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Impact of employment generation programmes on livelihood security of the rural poor in Manipur

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Abstract
This paper is an attempt to examine the effect of employment generation programmes implemented by the Government of India to secure livelihood of the rural poor. Among the various employment generation programmes, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and Swarnajayanti Gram Swarojgar Yojana (SGSY) were opted for this study. Data were collected from 185 respondents from Imphal East and Churachandpur districts. A Livelihood Security Index (LSI) comprising of seven components was used to assess the impact. The findings revealed that statistically significant changes in livelihood security of the beneficiaries before and after MGNREGA and before and after SGSY were observed. Substantial variation between the four groups in relations of livelihood security was as well cited along with maximum mean score of 49.97 was also found by the beneficiaries of both the programmes. Thus, a positive impact on livelihood security was observed on the beneficiaries of employment generation programmes in comparison to non-beneficiaries.

Keywords: MGNREGA, SGSY, beneficiaries, non-beneficiaries, livelihood

Introduction
In India poverty executes a repressive weight, especially in the rural areas where 77 percent of the Indian poor live. India, sustained experiencing of significant capability deprivations leads to chronic poorness and consequently the poor often impart their penury to subsequent generations by Hulme and Shepherd, 2003. Planning Commission, 2013 released a state wise poverty estimates of 2011-12 was suggestive that among the top graded states of India, Manipur was found to be one in relation to poverty ratio comprising 240593 BPL households.

Unemployment is the prime cause of poverty. Scarcity of money, the poor utilization of natural resources and insufficient job prospects are the main roots of unemployment in India. In observation of these situations of never-ending rural paucity and joblessness ever since Independence, suppression of poverty has been the greatest significant aims ever since the commencement of financial planning. It was understood that in the course of development itself a viable plan of paucity lessening has to be on rising fruitful employment chances. Therefore, it was obligatory to frame precise poverty mitigation programmes for creation of a certain smallest amount of income for the rural poor. Accordingly, SGSY and MGNREGA turned up, and were observed to be associated with employment generation, aimed with ameliorating livelihood situations of underprivileged.

Thus, circumstantial to huge government outlay to eradicate penury through MGNREGA and SGSY in particular, this paper tried to find out whether those employment generation programmes in realism, been able to secure the livelihood of the rural poor apart from the assurances made during their initiation, thus, the study was commenced with the broad objective:

- To evaluate the impact of employment generation programmes on livelihood security of the rural poor in Manipur.

Materials and Methods
The study was conducted in the state of Manipur, targeting one (1) valley and one (1) hill district of Imphal East and Churachandpur. In India, Manipur was recognized as one of the peaks ranked, in terms of poverty ratio as per the estimates of 2011-12 (Planning Commission, 2013). The respondents were selected from the targeted villages based on the subsequent way:

Phase I: Assembling of present lists of the families from the targeted villages which are under below property line.

Phase II: Verification of the members of SHGs (self-help groups) and Job card holders under SGSY and MGNREGA from the collected listed families of below property line

Phase III: Four distinct sub-groups were also prepared from the selected target villages.

Group A: MGNREGA beneficiaries
Group B: SGSY beneficiaries
Group C: Both MGNREGA and SGSY beneficiaries
Group D: MGNREGA and SGSY Non beneficiaries

Phase IV: From the First three group i.e. Group A, Group B and Group C, 50 respondents was selected and from the fourth group i.e. Group D, 35 respondents was also selected in accordance to the probability proportional to sample size, hence, established a size sampling of 185 respondents.

Further, the beneficiaries and non-beneficiaries were interviewed. In order to measure the living of the respondents a livelihood security index (LSI) comprising of seven components *viz.* food security, income security, habitat security, educational security, health security, social security and environmental security was used (Baby 2005) [1].

(LSI) was calculated using the following formula:

$$LSI_i = \frac{\sum U_{ij} \cdot S_j \times 100}{\text{Total Scale Value (54.63)}} \quad i = 1 - 50, j = 1 - 7$$

Where,
LSI_i = livelihood security index of ith respondent
U_{ij} = Unit score of ith respondent on j^{th} component
S_j = scale value of the jth component

$$\text{Where } U_{ij} = \frac{Y_{ij} - Min\ y_j}{Max\ y_j - Min\ y_j}$$

U_{ij} = Unit score of ith respondent on j^{th} component.
Y_{ij} = value of ith respondents on the jth component.
Max y_j = maximum score on the jth component.
Min y_j = minimum score on the jth component.

Categorization of the respondents was done as follows

Sl. No.	Livelihood security category	Scores obtained
1.	Very low	0-20
2.	Low	20-40
3.	Medium	40-60
4.	High	60-80
5.	Very high	80-100

Analyses and interpretation of collected data were done by using the following statistical tools

t-test: t- test is used for comparing the means of two independent groups. t value is calculated by using the following formula.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad \text{at } n_1 + n_2 - 2df$$

Where,
$\bar{x}_1$ = First sample mean
$\bar{x}_2$ = Second sample mean
n_1 = No. of first sample observations
n_2 = No. of second sample observations
S^2 = Two samples pooled mean square

ANOVA: ANOVA was performed using the formula given below.

$$F = \frac{\text{Between groups mean square}}{\text{within groups mean square}}$$

Results and Discussion
Table 1 and figure 1 exhibited the mean score achieved by the four different categories of respondents on the components of livelihood security index. Table 1 shows a variation in the mean score for each element of livelihood security index.

Table 1: Mean score of the different categories of respondents on the components of livelihood security index

Particulars	MGNREGA beneficiaries (n=50)		SGSY beneficiaries (n=50)		Beneficiaries of both the programmes (n=50)	Non-Beneficiaries (n=35)
	Before	After	Before	After		
Food Security	6.78	6.98	6.8	7.94	7.96	5.94
Income Security	5.44	6.66	5.18	7.14	7.38	5.74
Habitat Security	8.48	9.52	7.58	8.72	8.92	7.89
Educational Security	7.78	7.98	6.72	8.16	8.18	7.63
Health Security	7.3	7.38	6.64	7.3	7.4	6.83
Social Security	4.9	7.2	4.86	6.64	7.04	4.89
Environment Security	7.54	8.94	7.56	8.12	8.84	7.37

It could be observed from table 1 that the mean score obtained in all the components of livelihood was highest for beneficiaries of both the programmes followed by beneficiaries of SGSY in many instances. The findings indicated that after MGNREGA there was a key alteration in social security, subsequently environmental security, income security and habitat security which was in line with Chathukulam & Gireesan, 2007 [3] and Bebarta, 2013 [2]. And a least or negligible changes was found on the component health security.
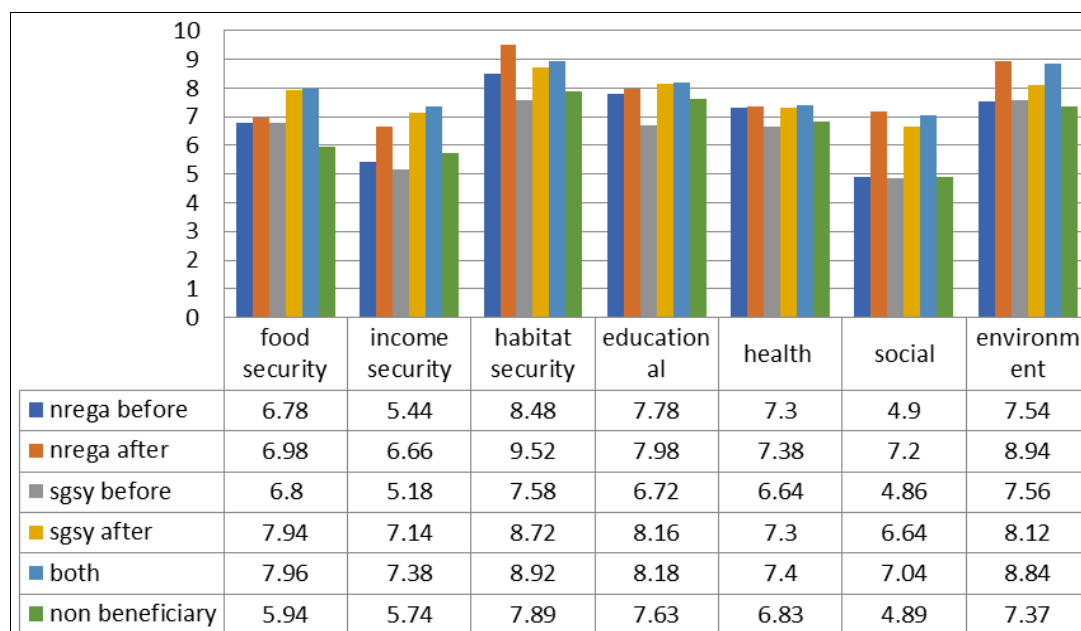
Fig 1: Mean score obtained by the respondents on the components of livelihood security index.

The table was also indicative of the fact that amongst the elements, social security was observed to have highest changes after MGNREGA. It might be due to increase in active participation as well as increase in the number of respondents who became member of different organisation like *Meira Paibi Lup* (women organisation), Farmers Club etc. Since the respondents start knowing one another and more socialise as they gathered frequently in comparison to time before working under MGNREGA.

The table also revealed that after SGSY a maximum variation in income security could be seen, subsequently social security then educational security was aligned with the findings of Umdor & Panda, 2009 and Voluntary Operation in Community & Environment, 2008.

Maximum degree of change in income security amongst the various elements of livelihood security may be due to consistent monthly income from the SHGs where they had enrolled in.

The outcome of table 1 determined visible changes in the mean scores of all the elements under the livelihood security index. Between, social security attained maximum change, subsequently food security then income security.

Maximum alterations in social security shows, respondents under "beneficiaries of both the programmes", turn into more socialise and had a superior social status of the family as compared to non-beneficiaries. As they were engaged in both the programmes, frequency of knowing one another, lively involvement in social gathering and monthly income rises.

From the data exhibited, it is apparent that, variations happened in the mean scores of food security, income security, habitat security, educational security, health security, social security and environment security of the respondents before and after MGNREGA and before and after SGSY. To observe whether the changes in the mean scores of the above stated components were statistically significant or not, paired t-test was applied. The results of the paired t-test are presented in the table 2 and 3

Table 2: Pair t-test value to test the significance of the mean difference of the components of livelihood security before and after MGNREGA

Particulars	Before MGNREGA	After MGNREGA	t-value
Food Security	6.78	6.98	-3.50**
Income Security	5.44	6.66	-11.71**
Habitat Security	8.48	9.52	-7.14**
Educational Security	7.78	7.98	-3.13**
Health Security	7.3	7.38	-2.06*
Social Security	4.9	7.2	-10.73**
Environment Security	7.54	8.94	-4.82**

** Significant at 1% level of significance
* Significant at 5% level of significance

From the end result of the paired t-test (table 2) it was ascertained that, variations in the mean scores of all the elements were statistically significant at one percent level of significance as the calculated t-value of the above said components were more than the table values. The change in mean score of health security before and after MGNREGA was statistically significant at five percent level of

significance.

Similarly, result of paired t-test (table 3) also depict that, variations in mean scores of all elements under before and after SGSY were statistically significant at one percent level of significance as the calculated t-value of the above said elements was more than the table value.

Table 3: Pair t-test value to test the significance of the mean difference of the components of livelihood security before and after SGSY

Particulars	Before SGSY	After SGSY	t-value
Food Security	6.8	7.94	-7.53**
Income Security	5.18	7.14	-12.53**
Habitat Security	7.58	8.72	-8.14**
Educational Security	6.72	8.16	-10.47**
Health Security	6.64	7.3	-6.50**
Social Security	4.86	6.64	-8.53**
Environment Security	7.56	8.12	-5.86**

** Significant at 1% level of significance
* Significant at 5% level of significance

Once more an effort was made to measure the impact of employment and livelihood linked programmes on the livelihood security of the respondents. Table 4 displays the segregation of respondents on the livelihood security before and after MGNREGA, before and after SGSY, beneficiaries of both and non-beneficiaries.

Findings on table 4 revealed slight changes on livelihood security of the respondents before and after MGNREGA. It was perceived that maximum (56%) of the respondents were found to be under low livelihood security category. But still after working under MGNREGA, yet again majority (42%) of the respondents were found in low category, even though no more respondents were found in very low category, indicating least amount of positive change in livelihood security after MGNREGA.

Table 4: Distribution of the respondents according to their livelihood security level

Categories	MGNREGA beneficiaries (n=50)		SGSY beneficiaries (n=50)		Beneficiaries of both the programmes (n=50)	Non Beneficiaries (n=35)
	Before	After	Before	After		
Very low (0-20)	12 (24.00)	-	12 (24.00)	-	-	6 (17.14)
Low (21-40)	28 (56.00)	21 (42.00)	38 (76.00)	14 (28.00)	9 (18.00)	28 (80.00)
Medium (41-60)	7 (14.00)	19 (38.00)	-	31 (62.00)	34 (68.00)	1 (2.86)
High (61-80)	3 (6.00)	10 (20.00	-	5 (10.00)	7 (14.00)	-
Very high (81-100)	-	-	-	-	-	-

Figure in parentheses indicates percentage to the total

Impact assessment of SGSY on the livelihood security of beneficiaries was also found out. The data in table 4 also revealed the dissemination of respondents on the livelihood security before and after SGSY. A study of the table exhibited that majority of the respondents (76%) were found to be under low livelihood category before SGSY. But subsequently functioning under SGSY majority (62%) of the respondents were observed to be under medium livelihood category, revealing substantial changes in livelihood security of the people after SGSY.

From the table 4 again, dissemination of the respondents who were receiving the facilities from both the programmes (MGNREGA and SGSY) i.e. "beneficiary of both" could be witnessed. From the outcome presented, it was intended that most of them (68%) fall under medium category subsequently low (18%) and high (14%). This was also indicative of positive substantial changes in livelihood security of the respondents under beneficiary of both.

Based on livelihood security, "non-beneficiaries" were portrayed in table 4. The figures displays that (80%) of the respondents belonged to low category followed by very low (17.14) and medium category (2.86). Low income and unemployment of majority of the respondents might have put up to gathering of bulk amount (80%) of respondents in low livelihood security category.

Thus, in whole a positive impact on livelihood security was observed on the beneficiaries of both the programmes compared to non-beneficiaries. Since, none of the beneficiaries taken up for study were under very low livelihood category after receiving the benefit of those livelihood and employment programmes.

Additionally, paired t-test and ANOVA was used to observed variation in livelihood security of the respondents was statistically significant or not.

Table 5: Mean score of livelihood security obtained by different groups of respondents

	MGNREGA beneficiaries (n=50)		SGSY beneficiaries (n=50)		Beneficiaries of both the programmes (n=50)	Non beneficiaries (n=50)
	Before	After	Before	After		
Total mean score of livelihood security	31.83	46.36	25.342	46.29	49.97	27.40
Paired t- test	-16.273**		-I5.677**			
ANOVA for total mean score (F)	36.780**					

** Significant at 1% level of significance

The end results of paired t-test shows variations in livelihood security of the respondents before & after MGNREGA and before & after SGSY were statistically significant at one percent level of significance. Similarly, the value of ANOVA depicted in table 5 also revealed that, there were significant changes among the four groups in terms of livelihood security at one percent level of significance. This is indicative of a significant impact of the programmes on the livelihood of the beneficiaries. The livelihood security index of the beneficiaries of both the programmes was highest (49.97) among the four groups.

Conclusion
Impact assessment of the employment generation programmes implemented by GOI especially for the rural poor revealed that none of the respondents (excluding non-

beneficiaries) was observed to be in very low livelihood category after being a beneficiary of those employment generation programmes. Statistically significant changes in livelihood security of the respondents before & after MGNREGA and before & after SGSY were observed. A substantial difference among the four groups in terms of livelihood security was also witnessed, with highest mean score (49.97) attained by the beneficiaries of both the programmes. Thus, a positive impact on livelihood security was observed on the beneficiaries of employment generation programmes compared to non-beneficiaries.

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