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How much gender income inequality accrues due to climate-induced migration? New evidence from Bangladesh

Azreen Karim[1]

Abstract

How much gender income inequality accrues due to climate-induced migration? What are the key drivers in the gender gap governance framework to achieve gender parity across development dimensions among affected communities? We ask these questions by examining two (2) dimensions of gender parity: economic participation and opportunity and educational attainment.

This paper aims to investigate the impacts of climate change on gender gap across economic development dimensions i.e., income, education, employment and livelihood strategies. We identify a total of 403 climate-affected internally migrated and non-migrated households in selected rural and urban sub-districts of coastal Bangladesh in destination locations only. We select a retrospective timeline of year 2020 due to occurrence of a major natural event i.e., Cyclone Amphan[3] and therefore adopt purposive sampling to identify migrated households triggered by this extreme event and other climate-induced natural disasters subsequently. We employ a mixed method approach and focus on 1001 male and 922 female members who had internally migrated to move out of climate risk areas. Our results show that women in climate migrated households in the rural areas earned BDT 3627.5 less compared to the nationally representative amount as indicated (i.e., BDT 2359) which might accrue due to climate change.

This income differential is BDT 1452.3 among climate-migrated households in the urban locations compared with the nationally representative gender earnings gap i.e., BDT 5517, indicating climate-induced internal migration to urban locations being more favourable for women. We find significant gender gaps persist in day (casual) laborer (non-agriculture) and paid jobs category for migrated households in the rural and urban locations. We also find evidence of persisting wider gender gaps in the tertiary education sector in the rural areas for both household groups along with wider gender gaps in the higher secondary sector in the urban regions for climate-affected migrated households in the coastal belt. Policy wise, the earnings gap should be addressed through livelihood diversification and vulnerability reduction strategies focusing on gender safety net and network-based community groups prioritizing women's economic leadership to achieve equity in the governance framework.

Keywords: Climate change; Income gap; Gender equity; Gender gap governance framework; Economic participation and opportunity; Educational attainment; Coastal belt.

1 Bangladesh Institute of Development Studies, Email: azreen@bids.org.bd; azreenk@gmail.com

1. Introduction

A growing literature recognizes differential effects of climate change on gender issues, particularly on women. There has also been an emerging literature on the impacts of migration due to climate change and their regional implications on gender-oriented norms and issues. These include effects on poverty, food security and livelihoods (e.g., Karim, 2018; Karim and Noy, 2018, 2016a, 2016b; Iheke and Agodike, 2016; Safrade Campos, 2016; Hallegatte et al., 2015; Mueller et al. 2014; Green et al. 2010); effects on gender norms and women (e.g., Evertsen and Van der Geest, 2020; Islam and Shamsuddoha, 2017; Curran et al. 2016; Joarder et al., 2013) and on displacement (e.g., Haque et al., 2020; Hossain et al. 2020). These studies have explored the differential impacts of climate-induced migration in an isolated manner. This is the first study in which climate change-gender nexus issues have been looked at with having a focus on climate-induced migration under a single framework contributing to this gap in the 'Climate-Development' literature.

How much gender income inequality accrues due to climate-induced migration? Do these differ across disasters and their coping mechanism? We ask these questions by examining two (2) dimensions of gender parity identified in the global gender gap governance framework: economic participation and opportunity and educational attainment.[2] The objective of this paper is to investigate the impacts of climate change on gender gap across economic development dimensions (i.e., income, education, employment and livelihoods etc.) and examine the patterns of economic opportunities and challenges after climate-induced migration. Therefore, we identify climate-affected migrated and non-migrated households and search for evidence against the contemporary gender gap dimensions to investigate the likely impact of climate change in this study and thus highlight some key recommendations with embedded challenges herewith intended to close this gender gap which climate change might exacerbate.

The paper has been organized as follows: Section 2 provides a review of the relevant literature as evident in Bangladesh and other developing countries. We present details of data collection and methodology in Section 3. Section 4 analyses the empirical results and in Section 5, we conclude with some policy remarks to reduce gender inequality in the context of climate change and internal migration in Bangladesh.

2. Literature review

Recent studies had investigated the effects of climate-induced migration on poverty, food security and livelihoods (e.g., Karim, 2018; Karim and Noy, 2018, 2016a, 2016b; Iheke and Agodike, 2016; Safrade Campos, 2016; Hallegatte et al., 2015; Mueller et al. 2014; Green et al. 2010). Hallegatte et al. (2015) show that without rapid inclusive development, climate change would likely spark higher agricultural prices and could threaten food security in poorer regions such as Sub-Saharan Africa and South Asia. In a case study on adoption of climate change mitigating measures by smallholder farmers in Imo State, Nigeria; Iheke and Agodike (2016) suggested that drainage/flood barrier construction, multiple cropping, mulching, use of improved varieties of crops, change of planting date, irrigation of crops, planting of cover crops, tree planting, education and training of farmers and provision of credits are key to coping and building resilience against the impacts of climate change and hence could potentially lift

2 These gender gap dimensions are found to be closely aligned with the key dimensions of the Global Gender Gap Index Framework (see Global Gender Gap Report 2024).

rural smallholder farmers out of poverty and food insecurity. However, assisted migration could also offer a tool to improve production, sustainability and resilience; in particular, improved egg production and growth of the fishery (Green et al., 2010). Policy wise, this type of migration pattern needs to be aligned with the skill sets of the migrant households who in most cases are found to be permanent.

This finding is also confirmed by Joarder et al. (2013) that reveals migrants who were previously engaged in agriculture or fishing are more inclined to migrate permanently. Using a 21-year longitudinal survey conducted in rural Pakistan, Mueller et al. (2014) find that migration is correlated with relief efforts associated with the types of climate-induced natural events e.g., flood, heat stress etc. Despite flooding (a climate shock associated with large relief efforts) is found to exhibit modest to insignificant impacts on migration; heat stress, however (which has attracted relatively little relief) consistently increases the long-term migration of men, driven by a negative effect on both farm and non-farm income. Safra de Campos (2016) revealed that the welfare system in Brazil, compared to other countries, has direct implications on livelihoods and on the movement of individuals who could otherwise have engaged in seasonal or permanent migration due to climatic events.

There has also been an emerging literature on the impacts of migration due to climate change and their regional implications on gender-oriented norms and issues. These include effects on gender norms and women (e.g., Evertsen and Van der Geest, 2020; Islam and Shamsuddoha, 2017; Curran et al. 2016; Joarder et al., 2013). Evertsen and van der Geest (2020) addresses how gender norms impact the process of migration and what this means for the use of migration as an adaptation strategy to cope with environmental stressors. Data revealed that women migrate when environmental stress threatens livelihoods and leave male household members unable to earn enough income for their families. While social costs negatively affect the utilization and efficiency of female migration as an adaptation strategy to environmental stressors, it becomes clear that female migration is imperative to sustain livelihoods within the Bhola community. Curran et al. (2016) substantiate by evaluating the distinct effects of climatic change and modelling these effects on men's and women's responses to drought and rainfall.

During periods of prolonged climatic stress, the study found modest but significant increases in migration above existing levels and these patterns vary by gender and land tenure.

Joarder et al. (2013) examined whether environmental migrants in Bangladesh move permanently or temporarily. Females are more inclined to migrate temporarily, a finding which is consistent with prior studies that argued female migration is one temporary household survival strategy in the face of an environmental crisis. Those households who reported that they had lost assets due to environmental hazards are shown to have a higher probability of becoming permanent migrants.

In contrast, loss of livestock and crop failure are associated with a greater likelihood of temporary migration. Islam and Shamsuddoha (2017) showed that the dramatic onset disasters usually caused mass displacement, while the slow onset disasters affected the environment, local ecosystem services and employment opportunities that forced people to undergo routine economic migration at first, followed later by permanent migration. This permanent migration had long-term negative consequences on their livelihoods in terms of poverty and especially for women, the elderly and those with a disability.

3. Data collection and methodology

We employ survey (i.e., quantitative) tools to collect data to understand various facets of the nexus between climate-induced migration and gender in Bangladesh. We have selected a few vulnerable regions in the coastal belt through multi-stage selection process and focus on climate migrated households who had internally migrated after being affected by climate-induced natural disasters since 2020. We select a retrospective timeline of year 2020 due to occurrence of a major natural event i.e., Cyclone Aphan3 and therefore adopt purposive sampling of identifying migrated households triggered by this extreme event and other climate-induced natural disasters subsequently till the survey period during September-October 2023. We further select a group of non-migrated households who are climate-affected but did not migrate. It needs to be noted here that both migrated and non-migrated households have been identified and surveyed in the destination regions only on the coastal belt.

We strategize our household selection based on their mobility patterns after being affected by climate-induced natural disasters since the year 2020. We adopt a purposive sampling approach and select a representative sample of approximately 100 climate-affected households per District (Zila) with an accumulated number of 403 households from eight (8) selected Upazilas across two (2) administrative divisions. Our representative sample encompasses 70 percent migrated and 30 percent non-migrated households out of per 100 purposive samples from each Upazila.

Table 1: Regional location of the household sample

Division	District	Upazila	Location	Number	Total
Barishal	Barguna	Pathorghata	Rural	21	34
			Urban	13	
		Taltoli	Rural	39	66
			Urban	27	
Khulna	Bagerhat	Mongla	Rural	28	28
			Urban	0	
		Shoronkhola	Rural	50	72
			Urban	22	
	Khulna	Dacope	Rural	22	39
			Urban	17	
		Koyra	Rural	47	64
			Urban	17	
	Satkhira	Assassuni	Rural	30	36
			Urban	6	
		Shyamnagar	Rural	29	64
			Urban	35	
N=2	**N=4**	**N=8**			**403**

Source: Climate-induced Migration and Gender Survey 2023.

We identify gender gaps, as defined by the disparities in indicators between male and female, primarily in three (3) categories/pillars: i) Gender gap in employment and sectoral livelihoods; ii) Gender gap in income and iii) Gender gap in educational attainment. In each of these pillars, we identify evidence where the gender gap is found to be wider (higher) i.e., positive (+); and highlight the indicators in

3 Super Cyclonic Storm Amphan was an extremely powerful and catastrophic tropical cyclone that caused widespread damage in Eastern India, specifically in West Bengal and Odisha and in Bangladesh, in May 2020.

which gender gap had been observed to be narrower (lower) i.e., negative (-). It needs to be noted here that positive (+) sign denotes better-off scenarios for males whereas negative (-) sign indicates that females are better-off in the similar context.

4. Empirical results

Our aim in this study is to understand the gender gaps across the gender parity indicators among climate-affected migrated and non-migrated households located in the rural and urban region of the coastal belt in Bangladesh. Our survey design allows us to analyse both male and female from these two (2) groups of households: migrated and non-migrated. Here, we define gender gap as the percentage differences across selected indicators between men and women. A positive (+) gap indicates the disparities between male and female is wider (higher) and a negative (-) sign denotes that the differences has been narrower (lower) i.e., inequalities has been lessened showing progress across the gender parity dimensions. We analyse two (2) dimensions identified in the global gender gap governance framework: Economic participation and opportunity and Educational attainment. Here, our proxy indicators are employment and sectoral livelihoods and gender income (including IGAs) (for economic participation and opportunity) and highest educational level (for educational attainment).

4.1 Gender gap in employment and sectoral livelihoods

We analyze the gender gap in employment and sectoral livelihoods using the current employment status of male and female members of migrated and non-migrated households in the rural and urban region. We identify sixteen (16) categories of employment; namely employer/entrepreneur, self-employed (agriculture), self-employed (non-agriculture), contributing family member, paid employee, day (casual) laborer (agriculture), day (casual) laborer (non-agriculture), apprentices/intern (if paid), domestic worker, collecting fish, fishing, poultry farming, driver (easy bike, van etc.), animal husbandry, sewing and others. Table 2 below reports the significant gender gaps in selected categories of employment for rural and urban migrated households.

Table 2: Gender gap in employment status – rural and urban migrated households

Employment Status	Gap (R-Migrated)	Gap (U-Migrated)
Employer/Entrepreneur	3.13**	4.33
Self-employed (Agriculture)	0.76	5.36
Self-employed (Non-Agriculture)	-0.5	4.66
Contributing family member	-30.7***	-50.64***
Paid employee	11.05***	13.84**
Day (Casual) labourer (Agriculture)	1.2	1.04
Day (Casual) labourer (Non-Agriculture)	16.98***	27.34***
Fishing	1.71	1.1
Poultry farming	-1.71***	-2.33

Source: Author's calculations based on Climate-induced Migration and Gender Survey 2023.

Note: [a] R-migrated represent gender gaps in rural migrated and U-migrated represent gaps in urban migrated households.
[b] '*' indicate statistically significant at the 10% level. '**' indicate statistically significant at the 5% level.
"***" indicating significance at the 1% level ($p < 0.01$). No asterisk indicates that the difference is not statistically significant at the 10% level.

Our results show that gender gap is significantly wider in day (casual) laborer (non-agriculture) i.e., 16.98 percent, which is followed by paid employee (i.e., 11.05%) and employer/entrepreneur (i.e., 3.13%) among migrated households in the rural areas. It has been revealed that males from migrated households shifted from river fishing to various professions, including non-agricultural day laborer roles such as shoe stitching, cleaning, barbering and teaching. Women participated in income-generating activities such as tailoring, vegetable cultivation, small businesses and animal husbandry. We found an almost similar trend for migrated households in the urban region. The gender gap is found to be significantly wider for day (casual) laborer (non-agriculture) i.e., 27.34 percent and paid employee (e.g., 13.84%), while significantly became narrower for contributing family member (i.e., -50.64%) category in the urban region. Women were found to engage in agriculture, animal husbandry, part-time work, sewing, stitching and vegetable cultivation after migration. It is also important to note that local NGO initiatives (in terms of financial support, training facilities and others) are found to be correlated with the choice of occupations and/or occupational shifts for migrated households in the rural and urban coastal destinations.

Table 3: Gender gap in employment status – rural and urban non-migrated households

Employment Status	Gap (R-Non-Migrated)	Gap (U-Non-Migrated)
Employer/Entrepreneur	4.1***	11.11
Self-employed (Non-Agriculture)	10.71**	-46.67*
Day (Casual) labourer (Non- Agriculture)	19.83***	22.22
Fishing	10.03***	22.22
Poultry farming	-1.12	-8.89

Source: Author's calculations based on Climate-induced Migration and Gender Survey 2023.

Note: [a] R-migrated represent gender gaps in rural migrated and U-migrated represent gaps in urban migrated households.
[b]'*' indicate statistically significant at the 10% level. '**' indicate statistically significant at the 5% level.
"***" indicating significance at the 1% level ($p < 0.01$). No asterisk indicates that the difference is not statistically significant at the 10% level.

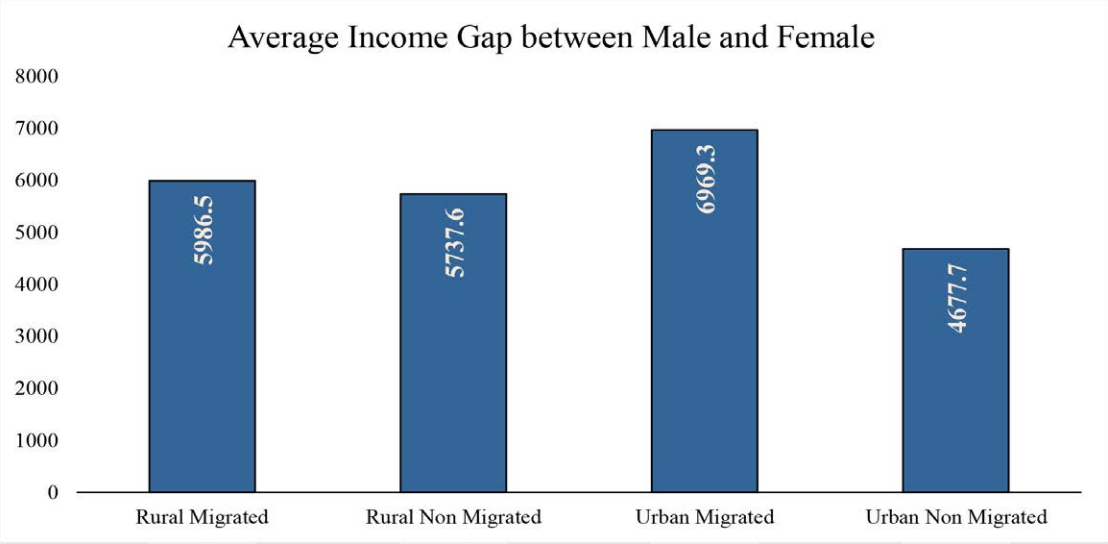
We further examine the employment status for non-migrated households in the rural and urban region in table 3. The types of employment in which the gender gap is significantly higher is day (casual) laborer (non-agriculture) i.e., 19.83 percent, self-employed (non-agriculture) i.e., 10.71 percent, fishing i.e., 10.03 percent and employer/entrepreneur i.e., 4.1 percent respectively. The categories in which male-female disparities are found to be lower i.e., female participation have increased are contributing family member (i.e., -41.93%), collecting fish (i.e., -1.68%) and animal husbandry (i.e., -1.68%). Intriguingly, evidence shows that gender gap has significantly been reduced in the self-employed (non-agriculture) category i.e., -46.67 percent in the urban region. This is primarily due to access to finance (loans) and availability of training and other facilities from the NGOs and local government initiatives.

This is primarily due to access to finance (loans) and availability of training and other facilities from the NGOs and local government initiatives.

4.2 Gender gap in income

Economic participation and opportunity are an important parity dimension identified in the global gender gap report 2024; and we attempted to analyze gender gap in average monthly income among climate-affected migrated and non-migrated households in the rural and urban region. We calculate male and female income based upon household members individual responses on their monthly earnings. However, this income does not include households' other annual (gross) income as it has been recorded on a household basis.

Figure 1: Gender gap in average monthly income



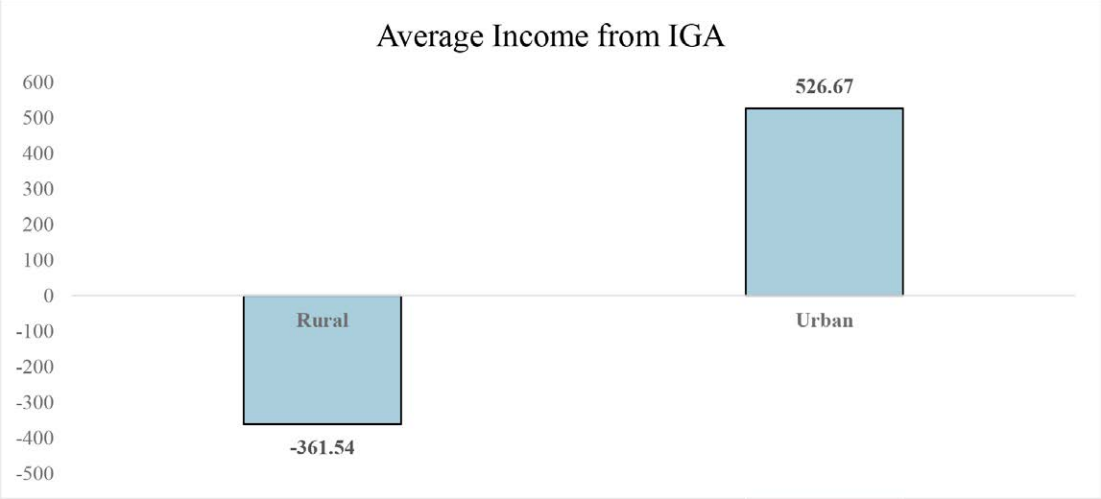
Source: Author's elaborations using Climate-induced Migration and Gender Survey 2023.

Our results indicate that for migrated households, the gender income gap in both the rural and urban locations is significantly wider (higher). We found that the rural gender income gap is around BDT 5986.57 while the urban gender income gap is around BDT 6969.36. We believe, this gender disparities in average monthly income are perhaps due to the occupational choices, opportunities and their changing patterns; and of course, access to financial and other support. Migrated households often move from climate-affected regions, which might be economically depressed, to areas less affected by climate change with more robust economies and job markets. They diversify their livelihoods to reduce the risk associated with climate impacts.

This diversification often leads to higher and more stable incomes compared to those who remain in vulnerable areas and rely on climate-sensitive livelihoods like agriculture. It has been evident that the dimensions of occupation went through changes/transformation due to migration. For example, men are found to adopt diversified professions and opted for a shift from their previous occupation e.g., fishing, in particular. They were involved in substantial construction activities, paddy farming, motorcycle, rickshaw and van driving and other non-agricultural endeavors. Few people managed to

establish permanent businesses or secure permanent jobs after migration as well. Therefore, for many male migrants, this led to a change in the type of work with increased opportunities in some cases. On the other hand, the female migrants demonstrated a keen interest to engage in income-generating activities, with aspirations encompassing poultry farming, fish cultivation and vegetable cultivation. Nevertheless, the scarcity of available land posed a considerable constraint to their occupational choices. Moreover, migrated households might receive support from government programs or NGOs aimed at helping climate migrants adapt and integrate into new areas. Some climate migrated households might benefit from emergency relief, rehabilitation programs, or climate adaptation funds, which can provide necessary support to boost their income. On a similar note, for non-migrated households, although the gender income gap is higher (i.e., positive) in both the rural and urban context, this income is not found to be statistically significant.

Figure 2: Gap in average IGA income between migrated and non-migrated households



Source: Author's elaborations using Climate-induced Migration and Gender Survey 2023.

Furthermore, we recorded income earned through women's income-generating activities (IGA). IGA refers to those income generating work that family members, especially female members, can do together and responses have been recorded from female household members only. Therefore, the IGA income gap indicates differences between migrated females and non-migrated females in the rural and urban region. Our gap analysis between female migrated and female non-migrated income shows that income gap in IGAs has been narrower i.e., BDT -361.54 (indicating non-migrated female income is higher) in the rural areas; whereas gap is wider i.e., BDT 526.67 (indicating migrated female income is higher) in the urban areas (but this is not statistically significant).

4.3 Gender gap in educational attainment

Educational attainment is an important gender parity indicator according to the Global Gender Gap report 2024. Our sample allows us to analyze the gender disparities among migrated and non-migrated households located in the rural and urban region. We compare percentage differences between male and female across the educational levels and attempt to identify whether the gaps are significantly wider or not in our sample households.

Table 4: Gender gap in educational attainment – rural and urban

Highest education	R-Migrated	U-Migrated	R-Non-Migrated	U-Non-Migrated
No Education	-4.96*	-4.64	0.54	18.57
Below Primary	2.83	0.34	-3.23	1.43
PSC-Below Secondary	-2.02	-2.41	-8.22**	-17.14
Secondary	-0.39	-4.24	3.98*	-10.00
Higher Secondary	1.53	7.05**	2.21	
Tertiary	2.01*	1.57	2.87**	7.14
Others	1.01**	2.34	1.85**	

Source: Author's calculations based on Climate-induced Migration and Gender Survey 2023.

Note: '*' indicate statistically significant at the 10% level.
'**' indicate statistically significant at the 5% level. No asterisk indicates that the difference is not statistically significant at the 10% level.

For households located in the rural areas - migrated and non-migrated, the gender gaps are significantly wider at the tertiary level (i.e., 2.01% and 2.87%) and others (i.e., 1.01% and 1.85%) category, while the same has been observed at the secondary level (e.g., 3.98%) for non-migrated households only. Interestingly, in the urban region, we found the gap to be significantly wider, particularly at the higher secondary level (i.e., 7.05%) for migrated households only. On a positive note, significant improvement has been observed at the PSC-below secondary level (e.g., -8.22%) in the non-migrated households with substantially reducing the number of non-educated females (i.e., -4.96%) in migrated households in the rural coastal areas.

5. Conclusion and policy remarks

This paper aims to investigate the impacts of climate change on gender gap across economic development dimensions i.e., income, education, employment and livelihood strategies. To understand the key drivers in the gender gap governance framework to achieve gender parity across development dimensions among climate-induced migrated and non-migrated households; we examine two (2) dimensions of gender parity: economic participation and opportunity and educational attainment. We select two (2) proxy indicators from the economic opportunity and participation dimensions for this gender gap analysis. They are: Employment and sectoral livelihoods and Estimated earned income.

We analyze the gender gap in employment and sectoral livelihoods using the current employment status of male and female migrated and non-migrated household members in the rural and urban region. Our results show that the gender gap is significantly wider in day (casual) laborer (non-agriculture), which is followed by paid employee and employer/entrepreneur among migrated households in the rural areas. For non-migrated households, the types of employment in which gender gap is significantly higher is day (casual) laborer (non-agriculture), self-employed (non-agriculture), fishing and employer/entrepreneur respectively. It has been revealed that males from migrated households shifted from river fishing to various professions, including non-agricultural day laborer roles such as shoe stitching, cleaning, barbering and teaching. Interestingly, evidence shows that gender gap has significantly been reduced in the self-employed (non-agriculture) category for non-migratory cases in the urban region.

There has been a feminization of agriculture in Bangladesh, yet a large share of women remains confined to home-based and low or unpaid work; and even among paid agricultural workers, rural women are more likely than men to be in vulnerable employment. This evidence further re-emphasizes the fact that there still exists significant gender-specific barriers towards diversified and high-paid jobs for women and the challenges of climate change could further widen these gaps.

We find that gender income gap in both the rural and urban locations is significantly wider (higher) for migrated households. We believe the gender disparities in average monthly income are perhaps due to the occupational choices, opportunities and their changing patterns; and of course, access to financial and other support. Now, if we compare the national estimates as reported in the Labour Force Survey 2022 with our observable gender income differences, we find that women in the climate migrated households earned BDT 3627.5 less compared to the nationally representative amount as indicated (i.e., BDT 2359) which might accrue due to climatic change. Comparatively, in the urban locations the income differential is BDT 1452.3 among climate migrated households compared with the nationally representative gender earnings gap i.e., BDT 5517 as reported in LFS 2022.[4] Furthermore, we recorded income earned through women's income-generating activities. Therefore, the IGA income gap indicates differences between migrated females and non-migrated females in the rural and urban region. Our gap analysis between female migrated and female non-migrated income shows that income gap in IGAs is wider (indicating migrated female income is higher) in the urban areas.

Our evidence on educational attainment (proxied through highest educational level) shows that for households located in the rural areas - migrated and non-migrated, the gender gaps are significantly wider at the tertiary level and others category, while the same has been observed at the secondary level for non-migrated households only. However, in the urban region, we found the gap to be significantly wider particularly at the higher secondary level for migrated households only. This evidence showcases that despite incredible progress has been achieved in primary and lower secondary education in Bangladesh, there are relatively fewer governmental programs incentivizing female tertiary education, contributing to low female enrollment and this turns out to be true in the context of climate change as well.

On current policies, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009, the Climate Change and Gender Action Plan (ccGAP) 2013 and the National Adaptation Plan (NAP) are currently in place to design action-oriented gender specific programs along with a proper guideline to integrate and address climate change induced challenges in our development policies. Our findings are found to be consistent with the government's education policy of prioritizing female education at the primary level. On the broader note, we believe, female educational attainment is important in local level adaptation program designation as evidence suggests that better female educational outcomes could lead to improvement in gender outcomes as well. For example, reduction in gender gap in female educational attainment could potentially increase female community leadership participation, female labor force participation and better female income opportunities. In practice, in adaptive social

4 We use the Labor Force Survey (LFS) 2022 report findings to calculate the gender income inequality in the rural and urban context. The LFS survey covered the population aged 15 or older living in the sampled households to obtain estimates on many socio-demographic variables classified by sex, age, educational attainment, occupation and industry. The survey involved a quarterly sample of 30,816 households from 1284 primary sampling units (PSUs) and distributed across all 64 Districts of Bangladesh.

protection programs, productive inclusion of cash/meal incentives to achieve female educational outcomes could generate better income-earning opportunities and enhance IGA management skills and could also increase female leadership in facilitating community-based savings and loan groups. This practice could further be integrated in locally-led adaptation programs where local women could be the focal of the economic and social decision-making process and increased female educational attainment could create opportunities in relevant spaces for women to participate in the adaptation process. We therefore, emphasize on gender-smart and climate-smart development interventions through identifying high-potential gender entry points (supported by programmatic approaches such as access to green jobs, adaptive social safety nets[4] and so on) and transitioning towards institutional approaches to address and reduce the unequal gender impacts of climate change on women across diversified livelihoods and earnings gap in the gender gap governance framework.

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APPENDIX

Table a1: Summary of gender gap in economic participation, opportunity and educational attainment

Gender parity dimension(s)	Indicator(s)	Gender gap a (migrated)		Gender gap (non-migrated)	
		Rural	Urban	Rural	Urban
Economic participation & opportunity	Estimated Earned Income b [BDT]	5986.5***	6969.3***	5737.6	4677.7
	Paid Employee	11.05***	13.84**		
	Day (Casual) Labourer (Non-agriculture)	16.98***	27.34***	19.83	22.22
	Contributing Family Member	-30.7***	-50.64***	-41.93***	
	Self-employed (Nonagriculture)			10.71**	-46.67*
	Employer/Entrepreneur	3.13**		4.1***	11.11
	Fishing			10.03***	22.22
	Poultry Farming	-1.71***		-1.12	-8.89
Educational attainment	No Education	-4.96*	-4.64	0.54	18.57
	Below Primary	2.83	0.34	-3.23	1.43
	PSC-Below Secondary	-2.02	-2.41	-8.22**	-17.14
	Secondary	-0.39	-4.24	3.98*	-10.00
	Higher Secondary	1.53	7.05**	2.21	
	Tertiary	2.01*	1.57	2.87**	7.14
	Others	1.01**	2.34	1.85**	

Source: Author's Calculations based on Climate-induced Migration and Gender Survey 2023.

Note: [a] The formula to calculate the gender gap is male minus (-) female across the key gender dimensions.
[b] The gender gap in the estimated earned income category had been calculated on an individual basis. Therefore, other annual incomes of households are not included in this estimation.