

Note

Bangladesh Development Studies
Vol. XLII, June-September 2019, Nos. 2 & 3

Rural Transformation, Occupational Choice and Poverty Reduction in Bangladesh during 2010-2016

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Between 2010 and 2016, 90 per cent of the poverty reduction of Bangladesh occurred in rural areas. The gains in poverty reduction were largely driven by non-agricultural sectors (i.e., both industry and services). This paper describes the recent evolution of employment and wages in rural Bangladesh. The analysis highlights the increasing trend into non-farm employment in the rural sector and some of the factors linked to the choice of non-farm jobs. The paper relies on the Household Income and Expenditure Surveys for 2010 and 2016 with additional evidence drawn from the Labour Force Surveys. Overall, there has been a more pronounced non-farm orientation of jobs in rural areas since 2010. This process has been observed for both males and females, and for those with higher education levels. Better connectivity and microfinance are also positively linked with off-farm employment. The increase in non-farm employment was much faster in Eastern than Western divisions of the country, which can partly explain the re-emergence of the East-West divide in terms of welfare after 2010.

Keywords: Rural Transformation, Non-farm, Salaried Work, Female Labour

JEL Classification: J41, J43, J62, I30, I39

I. INTRODUCTION

Bangladesh has experienced an impressive reduction in poverty in the past two decades. Between 2000 and 2016, the upper poverty rate fell from about half to 25 per cent of the population. Extreme poverty also fell from 34 to 13 per cent of the population. Between 2010 and 2016, poverty continued to decline, though at a slower pace. Importantly, about 90 per cent of the poverty reduction observed since 2010 occurred in rural areas (See *Hill and Genoni* paper included in this volume).

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This paper uses the *Household Income and Expenditure Survey* (HIES) to describe some important features of the rural transformation in Bangladesh and its potential implications for poverty reduction. It describes the structure and recent trends in rural employment and wages, the spatial variation in job growth, and factors that can be related to households' choosing off-farm labour.

The main data source for this paper is the HIES for the years 2010 and 2016. The HIES cross-sectional survey is the main official source of information about households' consumption, poverty, and income in Bangladesh. The HIES 2016/17 data was collected from April 2016 until March 2017. The previous rounds of HIES data were collected in 2000, 2005, and 2010.¹ The analysis is complemented with information from the *Labour Force Survey*, as well as macro-economic indicators.

The paper relies on sector of activity and wage data from HIES and does not focus on studying changes in individual and household income. This is determined by the fact that income data in HIES 2016/17 was found to suffer from some quality issues that would require a careful treatment of missings and zeros, which is beyond the scope of this paper.²

The next section describes some important trends that show the rapid transformation of Bangladesh's economy. Section III describes factors that could be linked to participation in off-farm activities and assesses their relative importance with a regression model. Section IV presents recent trends in real wages. Finally, Section V summarises the main findings and discusses some of their implications for poverty reduction.

II. CHANGES IN SECTORAL SHARES OF OUTPUT AND EMPLOYMENT

Before we proceed to discuss the nature of rural transformation, a few structural aspects of the macro context may be highlighted. These aspects can be

¹ For more information about the HIES, see Ahmed, Arias-Granada, Genoni *et al.* (2017) and Ahmed, Roy, Yanez-Pagans *et al.* (2017).

² An analysis of the quality of the income data in HIES in 2016/17 compared to 2010 was conducted for this poverty assessment (Hill and Endara 2019). Overall, it was found that, although there is no obvious systematic error that undermines the 2016/17 income data entirely, the income data is less complete and noisier than the income data collected in 2010, with coding errors also limiting the number of observations for which accurate income data was recorded in 2016/17. A larger proportion of 2016/17 households lack complete income data than was the case in 2010. Richer households in rural areas in self-employment activities are more likely to be missing income data. Wage information seems to be less affected, although it is also noisier in 2016.

grouped into two broad categories. The first category relates to indicators that stand for positive structural change in the long term, i.e. compared to the benchmark status of the early 1990s, when the country embarked on the path of market liberal economic reforms. Three aspects of long-term growth and structural change may be emphasised.

First, the rate of economic growth has accelerated in Bangladesh over the last three decades (Table I). The key growth indicator of per capita GDP had stagnated at a meagre 1.5 per cent in the 1980s but has been on the rise since then, posting higher growth in each subsequent quinquennial, making Bangladesh a striking example of the least volatile growth in the post-1990 period. Thus, the average growth in per capita GDP accelerated from 2.6 per cent in 1991-95 to 3.3 per cent in 1996-00, 3.9 per cent in 2001-05, 4.5 per cent in 2006-10 and 5.1 per cent in 2011-16, rising further to 5.9 per cent in 2016/17. In terms of growth rate in per capita GDP, Bangladesh now belongs to the club of the top 20 growth performers.

TABLE I
LONG-TERM MACRO-ECONOMIC PERFORMANCE
IN BANGLADESH, 1991-2014

Five-yearly average		Years				
		1991-95	1996-00	2001-05	2006-10	2011-16
GDP growth rate		4.50	5.21	5.44	6.03	6.45
Per capita GDP growth rate		2.62	3.33	3.96	4.55	5.15
Share in GDP	Agriculture	29.23	25.68	25.03	19.65	16.12
	Industry	21.04	24.87	26.20	27.67	30.17
	Services	49.73	49.45	48.77	52.69	53.71
	Overall	18.75	21.50	23.62	26.44	28.78
Investment (as per cent of GDP)	Public	6.65	6.78	6.44	4.78	6.50
	Private	12.10	14.74	17.18	21.66	22.28
	Overall	22.20	28.32	32.88	41.42	42.38
Trade ratio (as per cent of GDP)	Export	8.30	11.08	13.36	17.72	17.95
	Import	13.90	17.24	19.52	23.70	24.43
Remittance (in Billion US \$)		0.97	1.57	2.93	7.87	14.35
Budget deficit excluding foreign grants (as per cent of GDP)		-5.20	-4.50	-4.52	-4.48	-3.85
Inflation		6.10	5.83	3.12	7.66	6.26

Source: Bangladesh Bureau of Statistics (*Statistical Year Book 2017* and year books for previous years). Remittance, budget deficit and inflation figures are averages for FY2013-FY2018 and calculated from World Bank, *Bangladesh Development Update* (October 2018).

Second, impressive growth acceleration has been accompanied by noticeable shifts in the composition of output. Agriculture's share in GDP declined from 29.5 per cent in 1989/90 to 20.3 per cent in 2009/10, falling further to 14.7 per cent in 2016/17. The most dramatic expression of structural change is seen in the rising GDP share of industry, which increased from 20.8 per cent in 1989/90 to 29.9 per cent in 2009/10, climbing further to 32.4 per cent in 2016/17. The service sector's share in GDP initially stabilised at 50 per cent during the period between 1989/90 and 2009/10, but rose faster in the 2010s, reaching 52.8 per cent in 2016/17.

Third, all these changes have been achieved at a low level of fiscal deficit (not exceeding the 4 per cent cut-off point over the last two decades) and a relatively well managed inflation (kept well within 8 per cent over the last decade), while maintaining a private sector-oriented, liberalised trade regime.

The second category of macro aspects relates to recent changes, especially over the last five years. This sub-group of issues is pertinent to our subsequent analysis because they directly affect wellbeing outcomes as captured by the 2016 HIES. While the progressive features of growth acceleration and structural change in GDP have been retained in this specific sub-period as well, there are some disconcerting signs. First, the private investment rate has barely increased during 2011-16 compared to 2006-10. The public investment rate has increased considerably, as a result of which the total investment rate has risen by more than two percentage points (from 26.4 to 28.7 per cent).

Second, the growth of exports during this period has visibly decelerated. The export-GDP ratio has remained almost flat (17.7 per cent in 2006-10 and 17.9 per cent in 2011-16). The sluggishness in private investment combined with deceleration in exports led to a very slow growth of imports during the period. Third, although the absolute value of workers' remittances sent from abroad has increased from US\$ 7.87 billion in 2006-10 to US\$ 14.35 billion in 2011-16, it has declined as a proportion of GDP. Thus, the amount of current transfers as a share of GDP has declined from 9.9 per cent in 2012/13 to 6.9 per cent in 2015/16, dipping to 5.6 per cent in 2017/18 (Table II).

TABLE II
MACRO INDICATORS ON THE RECENT
PERFORMANCE OF THE BANGLADESH ECONOMY

Description	FY13	FY14	FY15	FY16	FY17	FY18
GDP Growth Rate and Per Capita Income						
GDP growth (% , 2005-06 base year)	6.0	6.1	6.6	7.1	7.3	7.9
GDP growth Per Capita (%)	4.8	4.8	5.4	5.9	6.1	6.7
Per capita GDP (US \$, official estimate)	976.0	1110.0	1236.0	1385.0	1544.0	1675.0
Per capita GNI (US \$, official estimate)	1054.0	1184.0	1316.0	1465.0	1610.0	1751.0
Inflation						
Rate of inflation (CPI, %) (year on year)	6.8	7.3	6.4	5.9	5.4	5.8
Savings & Investment (% of GDP)						
Gross domestic saving	22.0	22.1	22.2	25.0	25.3	22.8
Gross national saving	30.5	29.2	29.0	30.8	29.6	27.4
Private investment	21.7	22.0	22.1	23.0	23.1	23.3
Of which: FDI	1.2	0.8	0.9	0.6	0.7	0.6
Public investment	6.6	6.6	6.8	6.7	7.4	8.0
Central Govt. Budget (% of GDP)						
Total revenue	10.7	10.4	9.6	10.0	10.2	10.6
Total expenditure	14.5	13.8	13.5	13.8	13.6	15.1
Overall budget deficit	3.8	3.6	3.9	3.8	3.5	4.5
Balance of Payment (% of GDP)						
Trade (merchandise export + merchandise import)	40.1	38.4	35.0	33.1	31.0	32.9
Exports	17.7	17.2	15.7	15.1	13.6	13.1
Imports	22.4	21.2	19.3	18.0	17.4	19.7
Current transfers	9.9	8.6	8.1	6.9	5.3	5.6
Current account balance (including transfers)	1.6	0.8	1.5	1.9	-0.5	-3.5
Public Debt and Official Reserves						
Total Debt as % of GDP	32.1	31.7	31.8	31.5	30.6	31.2
External Debt as % of GDP	14.9	14.1	12.2	11.9	11.3	12.0
Gross Reserves (in months of imports)	5.5	5.8	7.0	7.9	8.0	6.2
Money and Credit						
M2 Growth (% , year-on-year)	16.7	16.1	12.4	16.3	10.9	9.2
Ratio of private sector credit to GDP (%)	37.7	37.8	37.9	38.7	39.3	40.3
Population (millions)*	157.2	159.1	161.0	162.9	164.9	166.9
Population growth rate	1.2	1.2	1.2	1.2	1.2	1.2

Source: World Bank, *Bangladesh Development Update: Powering the Economy Efficiently* (October 2018).

All these long-term trends and recent changes in the composition of national output may have implications for the structure of rural personal income and employment.

2.1 Structure and Trends in Rural Employment

Consistent with the changes in the structure of GDP and rural personal income, the pattern of rural employment has also changed during the two decades since 1995/96. Several points are noteworthy. First, during the period between 1995/96 and 2010, agriculture's share in total rural employment dropped by only 5.6 percentage points, compared to the larger decrease in the share of agricultural GDP, which fell by 9.2 percentage points (compare Table III to Table II). This is

expected in the initial phase of rural structural transformation. However, this familiar reality has changed on the ground in the 2010s. First, agriculture's share in total rural employment decreased by 16.6 percentage points over the six-year period 2010-16, compared with a 5.6 percentage point drop for the entire period from 1995/6 to 2010. Second, the rapid decline in the proportion of agricultural employment has been matched by an equally rapid increase in the share of industrial employment (with a 9.5 percentage point increase in manufacturing and a 5.6 percentage point rise in the construction sector).

TABLE III
SECTORAL DISTRIBUTION OF RURAL EMPLOYMENT, 1995/96-2016

	1995/96 (%)	2010 (%)	2016 (%)
Agriculture	59.3	53.7	37.14
Industry	11.2	18.2	33.32
Manufacturing	7.5	14.5	23.98
Construction	3.7	3.7	9.34
Services	29.5	27.1	29.53
Total	100.0	100.0	100.0

Source: Calculated from primary data of HIES, various rounds.

Note: In making sectoral classification of workers, the following route was adopted. Workers working in multiple sectors are dropped from the analysis. Only workers who work in exclusively in one sector have been considered, for example, those who only work in agriculture have been compared with those who only work in manufacturing.

We also check for the consistency of the HIES-based findings with the *Labour Force Survey* (LFS) data (Table IV) and find the following congruent trends: (a) the share of agricultural employment for male workers is declining fast; (b) the employment share of the industrial sector for both male and female workers is rapidly increasing; and (c) the rural service sector's employment share for both male and female workers is decreasing fast (or stagnating as per HIES). The previous thesis that the declining share of agricultural employment is matched by an acceleration in service-sector-driven rural non-farm employment (Hossain and Bayes 2009, 2018, Khan 2015) is not vindicated by either HIES 2016 or LFS 2013. We surmise that, by the end of the 2000s, service sector employment in rural areas was already much overblown, acting like a sponge to absorb the surplus farm labour. The earlier trend of crowding into activities at the "lower end of the productivity scale" in trade and service sectors needed structural correction, hence the decline in the employment share of rural services.

TABLE IV
**SECTORAL DISTRIBUTION OF RURAL EMPLOYMENT
 BY GENDER, 2000-2013**

	Male workers (2000)	Male workers (2013)	Female workers (2000)	Female workers (2013)
Agriculture	63.3	52.8	58.3	65.2
Industry	8.8	29.5	17.2	24.1
Manufacturing	5.8	11.8	15.9	19.1
Construction	2.9	17.7	1.2	5.1
Services	27.9	17.7	24.2	10.7
Transport	19.2	7.6	6.0	0.5
Other services	8.8	10.2	18.2	10.2
Total	100.0	100.0	100.0	100.0

Source: Calculated from primary data of LFS, various rounds.

The upshot of the above is to assert that a distinct tilt towards non-farm jobs, and away from farm employment, has been more pronounced in the decade of the 2010s. We have also seen that, within the plethora of non-farm activities, it is the manufacturing sector (followed by construction) that emerged as the most promising source of rural employment. It is, however, difficult to unpack the nature of industrial activities within the manufacturing sector based on either LFS or HIES.

Table V presents evidence from the LFS on three categories of households: (a) “pure farm” (where all workers are engaged in agricultural activities), (b) “pure non-farm” (where all workers are engaged in non-agricultural activities), and (c) “mixed” (where some workers have non-farm occupations and others have farm occupations). For each of these categories, we classify the workers further according to their labour status, which includes four categories: (a) self-employed, (b) casual wage labourer, (c) salaried or regular wage labourer, and (d) unpaid family helper. The evidence shows that the proportion of salaried workers listed in the pure non-farm category increased dramatically, from 21 per cent to 37 per cent, between 2000 and 2013. The share of casual wage workers also increased, though the rise was much less pronounced. In contrast, the share of non-farm self-employment decreased by 20 percentage points during the same period. Clearly, the rural non-farm sector has taken a decisive turn towards wage employment, especially in favour of salaried jobs, in the 2010s. The latter is suggestive of a perceptible transition from short-term to durable employment arrangements and augurs well, with the emergence of the industrial sector as the main source of demand for rural non-farm jobs.

TABLE V
**DISTRIBUTION OF RURAL WORKERS BY HOUSEHOLD
 TYPES AND LABOUR STATUS**

Household Types	2000				2013			
	Self	Unpaid	Casual	Salaried	Self	Unpaid	Casual	Salaried
Pure Farm	42.1	13.9	42.1	1.9	49.8	26.3	22.5	1.4
Mixed	44.8	20.9	18.8	15.4	39.3	27.8	16.1	16.7
Pure non-farm	59.3	7.2	12.8	20.7	39.6	5.3	18.4	36.7
All	48.0	13.5	27.6	10.8	43.2	21.7	19.0	16.2

Source: Sen *et al.* (2018).

In addition, there are gender differences in the form of wage remuneration, which is one criterion to distinguish casual wage employment from salaried work. Applying this criterion, we see that the proportion of salaried jobs in total non-farm wage-employment jobs, as estimated from HIES, is higher for females. The latter was assessed at 43 per cent for male wage workers and 65 per cent for female wage workers in 2016. Compared to 2010, the share of salaried workers among female wage workers has increased (Annex tables).

Overall, the main message of this sub-section is that the rural labour market has continued its non-farm orientation in the last decade. In addition, this process does not seem to be taking place through the expansion of self-employment opportunities, but is being increasingly defined by more wage-employment opportunities, such as salaried jobs.

2.2 Spatial Variation in the Growth of Non-farm Jobs

The other important issue to consider is whether rural non-farm jobs are spatially concentrated in a few places or instead represent widely dispersed activities. The first aspect to note is that there is considerable variation in the proportion of rural workers with non-farm occupations across the eight divisions of the country (see Tables VIa and VIb). Dhaka, Chittagong and Barisal report the highest prevalence of non-farm jobs (some 70 per cent or above), in contrast to Rangpur, Rajshahi and Khulna (50 per cent or less); the third group of Mymensingh and Sylhet belongs to the middle order (ranging from 54 to 58 per cent).

TABLE VIA
**VARIATION IN THE INCIDENCE OF NON-FARM
 JOBS BY DIVISION, 2016**

Division Code	Division Name	Percentage of individuals work in non-farm jobs (weighted)	Percentage of individuals in farm jobs (weighted)
10	Barisal	75.0	25.0
20	Chittagong	69.0	31.0
30	Dhaka	71.0	29.0
40	Khulna	50.0	50.0
45	Mymensingh	54.0	46.0
50	Rajshahi	49.0	51.0
55	Rangpur	47.0	53.0
60	Sylhet	58.0	42.0

Source: Calculated from the primary data of HIES 2016.

TABLE VI B
**VARIATION IN THE INCIDENCE OF NON-FARM
 JOBS BY DIVISION, 2010**

Division Code	Division Name	Per cent of workers in non-farm jobs (weighted)	Per cent of workers in farm jobs (weighted)
10	Barisal	66.0	34.0
20	Chittagong	53.0	47.0
30	Dhaka	58.0	42.0
40	Khulna	42.0	58.0
50	Rajshahi	43.0	57.0
60	Sylhet	61.0	39.0

Source: Calculated from the primary data of HIES 2010.

Secondly, this pattern of unevenness has become more pronounced during the 2010s. Dhaka and Chittagong divisions—the leading regions of the Eastern part of the country—experienced the largest quantum increase in non-farm orientation, while Rajshahi (and Rangpur) divisions—the lagging regions of the Western part of the country—experienced the least growth in rural non-farm jobs. Khulna division witnessed some moderate growth in rural non-farm jobs during the period, but is still a long way from reaching the league of leading regions.

Thirdly, Barisal and Sylhet were the two leading divisions in terms of rural non-farm jobs in 2010. Sylhet division has experienced decline in the incidence of non-farm jobs since then, while Barisal has continued to witness impressive growth in non-farm jobs. The divergent fortunes of Sylhet and Barisal are

showing up not only in the trends in non-farm jobs but also in schooling rates, with Barisal gaining an edge over Sylhet, despite being the poorer region income-wise.³

Finally, the unevenness of the incidence and growth of rural non-farm jobs broadly corresponds to—and may be driving—the worsening East-West divide in the 2010s. Dhaka and Chittagong not only led the league, but also experienced the fastest growth in the creation of rural non-farm jobs, compared to the lagging regions of Rajshahi and Rangpur, which experienced the least expansion.

III. WHAT DRIVES THE OCCUPATIONAL CHOICE?

The preceding analysis of rural employment points to the major structural shift that has occurred in the 2010s towards non-farm sectors—highlighting the importance of “wages and salaries” income—with attendant emphasis on non-farm wage employment, especially in the manufacturing sector. The latter emerged as a destination of labour movement for both male and female workers (Table IV). This is the crux of the rural transformation in Bangladesh. At the same time, we have seen that there is a large spatial variation in the spread of non-farm jobs. What are the factors that are likely to be associated with the occupational choice of rural workers (broadly defined, i.e., including both self-employment and wage employment) in opting for non-farm jobs as opposed to farm jobs?

We focus on six sets of factors that may correlate with occupational choice among rural workers: (a) accumulation of human capital, (b) access to finance, (c) adoption of agricultural technology, such as farm mechanisation, (d) access to domestic and international migration, (e) proximity to large cities, and (f) susceptibility to natural shocks. The relevance of these factors is highlighted by the development literature on the role of the non-farm sector in the process of rural structural transformation. Each of these elements is briefly sketched out below.

³ The puzzle of Barisal versus Sylhet may be explained by a range of economic and social circumstances, such as lower fertility rate, higher female schooling, higher female labour force participation, greater out-migration propensity, enhanced reliance on domestic migration (highest among all divisions), and the least exposure to foreign migration (which can often discourage labour force participation in the receiving communities). However, this falls outside the scope of the present paper.

3.1 Human Capital and Financial Capability: Drivers Relating to Capability

Human Capital

The relevance of educational human capital has long been recognised in explaining the transition of rural populations—especially over the generations—from the farm to the non-farm sector (Galor and Zeira 1993). This is because non-farm work such as regular wage employment (salaried work) in non-agricultural sectors requires some threshold level of educational human capital. Access to formal service sector jobs, as well as most manufacturing jobs, such as employment in the readymade garment (RMG) industry, is usually conditional on having some forms of human capital. Most of the female workers employed in the RMG sector have at least primary education (Heath and Mobarak 2015). However, it remains unclear which aspect of human capital is crucial to accessing non-agricultural jobs—beyond literacy and numeracy. Whether it is the power of reasoning that comes with exposure to education, or the capacity to receive on-the-job training, or simply a screening device for recruiting relatively skilled workers in non-agricultural jobs possibly requires further research. These ambiguities notwithstanding, there is adequate evidence to state that human capital increases the chances of being in the non-farm sector and, through that channel, aids rural structural transformation. Accordingly, we use the information on the “completion of various levels of education” as the indicator of human capital and expect that the chances of getting into non-farm jobs are likely to increase with each level of education.

Access to Finance

Non-farm occupations are often out of the reach of many rural workers, because such activities require considerable investment in a business enterprise. In the context of widespread credit market failure, the choice of self-employment over wage employment depends critically on initial asset endowments and type of endowments, and ultimately on the initial distribution of assets (Banerjee and Newman 1993). However, in the context of rural Bangladesh, the credit access problem may not be as severe as in the typical developing country (Mahmud and Osmani 2017), due to the vast presence of microfinance institutions (MFIs). Non-farm orientation by way of accumulation of non-farm assets can be facilitated by the access to financial capital provided by MFIs, which have continued to expand at a moderate pace in the 2010s. In this study, we use the information on “borrowing of loans from MFIs” as an indicator of access to finance for the rural context.

3.2 Mechanisation, Urban Proximity, and Migration: Drivers Relating to Opportunity

Access to Agricultural Mechanisation

Access to improved agricultural technology has been an important driver of production growth in agriculture (Sen *et al.* 2007). In the 1980s and 1990s, the prevalent technology was HYV seed-fertilizer-irrigation technology. The rapid progress of the HYV technology—popularly known as the “green revolution”—has been initiated first in the eastern region (Dhaka and Chittagong divisions) in the 1970s and 1980s, then moved to the western parts of the country (Rajshahi and Rangpur divisions) in the 1990s and 2000s, before it moved to the south (Khulna and Barisal divisions) in the 2000s and 2010s. By 2016, this new seed-fertiliser-irrigation technology reached almost every nook and corner of the country. However, rural regions differ in other technological aspects, commonly known as the mechanised service market for renting services for tillage and threshing operations. Some regions have moved faster in the use of power tillers, tractors, and power threshers. The use of these mechanised services enabled considerable costs savings, hence their growing popularity among land-poor farmers. Consequently, we hypothesise that access to farm mechanisation technology is likely to counteract the tendency to opt for non-farm work and encourage new agricultural practices.

Another possibility must also be considered. To the extent that the use of mechanised technology requires less farm labour, it may shift farm labour towards non-farm work. This process may have a gender dimension, as well. For instance, it is possible that male farm labour is replaced and sent to non-farm work, while female labour may take former male workers’ place in the farm sector. In other words, we may find a non-farm orientation of male workers alongside the farm orientation of female workers. However, the counter-argument is that there are likely to be very minimal labour substitution effects from the use of these technologies—more in the case of the power thresher than in the case of tillage operations (Hossain, Rahman and Nath 2017). Hence, the matter needs to be resolved empirically. Accordingly, we use the information on “whether the household has made use of mechanised services for tillage and threshing operations” as the indicator of agricultural mechanisation.

Urban Proximity

Urban proximity may matter for occupational choice for several reasons. First, it directly increases the likelihood of finding non-farm jobs in the urban sector through the migration channel. Commuting to urban areas for seasonal

work becomes feasible with closer proximity. Second, it increases the productivity of existing rural non-farm production through improved marketing and technology linkages with upstream urban markets (World Bank 2009, Hossain, Sen and Sawada 2016). Third, as the economic transformation proceeds, towns become important centres of demand, creating new market opportunities for both production inputs and consumption goods originating in rural sectors (Islam 2006). Urban areas start subcontracting many lower-level manufacturing processes to rural non-farm enterprises. The combined outcome of these three effects will tend to increase the share of non-farm occupations in rural areas, especially near towns that have marketing and employment links to the rural neighbourhoods. However, the effects of urban proximity on non-farm occupations may vary by the “size” of cities (see Christiansen and Kanbur 2017 for a review of small versus large cities). Another question remains about the trigger point behind the “size” issue: is it the proximity to “ports,” “seats of political power,” “market concentration,” or simply “infrastructural development” that is driving the potent effects of larger agglomerations? Here, our scope of analysis is limited: we capture the effect of urban proximity by using the measure of actual physical distance from the capital city (Dhaka) as the principal hub of economic activities.

Access to Migration

Migration to cities and abroad on the part of some household members—whether induced by natural shocks or stimulated by economic opportunities—may encourage a search for jobs in the non-farm sector on the part of household members who stay behind in the places of origin. In other words, there is a “signalling” involved in the migration process. However, whether the remaining members of the household follow in the footsteps of the migrant members would depend on a variety of circumstances, including: success of previous migration, cost of new migration, other economic opportunities in the village influencing the channel of remittance use, and restrictive social norms on physical mobility of female workers. For instance, if the bulk of the remittance is used by the receiving households to accumulate non-farm assets, then it may encourage non-farm occupational choice. However, the reverse possibility also exists: if the additional household income acquired through transfers is used for buying land or agricultural machinery, then it can benefit the farm activities more than the non-farm activities. In the latter case, the strength of non-farm “signalling” from migration would be muted.

In the proposed empirical exercise, we use the information on whether there is “at least one domestic migrant worker working outside for more than six months” (the migrant’s workplace may be cities or other rural parts of the country) as the proxy for domestic migration and whether “the household has at least one foreign migrant worker who is currently staying abroad” as the proxy for international migration.

3.3 Drivers Relating to Vulnerability: Response to Natural Shocks

Movement out of the farm sector is often seen as a response to expected risks and realised shocks, especially to natural disasters. Droughts, floods, or salinity intrusions make farm households vulnerable, depreciate farm assets, and discourage farm production. In contrast, susceptibility to risks can encourage the accumulation of “portable assets” such as human capital which, in turn, put a worker on the pathway out of agriculture. Rural non-farm activities such as trade and manufacturing are often considered more resilient to natural shocks.

In some contexts, moving out of the farm sector is often a gendered phenomenon: while male workers leave for work in non-farm sectors outside of villages, female workers remain behind in the rural areas. Thus, one often sees a sharp rise in the female work force participation rate, especially as the “unpaid family helper,” both in farm and rural non-farm sectors. The uncertain part in this story is that one does not know, on balance, which way the occupational choice of a rural worker shifts—towards farm or non-farm jobs—after experiencing natural risks, nor how durable the transition may be. In other words, it remains unclear whether natural risks generally spur only short-term coping responses, while workers mostly remain within the farm sector, or whether such risks tend to promote long-term exit decisions out of the farm sector. The other consideration is whether the type of risks matters. The farm to non-farm transition path is different for different agro-ecological settings (drought-prone versus flood-prone areas, for example).

In this exercise, however, we use a proxy for natural risks—by applying a measure of the “variability of rainfall”—which has been extensively used in previous studies. For the 2016 round, we use a lagged variable for risks (captured by the “standard deviation of the rainfall during 2000-2010”); for the 2010 round, we use the lagged variable “standard deviation of the rainfall during 1990-2000.” We expect that **the** exposure to natural risks would motivate a rural worker to opt for non-farm jobs. Admittedly, the measure that we have could reflect the impact of expected risk as much as realised shocks. Indeed, the lag between the

measured period and the labour outcome is quite large and may suggest this variable is really picking up the impact of risk rather than shock realisations.

3.4 Discussion of Results

Apart from the above indicators of human capital, access to finance, agricultural mechanisation, urban proximity, shocks, and access to domestic as well as international migration opportunities, we also include in the full model standard controls such as age, land ownership, log of per capita expenditure, and divisional fixed effects. We estimate the probit model with the individual worker level data where the dependent variable is “whether the worker is engaged in non-farm occupation” (non-farm=1, farm=0), conditional on the covariates listed above. We estimate both male workers and female workers (aged 15 to 64) separately. We present the marginal effects from the probit model for 2016 and 2010 separately (see Table VII and Table VIII). A note of caution in interpreting the results: we are looking here for “robust association,” rather than “claiming causality,” given the cross-sectional nature of the data set-up.

TABLE VII
**MARGINAL EFFECTS FROM THE PROBIT MODEL OF OCCUPATIONAL
CHOICE OF MALE AND FEMALE WORKERS IN FARM HOUSEHOLDS**
(non-farm job=1, farm job=0): individual worker level regression for 2016

VARIABLES	(1)	(2)
	Male Worker	Female Worker
	Age 15 to 64	Age 15 to 64
Age	-0.0139*** (0.00260)	-0.0255** (0.0102)
Age squared	6.97e-05** (3.12e-05)	0.000276** (0.000131)
Ref: No education		
Class 1 to 5	0.0472*** (0.0128)	0.0227 (0.0426)
Class 6 to 8	0.123*** (0.0166)	0.120*** (0.0456)
Class 9 to SSC	0.134*** (0.0173)	0.149*** (0.0495)
HSC and above	0.299*** (0.0232)	0.346*** (0.0768)
Ref: Married		
Widowed/Divorced/Separated	-0.0575 (0.0578)	0.00864 (0.0496)
Never married	0.0771*** (0.0189)	0.141** (0.0612)
HH deposited in microcredit institution	0.0759*** (0.0147)	0.146*** (0.0354)
Use of mechanised services (adopter=1, non-adopter =0)	-0.139*** (0.0197)	0.00388 (0.0450)
Cultivable land owned by HH	-0.00710* (0.00386)	-0.00591 (0.00388)

(Contd. Table VII)

VARIABLES	(1)	(2)
	Male Worker	Female Worker
	Age 15 to 64	Age 15 to 64
Use of mechanised services*Cultivable land owned	-0.00150 (0.00674)	0.0119* (0.00636)
HH has at least one migrant abroad	-0.0153 (0.0214)	-0.184** (0.0753)
HH has at least one domestic migrant	0.0946*** (0.0290)	-0.0287 (0.120)
HH size	0.0329*** (0.00358)	0.0365*** (0.00979)
Log of per capita expenditure	0.0718*** (0.0120)	0.115*** (0.0352)
Distance of district from Dhaka	-0.000453*** (0.000165)	-0.00122*** (0.000413)
Total rainfall 1990 to 2000	-4.88e-05 (5.23e-05)	-0.000127 (0.000139)
Standard deviation of rainfall 1990 to 2000	0.000551* (0.000285)	0.00151* (0.000786)
Observations	12,289	1,772
Divisional FE	Yes	Yes

Notes and Source: *** p<0.01, ** p<0.05, * p<0.1. Parentheses contain the robust clustered standard error at Thana level. Estimated from the primary data of HIES 2016.

TABLE VIII
MARGINAL EFFECTS FROM THE PROBIT MODEL OF OCCUPATIONAL
CHOICE OF MALE AND FEMALE WORKERS IN FARM HOUSEHOLDS
(non-farm job=1, farm job=0): individual worker level regression for 2010

Variables	(1)	(2)
	Male worker Age 15 to 64	Female worker Age 15 to 64
Age	-0.000358 (0.00362)	-0.0256** (0.0113)
Age squared	-8.35e-05* (4.47e-05)	0.000302** (0.000143)
Ref: No education		
Class 1 to 5	0.0968*** (0.0168)	0.124** (0.0623)
Class 6 to 8	0.112*** (0.0209)	0.209*** (0.0677)
Class 9 to SSC	0.188*** (0.0198)	0.346*** (0.0772)
HSC and above	0.470*** (0.0272)	0.507*** (0.0766)
Ref: Married		
Widowed/Divorced/Separated	-0.0962 (0.0975)	-0.0196 (0.0558)
Never Married	0.0353 (0.0252)	0.0442 (0.0885)
HH deposited in microcredit institution	0.124*** (0.0221)	0.0128 (0.0474)
Use of mechanised services (adopter=1, non-adopter =0)	-0.198*** (0.0204)	-0.154*** (0.0408)
Cultivable land owned by HH	-0.000202** (8.85e-05)	-0.000475** (0.000191)

(Contd. Table VIII)

Variables	(1)	(2)
	Male worker Age 15 to 64	Female worker Age 15 to 64
Use of mechanised services*Cultivable land owned	-6.07e-06 (0.000104)	0.000367* (0.000198)
HH has at least one migrant abroad	-0.000638 (0.0202)	-0.213*** (0.0819)
HH has at least one domestic migrant	0.0836** (0.0420)	-0.0525 (0.0699)
HH size	0.0175*** (0.00371)	0.0189* (0.0109)
Log of per capita expenditure	0.0361 (0.0220)	-0.0335 (0.0521)
Distance of district from Dhaka	-0.00104*** (0.000197)	-0.000474 (0.000362)
Total rainfall 1990 to 2000	8.80e-05 (6.17e-05)	-6.73e-05 (0.000133)
Standard deviation of rainfall 1990 to 2000	0.000648*** (0.000216)	0.000209 (0.000500)
Observations	4,708	468
Divisional FE	Yes	Yes

Notes and Source: *** p<0.01, ** p<0.05, * p<0.1. Parentheses contain the robust clustered standard error at Thana level. Estimated from the primary data of HIES 2010.

Several features are noteworthy. First, each successive level of education (after completion of the primary level) is associated with higher likelihood of being in non-farm occupation. This holds true for both male and female workers. Those who have crossed the bar of the Higher Secondary Certificate (HSC) have a three times higher probability of choosing non-farm jobs than those who completed junior secondary level (grades six to eight).

Second, access to microfinance is linked with increased chances of selecting a non-farm occupation (by a margin of 10 per cent), and this is equally valid for male and female workers.

Third, access to the use of agricultural mechanisation is associated with lower chances of household workers being in non-farm occupations. This is possibly because it enhances farm profitability and perhaps encourages specialisation in the farm sector. However, it may allow female workers in the large land ownership group to go for non-farm jobs (as indicated by the interaction term between land and mechanisation).

Fourth, domestic and foreign migration have different associations with the occupational choice of male workers. The non-farm “signalling” works in the case of domestic migration, but migration abroad has no correlation with occupational choice. Thus, having at least one domestic migrant in cities is associated with greater chances (by a margin of about 10 per cent) of choosing a non-farm occupation. In contrast, migration abroad reduces the likelihood of non-farm orientation for female workers. This can be the result of two effects: (a) in

the absence of a male worker who has migrated abroad, the erstwhile female non-farm worker may now have to enter the farm sector as family helper or manager of farm activities, especially when foreign remittances are used for buying land or farm machinery services (the labour substitution effect); (b) migration abroad on the part of male workers leads to substantive remittance flows which, in turn, allow female workers to withdraw from the non-farm labour market (the wealth effect).⁴ In principle, these effects should have been in the same direction for both domestic and international migration. The differential association of domestic and international migration with the non-farm orientation of female workers may be due to much larger remittance flows associated with migration abroad.

Fifth, urban proximity matters for occupational choice. Villages located far from Dhaka city are strongly associated with favouring farm occupations, and this effect is valid for both male and female workers.

Sixth, experience of natural shocks is correlated with the choice that favours non-farm jobs. Both male and female workers adopt non-farm orientation in the face of natural shocks as a coping method.

Finally, a statistical point to note is that the above results are robust to the choice of survey rounds. Both HIES 2016 and 2010 yield broadly similar results. Between the two surveys, the effects of financial access, farm technology, urban proximity, and shocks have become stronger for female workers in 2016.⁵

⁴ One suspects that variation in female labour force participation rates in Barisal versus Sylhet comparisons—high in Barisal division and low in Sylhet division—illustrates the two effects. Barisal is known to be a division from which much of the country's internal (male) out-migration takes place. In the absence of male workers available for farm work, female-managed agriculture has emerged in Barisal. This is an example of the labour substitution effect. In contrast, Sylhet is traditionally known to be the foreign remittance receiving region, where remittance inflows discourage female participation in non-farm (or farm) work—an example of the wealth effect.

⁵ This exercise can be enriched by considering the following avenues: (a) implement the occupational choice model in a panel framework, (b) by distinguishing large from small-size towns, (c) by demarcating different kinds of natural and idiosyncratic shocks, (d) by differentiating migration to cities as opposed to other rural parts, (e) by identifying different destinations of migration abroad, (f) by considering different “household value systems” influencing gender norms dictating occupational choice, and (g) by differentiating categories of non-farm occupations. This is, however, beyond the scope of the present aggregative exercise.

The main message is that non-farm orientation of employment may be an outcome of labour market response to both opportunities (mechanisation, urban proximity, and migration) and shocks (natural shocks) mediated by capability (human capital and access to finance). This seems a valid reference point for understanding both male and female labour supply responses, and the nature of rural structural transformations in present-day Bangladesh.

3.5 Differential Characteristics of Female Employment

The pronounced shift of employment to the non-farm sector has influenced both male and female workers. The general features of the farm to non-farm transitions have been discussed earlier. We now turn to specific attributes of female labour supply compared with their male counterparts.

Human capital influences the likelihood of obtaining non-farm jobs equally for both male and female workers. Just educating girls up to primary education no longer seems to matter for getting non-farm jobs in rural areas. The coefficient for primary education was statistically significant in 2010 but turned out to be insignificant in 2016 (see Tables VII and VIII). The results show the importance of secondary and post-secondary education for availing non-farm jobs for rural women (the matched effects of post-primary education are larger for women than men in both 2010 and 2016).

Access to microcredit is positively associated with non-farm orientation of female workers in 2016, while it was insignificant in 2010. Spread of farm technology also influences occupational choice. Use of mechanised services is linked with increasing farm orientation, so is the factor of land ownership. However, the interaction effect between land and rural mechanisation suggests a contrasting scenario: it indicates farm orientation for male workers and non-farm orientation for female workers (the result is valid for both 2010 and 2016). This could indicate that female workers in larger farms substitute farm labour for non-farm labour in the presence of rural mechanisation.

Migration of workers to the cities is positively associated with non-farm orientation of the *other* male workers of the sending households but does not have any matched influence on the female workers. Migration of workers abroad does not have any influence, however, on the occupational choice of the remaining workers—male or female—of the sending households.

Non-farm orientation is correlated with higher expenditure (lower poverty), and this is valid for both male and female workers. Similarly, remoteness is associated with farm orientation for both male and female workers. Natural shocks seem to encourage non-farm orientation for both male and female workers. These results, by and large, are valid for both 2010 and 2016.⁶

VI. TRENDS IN REAL AGRICULTURAL WAGES

The sign of tightening of the rural labour market was already visible by the early 2010s (Zhang *et al.* 2013). Development of the rural non-farm sector, combined with rural-urban migration, was the primary factor behind this upbeat trend in farm wages. Entry of landless households into the tenancy market may have given further stimulus to the tightening of the rural labour market and positively influenced the growth of farm wages. Analysis of the newly available data from the HIES 2016 shows that this trend continued unabated in the 2010s.

Four features of wage trends are noteworthy (Table IX). First, mean real rural wages have increased by about 46 per cent between 2010 and 2016. In rural areas, agricultural wages have registered a 41 per cent increase, while non-agricultural wages grew faster (54 per cent) over the period. The growth in wages is observed across all divisions. However, there was variation in the extent of the change. The divisions of Barisal, Dhaka, and Khulna witnessed the fastest growth in farm wages (around 50 per cent).

As expected, non-farm wages are higher than farm wages in rural areas, indicating the potential gains for transition from the farm to rural non-farm sectors. In addition, urban wages are higher than the rural wages for all the divisions. At the national level, the urban-rural wage gap has increased in the 2010s—from 24 per cent to 33 per cent. This is consistent with the pattern of declining poverty amidst rising inequality trends.

⁶ The only exception is the natural risk variable. It was insignificant for female workers in 2010. In 2016, such shocks were associated with the non-farm choice among female workers.

TABLE IX
TRENDS IN NOMINAL AND REAL AGRICULTURAL WAGES BETWEEN 2010 AND 2016
FOR AGRICULTURAL LABOURERS BY DIVISION
(TAKA PER DAY)

Division	Nominal wage 2010						Nominal wage 2016					
	Rural agricultural wage	Urban agricultural wage	Rural non-agricultural wage	Urban non-agricultural wage	Rural wage	Urban wage	Rural agricultural wage	Urban agricultural wage	Rural non-agricultural wage	Urban non-agricultural wage	Rural wage	Urban wage
Barisal	161	169	179	198	173	198	318	340	353	392	339	390
Chittagong	176	163	211	229	191	223	312	292	422	473	357	462
Dhaka	149	171	191	196	171	194	313	359	382	464	344	458
Khulna	114	140	130	157	120	155	232	241	294	328	256	324
Rajshahi	121	123	127	162	123	155	227	237	273	300	243	294
Sylhet	136	137	123	222	128	204	262	303	329	425	293	412
Bangladesh	136	142	160	189	147	183	264	290	338	399	295	392
	Wage 2010 in 2016 value						Wage 2016 in 2016 value					
Barisal	212	222	235	261	227	260	318	340	353	392	339	390
Chittagong	246	228	295	320	267	312	312	292	422	473	357	462
Dhaka	211	242	270	278	242	275	313	359	382	464	344	458
Khulna	156	191	178	214	164	212	232	241	294	328	256	324
Rajshahi	163	165	171	219	165	208	227	237	273	300	243	294
Sylhet	191	191	172	310	179	284	262	303	329	425	293	412
Bangladesh	187	195	219	259	202	251	264	290	338	399	295	392

Note and Source: Divisional real wages have been derived by using the spatial deflators based on the “lower poverty line.” Estimated from the unit-record data of 2010 and 2016.

VII. CONCLUSION

The nature of rural transformation has important implications for poverty reduction and inequality trends. One caveat, though, would be in order. Since we do not have panel data for the period at our disposal, there is a risk of telling a dynamic story about “what happened” solely on the basis of cross-sectional data.

The main message is that the decade of the 2010s continues the positive trends already witnessed in the previous decade. This relates to acceleration of national growth at the macro level and sustenance of moderate consumption growth, as well as poverty reduction in rural areas (on this, see BBS 2018).

The role of non-farm jobs has become visibly more important over time. Between 2010 and 2016, the share of agricultural employment has declined rapidly, with most increases happening in the manufacturing and construction sectors. Both HIES and LFS data support this conclusion of much more pronounced non-farm orientation of the rural labour force in the 2010s, compared to previous decades. In addition, our analysis of the occupational choice shows the importance of human capital, urban proximity, and shocks as correlates of non-farm occupations.

The above process of non-farm orientation did not bypass the female labour force, with fast spread of education and connectivity supporting this trend. However, the recent declines in female labour force participation are a cause of concern.

Moreover, the transition of the labour force from the farm to the non-farm sector has had implications for the tightening of the agricultural wage labour market. Real farm wages continued to rise in the decade of 2010s, reinforcing the trends of farm mechanisation and the sustained drop in rural extreme poverty. Yet, average non-agricultural wages increased more consistently with findings that non-agricultural sectors drove the largest share of the poverty reduction in rural areas (Hill and Genoni 2018).

Finally, considerable spatial variations in farm/non-farm employment and wages are noticeable. The western regions (Rajshahi and Rangpur) exhibited lower growth in non-farm jobs and wages, compared to the eastern regions. This supports the broad thesis of re-appearance of the East-West divide in the 2010s. However, the implications of these changes for the trends in rural personal income inequality need to be examined further.

REFERENCES

- Ahmed, F., Y. Arias-Granada, M. E. Genoni, M. Yanez-Pagans, N. Yoshida, D. Roy, and A. Latif. 2017. "Description of the Official Methodology Used for Poverty Estimation in Bangladesh for 2016/17." Washington, DC: World Bank.
- Ahmed, F., D. Roy, M. Yanez-Pagans, and N. Yoshida. 2017. "Design of a Multi-Stage Stratified Sample for Poverty and Welfare Monitoring with Multiple Objectives: A Bangladesh Case Study." World Bank Research Working Paper. Washington, DC: World Bank.
- Banerjee, A. V., and A. F. Newman. 1993. "Occupational Choice and the Process of Development." *Journal of Political Economy*, 101(2): 274-298.
- BBS. 2018. *Household Income and Expenditure Survey 2016-17*. Dhaka: BBS.
- Christiansen, L. and R. Kanbur. 2017. "Secondary Towns and Poverty Reduction: Refocusing the Urbanization Agenda." *Annual Review of Resource Economics*, 9: 405-419.
- Galor, O. and J. Zeira. 1993. "Income Distribution and Macroeconomics." *The Review of Economic Studies*, 60(1): 35-52.
- Heath, R. and A.M. Mobarak. 2015. "Manufacturing Growth and the Lives of Bangladeshi Women." *Journal of Development Economics*, 115: 1-15.
- _____. 2018. "Bangladesh Poverty Trends 2010-11-2016/17." Washington, DC: World Bank.
- Hill, R., and J. Endara. 2019. "Understanding Poverty Trends in Bangladesh: Insights from Decomposition Analysis." Background paper for the Bangladesh Poverty Assessment 2010-2016/17. World Bank, Washington, DC.
- Hossain, M. and A. Bayes. 2009. *Rural Economy and Livelihoods: Insights from Bangladesh*. Dhaka: A. H. Publishing House.
- _____. 2018. *Rural Transformation: Insights from Bangladesh*. Dhaka: University Press, Ltd.
- Hossain, M., B. Sen and Y. Sawada. 2016. "Bangladesh: Jobs and Growth in an Urbanizing Economy." In G. Betcherman and M. Rama, eds. *Jobs for Development: Challenges and Solutions in Different Country Settings*. London: Oxford University Press.
- Hossain, M., M. Rahman and S. C. Nath. 2017. "Nature and Impact of Agricultural Mechanisation in Bangladesh." In M.A.S. Mandal, S.D. Biggs, and S.E. Justice, eds. *Rural Mechanisation: A Driver in Agricultural Change and Rural Development*. Dhaka: Institute of Inclusive Finance.
- Islam, N. 2006. *Reducing Rural Poverty in Asia: Challenges and Opportunities for Microenterprises and Public Employment Schemes*. New York: Haworth Press.

- Khan, A. R. 2015. *The Economy of Bangladesh: A Quarter Century of Development*. New York: Palgrave Macmillan.
- Mahmud, W. and S. R. Osmani. 2017. *The Theory and Practice of Microcredit*. London: Routledge.
- Rahman, H. Z. and M. Hossain, eds. 1995. *Rethinking Rural Poverty: Bangladesh as a Case Study*. New Delhi/Thousand Oaks/London: SAGE Publications.
- Sen, B., M. K. Mujeri and Q. Shahabuddin. 2007. "Explaining Pro-Poor Growth in Bangladesh: Puzzles, Evidence, and Implications." In: T. Besley and L. J. Cord (eds.) *Delivering on the Promise of Pro-Poor Growth*. New York/Washington, DC: Palgrave Macmillan and World Bank: 79-118.
- World Bank. 2009. *World Development Report 2009. Geography and Development*. Washington, DC: World Bank.
- _____. 2018. *Bangladesh Development Update* (October 2018). Washington, DC: World Bank.
- Zhang, X., S. Rashid, K. Ahmad, V. Mueller, H. L. Lee, S. Lemma, S. Belal and A. U. Ahmed. 2013. "Rising Wages in Bangladesh." Washington, DC: International Food Policy Research Institute.

ANNEX TABLES

Table 1a: **Distribution of Male Workers by Household Types and Labour Status in Rural Areas**

Household types	2000				2013			
	Self	Unpaid	Casual	Salaried	Self	Unpaid	Casual	Salaried
Pure farm	46.46	8.09	43.45	2.00	63.41	6.97	28.08	1.54
Mixed	52.88	8.57	21.63	17.22	55.87	6.98	19.68	17.48
Pure non-farm	63.52	4.14	12.84	19.50	47.35	2.60	17.92	32.13
All	53.15	6.92	29.27	10.66	56.39	5.79	22.35	15.47

Source: LFS. Figures represent percentages of row total.

Table 1b: **Distribution of Female Workers by Household Types and Labour Status in Rural Areas**

Household types	2000				2013			
	Self	Unpaid	Casual	Salaried	Self	Unpaid	Casual	Salaried
Pure farm	19.04	44.92	34.94	1.11	13.29	78.08	7.64	0.98
Mixed	27.08	49.24	12.50	11.17	8.66	66.45	9.56	15.33
Pure non-farm	38.22	22.51	12.30	26.96	14.05	14.27	19.76	51.91
All	27.02	40.59	20.81	11.58	11.30	59.98	10.95	17.77

Source: LFS. Figures represent percentages of row total.

Table 2a: **Bangladesh Rural Employment of Male Aged 15 to 64 by Types of Earning for the Farm and Non-farm Workers, 2010 and 2016**

		2010	2016	2010	2016
		Pure Farm	Pure Farm	Pure Non- Farm	Pure Non- Farm
Casual wage	Per cent	96.22	96.00	55.02	56.14
	millions	5.58	6.28	4.23	6.04
Salaried	Per cent	3.64	2.48	44.66	43.12
	millions	0.21	0.16	3.43	4.64
Mixed	Per cent	0.14	1.52	0.33	0.74
	millions	0.008	0.10	0.03	0.08
Total	Per cent	100.00	100.00	100.00	100.00
	millions	5.80	6.54	7.70	10.77

Note: The “mixed” category represents those who are simultaneously engaged in both casual and salaried wage work.

Source: Calculated from Bangladesh Household Income and Expenditure Surveys 2010 and 2016.

Table 2b: **Bangladesh Rural Employment of Female Aged 15 to 64 By Types of Earning for the Farm and Non-Farm Workers, 2010 and 2016**

		2010	2016	2010	2016
		Pure farm	Pure farm	Pure non- farm	Pure non- farm
Casual wage	Per cent	95.75	92.73	41.94	33.32
	millions	0.62	0.70	0.62	0.67
Salaried	Per cent	3.48	3.48	57.60	64.97
	millions	0.02	0.03	0.85	1.31
Mixed	Per cent	0.78	3.78	0.46	1.71
	millions	0.005	0.03	0.007	0.03
Total	Per cent	100.00	100.00	100.00	100.00
	millions	0.65	0.75	1.47	2.01

Note: The “mixed” category represents those who are simultaneously engaged in both casual and salaried wage work.

Source: Calculated from Bangladesh Household Income and Expenditure Survey, 2010 and 2016.