
Impact of PRIME Intervention in Monga-prone Areas

Rushad Faridi

M.A. Baqui Khalily

Md. Jashim Uddin

Objective of This Study

- Measuring the impact of PRIME in improving livelihood of Monga-affected households
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Methodology

- Simple comparison of participants and non-participants in a program are fraught with biases
 - Self-selection bias
 - Bias due to time effect



Correcting Bias

- Difference-in-difference (*DiD*) Estimation
- Propensity score matching



DiD Estimation

$$DiD = (\bar{Y}_1^1 - \bar{Y}_0^1) - (\bar{Y}_1^0 - \bar{Y}_0^0)$$

Y = outcome variable

Subscript denotes time period

1 = after program 0 = before program

Superscript denotes participation status

1 = participant 0 = non-participants

DiD Estimation

$$D1 = (\bar{Y}_1^1 - \bar{Y}_0^1)$$

= Time Effect + Program effect

$$D2 = (\bar{Y}_1^0 - \bar{Y}_0^0) = \text{Time Effect}$$



DiD Estimation

$$DiD = D1 - D2 =$$

Time Effect + Program Effect – Time Effect

= Program Effect

Data

- PRIME was first launched in Lalmonirhat district from August 2006
 - 5 upazilla, 40 unions and 77 villages
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Data

- A random sub-sample of population was selected to measure impact
 - 1623 households were surveyed during June/July 2007
 - Among them 1277 were targeted households
 - 601 households are participants
 - 677 are non-participants
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Reference Time Period

- Before PRIME Intervention
 - 2005 Monga period

 - After PRIME intervention
 - 2006 Monga period
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Impact Outcome

- Outcome variables
 - Consumption ordering according to daily meals
 - Number of households in Seasonal Hardship
 - Household having less meals during Monga than regular season
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Table 1

Pattern of Meals for targeted population in 2005 Monga						
	Participants			Non-Participants		
No. of daily meals during 2005 Monga	No. of households	% of households	Average daily Meals	No. of households	% of households	Average daily Meals
1	210	34.65	1.74	99	14.75	1.98
2	343	56.6		368	72.28	
3	53	8.75		87	12.97	
Total	606	100		671	100	

Table 2

Pattern of meals for targeted population in 2006 Monga						
	Participants			Non-Participants		
No. of daily meals during 2005 Monga	No. of households	% of households	Average daily Meals	No. of households	% of households	Average daily Meals
1	126	21.07	2.26	161	24.39	2.03
2	188	31.44		313	47.42	
3	284	47.49		186	28.18	
Total	598	100		660	100	

$$DiD = (2.26 - 1.74) - (2.03 - 1.98) = 0.47$$

27% increase in Daily Meals intake for PRIME participants

Table 3

Distribution of Targeted Population in Seasonal Hardship						
Monga in 2005				Monga in 2006		
	No. of Households	No. of Households in Seasonal Hardship	% of Households in Seasonal Hardship	No. of Households	No. of Households in Seasonal Hardship	% of Households in Seasonal Hardship
Participants	606	207	34.16	606	124	20.46
Non-participants	671	92	13.71	671	160	23.85

$$DiD = (13.71 - 34.16) - (23.85 - 20.46) = -23.84$$

23.84% reduction in the seasonal hardship for participant households

Categories of PRIME Intervention

- Both short term and long term components
 - Cash for Work (CFW)
 - Microfinance
 - Comparison of these components
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Table 4

Average daily Meals for both CFW & Microfinance participants in 2005 Monga		
	Non-Participants in MFI	Participants in MFI
Non-Participants in CFW in 2006 Monga	1.96 (230)	2.01 (365)
Participants in CFW in 2006 Monga	1.75 (225)	1.69 (347)

* Note: Number of households in the parentheses

Table 5

Average daily Meals for both CFW & Microfinance participants in 2006 Monga		
	Non-Participants in MFI	Participants in MFI
Non-Participants in CFW	2.02	2.08
Participants in CFW	2.25	2.27

DiD impact of CFW for MFI participants = $(2.27 - 1.69) - (2.08 - 2.01) = 0.51$

24.5% increase in Daily Meals intake for MFI members with CFW participation

DiD impact of MFI for CFW participants = $(2.27 - 1.69) - (2.25 - 1.75) = 0.08$

Only 4% increase in Daily Meals intake for CFW participants with MFI membership

Summary of Findings

- PRIME has made a significant impact in Monga-prone areas.
 - Short term Cash flow plays an important role.
 - Combination of Microcredit and Cash for Work is the most effective .
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Summary of Findings

- Long term coping ability would also increase.
 - Need not sell assets/labor to smooth consumption
 - Prevents greater vulnerability from the future shocks
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THANK YOU!