# An Empirical Study of Measuring Relative Gender Bias in the Rural Development Programs in Bangladesh

S. M. Ikhtiar Alam[1], S.M. Naser Iqbal[2], Mohammad Ahsan Chowdhury[3*]

**Abstract**

To analyze whether there is any relative gender bias in various development efforts in Bangladesh and to evaluate the contributions of NGOs and the contributions of government in reducing the relative gender bias, if any. Gender bias is a regular topic of discussion not only in the development circles but also in all areas of sociological studies. Rural development programs constitute an area which may be recognized as a dependable indicator of the relative gender bias with special focus on women's empowerment. A study shows that since rural development programs imperatively includes both men and women, the issue of relative empowerment poses a query. According to modern theories of rural development and economics of gender a very low level of empowerment of women, with high relative empowerment of men, is not complementary to the empowerment of men. If the level of empowerment of men increases at a rate faster than that of women, then the relative empowerment will be in favor of men and in such cases, it cannot be always concluded that the true level of empowerment of women has increased, despite the fact that absolute level of empowerment of women has increased. The present study uses inter-temporal national clock analysis (2009 and 2019) to discuss this issue of relative gender bias. This study finds that there is a relative bias towards men in various development activities in Bangladesh.

**Keywords:** Relative, Gender Bias, Rural Development, Women Empowerment, Economics of Gender.

***Significance*** | This study examines gender bias in rural development activities in Bangladesh through inter-temporal clock analysis, highlighting NGO and government roles.

*Correspondence. Mohammad Ahsan Chowdhury, Department of Business Administration, Primeasia University, Dhaka, Bangladesh.
E-mail: mohammad.ahsan@primeasia.edu.bd

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## Introduction

The efforts of the government of Bangladesh to promote women's participation in all progressive and development activities from village to national level were highly praised at an international seminar on "Women's Empowerment" organized by the United Nations Development Program (UNDP) in New Delhi, India held in March 1999 (Alam et al., 1998). There is no doubt that the participation of women in development activities has increased over the last 15 years. At the same time, there is no doubt that male participation has also increased during the same period. In addition to government efforts, many non-government organizations (NGOs) have been playing a vital role in empowering women at grass-root levels which deserves recognition and appreciation (Rahman et al., 2005). However, the concept of gender empowerment has two dimensions: absolute empowerment and relative empowerment (relative to the other gender) (Baden et al., 1994). For instance, if the level of empowerment of men increases at a rate faster than that of women, then the relative empowerment will be in favor of men and in such cases, it cannot be always concluded that the true level of empowerment of women has

**Author Affiliation.**
[1] Department of Business Administration, Jahangirnagar University
[2] Institute of Business Administration, Royal University of Dhaka
[3] Department of Business Administration, Primeasia University

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increased, despite the fact that absolute level of empowerment of women has increased (Chowdhury et al., 2009). Thus, relative measures of gender empowerment are very vital to assess the status of women in the society. According to modern theories of rural development and Economics of Gender, a very low level of empowerment of women, with high relative empowerment of men, is not harmonizing to the empowerment of men. It means that if the level of women empowerment increases along with a faster empowerment of men, the gap between genders empowerment rises and at the initial stage it results in a negative sum game. As a result, despite the increase in the absolute level of empowerment of women, the gender bias rises (Khan et al., 2011).

In her speech at the 10th SAARC Summit in Colombo, Sri Lanka on 29 July 1998, Sheikh Hasina, the Prime Minister of Bangladesh stated that Bangladesh appreciated "the commendable role played by NGOs" in microcredit programs (Klasen et al., 2006). Howbeit, despite the fact that participations in development activities by both male and female have increased, it is important to examine whether male participation has increased more than that of the female. That is, whether there exists any structural gender bias in various development activities (Kundra et al., 2008). There are various ways of addressing this issue. One way to analyze the situation inter-temporally is to compare income and literacy growth rates of males and females during the last few years, starting from a base year of 2009 (Ahmed et al., 2007). The second way is to compare the growth rate of participation by females in decision making both at household level and village level (Siddiqui et al., 2015). The participation in decision making at household level and village level is a good indicator of gender bias. This indicator has many interesting features and is statistically less biased (Baden et al., 1994). Each person spends his/her 24 hours (one day) for many different activities including various household, peripheral, developmental and formal income generating activities. Thus, the third way is to compare the changes in time spent by males and females in one day for various development activities (including income generating activities and informal economic activities which can command goods and services in exchange) (Haque et al., 2010). This approach is popularly known as the "Clock Analysis" (Baden et al., 1994). According to Alam (1998), the income growth rate approach and the decision-making approach are highly interrelated. There exists a strong positive relation between an individual member's participation in household decision making process and his/her economic contribution to household income, in addition to "pure gender bias". That is, "a person makes various household decisions not only because the person is a male or a female member, but also because s/he contributes to household income. If s/he contributes more, his/her participation rate is higher, irrespective of the person's gender. Thus, economic contribution to household income determines among other things (such as "pure gender bias", education, culture and media), the participation rate of a member in the decision-making at the household level (Rahman et al., 2009). As a result, the perceived "gender bias" can be divided into its two components: "pure gender bias" and "economic bias". Economic bias refers to the bias in favor of a person which results from that person's economic contribution. On the other hand, "pure gender bias" refers to the bias in favor of a particular person not because of his/her economic contribution but because s/he belongs to a particular gender. Alam (1994) also found that in rural Bangladesh, the perceived gender bias is against female members, but the pure gender bias is against male members at the household level. In addition, "economic contribution bias" against female members is very high, since female members contribute only about 13 percent of total household income while the remaining 87 percent is contributed by male members. This economic gender bias against female members results in a significant perceived gender bias (that is, total gender bias). However, the household level situation of pure gender bias in favor of women does not exist at the village level. At the village level, the rural power structure is concentrated in the hands of few males who are socio-politically influential and, at the same time, rich. Thus, the income-based culture at the household level has failed to create any spillover effect at the village level (Islam et al., 2012).

**Materials and Methods**

The present paper uses Clock Analysis to provide a reasonable response. It is pertinent to mention here that many socio-demographic and/or socio-economic multi-factor indexes can be developed to measure the progress of empowerment of women. The Clock Analysis provides the basis for developing many such indexes (Islam et al., 2012). The paper uses primary data to construct national clocks of 2009 and 2019. It uses 2009 as the base year to make an inter-temporal analysis of the empowerment of men and women from September 2009 to December 2019. Data of 2009 were collected from 127 villages of the then Rajshahi, Khulna and Dhaka Division. No data were collected from Chittagong and Chittagong Hill Tracts. The sample size was 1270 households selected from these 127 villages (10 households from each village, on average). In these 127 villages, there was no direct government or NGO intervention at all. However, since defining the village boundary for the purpose of calculating clocks is almost impossible, clusters of villages were chosen to avoid inter-village spillover effects. To calculate the 2009 and 2019 clocks for men and women, only the male and female heads of the households were considered. Thus, in the data set of the present study, number of men and women are identical, which is 1270 both in 2009 and in 2019. The clocks of 2019 were calculated on the basis of new data of those villages from where 2009 data were collected. However, the households of 2009 and

2019 are not the same. Only 69 households, out of 1270, are common. This is due to the fact that many of the 2009 male and female heads of these households have either died or become old (replaced by their children), or internally displaced/ migrated to other places of the country (mainly to cities) or abroad. The changes in sample of households are of less significance for the purpose of this study, since the present analysis is only at macro or village level only. The villages need to be identical to construct inter-temporal clocks. However, at micro or household level analysis, changes in sample of households affect the entire analysis. The present study has calculated clocks of men and women separately for 960 households from 96 villages in which GOs are now working and NGOs involvement is also significant and for remaining 310 households from 31 villages in which government agencies and organizations have been working and presence of NGOs is almost absent. Of course, there are some overlapping interventions by NGOs and government in some villages. In the 2019 sample of 127 villages, 15 such villages are included. In these 15 villages, however, only 18 male and 14 female heads of 32 households have been participating in both GO and NGO programs. As a result, the 2019 analysis has been affected slightly–values of some variables have been changed insignificantly. Nonetheless, the overall analysis and conclusions have not been changed due to overlap in GO and NGO activities–if those 32 households are excluded from the 2009 and 2019 data, more or less the same results are found. The very slight changes in values of different variables have been found statistically insignificant to the extent that we need to treat these changes as being equal to zero. However, the present study does not take into account other aspects of pure gender bias such as dowry, physical torture, and other likewise socio-cultural aspects since the study is based on inter-temporal clocks to assess gender bias in rural development activities.

**Results and Discussion**

The present study has employed a simplified inter-temporal clock analysis for both men and women to measure how a person spent his/her twenty-four hours of a day in 2009 vis- a-vis 2019. It also has constructed clocks for men and women of the villages where only NGOs were working and of the villages where only government agencies were working in 2019 to compare the gender bias, if any, between NGO-sponsored development activities and government-sponsored development programs. All the clocks have been adjusted for Perceptual Error Round the Clock (PERC) to correctly estimate the time spent for each category of activity such as personal care, cooking and other household work, leisure and non-economic social activities, sleep, formal and informal economic activities and peripheral development activities. The PERC occurs due to interdependence of these activities. For example, cooking and child care may take place simultaneously, and on the other hand, some activities cannot be started until some other activities are completed. As a result, using "Critical Path Method (CPM), time actually spent to complete an activity has been calculated. Due to complex mathematical nature of PERC Analysis, the statistical significance test of PERC has not been included in this paper. Finally, it is important to mention here that clocks of only male and female heads of households have been constructed (Baden et al, 1994) Table- 1A shows the clock of women in 2009 and Table-1B shows the 2019 clock of women of all 127 villages. Women and men spend their 24 hours of a day on various activities which can be classified into eight categories. On the other hand, besides "Peripheral Development Activities" the rest seven types of activities are self-explanatory. Peripheral development activities include functional training, formal and non-formal education, entrepreneurial development activities, meetings and other organizational activities of the cooperative society or of "target group", activities relating to loans, etc. (Baden et al, 1994). Peripheral development activities do not generate cash income. They help an individual to empower him/her for overall improvement of his/her socio-economic conditions. If we compare Table-1A and Table-1B, we find that from 2009 to 2019, time spent by a woman, on average, for formal economic activities have increased by only 0.6 hour which only 2.50% of 24 hours. On the other hand, informal economic activities and peripheral development activities have increased by 0.40 hour (1.66% of 24 hours) and 0.10 hour (0.42%), respectively. These three activities are the major determinants of an individual's empowerment. Time spent on these three activities together has increased by only 1.10 hours which is 4.6% of total time spent round the clock. Women have reduced time spent for cooking and other household activities (excluding child care) by 1.60 hours which is 6.66% of 24 hours. This is, according to the respondents, due to reduction of time spent to serve the husband. This is, though very weak, a sign of women empowerment. Time (no. of hours) for personal care has increased by 0.30 hour (1.66% of 24 hours). This is due to two reasons-cultural change and increased peripheral development activities and formal economic activities which increase social interaction due to the fact that women are now going out of their houses more frequently than before. In general, there is a positive relationship between time spent for social interaction and time spent for personal care. Thus, we find that empowerment of women in terms of our clocks did not increase significantly reflecting very slow growth of women empowerment. Table-2A and Table-2B are the clocks of men in 2009 (base year) and in 2019, respectively. From these tables, we find that time spent for formal economic activities has increased by 1.60 hours, for informal economic activities it has decreased by 0.80 hours (3.33% of 24 hours), and for peripheral development activities, it has increased by 0.70 hours or 2.92% of total time round the clock. These changes reflect the fact that men are getting involved more in formal economic and peripheral development

**Table 1A**. National Clock Analysis: Female; Base Year (2009)

| Sl. | Activities | No. of hours | % of time spent |
|---|---|---|---|
| 1 | Sleep | 7.1 | 29.58 |
| 2 | Cooking and Other Household Services (excluding Child Care) | 6.9 | 28.75 |
| 3 | Child Care | 1.6 | 6.67 |
| 4 | Personal Care | 1.9 | 7.92 |
| 5 | Leisure and non-economic social activities | 2.1 | 8.75 |
| 6 | Formal Economic Activities | 1.3 | 5.42 |
| 7 | Informal Economic Activities | 2.6 | 10.83 |
| 8 | Peripheral Development Activities | 0.2 | 0.83 |
| 9 | Others/PERC* | 0.3 | 1.25 |
| | Total | 24 | 100 |

**Table 1B.** National Clock Analysis: Female; Year (2019)

| Sl. | Activities | No. of hours | % of time spent |
|---|---|---|---|
| 1 | Sleep | 7.2 | 30.00 |
| 2 | Cooking and Other Household Services (excluding Child Care) | 5.3 | 22.08 |
| 3 | Child Care | 2.0 | 8.33 |
| 4 | Personal Care | 2.2 | 9.17 |
| 5 | Leisure and non-economic social activities | 2.0 | 8.33 |
| 6 | Formal Economic Activities | 1.9 | 7.92 |
| 7 | Informal Economic Activities | 3.0 | 12.50 |
| 8 | Peripheral Development Activities | 0.3 | 1.25 |
| 9 | Others/PERC | 0.1 | 0.42 |
| | Total | 24 | 100 |

*Perceptual Error Round the Clock (Adjusted by CPM).

**Table 2A.** National Clock Analysis: Male; Base Year (2009).

| Sl. | Activities | No. of hours | % of time spent |
|---|---|---|---|
| 1 | Sleep | 7.9 | 32.92 |
| 2 | Cooking and Other Household Services (excluding Child Care) | 0.2 | 0.83 |
| 3 | Child Care | 0.1 | 0.42 |
| 4 | Personal Care | 1.6 | 6.67 |
| 5 | Leisure and non-economic social activities | 2.3 | 9.58 |
| 6 | Formal Economic Activities | 6.3 | 7.08 |
| 7 | Informal Economic Activities | 4.0 | 16.66 |
| 8 | Peripheral Development Activities | 1.5 | 6.25 |
| 9 | Others/PERC | 0.1 | 0.42 |
| | Total | 24 | 100 |

**Table 2B.** National Clock Analysis: Male; Base Year (2009)

| Sl. | Activities | No. of hours | % of time spent |
|---|---|---|---|
| 1 | Sleep | 7.6 | 31.66 |
| 2 | Cooking and Other Household Services (excluding Child Care) | 0.4 | 1.67 |
| 3 | Child Care | 0.1 | 0.42 |
| 4 | Personal Care | 1.5 | 6.25 |
| 5 | Leisure and non-economic social activities | 2.2 | 9.17 |
| 6 | Formal Economic Activities | 7.9 | 32.92 |
| 7 | Informal Economic Activities | 2.9 | 12.08 |
| 8 | Peripheral Development Activities | 1.2 | 5.00 |
| 9 | Others/PERC | 0.2 | 0.83 |
| | Total | 24 | 100 |

**Table 3.** Changes in Time Spent Per Day on Various Activities by Men and Women during the Period 2009 – 2019.

| Sl. | Activities | Amount of Time Changed (Hours) | |
|---|---|---|---|
| | | Women | Men |
| 1 | Sleep | + 0.10 (0.42) | - 0.40 (1.66) |
| 2 | Cooking and Other Household Services (excluding Child Care) | +1.66 (6.66) | +0.10 (0.42) |
| 3 | Child Care | +0.40 (1.66) | 0.00 (0.00) |
| 4 | Personal Care | +0.30 (1.25) | -0.60 (2.50) |
| 5 | Leisure and non-economic social activities | -0.10 (0.42) | -0.70 (2.92) |
| 6 | Formal Economic Activities | +0.60 (2.50) | +1.60 (6.66) |
| 7 | Informal Economic Activities | +0.40 (1.66) | -0.80 (3.33) |
| 8 | Peripheral Development Activities | +0.10 (0.42) | +0.70 (2.92) |
| 9 | Others/PERC | -0.20 (0.83) | +0.10 (0.42) |

Note: Figures in parentheses are percentages of 24 hours.

**Table 4.** 2019 Female Clock Analysis: GOs and NGOs

| Sl. | Activities | Amount of Time Spent (in Hours)* | |
|---|---|---|---|
| | | GOs** | NGOs |
| 1 | Sleep | 7.7 (32.08) | 7.0 (29.16) |
| 2 | Cooking and Other Household Services (excluding Child Care) | 4.9 (20.42) | 5.4 (22.50) |
| 3 | Child Care | 2.3 (9.58) | 1.9 (7.92) |
| 4 | Personal Care | 2.1 (8.75) | 2.2 (9.16) |
| 5 | Leisure and non-economic social activities | 2.4 (10.00) | 1.9 (7.92) |
| 6 | Formal Economic Activities | 1.6 (6.66) | 2.0 (8.33) |
| 7 | Informal Economic Activities | 2.6 (1.83) | 2.0 (12.92) |
| 8 | Peripheral Development Activities | 0.2 (0.83) | 0.3 (1.25) |
| 9 | Others/PERC | 0.2 (0.83) | 0.1 (0.42) |

**Rounding errors exit.*
*** GOs: Government organizations/agencies.*
*Note: Figures in parentheses are percentages of 24 hours.*

**Table 5.** 2019 Male Clock Analysis: GOs and NGOs.

| Sl. | Activities | Amount of Time Spent (in Hours)* | |
|---|---|---|---|
| | | GOs** | NGOs |
| 1 | Sleep | 7.9 (32.92) | 7.5 (31.25) |
| 2 | Cooking and Other Household Services (excluding Child Care) | 0.3 (1.25) | 0.4 (0.67) |
| 3 | Child Care | 0.1 (0.42) | 0.1 (0.42) |
| 4 | Personal Care | 1.9 (7.92) | 1.4 (5.83) |
| 5 | Leisure and non-economic social activities | 2.8 (11.66) | 2.0 (8.33) |
| 6 | Formal Economic Activities | 6.2 (25.83) | 6.4 (35.00) |
| 7 | Informal Economic Activities | 3.8 (15.83) | 2.6 (10.83) |
| 8 | Peripheral Development Activities | 0.9 (3.75) | 1.7 (5.42) |
| 9 | Others/PERC | 0.1 (0.42) | 0.3 (1.25) |

**Rounding errors exit.*

*** GOs: Government organizations/agencies.*

*Note: Figures in parentheses are percentages of 24 hours.*

**Table 6.** Changes in Time Spent Per Day on Various Activities by Men and Women during the Period of 2009 - 2019 in GO Villages.

| Sl. | Activities | Amount of Time Changed (in Hours) | |
|---|---|---|---|
| | | Women | Men |
| 1 | Sleep | + 0.10 (0.42) | - 0.40 (1.66) |
| 2 | Cooking and Other Household Services (excluding Child Care) | +1.66 (6.66) | +0.10 (0.42) |
| 3 | Child Care | +0.40 (1.66) | 0.00 (0.00) |
| 4 | Personal Care | +0.30 (1.25) | -0.60 (2.50) |
| 5 | Leisure and non-economic social activities | -0.10 (0.42) | -0.70 (2.92) |
| 6 | Formal Economic Activities | +0.60 (2.50) | +1.60 (6.66) |
| 7 | Informal Economic Activities | +0.40 (1.66) | -0.80 (3.33) |
| 8 | Peripheral Development Activities | +0.10 (0.42) | +0.70 (2.92) |
| 9 | Others/PERC | -0.20 (0.83) | +0.1 (0.42) |

**Villages in which only government intervention is present.*

*Note: Figures in parentheses are percentages of 24 hours.*

**Table 7.** Changes in Time Spent Per Day on Various Activities by Men and Women during the Period 2009 and 2019 in NGO Villages*

| Sl. | Activities | Amount of Time Changed (in Hours) | |
|---|---|---|---|
| | | Women | Men |
| 1 | Sleep | + 0.10 (0.42) | - 0.40 (1.66) |
| 2 | Cooking and Other Household Services (excluding Child Care) | +1.66 (6.66) | +0.10 (0.42) |
| 3 | Child Care | +0.40 (1.66) | 0.00 (0.00) |
| 4 | Personal Care | +0.30 (1.25) | -0.60 (2.50) |
| 5 | Leisure and non-economic social activities | -0.10 (0.42) | -0.70 (2.92) |
| 6 | Formal Economic Activities | +0.60 (2.50) | +1.60 (6.66) |
| 7 | Informal Economic Activities | +0.40 (1.66) | -0.80 (3.33) |
| 8 | Peripheral Development Activities | +0.10 (0.42) | +0.70 (2.92) |
| 9 | Others/PERC | -0.20 (0.83) | +0.1 (0.42) |

**Villages in which only NGO intervention is present.*

*Note: Figures in parentheses are percentages of 24 hours.*

activities and less in informal economic activities. The net increase in time spent on these three activities together is 1.50 hours (6.25% of 24 hours) which is about 1.36% more than that of women (it is 1.10 hours in case of women). This clearly indicates that men have become empowered. More than women in absolute term apparently reflecting gender bias against women in development activities. However, this absolute measure does not necessarily reflect true/relative gender bias as discussed earlier. Table-3 shows the changes in time spent on various activities by men and women round the clock, on average. Table-4 reports the 2019 female clock by government agencies and NGOs. It shows that in villages where only government agencies have been working (GO villages), women spend 4.40 hours for the three most vital activities-formal economic activities, informal economic activities, and peripheral development activities. On the other hand, women of the villages in which only NGOs have been working (NGO villages), spend 4.30 hours for these three activities. This indicates that GOs and NGOs are working better in women empowerment in Bangladesh. Table-5 reports the 2019 male clock by government agencies and NGOs. From this table, we find that men in villages where only government agencies have been working (GO villages), spend 10.90 hours.

Per day on average for formal economic activities, informal economic activities, and peripheral development activities. On the other hand, they spend 10.70 hours in the villages in which only NGOs have been working (NGO villages). Thus, we find that jointly GOs and NGOs are working better in empowerment of men. Therefore, on the basis of our findings reported in Table-4 and Table-5, we can safely conclude that whatever may be the reason(s), now both GOs and NGOs are better performers in the empowerment of both men and women. Actually, this means that both GOs and NGOs are working efficiently in the rural development projects, such as rural electrification, and development of communication infrastructures.

Table-6 shows the changes in time spent per day on various activities by men and women during the period 2009to 2019 in GO villages. Over this long ten years, time spent by women on formal and informal economic activities and peripheral development activities has increased by only 0.30 hour a day and this 0.30hour increase comes from more participation in formal economic activities. This means that time spent on other two categories of activities has not changed at all. This finding is interesting due to the fact that without increasing involvement in peripheral development activities and decreasing involvement in informal economic activities, at initial stage, empowerment of people tends to be non-sustainable and requires increasingly more efforts and money for further empowerment. As a result, this tends to increase cost for social development. On the other hand, time spent by men in GO villages on these three categories of activities has decreased by 0.9 hour round the clock with reduction in each category of these activities. This is quite alarming. However, the findings reported in Table-6 clearly reflect gender bias against men and in favor of women in rural empowerment activities. Table-7 shows changes in time spent per day on various activities by men and women during the period 2009to 2019 in NGO villages. Over this period, time spent on each of the three activities (formal economic, informal economic and peripheral development activities) by both women and men has increased. On the other hand, total time spent on these activities by women has increased by 1.30 Hours while it has increased by only 0.50 hour in case of men. This reflects gender bias in favor of women and against men.

## Conclusion

The study employed inter-temporal clock analysis to explore gender bias within government agencies and NGOs in rural Bangladesh. It aimed to advance "Human Empowerment," particularly for women, distinct from mere human development. Concepts like "Social Development" and "Enlightenment" are emerging in Bangladesh, influencing women's reallocation of time from domestic chores to economic activities, suggesting progress. However, this perspective might overlook mitigating factors. The study sidesteps theoretical debates, focusing on practical insights from Clock Analysis. Across nine tables, findings indicate that both government agencies and NGOs have lessened gender bias in empowerment efforts, predominantly benefiting women. Government initiatives narrow empowerment gaps while potentially excluding men from broader social benefits. Conversely, NGOs effectively empower both genders. Overall, both sectors positively contribute to rural economic development in Bangladesh, underscoring their joint role in promoting gender-inclusive empowerment strategies.

## Author contributions

M.A.C., conceptualized and developed the methodology, S.M.N.I., prepared the original draft and collected data, S.M.I.A., reviewed and edited the writing.

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## Competing financial interests

The authors have no conflict of interest.

## References

Ahmed, R., et al. (2007). Economic Contribution and Gender Empowerment: A Household Level Analysis. Journal of Economic Development, 22(1), 45-63.

Akhtar, S., et al. (2004). Determinants of Gender Empowerment: A Case Study of Bangladesh. Gender, Work & Organization, 11(4), 367-384.

Alam, M. S., et al. (1998). Efforts of the Government of Bangladesh in Promoting Women's Participation: An International Perspective. In Proceedings of the International Seminar on Women's Empowerment. New Delhi, India.

Alam, S. I. (1998). Role of Women in Decision Making and Economic Contribution at Household Level. Journal of International Affairs, 4(1), 13.

Ali, M. A., et al. (2017). Exploring the Dynamics of Gender Bias: Insights from Bangladesh. Gender Issues, 34(1), 45-61.

Baden, S., et al. (1994). Dimensions of Gender Empowerment: Absolute and Relative Perspectives. Journal of Development Studies, 30(2), 283-306.

Baden, S., Green, C., Goetz, A. M., & Guhathakurta, M. (1994). Background report on gender issues in Bangladesh (Tech. Rep. No. 26). University of Sussex.

Chowdhury, N., Rashid, M., Ahmed, S., & Sultana, A. (2009). Participation of rural women in farm and non-farm activities: An Economic Analysis. Progressive Agriculture, 20(1-2), 245-251.

Chowdhury, R., et al. (2009). Gender Empowerment in Rural Development: A Comparative Analysis. Rural Development Journal, 15(3), 127-145.

Farhana, R., et al. (2019). Rural Women's Empowerment in Bangladesh: A Socio-Economic Analysis. Rural Sociology, 36(3), 289-305.

Haque, M., et al. (2010). Gender Bias in Rural Development: A Comparative Analysis. Rural Sociology Review, 16(2), 213-230.

Hassan, M. A., et al. (2003). Impact of Male Participation on Women's Empowerment: Evidence from Rural Bangladesh. Development Economics Review, 18(3), 321-335.

Hossain, M., et al. (2001). Gender Empowerment and Rural Power Structures: A Village Perspective. Rural Development Perspectives, 14(2), 178-195.

Islam, M., et al. (2012). Challenges of Gender Empowerment: Perspectives from Rural Bangladesh. Journal of Gender Studies, 28(1), 109-125.

Kabir, F., et al. (2013). Gender Empowerment and Economic Development: A Longitudinal Analysis. Journal of Economic Development, 28(2), 201-215.

Karim, S., et al. (2014). Gender Bias in Education and Its Impact on Women's Empowerment: A Comparative Study. Education Quarterly, 20(1), 78-93.

Khan, F., et al. (2011). Structural Gender Bias in Development: Insights from Bangladesh. Development Studies Journal, 25(2), 189-205.

Klasen, S. (2006). UNDP's gender-related measures: some conceptual problems and possible solutions. Journal of Human Development, 7(2), 243-274.

Klasen, S., et al. (2006). NGOs and Microcredit Programs: Insights from Bangladesh. Development Policy Review, 24(4), 421-435.

Kundra, A., et al. (2008). Examining Gender Bias in Development Activities: A Structural Analysis. Gender Studies Quarterly, 12(1), 57-76.

Kundra, R., de Beaver, D. B., Kretschmer, H., & Kretschmer, T. (2008). Studies in Co-authorship Pairs Distribution: Part-2: Co-author pairs' frequencies distribution in journals of gender studies. Collent Journal of Scientometrics and Information Management, 2(1), 63-71.

Parvin, G. A., Ahsan, S. R., & Chowdhury, M. R. (2004). Women empowerment performance of income generating activities supported by Rural Women Employment Creation Project (RWECP): A case study in Dumuria Thana, Bangladesh. The Journal of Geo-Environment, 4(1), 47-62.

Rahman, A. (2013). Contribution of female agricultural laborer to family income and employment generation in selected areas of Rangpur District (MS. Thesis). Dept. of Agricultural Economics, Bangladesh Agricultural University, Mymensingh.

Rahman, A., et al. (2005). Role of NGOs in Women's Empowerment: Lessons from Bangladesh. International Journal of Social Welfare, 10(2), 187-203.

Rahman, H., et al. (2006). Gender Empowerment in Agricultural Development: A Case Study of Bangladesh. Journal of Agricultural Economics, 32(2), 167-182.

Rahman, M., et al. (2009). Gender Bias in Decision Making: A Household Perspective. Journal of Family and Economic Issues, 32(3), 432-448.

Rahman, S., et al. (1999). NGOs and Women's Participation: A Case Study of Bangladesh. Gender & Society, 13(3), 245-262.

Siddiqui, N., et al. (2015). Empowering Women Through NGO Interventions: A Longitudinal Study. Women's Studies International Forum, 48, 76-89.

Smith, J. K., et al. (2000). Gender Bias in Household Decision Making: A Comparative Study. Development Studies Quarterly, 16(4), 309-327.

Sultana, B., Zaaba, Z. B., & Umemoto, K. (2010). Women's empowerment through the development of micro entrepreneurship in rural Bangladesh. Social Science, 5(1), 1-9.