th, 5th, 6th, 7th deciles we observe similarity between male and female in terms of wages

➡ In the 8th decile male employees employees earn 3.6% higher wage than females and in the 9th decile male employees earns 8.9% more wage than female employees

➡ In 8th and 9th deciles characteristics favour women but labour market discrimination appears to result in wage gap in these deciles

Oaxaca-Blinder and quantile decomposition of gender wage gap in informal employment

Dependent Variable: Log Monthly Wages

Quantile	τ (10)	τ (20)	τ (30)	τ (40)	τ (50)	τ (60)	τ (70)	τ (80)	τ (90)	Oaxaca-Blinder
Total effect	0.182 (0.034)	0.154 (0.025)	0.182 (0.000)	0.087 (0.004)	0.123 (0.021)	0.080 (0.000)	0.113 (0.019)	0.169 (0.038)	0.223 (0.018)	0.143 (0.010)
Char. effect	0.000 (0.005)	-0.047 (0.022)	0.000 (0.000)	0.000 (0.004)	0.039 (0.011)	0.000 (0.000)	0.074 (0.017)	0.134 (0.029)	0.163 (0.031)	0.059 (0.006)
Coeff. effect	0.182 (0.034)	0.201 (0.011)	0.182 (0.000)	0.087 (0.000)	0.083 (0.022)	0.080 (0.000)	0.039 (0.009)	0.036 (0.022)	0.061 (0.027)	0.084 (0.009)

Source: Authors' calculation based on QLFS 2015-16 data

➡ The average wage gap between informally employed male and female employee is 14.3 % where 8.4% originates from labour market discrimination against women and 5.9% from characteristic effect

➡ Throughout the wage distribution, we observe higher wage gap for informal employment than what we observe for the full sample.

➡ At the bottom of the wage distribution (up to 4th decile), we find wage gap due to labour market discrimination against women

➡ The above tables indicate that the observed overall wage gap between male and female originates primarily from the unregulated informal employment. However, decile-wise this does not hold. This is evinced by the Quantile Regression exercise in the next table

Introducing informal employment as a source of gender discrimination: Evidence from quantile estimates

Quantile Regression of Log Monthly Wage Equation

(by taking interaction between informal employment and female dummy)

Dependent Variable: Log of Monthly Wage

Variables\Q	τ (10)	τ (20)	τ (30)	τ (40)	τ (50)	τ (60)	τ (70)	τ (80)	τ (90)	OLS
Female	0.085**	0.017	0.003	-0.023*	-0.038**	-0.029	-0.041*	-0.065***	-0.076**	-0.014
	(0.041)	(0.015)	(0.019)	(0.012)	(0.017)	(0.018)	(0.021)	(0.016)	(0.037)	(0.019)
Informal Emp × Female	-0.227***	-0.131***	-0.074***	-0.028*	-0.001	-0.005	0.006	0.032*	0.034	-0.031
	(0.047)	(0.020)	(0.021)	(0.015)	(0.019)	(0.019)	(0.022)	(0.017)	(0.040)	(0.021)
Other variables?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	9,256	9,256	9,256	9,256	9,256	9,256	9,256	9,256	9,256	9,256
R-squared	0.14	0.19	0.21	0.24	0.28	0.33	0.35	0.36	0.37	0.41

Oaxaca-Blinder decomposition
Male-Female wage gap by sector and rural-urban divide

	Rural	Urban	Agriculture	Industry	Service
Male	Tk. 9,931 (0.000)	Tk. 12,789 (0.000)	Tk. 8,227 (0.000)	Tk. 11,195 (0.000)	Tk. 13,304 (0.000)
Female	Tk. 9,150 (0.000)	Tk. 11,166 (0.000)	Tk. 7,013 (0.000)	Tk. 10,135 (0.000)	Tk. 11,820 (0.000)
Difference (%)	**8.0 (0.000)**	**14.0 (0.000)**	**17.3 (0.000)**	**9.9 (0.000)**	**11.6 (0.000)**
Explained (%)	-2.0 (0.000)	7.00 (0.000)	2.5 (0.070)	-0.2 (0.78)	10.1 (0.000)
Unexplained (%)	10.0 (0.000)	7.00 (0.000)	14.5 (0.000)	10.7 (0.000)	2.24 (0.040)

Source: Authors' calculation based on QLFS 2015-16

➥ In the rural labour market the wage gap is 8.0% while in the urban market wage gap is 14.0%

➥ Because of the higher occupational segregation we observe higher wage gap in the urban labour market

➥ Among the sectors, agriculture has the highest wage gap (17.3%) followed by 11.6% in the service sector. The wage gap is lowest in industry sector (9.9%)

Section IV. Returns to Schooling, Training, and Self-Employment: Results from Analyses

An instrumental variable quantile estimates of return to schooling

Dependent Variable: Log (Hourly Wage)

Quantiles	Male	Female
	IVQREG (1)	IVQREG (2)
$\tau(15)$	0.029*** (0.009)	0.027 (0.017)
$\tau(25)$	0.055*** (0.009)	0.030*** (0.009)
$\tau(50)$	0.052*** (0.007)	0.069*** (0.014)
$\tau(75)$	0.057*** (0.005)	0.069*** (0.010)
$\tau(85)$	0.071*** (0.003)	0.071*** (0.004)
Other variables included?	Yes	Yes
Instrument:		
Father Education	**Yes**	**Yes**
Obs.	3953	565

Variables	Male	Female
	IVGMM (3)	IVGMM (4)
Education	0.073*** (0.0101)	0.081*** (0.0305)
Other variables Included?	Yes	Yes
Instrument:		
Father's Education	**Yes**	**Yes**
Constant	3.92*** (0.157)	3.744*** (0.608)
Obs.	3,954	565
R-squared	0.29	0.11

Source: Authors' calculation using QLFS 2015-16

Return to schooling

- The average rate of return to schooling for male is 7.3% and for female it is 8.1%

- The average return for female is higher roughly by 1%

- Return to schooling is 2.9% at 15 percentiles for male. At the same percentile point return to education for female is found to be statistically insignificant (4th column). This gives us an additional insight as to why education has a U-shaped pattern in FLFP

- Return to schooling highest an 7.1 (7.1)% at 85th percentile for male (female) (2nd and 4th column). The return is 5.5 (3.0)% at 25th percentile for male (female), 5.2 (6.9)% at 50th percentile for male (female), and 5.7 (6.9)% at 75th percentile for male (female)

- For those who are employed, the returns to schooling is found to be higher for higher wage-earning females. However, for women to be employable they would need other endowments besides education such as skills and training

QTE of bachelor or higher degree on earnings for female

Dependent variable: Log Hourly Wage

Quantile	QTE (1)	QTE (2)
$\tau(15)$	0.906	0.309
	(0.019)	(0.071)
$\tau(25)$	0.908	0.263
	(0.013)	(0.068)
$\tau(50)$	0.901	0.280
	(0.011)	(0.083)
$\tau(75)$	0.875	0.326
	(0.015)	(0.086)
$\tau(85)$	0.681	0.306
	(0.018)	(0.064)
Other variables included?	No	Yes
Obs.	17,142	17,142

Source: Authors' calculation based on QLFS 2015-16 data

➥ At the 15th percentile on account of bachelor or higher degree the earning is 30.9% higher. At the 25th percentile the effect is 24.7%, at 50th percentile 50.4%, at 75th percentile 30.1% and at 85th percentile the effect is 30.8%

Return to training for female: evidence from matching sample

Training Institute	Labour Force	Not in Labour Force	Share in Training
Government	55.1	44.9	9.8
Non-Government Institute	87.7	12.3	75.9
NGO	83.4	16.6	5.8
Foreign	83.0	17.0	0.5
Joint venture	70.6	29.0	2.9
Others	72.3	27.7	5.1
Total	83.0	17.1	100.0

Source: BBS (2017)

➡ The regression analysis (Probit) shows that training in last one year increases labour force participation by 49%. Except in government-imparted training, FLFP is significantly higher for all other trainings

➡ Table suggests that 83% of female workers who received training in some form participate in the labour force

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Quantile treatment effect of return to training for female

Dependent variable: Log Hourly Wage

Quantile	QTE (1)
τ (15)	0.371 (0.025)
τ (25)	0.382 (0.020)
τ (50)	0.405 (0.020)
τ (75)	0.431 (0.025)
τ (90)	0.405 (0.027)
Other controls included?	NO

Source: Authors' calculation based on QLFS 2015-16 data

➡ **The exercise indicates that returns to training is considerably high for all percentiles of female employees**

Challenges facing self-employment: wage gap

Quantile	Formal Paid vs Informal Self-Employed		
	Total Effect	Char. Effect	Coeff. Effect
10	2.449 (0.079)	0.559 (0.062)	1.889 (0.102)
20	2.380 (0.044)	0.656 (0.023)	1.724 (0.049)
30	2.369 (0.034)	0.727 (0.035)	1.642 (0.046)
40	2.301 (0.036)	0.731 (0.029)	1.569 (0.045)
50	2.261 (0.043)	0.757 (0.043)	1.480 (0.034)
60	2.213 (0.031)	0.733 (0.020)	1.480 (0.034)
70	2.128 (0.044)	0.742 (0.030)	1.386 (0.049)
80	1.998 (0.043)	0.742 (0.024)	1.256 (0.048)
90	1.936 (0.520)	0.791 (0.025)	0.145 (0.052)
Oaxaca-Blinder	2.254 (0.029)	0.802 (0.057)	1.443 (0.061)

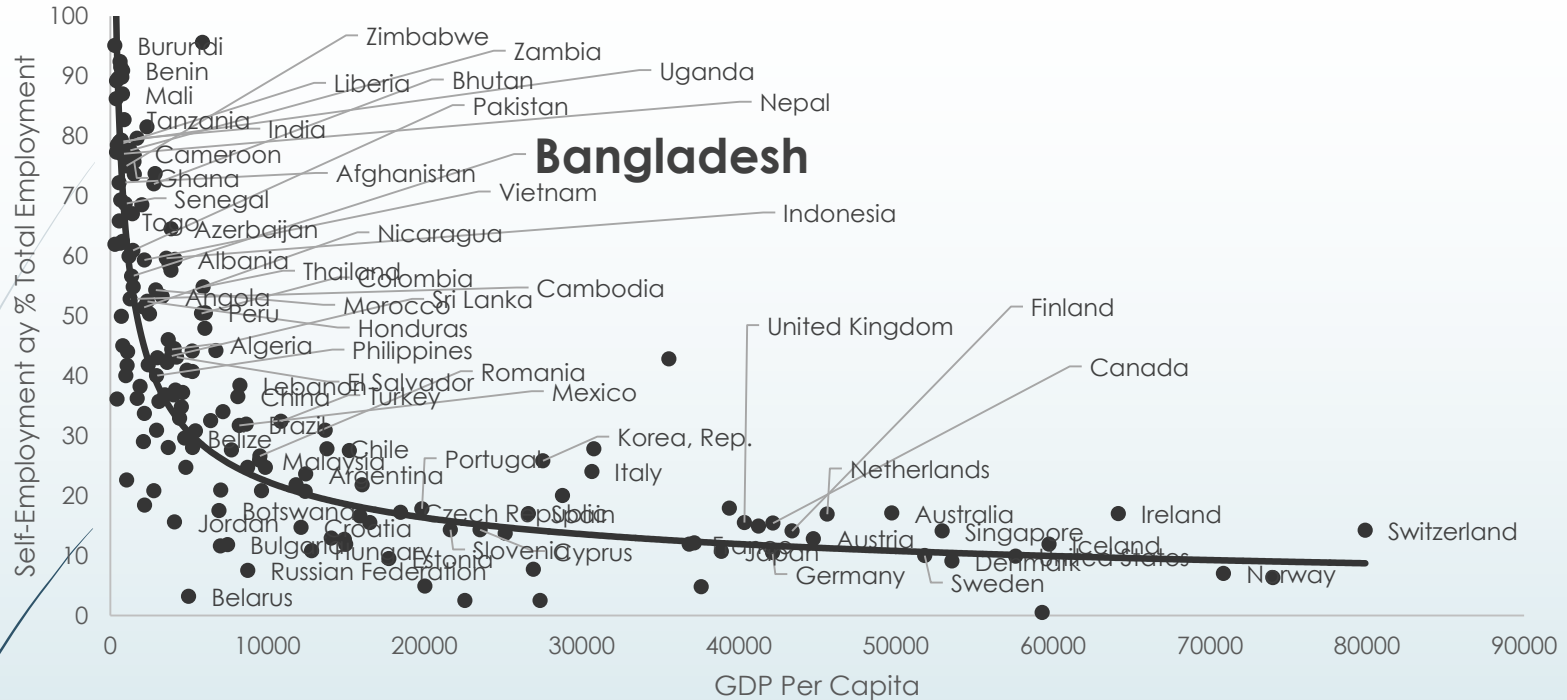Source: Authors' calculation based on QLFS 2015-16 data

Source of wage gap

	Formal Paid vs Informal Self-Employed
Total Differential	2.254 (0.029)
Formal Employment Wage Premium	1.443 (0.061)
Endowment Effects	
: Education	0.324 (0.019)
: Age	0.009 (0.005)
: Total	0.802 (0.057)

Source: Authors' calculation based on QLFS 2015-16 data

➡ The average gap is 225%; of this 144% is wage premium in formal paid jobs. This at the top (194%) wage gap is highest (245%) for the first decile and tends to be narrower

➡ Education accounts for 32.4% of the wage gap (out of 80.2% of endowment effect). This clearly indicates that the self-employed sector is dominated by mostly less educated individuals

➡ Whilst, self-employment could be a short term strategy, in the medium to long term creating formal employment opportunities ought to be the desired strategy for Bangladesh

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Status of self-employment in middle income journey: transition from self-employment
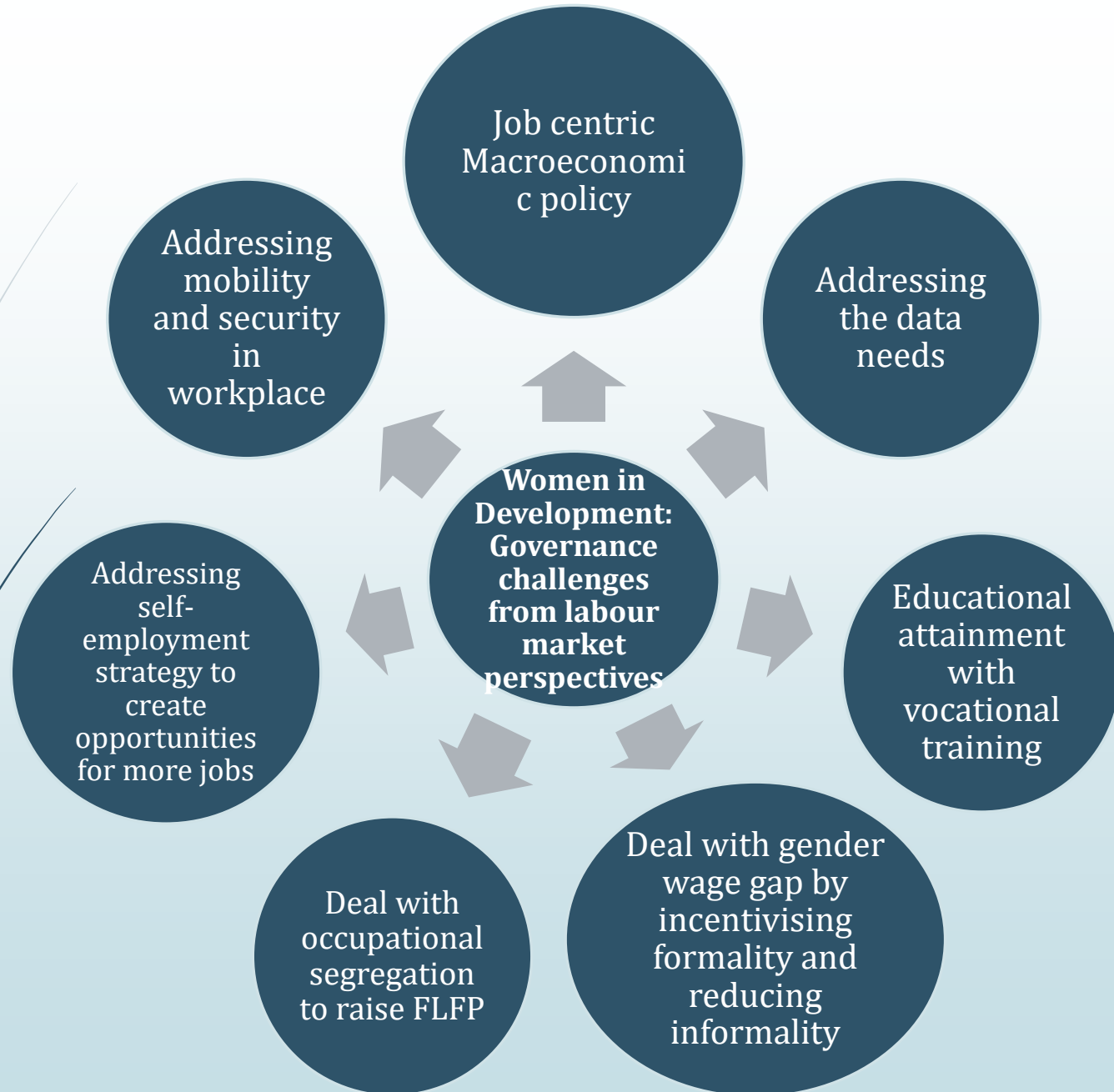

Source: Authors' calculation using WDI 2018

- La Porta and Shleifer (2014) estimate that doubling of GDP per capita is associated with a reduction in self-employment of about 5.0 percentage points. This estimate would indicate that a low-income country that starts with 50% self-employment, and then grows consistently at 7% per year so that per capita income doubles every 10 years, will see its self-employment fall to the high-income countries' level of 20% in about 60 years

- In Bangladesh the share of self-employed female has risen from 18.5% in 2010 to 27.2% in 2016-17

- Employment opportunities will need to be created at a fast pace in the formal sectors if this trend is to be arrested

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Section V. Policy Perspectives

Taking advantage of higher FLFP: Policy Perspectives

Job centric Macroeconomic policy

Addressing mobility and security in workplace

Addressing the data needs

Women in Development: Governance challenges from labour market perspectives

Addressing self-employment strategy to create opportunities for more jobs

Educational attainment with vocational training

Deal with occupational segregation to raise FLFP

Deal with gender wage gap by incentivising formality and reducing informality

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Job-centric Macroeconomic Policies

➡ Whilst FLFP merits particular attention, much will hinge on overall macroeconomic policies that support job-centric growth. Recent labour force surveys indicate disquieting trends, of the nature of jobless growth. This is likely to have adverse implications particularly for the FLFP

➡ Job-inducing infrastructure, promotion of labour-intensive sectors, productivity enhancing interventions, targeted programmes to facilitate women's entry into the 'new-economy' sectors and greater integration with global job market will be needed towards higher FLFP and for drawing the benefits of the potential demographic dividend

Education with Skills Endowment

- Our analysis shows that returns to education, for female, tends to be limited, up to higher secondary level. On the other hand, training and skills endowments premium is found to be very high. In view of this, if the demographic dividend is to be realized, there is a need to blend vocational training with female education, to enable greater and gainful labour force participation in job markets of the future

- Reinforce female education with skills endowment. Targeted programmes are needed for skills development through on-the-job training and apprenticeships – creating scope for female workers to move up the skills/employment/grades ladder

- Tertiary education has significant impact on FLFP. Consequently, ensuring female education beyond high school level should be seen as an important female job market strategy, particularly in view of the opportunities of the emerging 'new economy'

Ensuring evenness of occupation

➡ Our analysis revealed significant labour market segmentation with concomitant wage penalty for women. This was found to be more prominent in urban labour market. Targeted programmes will need to be taken for women to have the skills to enter into the emerging urban job market opportunities

➡ In the rural economy, in the backdrop of falling share of agriculture, male employment is becoming more prominent. Special efforts will need to be taken for incentivizing female employment in the emerging rural non-farm sectors

Reduce informality in FLFP

Promote formalisation through policy support

- Our analysis shows that there is predominance of informality in the FLFP. The analysis also revealed the high wage penalty on account of this

- Both carrots (in the form of reforms and actions which reduce the costs and increase the benefits of formalisation e.g. fiscal incentives, access to credit and financial services) and sticks (enforcement of improved laws and regulations relating to minimum wage provisions, labour rights) will need to be deployed to encourage and incentivise transition from informality to formality

- It is important to identify barriers (fiscal, regulatory) to formalisation and take gradual steps (simplification of tax laws, facilitation of compliance, easing of entry as a formal entity, a supportive regulatory regime) to promote formal employment and formal sectors in the economy

Labour market reforms

- Labour Law stipulates the rights and entitlements of workers in enterprises, business units and clusters. However, to be eligible, the units need to have a threshold number of employees (e.g. 20 as per Article No. 183 in 2013 Amended Labour Law). A vast number of informal female workers are in micro and home-based enterprises where the vicious cycle of 'low-productivity – low-income' is pervasive. Labour laws and related institutions must safeguard interests and rights of women in MSMEs

- A large number of informally employed female workers are engaged in various hazardous activities. Special targeted programmes needed for these female informal workers, particularly to eliminate child female labour

Generate decent jobs for women

➡ About one-fourth of women in Bangladesh are engaged in self-employment and this share has been on the rise. However, many of these are in low-paying jobs. Scaling-up and entrepreneurship development will need to be supported through appropriate financial instruments

➡ Self-employment in Bangladesh comes with a significant earnings penalty

➡ Strategic policy support should be geared to encourage generation of more decent jobs in formal sectors

Data Needs

➡ It is good to see that in recent times the BBS has been taking initiatives to generate high frequency data on labour force participation in Bangladesh

➡ However, there should be more detailed information on labour force participation of women, particularly focusing on barriers to women's participation in labour force, on reasons why women leave jobs, information on job longevity, data as regards job-shifting, reasons for preferring self-employment etc.

➡ Enterprise level surveys are required to help identify factors that enhance productivity and raise earnings of female workers at the enterprise level towards a deeper understanding about FLFP in Bangladesh

Section VI. Concluding Remarks

Concluding Remarks

➥ Issues concerning FLFP has remained a relatively understudied subject in Bangladesh

➥ In view of Bangladesh's aspiration to be a more inclusive society, from the perspective of attaining the SDGs, particularly Goal 4, 5, 8, 10 and to be able to realise the potentials of the demographic dividend, an indepth understanding of the underlying dynamics and driving forces concerning FLFP in Bangladesh labour market is urgently needed.

➥ Required: Generation of more extensive data concerning female participants in the labour market

➥ FLFP should be accorded more prominence in the upcoming 8FYP, vision 2041 document and the SDGs implementation plan of Bangladesh

➥ Bangladesh's voluntary national reports (VNRs) in the context of the SDGs should monitor progress with regard to various dimensions of FLFP in light of the relevant SDG targets and indicators

➥ FLFP in the particular context of overseas job market is emerging as an important issue in Bangladesh. This component of the FLFP merits a closer examination

Thank You