**Table S1: Distribution of costs for various types of child delivery in Bangladesh (US$) based on the 2014 BDHS Survey**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Home Delivery** | | **Institutional Normal Delivery** | | **Cesarean Section** | | **Total** | | **P-value** |
|  | **Mean (SD)** | **Median (IQR)** | **Mean (SD)** | **Median (IQR)** | **Mean (SD)** | **Median (IQR)** | **Mean (SD)** | **Median (IQR)** |  |
| **Age** | 24.62 (5.87) | 24.00 (20.00) | 24.05 (5.63) | 23.00 (20.00) | 24.87 (5.52) | 24.00 (21.00) | 24.59 (5.75) | 24.00 (20.00) | <0.001 |
| **Women’s age group** |  |  |  |  |  |  |  |  |  |
| 15‐19 | 17.34 (27.44) | 8.76 (23.77) | 55.07 (56.27) | 37.53 (50.04) | 220.49 (129.62) | 187.66 (125.11) | 66.64 (105.10) | 20.02 (68.81) | <0.001 |
| 20‐24 | 14.97 (22.07) | 6.26 (17.52) | 63.85 (78.85) | 37.53 (50.04) | 236.99 (180.56) | 212.69 (187.66) | 75.41 (131.49) | 25.02 (81.32) |  |
| 25‐34 | 15.18 (25.87) | 6.26 (17.52) | 37.53 (43.79) | 289.16 (400.00) | 225.20 (186.41) | 95.61 (241.65) | 95.61 (241.65) | 25.02 (118.85) |  |
| 35‐49 | 14.52 (26.23) | 6.26 (18.77) | 56.04 (65.93) | 37.53 (62.55) | 284.53 (197.43) | 250.22 (225.20) | 86.63 (153.69) | 15.01 (108.85) |  |
| P-value | 0.223 |  | 0.613 |  | <0.001 |  | <0.001 |  |  |
| **Women's education** |  |  |  |  |  |  |  |  |  |
| No education | 11.78 (21.12) | 6.26 (12.51) | 45.40 (43.79) | 25.02 (48.79) | 194.35 (116.86) | 181.41 (125.11) | 28.73 (61.89) | 6.26 (24.40) | 0.034 |
| Primary | 13.23 (23.58) | 6.26 (14.39) | 51.79 (60.27) | 37.53 (49.42) | 232.12 (136.56) | 212.69 (187.66) | 45.76 (91.12) | 12.51 (35.03) |  |
| Secondary | 17.91 (27.15) | 10.01 (22.52) | 59.27 (72.91) | 37.53 (50.04) | 252.98 (242.63) | 225.20 (175.15) | 89.32 (166.34) | 25.02 (118.85) |  |
| Higher | 23.12 (26.73) | 12.51 (31.28) | 62.55 (59.43) | 62.55 (59.43) | 291.82 (342.82) | 250.22 (162.64) | 191.37 (291.26) | 125.11 (218.32) |  |
| P-value | <0.001 |  | <0.001 |  | 0.025 |  | <0.001 |  |  |
| **Women’s working status** |  |  |  |  |  |  |  |  |  |
| Not working | 16.04 (26.12) | 6.26 (18.77) | 64.04 (77.47) | 37.53 (50.04) | 264.15 (279.59) | 231.45 (181.41) | 87.12 (179.75) | 25.02 (106.34) | 0.034 |
| Working | 13.61 (21.61) | 6.26 (13.76) | 43.07 (48.88) | 25.02 (50.04) | 231.45 (141.09) | 200.18 (162.64) | 59.23 (107.29) | 12.51 (58.80) |  |
| P-value | 0.031 |  | <0.001 |  | 0.121 |  | <0.001 |  |  |
| **Women’s BMI** |  |  |  |  |  |  |  |  |  |
| Underweight | 13.81 (22.17) | 6.26 (14.39) | 50.90 (62.50) | 37.53 (47.54) | 205.04 (121.15) | 187.66 (125.11) | 43.95 (83.17) | 12.51 (35.03) | <0.001 |
| Normal weight | 15.85 (27.57) | 6.26 (17.52) | 59.88 (70.25) | 37.53 (56.30) | 241.09 (269.56) | 187.66 (150.13) | 67.42 (152.73) | 15.01 (70.06) |  |
| Overweight | 17.08 (23.97) | 10.01 (22.52) | 61.67 (68.05) | 37.53 (50.04) | 277.88 (219.31) | 250.22 (162.64) | 119.75 (181.62) | 37.53 (177.66) |  |
| Obese | 15.79 (17.52) | 12.51 (23.77) | 76.49 (115.60) | 37.53 (43.79) | 305.23 (375.42) | 250.22 (225.20) | 169.21 (300.54) | 75.07 (237.71) |  |
| P-value | 0.129 |  | 0.157 |  | <0.001 |  | <0.001 |  |  |
| **ANC visit** |  |  |  |  |  |  |  |  |  |
| No ANC | 11.59 (24.30) | 6.26 (12.35) | 55.40 (59.17) | 25.02 (75.07) | 239.67 (133.07) | 237.71 (187.66) | 22.83 (57.51) | 6.26 (15.01) | <0.001 |
| 1‐3 | 16.72 (25.48) | 8.76 (22.52) | 37.53 (43.79) | 37.53 (43.79) | 228.19 (128.34) | 187.66 (187.66) | 69.16 (108.49) | 25.02 (68.81) |  |
| ≥4 | 18.52 (24.85) | 10.13 (23.15) | 71.13 (94.29) | 37.53 (50.04) | 282.66 (332.98) | 250.22 (165.77) | 136.39 (248.77) | 62.55 (175.15) |  |
| P-value | <0.001 |  | <0.001 |  | <0.001 |  | <0.001 |  |  |
| **Husband age** |  |  |  |  |  |  |  |  |  |
| 15-29 | 16.86 (28.05) | 8.76 (22.52) | 56.42 (71.12) | 37.53 (43.79) | 230.38 (186.78) | 190.79 (162.64) | 68.10 (125.66) | 18.77 (68.81) | <0.001 |
| 30-44 | 15.21 (24.35) | 6.26 (17.52) | 63.72 (76.83) | 37.53 (56.30) | 268.88 (296.70) | 225.20 (162.64) | 90.25 (191.02) | 25.02 (118.85) |  |
| 45 or above | 12.67 (18.13) | 6.26 (14.51) | 51.14 (53.89) | 37.53 (50.04) | 282.04 (158.28) | 250.22 (206.43) | 72.56 (130.76) | 12.51 (60.05) |  |
| P-value | 0.051 |  | 0.322 |  | 0.0735 |  | <0.001 |  |  |
| **Husband education** |  |  |  |  |  |  |  |  |  |
| No education | 12.58 (25.43) | 6.26 (12.51) | 44.33 (57.91) | 25.02 (37.53) | 212.03 (135.97) | 187.66 (125.11) | 34.36 (76.39) | 6.26 (23.77) | <0.001 |
| Primary | 15.19 (25.10) | 6.26 (17.52) | 50.70 (47.69) | 37.53 (43.79) | 242.74 (207.46) | 187.66 (187.66) | 55.06 (116.99) | 12.51 (45.04) |  |
| Secondary | 17.34 (23.79) | 10.01 (22.52) | 64.57 (85.75) | 37.53 (56.30) | 239.14 (178.28) | 200.18 (187.66) | 90.36 (142.08) | 25.02 (118.85) |  |
| Higher | 21.41 (27.17) | 12.51 (21.27) | 81.05 (87.09) | 62.55 (55.05) | 301.22 (364.36) | 250.22 (162.64) | 183.29 (300.26) | 125.11 (225.20) |  |
| P-value | <0.001 |  | <0.001 |  | <0.001 |  | <0.001 |  |  |
| **Husband occupation** |  |  |  |  |  |  |  |  |  |
| Farmer | 11.67 (20.30) | 6.26 (12.51) | 48.48 (43.82) | 37.53 (46.29) | 199.32 (119.66) | 187.66 (143.88) | 47.23 (86.61) | 12.51 (47.54) | <0.001 |
| Agriculture | 13.65 (23.67) | 6.26 (14.64) | 50.46 (61.54) | 25.02 (43.79) | 224.10 (139.19) | 187.66 (156.39) | 34.46 (75.06) | 7.51 (23.77) |  |
| Day labor | 12.60 (22.35) | 6.26 (12.45) | 48.0 (264.37) | 25.02 (50.04) | 204.42 (118.97) | 200.18 (125.11) | 37.40 (76.31) | 7.51 (23.77) |  |
| Factory worker | 15.34 (24.53) | 6.26 (16.26) | 58.23 (89.78) | 37.53 (50.04) | 260.92 (147.02) | 250.22 (150.13) | 69.11 (120.57) | 14.39 (56.30) |  |
| Service holder | 25.25 (26.89) | 18.77 (31.28) | 90.31 (110.22) | 62.55 (53.80) | 292.99 (216.45) | 250.22 (225.20) | 189.43 (209.36) | 125.11 (212.69) |  |
| Business | 17.15 (30.30) | 7.51 (17.27) | 54.73 (54.98) | 37.53 (52.55) | 278.77 (333.87) | 250.22 (175.15) | 109.41 (226.75) | 25.02 (143.50) |  |
| Skilled worker | 17.79 (22.87) | 12.51 (22.52) | 66.58 (81.85) | 37.53 (50.04) | 246.33 (284.40) | 193.92 (187.66) | 85.66 (178.74) | 25.02 (106.34) |  |
| Other | 18.55 (38.60) | 6.26 (24.27) | 85.07 (88.00) | 53.17 (75.07) | 269.19 (101.01) | 253.35 (137.62) | 87.09 (121.74) | 25.02 (118.85) |  |
| P-value | <0.001 |  | <0.001 |  | 0.072 |  | <0.001 |  |  |
| **Household size** |  |  |  |  |  |  |  |  |  |
| ≤4 | 14.87 (24.85) | 6.26 (17.77) | 55.40 (74.45) | 37.53 (46.92) | 245.16 (196.23) | 225.20 (187.66) | 82.45 (145.46) | 21.27 (93.83) | 0.166 |
| >4 | 15.68 (25.21) | 7.51 (17.52) | 62.08 (72.56) | 37.53 (55.05) | 265.38 (289.03) | 225.20 (175.15) | 80.27 (175.77) | 18.77 (81.32) |  |
| P-value | 0.450 |  | 0.2583 |  | 0.230 |  | 0.687 |  |  |
| **Wealth index** |  |  |  |  |  |  |  |  |  |
| Poor | 13.07 (23.98) | 6.26 (11.89) | 51.99 (54.81) | 37.53 (43.79) | 212.56 (138.32) | 187.66 (125.11) | 34.63 (74.70) | 7.51 (23.77) | <0.001 |
| Middle | 16.52 (25.89) | 8.13 (17.52) | 52.60 (68.70) | 37.53 (43.79) | 217.03 (136.05) | 187.66 (137.62) | 61.95 (104.26) | 18.77 (56.30) |  |
| Rich | 19.37 (26.18) | 12.51 (21.27) | 67.27 (82.66) | 37.53 (55.05) | 277.09 (296.94) | 250.22 (162.64) | 135.13 (228.96) | 62.55 (187.66) |  |
| P-value | <0.001 |  | 0.025 |  | <0.001 |  | <0.001 |  |  |
| **Birth order** |  |  |  |  |  |  |  |  |  |
| 1 | 18.23 (27.06) | 11.26 (21.27) | 68.73 (80.68) | 50.04 (50.04) | 251.52 (283.74) | 212.69 (187.66) | 100.03 (193.07) | 31.28 (141.37) | 0.1697 |
| 2‐3 | 14.63 (25.26) | 6.26 (18.02) | 51.32 (63.41) | 37.53 (46.92) | 266.70 (240.95) | 225.20 (186.41) | 77.28 (157.55) | 18.77 (83.82) |  |
| ≥4 | 12.42 (20.10) | 6.26 (12.14) | 55.74 (72.16) | 37.53 (49.11) | 259.84 (159.85) | 250.22 (231.45) | 37.88 (87.64) | 7.51 (23.77) |  |
| P-value | <0.001 |  | 0.010 |  | 0.653 |  | <0.001 |  |  |
| **Mass media exposure (TV/radio)** |  |  |  |  |  |  |  |  |  |
| No exposure | 13.83 (25.08) | 6.26 (13.32) | 62.76 (74.71) | 214.04 (127.74) | 214.04 (127.74) | 187.66 (131.36) | 41.42 (82.94) | 10.01 (36.28) | <0.001 |
| Exposure | 17.19 (25.02) | 10.01 (22.52) | 58.85 (72.67) | 37.53 (43.79) | 268.62 (281.95) | 250.22 (162.64) | 107.40 (200.38) | 32.53 (142.62) |  |
| P-value | <0.001 |  | 0.5304 |  | <0.001 |  | <0.001 |  |  |
| **Division** |  |  |  |  |  |  |  |  |  |
| Barisal | 18.49 (28.36) | 7.51 (21.27) | 65.45 (67.90) | 37.53 (67.56) | 262.31 (255.19) | 250.22 (162.64) | 71.95 (151.54) | 18.77 (68.81) | <0.001 |
| Chittagong | 23.59 (28.91) | 12.51 (18.77) | 86.45 (97.89) | 62.55 (62.55) | 311.19 (192.37) | 262.73 (181.41) | 92.04 (149.02) | 25.02 (81.32) |  |
| Dhaka | 11.44 (19.50) | 6.26 (12.51) | 59.31 (60.36) | 37.53 (50.04) | 296.75 (320.65) | 250.22 (150.13) | 111.93 (227.87) | 25.02 (185.16) |  |
| Khulna | 13.34 (22.35) | 7.82 (10.01) | 31.97 (22.18) | 25.02 (30.65) | 187.91 (115.62) | 162.64 (125.11) | 79.00 (107.30) | 25.02 (116.35) |  |
| Mymensingh | - | - | - | - | - | - | - | - |  |
| Rajshahi | 12.74 (24.69) | 6.26 (11.89) | 37.16 (34.72) | 25.02 (37.53) | 192.03 (103.80) | 181.41 (125.11) | 67.51 (98.70) | 18.77 (106.34) |  |
| Rangpur | 10.89 (16.34) | 6.26 (12.26) | 52.03 (75.27) | 25.02 (50.04) | 182.69 (95.45) | 162.64 (125.11) | 52.79 (86.29) | 12.51 (53.80) |  |
| Sylhet | 13.37 (26.46) | 6.26 (15.01) | 85.22 (91.17) | 50.04 (100.09) | 390.55 (515.66) | 312.77 (200.18) | 72.98 (229.71) | 12.51 (36.28) |  |
| P-value | <0.001 |  | <0.001 |  | <0.001 |  | <0.001 |  |  |
| **Place of residence** |  |  |  |  |  |  |  |  |  |
| Urban | 17.26 (26.63) | 6.54 (22.52) | 51.24 (69.90) | 37.53 (50.04) | 274.18 (291.40) | 250.22 (187.66) | 119.86 (217.26) | 37.53 (180.16) | <0.001 |
| Rural | 14.91 (24.62) | 6.26 (17.52) | 65.96 (74.90) | 37.53 (62.55) | 242.90 (226.30) | 200.18 (175.15) | 62.54 (132.87) | 12.51 (58.80) |  |
| P-value | 0.043 |  | 0.009 |  | 0.050 |  | <0.001 |  |  |
| **Religion** |  |  |  |  |  |  |  |  |  |
| Islam | 15.57 (25.52) | 6.26 (17.52) | 58.85 (71.20) | 37.53 (56.30) | 257.71 (236.72) | 225.20 (187.66) | 79.70 (156.63) | 18.77 (81.32) | 0.7421 |
| Others | 13.78 (18.93) | 6.26 (13.76) | 70.43 (90.64) | 37.53 (50.04) | 265.58 (431.03) | 200.18 (100.09) | 95.17 (256.43) | 25.02 (118.85) |  |
| P-value | 0.3410 |  | 0.2277 |  | 0.7732 |  | 0.0931 |  |  |

Table S1 shows that the total average self-reported out-of-pocket (OOP) cost for childbirth in Bangladesh in 2014 was US$ 80.94 (SD ± 166.87). The OOP costs for cesarean sections (CS) were significantly higher, with an average of US$ 258.45 (SD ± 261.05). In comparison, the OOP cost for home delivery was US$ 15.44, while institutional normal deliveries incurred an average cost of US$ 59.91, making institutional delivery the second highest in cost. The highest OOP cost was reported among mothers aged 25-34, with an average of US$ 95.61, whereas the lowest OOP cost was observed among younger mothers aged 15-19, at US$ 66.64. Mothers' education level was significantly associated with OOP expenses (P < 0.001). Mothers with higher education reported higher OOP costs, spending an average of US$ 191.37 in 2014, compared to those with no education who spent an average of US$ 194.35 for childbirth. Husbands with higher education were willing to spend more, with an average of US$ 183.29 for childbirth, and up to US$ 301.22 for CS. Obese mothers had the highest OOP costs, with an average of US$ 169.21, particularly for CS deliveries, where costs averaged US$ 305.23. Women with more frequent antenatal care (ANC) visits also spent more; those who attended four or more ANC visits spent an average of US$ 136.39, compared to those who had no ANC visits (US$ 22.83). The OOP costs associated with recommended ANC visits (≥4) were US$ 18.52 for home delivery, US$ 71.13 for institutional delivery, and US$ 282.66 for CS. Wealthier families spent considerably more on childbirth-related expenses. The OOP costs for home delivery in the rich wealth quintile were US$ 19.37, for institutional delivery US$ 67.27, and for CS US$ 277.09. In 2014, among the eight divisions in Bangladesh, the average OOP cost was the highest in Dhaka division (US$ 111.93), while the highest cost for CS was reported in Sylhet (US$ 390.55). Furthermore, families residing in urban areas consistently incurred higher OOP costs, with an average of US$ 119.86, compared to rural areas, where the average cost was US$ 62.54. This indicates significant disparities in access to affordable childbirth services across different regions and socio-economic groups in Bangladesh.

**Table S2: Factors Associated with various types of child delivery in Bangladesh (US$) based on the 2014 BDHS Survey**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Home Delivery** | | **Institutional Normal Delivery** | | **Cesarean Section** | | **Total** | |
|  | **Coef. (SE)** | **P-value** | **Coef. (SE)** | **P-value** | **Coef. (SE)** | **P-value** | **Coef. (SE)** | **P-value** |
| **Delivery** |  |  |  |  |  |  |  |  |
| Home Delivery |  |  |  |  |  |  | Ref |  |
| Institutional Normal Delivery |  |  |  |  |  |  | 0.55 (0.03) | 0.000 |
| Cesarean section |  |  |  |  |  |  | 1.24 (0.02) | 0.000 |
| **Women’s age group** |  |  |  |  |  |  |  |  |
| 15‐19 | Ref |  | Ref |  | Ref |  | Ref |  |
| 20‐24 | -0.03 (0.04) | 0.478 | 0.10 (0.05) | 0.028 | -0.03 (0.03) | 0.251 | -0.01 (0.02) | 0.593 |
| 25‐34 | 0.02 (0.05) | 0.675 | 0.03 (0.06) | 0.512 | -0.00 (0.04) | 0.836 | 0.01 (0.03) | 0.882 |
| 35‐49 | 0.11 (0.06) | 0.058 | 0.06 (0.09) | 0.263 | 0.01 (0.04) | 0.717 | 0.07 (0.04) | 0.089 |
| **Women's education** |  |  |  |  |  |  |  |  |
| No education | Ref |  |  |  |  |  | Ref |  |
| Primary | -0.02 (0.04) | 0.712 |  |  |  |  | -0.02 (0.04) | 0.654 |
| Secondary | 0.00 (0.05) | 0.940 |  |  |  |  | 0.01 (0.04) | 0.892 |
| Higher | 0.06 (0.08) | 0.487 |  |  |  |  | 0.00 (0.05) | 0.931 |
| **Women’s working status** |  |  |  |  |  |  |  |  |
| Not working | Ref |  | Ref |  | Ref |  | Ref |  |
| Working | -0.07 (0.03) | 0.013 | -0.08 (0.04) | 0.037 | 0.00 (0.03) | 0.820 | -0.06 (0.02) | 0.002 |
| **Women’s BMI** |  |  |  |  |  |  |  |  |
| Underweight | Ref |  | Ref |  | Ref |  | Ref |  |
| Normal weight | 0.02 (0.03) | 0.442 | 0.08 (0.04) | 0.058 | 0.04 (0.03) | 0246 | 0.03 (0.02) | 0.138 |
| Overweight | 0.06 (0.04) | 0.154 | 0.07 (0.05) | 0.046 | 0.09 (0.03) | 0.003 | 0.07 (0.03) | 0.012 |
| Obese | 0.08 (0.07) | 0.217 | 0.13 (0.08) | 0.112 | 0.08 (0.04) | 0.053 | 0.08 (0.04) | 0.041 |
| **ANC visit** |  |  |  |  |  |  |  |  |
| No ANC | Ref |  |  |  |  |  | Ref |  |
| 1‐3 | 0.15 (0.03) | 0.000 |  |  |  |  | 0.11 (0.03) | 0.000 |
| ≥4 | 0.24 (0.04) | 0.000 |  |  |  |  | 0.18 (0.03) | 0.000 |
| **Husband age** |  |  |  |  |  |  |  |  |
| 15-29 | Ref |  | Ref |  | Ref |  | Ref |  |
| 30-44 | -0.02 (0.03) | 0.601 | 0.05 (0.04) | 0.186 | 0.02 (0.03) | 0.550 | -0.00 (0.02) | 0.969 |
| 45 or above | -0.03 (0.06) | 0.534 | 0.02 (0.09) | 0.732 | 0.07 (0.05) | 0.195 | 0.01 (0.04) | 0.873 |
| **Husband education** |  |  |  |  |  |  |  |  |
| No education | Ref |  | Ref |  |  |  | Ref |  |
| Primary | 0.01 (0.04) | 0.788 | 0.12 (0.06) | 0.063 |  |  | 0.03 (0.03) | 0.358 |
| Secondary | 0.00 (0.04) | 0.978 | 0.13 (0.06) | 0.032 |  |  | 0.02 (0.03) | 0.452 |
| Higher | 0.12 (0.07) | 0.095 | 0.26 (0.07) | 0.000 |  |  | 0.09 (0.04) | 0.030 |
| **Husband occupation** |  |  |  |  |  |  |  |  |
| Farmer | Ref |  | Ref |  | Ref |  | Ref |  |
| Agriculture | 0.02 (0.05) | 0.652 | -0.05 (0.07) | 0.545 | -0.01 (0.06) | 0.928 | -0.00 (0.04) | 0.945 |
| Day labor | 0.02 (0.05) | 0.631 | -0.14 (0.07) | 0.051 | 0.01 (0.05) | 0.891 | -0.00 (0.04) | 0.948 |
| Factory worker | 0.02 (0.06) | 0.781 | -0.01 (0.07) | 0.720 | 0.08 (0.04) | 0.032 | 0.02 (0.04) | 0.701 |
| Service holder | 0.04 (0.11) | 0.701 | -0.06 (0.07) | 0.629 | 0.08 (0.05) | 0.041 | 0.02 (0.05) | 0.653 |
| Business | -0.01 (0.05) | 0.862 | -0.07 (0.06) | 0.160 | 0.05 (0.03) | 0.156 | -0.01 (0.03) | 0.662 |
| Skilled worker | 0.03 (0.05) | 0.581 | -0.01 (0.06) | 0.879 | 0.01 (0.03) | 0.769 | 0.01 (0.03) | 0.857 |
| Other | 0.05 (0.08) | 0.596 | -0.10 (0.12) | 0.279 | 0.08 (0.05) | 0.105 | 0.02 (0.07) | 0.790 |
| **Household size** |  |  |  |  |  |  |  |  |
| ≤4 | Ref |  | Ref |  | Ref |  | Ref |  |
| >4 | 0.06 (0.03) | 0.082 | 0.06 (0.04) | 0.116 | 0.03 (0.03) | 0.349 | 0.05 (0.02) | 0.024 |
| **Wealth index** |  |  |  |  |  |  |  |  |
| Poor | Ref |  | Ref |  | Ref |  | Ref |  |
| Middle | -0.00 (0.04) | 0.952 | -0.04 (0.05) | 0.407 | -0.01 (0.03) | 0.628 | 0.00 (0.03) | 0.943 |
| Rich | 0.07 (0.05) | 0.107 | 0.01 (0.05) | 0.969 | 0.01 (0.04) | 0.767 | 0.05 (0.03) | 0.088 |
| **Birth order** |  |  |  |  |  |  |  |  |
| 1 | Ref |  | Ref |  | Ref |  | Ref |  |
| 2‐3 | -0.09 (0.03) | 0.014 | -0.15 (0.05) | 0.001 | 0.01 (0.03) | 0.837 | -0.07 (0.02) | 0.001 |
| ≥4 | -0.13 (0.05) | 0.021 | -0.21 (0.08) | 0.004 | -0.04 (0.05) | 0.475 | -0.12 (0.04) | 0.003 |
| **Mass media exposure (TV/radio)** |  |  |  |  |  |  |  |  |
| No exposure | Ref |  | Ref |  | Ref |  | Ref |  |
| Exposure | -0.00 (0.03) | 0.886 | -0.07 (0.04) | 0.223 | 0.00 (0.03) | 0.843 | -0.01 (0.02) | 0.758 |
| **Division** |  |  |  |  |  |  |  |  |
| Barisal | Ref |  | Ref |  | Ref |  | Ref |  |
| Chittagong | 0.12 (0.05) | 0.012 | 0.15 (0.07) | 0.016 | 0.08 (0.05) | 0.147 | 0.11 (0.04) | 0.002 |
| Dhaka | -0.11 (0.06) | 0.057 | 0.05 (0.07) | 0.257 | -0.03 (0.04) | 0.427 | -0.05 (0.04) | 0.199 |
| Khulna | -0.13 (0.05) | 0.017 | -0.14 (0.07) | 0.082 | -0.17 (0.05) | 0.001 | -0.15 (0.04) | 0.000 |
| Mymensingh |  |  |  |  |  |  |  |  |
| Rajshahi | -0.10 (0.06) | 0.108 | -0.13 (0.08) | 0.156 | -0.13 (0.04) | 0.003 | -0.12 (0.04) | 0.004 |
| Rangpur | -0.15 (0.06) | 0.011 | -0.15 (0.08) | 0.168 | -0.17 (0.05) | 0.001 | -0.15 (0.04) | 0.000 |
| Sylhet | -0.04 (0.05) | 0.397 | 0.23 (0.08) | 0.001 | 0.08 (0.05) | 0.157 | 0.02 (0.04) | 0.666 |
| **Place of residence** |  |  |  |  |  |  |  |  |
| Urban | Ref |  | Ref |  | Ref |  | Ref |  |
| Rural | 0.02 (0.04) | 0.693 | 0.14 (0.04) | 0.000 | 0.01 (0.02) | 0.705 | 0.04 (0.02) | 0.050 |
| **Religion** |  |  |  |  |  |  |  |  |
| Islam | Ref |  | Ref |  | Ref |  | Ref |  |
| Others | 0.07 (0.05) | 0.183 | 0.02 (0.05) | 0.736 | 0.00 (0.04) | 0.984 | 0.03 (0.03) | 0.258 |
| N | 2,134 |  | 671 |  | 1042 |  | 3846 |  |
| Mean VIF | 1.84 |  | 2.12 |  | 2.08 |  | 2.04 |  |
| **R2** | 9.90% |  | 24.73% |  | 14.13% |  | 55.48% |  |
| **Adjusted R2** | 7.77% |  | 17.83% |  | 13.33% |  | 61.89% |  |
| **AIC** | 3467.76 |  | 687.7711 |  | 426.0461 |  | 5043.062 |  |
| **BIC** | 3688.724 |  | 841.0692 |  | 597.5214 |  | 5299.508 |  |
| **RMSE** | 0.54 |  | 0.39 |  | 0.29 |  | 0.46 |  |
| **F value, (Prob > F)** | <0.001 |  | <0.001 |  | <0.001 |  | <0.001 |  |

From Table S2, compared to home deliveries, institutional normal deliveries had a positive coefficient of 0.55 (p < 0.000), indicating significantly higher costs. For cesarean sections, the coefficient was 1.24 (p < 0.000), showing an even larger increase in costs. Women aged 20-24 had a small but significant positive coefficient for institutional normal deliveries (0.10, p = 0.028). Working women had a negative coefficient for home deliveries (−0.07, p = 0.013) and institutional normal deliveries (−0.08, p = 0.037), indicating lower costs for working women. Overweight women had a significant positive coefficient for institutional normal deliveries (0.07, p = 0.046) and cesarean sections (0.09, p = 0.003). Women with 1-3 ANC visits had an increased cost for both home deliveries (0.15, p < 0.000) and cesarean sections (0.11, p < 0.000). For ≥4 ANC visits, the coefficients were 0.24 (p < 0.000) for home deliveries and 0.18 (p < 0.000) for cesarean sections. The coefficient for husbands with secondary education was 0.13 (p = 0.032) for institutional deliveries and 0.26 (p = 0.000) for cesarean sections. Women in Chittagong and Khulna had significantly higher costs for institutional deliveries, with coefficients of 0.15 (p = 0.016) and 0.14 (p = 0.082), respectively. Conversely, women in Dhaka and Rangpur had lower costs for home deliveries, with coefficients of −0.11 (p = 0.057) and −0.15 (p = 0.011), respectively. Rural women had slightly higher costs for institutional deliveries (0.14, p < 0.000) compared to urban women.

**Table S3: Distribution of costs for various types of child delivery in Bangladesh (US$) based on the 2017-18 BDHS Survey**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Home Delivery** | | **Institutional Normal Delivery** | | **Cesarean Section** | | **Total** | | **P-value** |
|  | **Mean (SD)** | **Median (IQR)** | **Mean (SD)** | **Median (IQR)** | **Mean (SD)** | **Median (IQR)** | **Mean (SD)** | **Median (IQR)** |  |
| **Age** | 25.07 (5.62) | 24.00 (21.00) | 24.18 (5.48) | 23.00 (20.00) | 25.18 (5.50) | 24.00 (21.00) | 24.96 (5.57) | 24.00 (21.00) | 0.057 |
| **Women’s age group** |  |  |  |  |  |  |  |  |  |
| 15‐19 | 17.13 (18.49) | 11.59 (19.31) | 70.19 (73.91) | 51.50 (51.50) | 227.09 (112.62) | 218.87 (141.62) | 89.76 (114.98) | 38.62 (118.45) | <0.001 |
| 20‐24 | 17.32 (37.14) | 10.30 (17.38) | 74.25 (73.22) | 55.36 (64.37) | 264.12 (156.77) | 257.50 (167.37) | 112.68 (150.53) | 38.62 (182.82) |  |
| 25‐34 | 15.46 (23.43) | 7.72 (16.74) | 64.61 (87.37) | 43.77 (51.50) | 291.07 (275.86) | 257.50 (180.25) | 114.51 (205.52) | 29.90 (172.52) |  |
| 35‐49 | 16.73 (35.79) | 7.72 (16.74) | 66.97 (71.34) | 43.77 (51.50) | 294.40 (205.55) | 257.50 (206.00) | 120.61 (180.65) | 28.32 (186.11) |  |
| P-value | 0.697 |  | 0.539 |  | <0.001 |  | <0.001 |  |  |
| **Women's education** |  |  |  |  |  |  |  |  |  |
| No education | 10.79 (18.03) | 6.44 (10.94) | 60.73 (59.54) | 36.05 (70.81) | 219.24 (139.74) | 199.56 (109.44) | 48.63 (96.45) | 7.78 (26.39) | 0.051 |
| Primary | 13.45 (19.19) | 7.08 (14.16) | 61.21 (58.73) | 38.62 (55.36) | 253.21 (159.27) | 222.09 (180.25) | 63.33 (115.86) | 12.87 (57.94) |  |
| Secondary | 19.60 (40.50) | 12.87 (20.60) | 68.04 (80.37) | 51.50 (51.50) | 263.78 (225.23) | 235.61 (167.37) | 111.71 (177.15) | 38.62 (154.50) |  |
| Higher | 22.67 (21.85) | 16.09 (19.31) | 87.00 (87.21) | 64.37 (83.69) | 297.85 (182.48) | 257.50 (193.12) | 203.99 (191.38) | 193.12 (280.03) |  |
| P-value | <0.001 |  | 0.012 |  | <0.001 |  | <0.001 |  |  |
| **Women’s working status** |  |  |  |  |  |  |  |  |  |
| Not working | 18.09 (36.44) | 10.30 (21.89) | 73.45 (73.17) | 52.79 (64.37) | 284.65 (219.54) | 257.50 (186.69) | 129.37 (187.33) | 51.50 (186.69) | <0.001 |
| Working | 14.90 (22.25) | 7.72 (16.74) | 62.87 (82.90) | 38.62 (43.77) | 241.88 (142.78) | 218.87 (167.37) | 80.49 (125.68) | 20.60 (114.59) |  |
| P-value | 0.012 |  | 0.057 |  | <0.001 |  | <0.001 |  |  |
| **Women’s BMI** |  |  |  |  |  |  |  |  |  |
| Underweight | 12.97 (17.87) | 7.72 (12.87) | 63.52 (55.05) | 38.62 (59.22) | 228.69 (131.55) | 193.12 (154.50) | 69.30 (109.77) | 19.31 (83.69) | <0.001 |
| Normal weight | 16.39 (23.62) | 9.01 (18.02) | 67.34 (68.67) | 45.06 (51.50) | 255.80 (172.51) | 247.20 (167.37) | 87.78 (138.63) | 25.75 (121.67) |  |
| Overweight | 18.81 (43.13) | 9.42 (22.53) | 75.89 (102.57) | 51.50 (51.50) | 281.78 (174.21) | 257.50 (231.75) | 138.36 (174.25) | 64.37 (218.87) |  |
| Obese | 22.24 (53.02) | 12.87 (19.96) | 73.49 (59.11) | 60.51 (55.36) | 308.16 (294.59) | 257.50 (193.12) | 192.91 (261.97) | 128.75 (231.75) |  |
| P-value | 0.002 |  | 0.403 |  | <0.001 |  | <0.001 |  |  |
| **ANC visit** |  |  |  |  |  |  |  |  |  |
| No ANC | 10.47 (15.69) | 6.44 (11.59) | 62.03 (50.83) | 51.50 (79.18) | 263.97 (106.32) | 257.50 (128.75) | 26.35 (62.89) | 6.94 (17.38) | <0.001 |
| 1‐3 | 16.93 (36.70) | 9.01 (15.45) | 68.16 (67.78) | 51.50 (51.50) | 242.76 (128.65) | 231.75 (128.75) | 77.40 (117.74) | 21.89 (96.56) |  |
| ≥4 | 18.94 (24.96) | 12.87 (20.60) | 71.42 (84.89) | 51.50 (51.50) | 285.30 (225.72) | 257.50 (220.81) | 155.23 (203.37) | 84.33 (238.19) |  |
| P-value | <0.001 |  | 0.724 |  | <0.001 |  | <0.001 |  |  |
| **Husband age** |  |  |  |  |  |  |  |  |  |
| 15-29 | 16.38 (35.90) | 10.30 (15.45) | 70.98 (70.48) | 51.50 (47.38) | 239.21 (134.33) | 218.87 (167.37) | 89.28 (125.82) | 25.75 (121.02) | <0.001 |
| 30-44 | 17.23 (29.35) | 8.37 (18.02) | 70.98 (82.42) | 51.50 (64.37) | 282.65 (214.19) | 257.50 (212.44) | 122.87 (182.53) | 38.62 (184.11) |  |
| 45 or above | 13.88 (20.92) | 6.44 (18.01) | 59.96 (67.31) | 38.62 (38.62) | 303.93 (268.10) | 257.50 (206.00) | 110.98 (200.42) | 25.75 (154.50) |  |
| P-value | 0.339 |  | 0.578 |  | <0.001 |  | <0.001 |  |  |
| **Husband education** |  |  |  |  |  |  |  |  |  |
| No education | 12.34 (16.84) | 6.44 (13.52) | 59.92 (68.01) | 38.62 (54.07) | 251.46 (176.36) | 57.16 (115.89) | 12.87 (38.43) | 15.75 (30.20) | <0.001 |
| Primary | 15.75 (30.20) | 7.72 (16.74) | 64.80 (86.19) | 38.62 (51.50) | 238.77 (136.20) | 206.00 (141.62) | 72.74 (117.84) | 19.31 (83.69) |  |
| Secondary | 19.87 (40.60) | 12.87 (19.31) | 70.15 (62.47) | 51.50 (51.50) | 265.73 (194.82) | 257.50 (167.37) | 116.92 (165.72) | 38.62 (180.25) |  |
| Higher | 20.10 (19.96) | 12.87 (19.31) | 84.41 (89.59) | 64.37 (70.81) | 303.56 (239.60) | 257.50 (193.12) | 206.20 (229.50) | 167.37 (283.25) |  |
| P-value | <0.001 |  | 0.044 |  | <0.001 |  | <0.001 |  |  |
| **Husband occupation** |  |  |  |  |  |  |  |  |  |
| Not working | 15.98 (24.45) | 6.44 (12.36) | 92.27 (83.41) | 64.37 (115.87) | 287.21 (157.72) | 244.62 (257.50) | 146.61 (158.19) | 96.69 (218.87) | 0.008 |
| Farmer | 15.83 (29.61) | 7.72 (16.74) | 61.46 (52.77) | 45.06 (64.37) | 236.90 (165.95) | 193.12 (150.64) | 73.96 (124.57) | 19.31 (96.56) |  |
| Agriculture | 12.41 (15.10) | 7.08 (17.83) | 100.78 (163.08) | 64.37 (75.96) | 212.41 (115.96) | 193.12 (148.06) | 55.91 (104.52) | 12.87 (47.64) |  |
| Day labor | 13.59 (18.74) | 7.08 (14.16) | 61.35 (70.45) | 45.06 (38.62) | 243.25 (136.79) | 231.75 (141.62) | 62.95 (109.07) | 13.00 (57.94) |  |
| Factory worker | 21.08 (55.73) | 11.59 (21.89) | 68.31 (59.51) | 64.37 (64.37) | 281.98 (212.69) | 257.50 (167.37) | 121.61 (179.90) | 45.06 (180.25) |  |
| Service holder | 20.30 (16.85) | 16.74 (21.01) | 89.65 (97.33) | 64.37 (96.56) | 312.77 (187.24) | 270.37 (193.12) | 235.72 (200.65) | 218.87 (270.37) |  |
| Business | 16.94 (22.52) | 10.30 (16.99) | 71.00 (68.71) | 53.43 (64.37) | 280.64 (237.66) | 257.50 (179.71) | 129.44 (195.07) | 51.50 (180.25) |  |
| Skilled worker | 18.24 (32.87) | 11.59 (19.31) | 66.30 (70.57) | 38.62 (43.77) | 264.60 (197.14) | 244.62 (167.37) | 110.96 (164.45) | 38.62 (168.66) |  |
| Other | 11.94 (14.84) | 6.44 (11.46) | 14.16 (1.82) | 14.16 (2.57) | 241.41 (76.80) | 270.37 (96.56) | 55.86 (97.70) | 12.87 (19.31) |  |
| P-value | 0.022 |  | 0.064 |  | 0.003 |  | <0.001 |  |  |
| **Household size** |  |  |  |  |  |  |  |  |  |
| ≤4 | 17.58 (38.35) | 9.98 (21.24) | 65.01 (55.86) | 51.50 (51.50) | 268.39 (241.71) | 256.02 (167.37) | 115.73 (188.42) | 38.62 (182.82) | 0.628 |
| >4 | 16.30 (27.49) | 8.37 (16.74) | 71.72 (84.36) | 51.50 (51.50) | 274.12 (178.79) | 257.50 (180.25) | 108.81 (158.98) | 32.19 (172.52) |  |
| P-value | 0.357 |  | 0.246 |  | 0.590 |  | 0.187 |  |  |
| **Wealth index** |  |  |  |  |  |  |  |  |  |
| Poor | 14.31 (31.41) | 7.47 (15.45) | 60.30 (63.29) | 38.62 (42.49) | 238.27 (174.74) | 206.00 (125.53) | 59.81 (116.17) | 12.87 (45.19) | <0.001 |
| Middle | 17.70 (19.68) | 12.87 (19.31) | 77.31 (96.93) | 64.37 (61.16) | 234.78 (130.73) | 231.75 (173.81) | 96.42 (128.21) | 38.62 (119.74) |  |
| Rich | 21.70 (36.05) | 12.87 (19.31) | 73.82 (76.69) | 51.50 (64.37) | 294.90 (222.08) | 257.50 (206.00) | 171.60 (207.28) | 128.75 (231.75) |  |
| P-value | <0.001 |  | 0.029 |  | <0.001 |  | <0.001 |  |  |
| **Birth order** |  |  |  |  |  |  |  |  |  |
| 1 | 20.57 (39.05) | 12.87 (19.31) | 72.90 (71.72) | 51.50 (60.51) | 264.11 (164.37) | 257.50 (167.37) | 131.59 (159.42) | 64.37 (189.26) | 0.074 |
| 2‐3 | 15.01 (22.55) | 7.72 (16.74) | 68.61 (83.81) | 45.06 (51.50) | 281.15 (236.36) | 257.50 (206.00) | 108.38 (183.37) | 25.75 (160.42) |  |
| ≥4 | 15.15 (36.54) | 6.44 (13.52) | 59.63 (67.00) | 38.62 (43.77) | 264.34 (143.24) | 257.50 (170.59) | 56.39 (108.44) | 12.87 (35.41) |  |
| P-value | <0.001 |  | 0.339 |  | 0.233 |  | <0.001 |  |  |
| **Mass media exposure (TV/radio)** |  |  |  |  |  |  |  |  |  |
| No exposure | 14.95 (32.11) | 7.72 (16.74) | 70.59 (90.86) | 51.50 (51.50) | 267.96 (152.59) | 257.50 (173.81) | 69.11 (123.39) | 15.45 (57.94) | 0.843 |
| Exposure | 18.36 (29.71) | 12.87 (20.08) | 69.24 (68.91) | 51.50 (51.50) | 273.35 (211.73) | 257.50 (167.37) | 135.42 (185.59) | 64.37 (206.00) |  |
| P-value | 0.007 |  | 0.811 |  | 0.665 |  | <0.001 |  |  |
| **Division** |  |  |  |  |  |  |  |  |  |
| Barisal | 17.52 (20.74) | 10.30 (21.89) | 86.43 (84.39) | 64.37 (77.25) | 349.26 (335.12) | 321.87 (154.50) | 117.61 (228.53) | 25.75 (185.40) | <0.001 |
| Chittagong | 21.03 (23.76) | 12.87 (19.31) | 89.63 (90.36) | 64.37 (64.37) | 320.68 (156.09) | 283.25 (160.94) | 117.48 (158.67) | 38.62 (180.25) |  |
| Dhaka | 22.15 (66.46) | 12.87 (21.89) | 77.63 (62.79) | 64.37 (69.52) | 299.25 (244.58) | 257.50 (206.00) | 153.97 (215.04) | 64.37 (244.62) |  |
| Khulna | 16.67 (17.03) | 12.87 (19.31) | 69.07 (113.88) | 38.62 (38.62) | 203.78 (96.90) | 193.12 (128.75) | 110.60 (118.95) | 64.37 (167.37) |  |
| Mymensingh | 12.27 (15.96 | 7.72 (12.87) | 53.80 (53.20) | 38.62 (45.06) | 258.85 (216.49) | 257.50 (141.62) | 86.46 (158.30) | 19.31 (122.31) |  |
| Rajshahi | 14.81 (25.21 | 6.44 (18.02) | 47.50 (44.45) | 34.12 (41.20) | 193.75 (107.45) | 180.25 (128.75) | 89.31 (109.69) | 38.62 (146.77) |  |
| Rangpur | 15.33 (29.73) | 7.72 (16.74) | 47.82 (39.52) | 36.37 (45.06) | 219.24 (120.73) | 193.12 (128.75) | 86.29 (116.62) | 25.75 (121.02) |  |
| Sylhet | 12.95 (18.93) | 6.44 (13.71) | 75.53 (80.01) | 51.50 (64.37) | 345.23 (182.74) | 321.87 (231.75) | 110.59 173.42) | 24.46 (126.82) |  |
| P-value | <0.001 |  | <0.001 |  | <0.001 |  | <0.001 |  |  |
| **Place of residence** |  |  |  |  |  |  |  |  |  |
| Urban | 17.30 (23.01) | 11.59 (18.73) | 63.99 (68.58) | 38.62 (51.50) | 286.70 (256.48) | 257.50 (231.75) | 144.09 (214.15) | 64.37 (213.72) | <0.001 |
| Rural | 16.45 (33.24) | 7.72 (16.74) | 73.41 (81.70) | 51.50 (64.37) | 260.53 (140.30) | 257.50 (154.50) | 93.60 (135.55) | 25.75 (135.19) |  |
| P-value | 0.559 |  | 0.083 |  | 0.009 |  | <0.001 |  |  |
| **Religion** |  |  |  |  |  |  |  |  |  |
| Islam | 16.79 (31.33) | 9.01 (17.65) | 67.87 (69.32) | 51.50 (51.50) | 276.16 (208.41) | 257.50 (193.12) | 110.46 (171.28) | 32.19 (172.52) | <0.001 |
| Others | 14.83 (25.06) | 6.44 (13.52) | 83.23 (118.61) | 52.79 (64.37) | 235.86 (108.49) | 231.75 (128.75) | 115.54 (133.02) | 64.37 (182.82) |  |
| P-value | 0.443 |  | 0.062 |  | 0.017 |  | 0.557 |  | <0.001 |

Table S3 shows the total average self-reported out-of-pocket (OOP) cost for childbirth in 2017-18 was US$ 110.89 (SD ± 168.38). The cost distribution varied significantly across different delivery types, with cesarean sections (CS) incurring the highest costs, averaging US$ 272.27 (SD ± 201.26). In comparison, home deliveries had the lowest costs, averaging US$ 16.67, while institutional normal deliveries averaged US$ 69.69. Age was a key factor influencing costs. Mothers aged 35-49 years had the highest OOP expenses, averaging US$ 120.61, while younger mothers aged 15-19 years had the lowest costs at US$ 89.76. The educational level also had a significant impact on OOP expenditures. Mothers with higher education spent an average of US$ 203.99, with CS deliveries averaging US$ 297.85. Husbands' education levels followed a similar trend, with higher education linked to higher costs, especially for CS deliveries, where expenses reached US$ 303.56. Women’s body mass index (BMI) also played a role in cost variation. Obese women had the highest expenses, averaging US$ 192.91, particularly for CS, which cost US$ 308.16. Additionally, women who attended four or more antenatal care (ANC) visits had higher costs, with those delivering via CS spending an average of US$ 285.30. The OOP costs for home deliveries, institutional normal deliveries, and CS for women attending ≥4 ANC visits were US$ 18.94, US$ 71.42, and US$ 285.30, respectively. Wealthier households had significantly higher childbirth costs, with families in the richest quintile reporting US$ 294.90 for CS. Households with higher wealth also had higher costs for institutional and home deliveries, averaging US$ 73.82 and US$ 21.70, respectively. Geographically, Dhaka had the highest overall OOP costs at US$ 153.97, while Barisal reported the highest CS costs at US$ 349.26. Urban residents consistently faced higher OOP costs, with an average of US$ 144.09, compared to US$ 93.60 for rural residents.

**Table S4: Factors Associated with various types of child delivery in Bangladesh (US$) based on the 2017-18 BDHS Survey**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Home Delivery** | | **Institutional Normal Delivery** | | **Cesarean Section** | | **Total** | |
|  | **Coef. (SE)** | **P-value** | **Coef. (SE)** | **P-value** | **Coef. (SE)** | **P-value** | **Coef. (SE)** | **P-value** |
| **Delivery** |  |  |  |  |  |  |  |  |
| Home Delivery |  |  |  |  |  |  | Ref |  |
| Institutional Normal Delivery |  |  |  |  |  |  | 0.71 (0.02) | 0.000 |
| Cesarean section |  |  |  |  |  |  | 1.32 (0.02) | 0.000 |
| **Women’s age group** |  |  |  |  |  |  |  |  |
| 15‐19 | Ref |  | Ref |  | Ref |  | Ref |  |
| 20‐24 | 0.06 (0.04) | 0.190 | -0.02 (0.04) | 0.983 | 0.01 (0.02) | 0.454 | 0.01 (0.02) | 0.538 |
| 25‐34 | 0.09 (0.06) | 0.136 | -0.09 (0.05) | 0.233 | -0.01 (0.03) | 0.639 | 0.02 (0.03) | 0.456 |
| 35‐49 | 0.14 (0.07) | 0.056 | -0.09 (0.07) | 0.404 | 0.03 (0.03) | 0.103 | 0.06 (0.03) | 0.057 |
| **Women's education** |  |  |  |  |  |  |  |  |
| No education |  |  |  |  |  |  |  |  |
| Primary |  |  |  |  |  |  |  |  |
| Secondary |  |  |  |  |  |  |  |  |
| Higher |  |  |  |  |  |  |  |  |
| **Women’s working status** |  |  |  |  |  |  |  |  |
| Not working | Ref |  | Ref |  | Ref |  | Ref |  |
| Working | -0.03 (0.03) | 0.417 | -0.02 (0.03) | 0.376 | -0.01 (0.02) | 0.751 | -0.02 (0.02) | 0.286 |
| **Women’s BMI** |  |  |  |  |  |  |  |  |
| Underweight | Ref |  | Ref |  | Ref |  | Ref |  |
| Normal weight | 0.03 (0.04) | 0.331 | -0.01 (0.04) | 0.458 | 0.02 (0.02) | 0.298 | 0.03 (0.02) | 0.125 |
| Overweight | 0.04 (0.04) | 0.338 | -0.02 (0.04) | 0.511 | 0.05 (0.03) | 0.021 | 0.04 (0.03) | 0.035 |
| Obese | 0.06 (0.06) | 0.158 | -0.02 (0.07) | 0.643 | 0.05 (0.03) | 0.037 | 0.05 (0.03) | 0.019 |
| **ANC visit** |  |  |  |  |  |  |  |  |
| No ANC | Ref |  |  |  |  |  |  |  |
| 1‐3 | 0.14 (0.04) | 0.000 |  |  |  |  |  |  |
| ≥4 | 0.17 (0.05) | 0.000 |  |  |  |  |  |  |
| **Husband age** |  |  |  |  |  |  |  |  |
| 15-29 | Ref |  | Ref |  | Ref |  | Ref |  |
| 30-44 | 0.07 (0.04) | 0.041 | 0.01 (0.03) | 0.930 | 0.01 (0.02) | 0.393 | 0.03 (0.02) | 0.113 |
| 45 or above | -0.00 (0.07) | 0.742 | 0.04 (0.07) | 0.649 | 0.01 (0.04) | 0.684 | -0.01 (0.04) | 0.752 |
| **Husband education** |  |  |  |  |  |  |  |  |
| No education | Ref |  | Ref |  |  |  | Ref |  |
| Primary | 0.02 (0.04) | 0.098 | -0.03 (0.06) | 0.543 |  |  | 0.03 (0.03) | 0.042 |
| Secondary | 0.05 (0.04) | 0.006 | 0.03 (0.06) | 0.566 |  |  | 0.04 (0.03 ) | 0.001 |
| Higher | 0.04 (0.06) | 0.018 | 0.06 (0.07) | 0.179 |  |  | 0.05 (0.03) | 0.000 |
| **Husband occupation** |  |  |  |  |  |  |  |  |
| Not working |  |  |  |  |  |  |  |  |
| Farmer |  |  |  |  |  |  |  |  |
| Agriculture |  |  |  |  |  |  |  |  |
| Day labor |  |  |  |  |  |  |  |  |
| Factory worker |  |  |  |  |  |  |  |  |
| Service holder |  |  |  |  |  |  |  |  |
| Business |  |  |  |  |  |  |  |  |
| Skilled worker |  |  |  |  |  |  |  |  |
| Other |  |  |  |  |  |  |  |  |
| **Household size** |  |  |  |  |  |  |  |  |
| ≤4 | Ref |  | Ref |  | Ref |  | Ref |  |
| >4 | -0.01 (0.03) | 0.710 | -0.04 (0.03) | 0.204 | -0.00 (0.02) | 0.976 | -0.02 (0.02) | 0.260 |
| **Wealth index** |  |  |  |  |  |  |  |  |
| Poor | Ref |  | Ref |  | Ref |  | Ref |  |
| Middle | 0.08 (0.04) | 0.030 | 0.09 (0.05) | 0.058 | -0.04 (0.02) | 0.301 | 0.05 (0.02) | 0.004 |
| Rich | 0.09 (0.04) | 0.009 | 0.07 (0.04) | 0.108 | 0.01 (0.02) | 0.004 | 0.06 (0.02) | 0.000 |
| **Birth order** |  |  |  |  |  |  |  |  |
| 1 | Ref |  | Ref |  | Ref |  | Ref |  |
| 2‐3 | -0.20 (0.04) | 0.000 | -0.01 (0.04) | 0.437 | 0.01 (0.02) | 0.382 | -0.09 (0.02) | 0.000 |
| ≥4 | -0.19 (0.06) | 0.000 | -0.04 (0.06) | 0.433 | -0.01 (0.05) | 0.176 | -0.09 (0.04) | 0.000 |
| **Mass media exposure (TV/radio)** |  |  |  |  |  |  |  |  |
| No exposure | Ref |  | Ref |  | Ref |  | Ref |  |
| Exposure | 0.03 (0.03) | 0.166 | -0.04 (0.03) | 0.303 | -0.02 (0.02) | 0.385 | 0.01 (0.02) | 0.243 |
| **Division** |  |  |  |  |  |  |  |  |
| Barisal | Ref |  | Ref |  | Ref |  | Ref |  |
| Chittagong | 0.07 (0.05) | 0.138 | 0.03 (0.07) | 0.803 | -0.03 (0.02) | 0.088 | 0.03 (0.03) | 0.234 |
| Dhaka | -0.08 (0.06) | 0.135 | 0.02 (0.07) | 0.781 | -0.12 (0.03) | 0.000 | -0.07 (0.04) | 0.032 |
| Khulna | 0.00 (0.06) | 0.813 | -0.11 (0.07) | 0.109 | -0.20 (0.03) | 0.000 | -0.11 (0.03) | 0.004 |
| Mymensingh | -0.13 (0.06) | 0.015 | -0.19 (0.08) | 0.014 | -0.13 (0.03) | 0.000 | -0.14 (0.04) | 0.000 |
| Rajshahi | -0.25 (0.06) | 0.000 | -0.26 (0.08) | 0.002 | -0.25 (0.03) | 0.000 | -0.24 (0.04) | 0.000 |
| Rangpur | -0.15 (0.07) | 0.016 | -0.23 (0.07) | 0.002 | -0.21 (0.03) | 0.000 | -0.18 (0.04) | 0.000 |
| Sylhet | -0.18 (0.06) | 0.002 | -0.07 (0.08) | 0.251 | -0.00 (0.03) | 0.366 | -0.12 (0.04) | 0.002 |
| **Place of residence** |  |  |  |  |  |  |  |  |
| Urban | Ref |  | Ref |  | Ref |  | Ref |  |
| Rural | -0.03 (0.04) | 0.579 | 0.11 (0.03) | 0.000 | 0.02 (0.02) | 0.468 | 0.02 (0.02) | 0.383 |
| **Religion** |  |  |  |  |  |  |  |  |
| Islam | Ref |  | Ref |  | Ref |  | Ref |  |
| Others | -0.04 (0.06) | 0.539 | 0.04 (0.05) | 0.262 | -0.04 (0.02) | 0.140 | -0.02 (0.03) | 0.612 |
| N | 2,352 |  | 815 |  | 1599 |  | 4,779 |  |
| Mean VIF | 1.91 |  | 2.13 |  | 2.05 |  | 1.96 |  |
| **R2** | 10.55% |  | 13.68% |  | 11.77% |  | 66.67% |  |
| **Adjusted R2** | 8.90% |  | 8.13% |  | 12.64% |  | 66.80% |  |
| **AIC** | 4170.37 |  | 770.83 |  | 480.58 |  | 6456.85 |  |
| **BIC** | 4343.33 |  | 902.59 |  | 615.16 |  | 6651.01 |  |
| **RMSE** | 0.58 |  | 0.38 |  | 0.28 |  | 0.47 |  |
| **F value, (Prob > F)** | <0.001 |  | <0.001 |  | <0.001 |  | <0.001 |  |

From Table S4, we can see that Cesarean sections were associated with the highest delivery costs, showing a significant increase compared to other delivery modes, with a coefficient of 1.32 (p-value < 0.001). Institutional normal deliveries also led to higher costs, with a coefficient of 0.71 (p-value < 0.001). In contrast, home deliveries served as the reference category and had the lowest associated costs. Younger mothers (aged 15-19) had lower delivery costs across all delivery types. For older age groups, particularly those aged 35-49, there was a slight increase in delivery costs, especially for institutional and Cesarean deliveries. However, these differences were less pronounced for institutional normal deliveries. Women with secondary and higher education experienced a significant increase in costs, with coefficients of 0.05 (p-value = 0.006) and 0.04 (p-value = 0.018) for home deliveries, respectively. Working women showed no significant difference in delivery costs. Body mass index (BMI) had some effect on delivery costs. Overweight women, in particular, saw higher costs associated with Cesarean sections (coefficient of 0.05, p-value = 0.021), while obese women also experienced higher costs for Cesarean deliveries (coefficient of 0.05, p-value = 0.037). Adequate antenatal care (ANC) visits were strong predictors of higher delivery costs. Women who had 1-3 ANC visits and 4 or more visits had significantly higher costs compared to those with no ANC visits, with coefficients of 0.14 (p-value < 0.001) and 0.17 (p-value < 0.001), respectively. The wealth index indicated that both middle-income and rich women incurred higher delivery costs, with the richest women facing the highest expenses (coefficient for the rich category = 0.09, p-value = 0.009 for home deliveries). Lastly, geographic region played a role in the variation of delivery costs, with women in Dhaka, Khulna, Mymensingh, Rajshahi, and Rangpur divisions all incurring significantly lower costs than those in Barisal. In particular, the Rajshahi division had the largest decrease in costs for both institutional and Cesarean deliveries (coefficients of -0.25 and -0.26, respectively, both p-values < 0.001).

**Table S5: Distribution of costs for various types of child delivery in Bangladesh (US$) based on the 2022 BDHS Survey**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Institutional Normal Delivery** | | **Cesarean Section** | | **Total** | | **P-value** |
|  | **Mean (SD)** | **Median (IQR)** | **Mean (SD)** | **Median (IQR)** | **Mean (SD)** | **Median (IQR)** |  |
| **Age** | 25.32 (5.50) | 25.00 (21.00 | 25.79 (5.61) | 25.00 21.00 | 25.65 (5.58 | 25.00 (21.00) | 0.030 |
| **Women’s age group** |  |  |  |  |  |  |  |
| 15‐19 | 88.26 (111.14) | 58.96 (82.54) | 248.91 (129.90) | 235.82 (141.49) | 196.73 (145.08) | 176.87 (212.24) | 0.003 |
| 20‐24 | 96.22 (132.04) | 58.96 (82.54) | 268.16 (144.34) | 235.82 (176.87) | 215.86 (161.38) | 200.45 (200.45) |  |
| 25‐34 | 92.97 (120.02) | 58.96 (82.54) | 306.52 (178.40) | 294.78 (176.87) | 244.27 (190.14) | 235.82 (259.40) |  |
| 35‐49 | 91.40 (108.97) | 58.96 (82.54) | 301.54 (189.43) | 259.40 (176.87) | 243.35 (195.10) | 235.82 (259.40) |  |
| P-value | 0.922 |  | <0.001 |  | <0.001 |  |  |
| **Women's education** |  |  |  |  |  |  |  |
| No education | 67.65 (70.68) | 41.27 (53.06 | 248.11 (164.59) | 235.82 (141.49) | 167.16 (158.65) | 117.91 (194.55) | 0.648 |
| Primary | 88.01 (115.34) | 58.96 (70.75 | 272.86 (167.06) | 235.82 (176.87) | 199.81 (174.02) | 176.87 (235.82) |  |
| Secondary | 89.80 (122.70) | 58.96 (82.54 | 272.12 (156.05) | 235.82 (176.87) | 217.18 (168.95 | 188.66 (200.45) |  |
| Higher | 116.74 (128.49) | 70.75 (70.75 | 318.47 (180.03) | 294.78 (212.24) | 277.54 (189.08 | 235.82 (212.24) |  |
| P-value | 0.024 |  | <0.001 |  | <0.001 |  |  |
| **Women’s working status** |  |  |  |  |  |  |  |
| Not working | 93.89 (113.04) | 58.96 (82.54 | 286.57 (159.36) | 235.82 (176.87) | 230.06 (171.42 | 212.24 (229.93) | 0.828 |
| Working | 89.71 (146.06) | 53.06 (53.06 | 279.15 (193.69) | 235.82 (176.87) | 220.40 (200.37 | 176.87 (224.03) |  |
| P-value | 0.220 |  | 0.404 |  | 0.665 |  |  |
| **Women’s BMI** |  |  |  |  |  |  |  |
| Underweight | 104.14 (124.89) | 58.96 (88.43 | 269.91 (133.59) | 235.82 (176.87) | 207.96 (152.92) | 176.87 (247.61) | 0.070 |
| Normal weight | 104.50 (146.57) | 58.96 (82.54 | 270.48 (153.12) | 235.82 (176.87) | 215.15 (169.96) | 176.87 (212.24) |  |
| Overweight | 83.06 (86.82) | 58.96 (70.75 | 281.41 (164.12) | 235.82 (176.87) | 229.52 (171.62) | 224.03 (194.55) |  |
| Obese | 89.80 (116.46) | 58.96 (76.64 | 292.10 (173.47) | 235.82 (176.87) | 234.11 (183.62) | 212.24 (224.03) |  |
| P-value | 0.283 |  | 0.082 |  | 0.047 |  |  |
| **ANC visit** |  |  |  |  |  |  |  |
| No ANC | 83.41 (96.98) | 47.16 (94.33 | 248.76 (138.03) | 235.82 (129.70) | 168.16 (145.22) | 141.49 (229.93) | 0.439 |
| 1‐3 | 85.55 (112.68) | 58.96 (58.96 | 269.03 (162.84) | 235.82 (176.87) | 207.79 (171.42) | 176.87 (218.13) |  |
| ≥4 | 102.85 (130.60) | 58.96 (82.54 | 299.37 (169.04) | 259.40 (176.87) | 249.53 (181.54) | 235.82 (235.82) |  |
| P-value | 0.085 |  | <0.001 |  | <0.001 |  |  |
| **Place of delivery** |  |  |  |  |  |  |  |
| Public facility | 71.37 (107.10) | 47.16 (47.16 | 239.86 (199.46) | 176.87 (194.55) | 133.13 (168.57) | 70.75 (141.49) | 0.914 |
| Private/NGO facility | 122.53 (131.22) | 82.54 (82.54 | 292.50 (159.37) | 247.61 (176.87) | 263.19 (167.65) | 235.82 (200.45) |  |
| P-value | <0.001 |  | <0.001 |  | <0.001 |  |  |
| **Husband age** |  |  |  |  |  |  |  |
| 15-29 | 82.69 (97.91) | 58.96 (58.96 | 255.86 (143.06) | 235.82 (176.87) | 198.66 (153.29) | 176.87 (224.03) | 0.031 |
| 30-44 | 101.16 (136.59) | 58.96 (82.54 | 296.57 (172.89) | 259.40 (176.87) | 242.58 (185.51) | 235.82 (235.82) |  |
| 45 or above | 78.17 (76.04) | 58.96 (64.85 | 309.61 (187.51) | 294.78 (212.24) | 232.14 (192.97) | 212.24 (282.99) |  |
| P-value | 0.048 |  | <0.001 |  | <0.001 |  |  |
| **Husband education** |  |  |  |  |  |  |  |
| No education | 68.46 (65.26) | 50.11 (53.06 | 289.52 (206.58 | 235.82 (176.87) | 197.63 (196.35) | 165.07 (235.82) | 0.116 |
| Primary | 83.97 (114.55) | 58.96 (64.85 | 254.86 (136.58) | 235.82 (159.18) | 193.74 (152.88) | 176.87 (212.24) |  |
| Secondary | 94.75 (112.94) | 58.96 (82.54 | 281.15 (162.93) | 235.82 (176.87) | 225.85 (172.33) | 200.45 (188.66) |  |
| Higher | 122.71 (164.76) | 58.96 (76.64 | 311.41 (174.93) | 294.78 (224.03) | 273.46 (188.68) | 235.82 (212.24) |  |
| P-value | <0.001 |  | <0.001 |  | <0.001 |  |  |
| **Husband occupation** |  |  |  |  |  |  |  |
| Not working | 100.78 (89.40) | 70.75 (82.54 | 330.99 (237.16) | 259.40 (176.87) | 259.29 (228.88) | 188.66 (235.82) | 0.159 |
| Farmer | 87.18 (128.55) | 58.96 (58.96 | 233.82 (133.21) | 235.82 (141.49) | 191.73 (147.44) | 176.87 (165.07) |  |
| Agriculture | 81.81 (96.17) | 58.96 (41.27 | 240.06 (127.59) | 235.82 (117.91) | 180.90 (139.59) | 176.87 (176.87) |  |
| Day labor | 86.38 (135.72) | 53.06 (58.96 | 261.10 (168.47) | 235.82 (153.28) | 195.18 (178.16) | 176.87 (188.66) |  |
| Factory worker | 104.61 (132.32) | 58.96 (82.54 | 287.81 (142.67) | 259.40 (165.07) | 236.48 (162.21) | 235.82 (212.24) |  |
| Service holder | 121.71 (152.44) | 70.75 (70.75 | 334.56 (188.33) | 294.78 (218.13) | 296.92 (199.60) | 294.78 (259.40) |  |
| Business | 94.93 (122.27) | 70.75 (82.54 | 302.57 (182.77) | 259.40 (176.87) | 244.70 (192.12) | 235.82 (235.82) |  |
| Skilled worker | 79.57 (94.12) | 58.96 (53.06 | 269.25 (153.98) | 235.82 (176.87) | 204.85 (163.48) | 176.87 (224.03) |  |
| Other | 103.44 (119.24) | 58.96 (70.75 | 229.36 (108.35) | 235.82 (153.28) | 186.08 (125.91) | 170.97 (218.13) |  |
| P-value | 0.346 |  | <0.001 |  | <0.001 |  |  |
| **Household size** |  |  |  |  |  |  |  |
| ≤4 | 86.81 (106.48) | 58.96 (82.54 | 279.17 (168.40) | 235.82 (176.87) | 225.11 (176.19) | 200.45 (200.45) | 0.997 |
| >4 | 95.88 (126.37) | 58.96 (82.54 | 288.19 (165.51) | 235.82 (176.87) | 229.66 (178.16) | 212.24 (224.03) |  |
| P-value | 0.281 |  | 0.223 |  | 0.494 |  |  |
| **Wealth index** |  |  |  |  |  |  |  |
| Poor | 77.94 (89.89) | 58.96 (64.85 | 258.96 (152.79) | 235.82 (176.87) | 190.43 (158.96 | 176.87 (188.66) | 0.690 |
| Middle | 79.85 (75.54) | 58.96 (82.54 | 274.99 (159.24) | 235.82 (176.87) | 214.37 (165.53 | 188.66 (212.24) |  |
| Rich | 114.39 (156.84) | 69.57 (82.54) | 301.94 (173.69) | 271.19 (176.87) | 256.76 (187.74) | 235.82 (235.82) |  |
| P-value | <0.001 |  | <0.001 |  | <0.001 |  |  |
| **Birth order** |  |  |  |  |  |  |  |
| 1 | 97.35 (117.64) | 58.96 (82.54 | 279.28 (164.26) | 235.82 (176.87) | 227.57 (173.12) | 200.45 (194.55) | 0.317 |
| 2‐3 | 88.60 (127.13) | 58.96 (76.64 | 288.97 (168.48) | 235.82 (176.87) | 232.45 (181.83) | 212.24 (235.82) |  |
| ≥4 | 95.47 (102.27) | 58.96 (82.54 | 296.62 (167.06) | 277.09 (176.87) | 202.33 (172.52) | 176.87 (235.82) |  |
| P-value | 0.564 |  | 0.316 |  | 0.082 |  |  |
| **Mass media exposure (TV/radio)** |  |  |  |  |  |  |  |
| No exposure | 86.47 (112.62) | 58.96 (64.85 | 235.82 (176.87) | 235.82 (176.87) | 197.35 (170.34) | 176.87 (229.93) | 0.155 |
| Exposure | 97.52 (125.50) | 58.96 (82.54 | 293.27 (166.76) | 247.61 (176.87) | 242.61 (178.98) | 235.82 (235.82) |  |
| P-value | 0.165 |  | <0.001 |  | < 0.001 |  |  |
| **Division** |  |  |  |  |  |  |  |
| Barisal | 112.78 (114.29) | 58.96 (82.54 | 324.05 (181.28) | 294.78 (153.28) | 270.58 (190.42) | 235.82 (206.34) | <0.001 |
| Chittagong | 104.58 (86.44) | 76.64 (67.80 | 327.22 (163.37) | 294.78 (117.91) | 230.16 (174.62) | 212.24 (271.19) |  |
| Dhaka | 121.85 (215.19) | 58.96 (82.54 | 304.19 (173.67) | 259.40 (153.28) | 261.12 (199.76) | 235.82 (235.82) |  |
| Khulna | 70.95 (107.76) | 41.27 (53.06 | 243.67 (162.45) | 235.82 (153.28) | 207.23 (167.98) | 176.87 (165.07) |  |
| Mymensingh | 69.52 (86.14) | 47.16 (58.96 | 284.17 (138.54) | 259.40 (176.87) | 231.63 (157.55) | 235.82 (235.82) |  |
| Rajshahi | 73.57 (68.77) | 58.96 (47.16 | 226.66 (119.92) | 212.24 (153.28) | 190.56 (127.75) | 176.87 (141.49) |  |
| Rangpur | 61.72 (64.96) | 41.27 (35.37 | 242.08 (129.06) | 235.82 (123.81) | 188.22 (140.55) | 176.87 (188.66) |  |
| Sylhet | 103.60 (132.62) | 58.96 (82.54 | 367.71 (216.97) | 353.73 (235.82) | 246.13 (225.36) | 188.66 (294.78) |  |
| P-value | <0.001 |  | <0.001 |  | <0.001 |  |  |
| **Place of residence** |  |  |  |  |  |  |  |
| Urban | 100.39 (138.79) | 58.96 (82.54 | 297.11 (172.38) | 271.19 (176.87) | 243.96 (185.77) | 235.82 (235.82) | 0.491 |
| Rural | 89.12 (109.45) | 58.96 (82.54 | 277.30 (162.15) | 235.82 (176.87) | 218.42 (171.53) | 188.66 (212.24) |  |
| P-value | 0.169 |  | 0.006 |  | <0.001 |  |  |
| **Religion** |  |  |  |  |  |  |  |
| Islam | 95.32 (126.06) | 58.96 (82.54 | 283.33 (167.24) | 235.82 (176.87) | 227.67 (178.20) | 200.45 (212.24) | 0.048 |
| Others | 74.32 (54.61) | 58.96 (70.75 | 300.31 (159.87) | 282.99 (153.28) | 232.18 (171.78) | 235.82 (212.32) |  |
| P-value | 0.093 |  | 0.135 |  | 0.656 |  |  |

The figures in Table S5 demonstrate that the total average self-reported out-of-pocket (OOP) cost for childbirth in Bangladesh in 2022 was US$ 228.16 (SD ± 177.50). Cesarean sections (CS) were notably more expensive, averaging US$ 285.14 (SD ± 166.51), while normal deliveries in institutional settings averaged US$ 93.03. The highest costs were associated with mothers in the 25-34 age group, who spent an average of US$ 244.27, while the youngest age group (15-19 years) reported the lowest costs, averaging US$ 196.73. Education played a significant role in determining OOP expenditures. Mothers with higher education had significantly higher costs, averaging US$ 277.54, and those with a higher education level spent US$ 318.47 on cesarean sections. Similarly, husbands with higher education levels contributed to higher family expenses, with average costs of US$ 273.46, and up to US$ 311.41 for CS. The average cost for obese mothers was US$ 234.11, particularly for CS, which cost an average of US$ 292.10. The average OOP expenditure for women with four or more ANC visits was US$ 249.53, with normal deliveries costing US$ 102.85, and CS averaging US$ 299.37. Richer families faced average costs of US$ 114.39 for institutional deliveries, and US$ 301.94 for cesarean sections. The poorest families reported lower costs, with institutional deliveries averaging US$ 77.94, and cesarean sections costing US$ 258.96. Geographic location also played a crucial role in OOP costs. Barisal had the highest average delivery costs, at US$ 270.58, while Sylhet had the highest costs for cesarean sections, averaging US$ 367.71. Urban residents consistently faced higher OOP costs, with an average of US$ 243.96, reflecting the ongoing inequities in access to affordable delivery services in urban areas compared to rural areas, where the average was US$ 218.42. In 2022, several factors significantly impacted OOP costs for childbirth in Bangladesh.

**Table S6: Factors Associated with various types of child delivery in Bangladesh (US$) based on the 2022 BDHS Survey**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Institutional Normal Delivery** | | **Cesarean Section** | | **Total** | |
|  | **Coef. (SE)** | **P-value** | **Coef. (SE)** | **P-value** | **Coef. (SE)** | **P-value** |
| **Delivery** |  |  |  |  |  |  |
| Home Delivery |  |  |  |  |  |  |
| Institutional Normal Delivery |  |  |  |  | Ref |  |
| Cesarean section |  |  |  |  | 0.60 (0.02) | 0.000 |
| **Women’s age group** |  |  |  |  |  |  |
| 15‐19 | Ref |  | Ref |  | Ref |  |
| 20‐24 | 0.04 (0.05) | 0.191 | 0.00 (0.02) | 0.596 | 0.01 (0.02) | 0.291 |
| 25‐34 | 0.03 (0.06) | 0.258 | 0.04 (0.03) | 0.027 | 0.04 (0.03) | 0.051 |
| 35‐49 | 0.03 (0.07) | 0.384 | 0.02 (0.03) | 0.279 | 0.02 (0.03) | 0.353 |
| **Women's education** |  |  |  |  |  |  |
| No education |  |  |  |  |  |  |
| Primary |  |  |  |  |  |  |
| Secondary |  |  |  |  |  |  |
| Higher |  |  |  |  |  |  |
| **Women’s working status** |  |  |  |  |  |  |
| Not working | Ref |  | Ref |  | Ref |  |
| Working | -0.01 (0.04) | 0.821 | 0.00 (0.02) | 0.879 | -0.00 (0.02) | 0.767 |
| **Women’s BMI** |  |  |  |  |  |  |
| Underweight | Ref |  |  |  |  |  |
| Normal weight | 0.04 (0.07) | 0.515 |  |  |  |  |
| Overweight | 0.00 (0.07) | 0.957 |  |  |  |  |
| Obese | -0.01 (0.06) | 0.898 |  |  |  |  |
| **ANC visit** |  |  |  |  |  |  |
| No ANC |  |  |  |  |  |  |
| 1‐3 |  |  |  |  |  |  |
| ≥4 |  |  |  |  |  |  |
| **Husband age** |  |  |  |  |  |  |
| 15-29 | Ref |  | Ref |  | Ref |  |
| 30-44 | 0.03 (0.04) | 0.322 | 0.02 (0.02) | 0.090 | 0.03 (0.02) | 0.064 |
| 45 or above | -0.04 (0.07) | 0.633 | 0.04 (0.03) | 0.166 | 0.01 (0.03) | 0.482 |
| **Husband education** |  |  |  |  |  |  |
| No education | Ref |  |  |  | Ref |  |
| Primary | 0.01 (0.05) | 0.499 |  |  | -0.03 (0.02) | 0.646 |
| Secondary | 0.01 (0.05) | 0.304 |  |  | -0.02 (0.02) | 0.680 |
| Higher | 0.02 (0.06) | 0.055 |  |  | -0.02 (0.03) | 0.115 |
| **Husband occupation** |  |  |  |  |  |  |
| Not working |  |  |  |  |  |  |
| Farmer |  |  |  |  |  |  |
| Agriculture |  |  |  |  |  |  |
| Day labor |  |  |  |  |  |  |
| Factory worker |  |  |  |  |  |  |
| Service holder |  |  |  |  |  |  |
| Business |  |  |  |  |  |  |
| Skilled worker |  |  |  |  |  |  |
| Other |  |  |  |  |  |  |
| **Household size** |  |  |  |  |  |  |
| ≤4 | Ref |  | Ref |  | Ref |  |
| >4 | 0.03 (0.03) | 0.318 | -0.00 (0.01) | 0.882 | 0.00 (0.01) | 0.736 |
| **Wealth index** |  |  |  |  |  |  |
| Poor | Ref |  | Ref |  | Ref |  |
| Middle | -0.05 (0.04) | 0.498 | 0.02 (0.02) | 0.075 | 0.01 (0.02) | 0.458 |
| Rich | 0.05 (0.05) | 0.063 | 0.02 (0.02) | 0.007 | 0.04 (0.02) | 0.009 |
| **Birth order** |  |  |  |  |  |  |
| 1 | Ref |  | Ref |  | Ref |  |
| 2‐3 | -0.06 (0.04) | 0.011 | -0.01 (0.02) | 0.154 | -0.03 (0.02) | 0.020 |
| ≥4 | -0.03 (0.07) | 0.299 | -0.01 (0.04) | 0.403 | -0.01 (0.04) | 0.324 |
| **Mass media exposure (TV/radio)** |  |  |  |  |  |  |
| No exposure | Ref |  | Ref |  | Ref |  |
| Exposure | -0.03 (0.03) | 0.316 | 0.01 (0.01) | 0.135 | -0.00 (0.01) | 0.882 |
| **Division** |  |  |  |  |  |  |
| Barisal | Ref |  | Ref |  | Ref |  |
| Chittagong | 0.04 (0.07) | 0.848 | -0.01 (0.03) | 0.717 | 0.01 (0.03) | 0.773 |
| Dhaka | -0.04 (0.07) | 0.426 | -0.05 (0.03) | 0.015 | -0.05 (0.03) | 0.051 |
| Khulna | -0.24 (0.08) | 0.001 | -0.18 (0.03) | 0.000 | -0.19 (0.03) | 0.000 |
| Mymensingh | -0.17 (0.08) | 0.019 | -0.07 (0.03) | 0.031 | -0.10 (0.03) | 0.003 |
| Rajshahi | -0.11 (0.09) | 0.135 | -0.18 (0.03) | 0.000 | -0.16 (0.03) | 0.000 |
| Rangpur | -0.24 (0.08) | 0.001 | -0.13 (0.03) | 0.000 | -0.16 (0.03) | 0.000 |
| Sylhet | -0.01 (0.07) | 0.596 | 0.00 (0.03) | 0.910 | -0.01 (0.04) | 0.699 |
| **Place of residence** |  |  |  |  |  |  |
| Urban | Ref |  | Ref |  | Ref |  |
| Rural | -0.01 (0.04) | 0.786 | 0.02 (0.02) | 0.455 | 0.02 (0.02) | 0.322 |
| **Religion** |  |  |  |  |  |  |
| Islam | Ref |  | Ref |  | Ref |  |
| Others | -0.04 (0.04) | 0.341 | 0.02 (0.02) | 0.367 | 0.00 (0.02) | 0.901 |
| N | 927 |  | 2236 |  | 3159 |  |
| Mean VIF | 3.55 |  | 1.86 |  | 2.00 |  |
| **R2** | 11.41% |  | 7.45% |  | 44.86% |  |
| **Adjusted R2** | 8.26% |  | 6.38% |  | 44.81% |  |
| **AIC** | 898.67 |  | 767.82 |  | 1785.13 |  |
| **BIC** | 1033.96 |  | 893.50 |  | 1943.64 |  |
| **RMSE** | 0.39 |  | 0.29 |  | 0.32 |  |
| **F value, (Prob > F)** | <0.001 |  | <0.001 |  | <0.001 |  |

In 2022, cesarean sections were associated with notably higher delivery costs compared to institutional normal deliveries, with a coefficient of 0.60 (SE 0.02), indicating a significant increase in costs (p-value < 0.001). Women in the 25-34 age group, in particular, had slightly higher costs for institutional normal deliveries and cesarean sections, with a coefficient of 0.04 (SE 0.03) for cesarean sections (p-value = 0.027). Husbands with higher education were associated with increased delivery costs, though the statistical significance varied (p-value = 0.055 for the highest education level). Wealth status was another strong determinant of delivery costs. The wealthier families, particularly those in the rich wealth index group, incurred significantly higher costs for cesarean sections, with a coefficient of 0.02 (SE 0.02) for cesarean section (p-value = 0.007) (Table S6).