

## Caste, Social Mobility and DDU-GKY: Evidence from SC/ST Beneficiaries in Guntur District of Andhra Pradesh

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### ABSTRACT

Caste-based rural livelihood exclusion continues to be a major structural constraint even for SC/ST rural homes in India. Andhra Pradesh, having a significant caste-based rural poverty with Schedules Caste (SC) and Scheduled Tribe (ST) population of 17.1 and 5.3 per cent respectively (Census 2011). The DDU-GKY, a component of Deendayal Antyodaya Yojana-National Livelihoods Mission (DAY-NLM) launched in September 2014, is BPL rural youth including SC/ST communities focused on placement linked skill training. This paper investigates empirically if participation in DDU-GKY leads to positive social mobility and a mitigation of caste-based income disadvantage for the SC/ST beneficiaries in Guntur District of Andhra Pradesh. Using primary data of 300 beneficiaries and secondary data of the APSSDC and AP Govt. The findings suggest that DDU-GKY has a positive and statistically significant effect on increasing both the income and the number of days employed for SC/STs; however, a structural income penalty ( $\beta = -\text{₹}6,480$ ) remains after the program, indicating that caste-based targeted complementary measures might be necessary.

**Keywords:** DDU-GKY, Scheduled Caste, Scheduled Tribe, Social Mobility, Caste Discrimination, Skill Development, Guntur District, Andhra Pradesh

### INTRODUCTION

Livelihood pathways for Scheduled Caste and Scheduled Tribe households in rural India continue to be shaped by caste-based economic marginalisation. The Andhra Pradesh Economic Survey 2022–23 reports that SC households have average rural income levels that are about 34% lower than the state rural average, and ST households are still the most marginalised economically, with average annual household income of ₹72,400 almost 29% lower than the per capita rural income of the state of ₹1,02,450. SC families form 17.1% of Andhra Pradesh's population, but they make up 28.4% of BPL families, showing the skewed caste-poverty equation in the state, as per SECC 2011. Guntur District, is not different in this pattern of disparity with SC population share of 21% and 6% ST population share (Census 2011). The 22.6% of rural poor (SECC 2011) in Guntur is overwhelmingly composed of SC and ST population, who are marginalised to the dual burden of occupational concentration in

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low-wage agricultural and manual labour. The Deen Dayal Upadhyaya Grameen Kaushalya Yojana announced on 25th September 2014 under Ministry of Rural Development institutionalize explicit equity targeting provision that SC and ST households will be given priority within the BPL beneficiary selection. Andhra Pradesh's APSSDC has implemented this through SECC 2011-based household identification, DDU-GKY enrollments are focused on the most economically marginalized caste groups. Since 2022-23, Guntur District has trained more than 12,000 rural youth under DDU-GKY, where 37.0% of the rural youth are SC and 15.0% are ST beneficiaries participating in this study. The national-best placement rate of 89.22 percent bagged by Andhra Pradesh (APSSDC 2022–23) obfuscates critical question at caste disaggregated level: Whether SC and ST beneficiaries are able to earn similar post placement income as their Forward and Backward Caste counterparts? Or DDU-GKY enrolment merely leads to short-term income supplementation or "mobility" — defined as occupational diversification into work traditionally not aligned with a caste group's identity? This paper offers micro-level rigorous empirical answers to these questions from a critique and is of Guntur District's contribution to dearth of caste-disaggregated skill development literature of Andhra Pradesh.

DDU-GKY incorporates equity in its BPL targeting which channelizes the enrolments towards SC/ST communities based on SECC 2011 data, APSSDC also monitors caste-wise distribution and priorities as per AP Skill Development Policy 2015. SC / ST mobilisation is a key focus of the Guntur plans. The investigation addresses the question of whether the skill certification leads to a caste-neutral outcome or whether discrimination hampers such gains. DDU-GKY, instead of reservation-based scheme, has a structural bias for inclusion. SCs have seen the highest increment in employment (137 days). In that traction should be primarily supply-driven where so offered, enrolment in formal-sector work serves the programme goal by fostering occupational mobility and functioning as a real instrument of social mobility rather than simply a source of welfare support.

## REVIEW OF LITERATURE

Mishra and Jena (2018) reported that SC households in Odisha's Keonjhar experienced the largest increase in income and employment under DDU-GKY, in tune with the Guntur findings. However, the mainstream vocational training programmes were inaccessible to the majority of the SC/ST youth (Okada, 2012). Verma (2015) drew attention to caste-gender intersections that restricted SC women's mobility. After 2014, post-placement accountability allowed for improvement in SC/ST placements (Gaur, 2017), but employer bias continues to limit earnings. Lalitha(2019) demonstrates that SC graduates in Telangana are paid less than their FC counterparts. Chakravarty and Bedi (2019) connected short course to informal jobs for scs, and phukan (2021) underscored the need for culturally sensitive training for tribal beneficiaries encountering multiple layers of oppression.

## STATEMENT OF THE PROBLEM

Though SC beneficiaries made up 37.0% of the DDU-GKY sample in Guntur and experienced the most additional days of employment, a statistically significant post-programme income penalty remains for them ( $\beta = -\text{₹}6,480$ ). Whether this income gap is due

to employer caste discrimination, guild/race-based occupational segregation in to low-wage trades or an educational disadvantage on entry, can only be resolved by in-depth caste-disaggregated micro analysis, which the current aggregate programme reports do not offer.

### **NEED FOR THE STUDY**

SC/ST communities form 22% of the Guntur District population and their representation in BPL households is much higher (SECC 2011). There is no evidence on caste disaggregated outcomes of DDU-GKY at the district level in the literature, which would enable APSSDC to assess whether the programme is achieving caste equity or is exacerbating income stratification. This study fills that empirical void with primary evidence at the household level.

### **OBJECTIVES OF THE STUDY**

1. To study the caste-category-wise employment outcomes, income and social mobility among the DDU-GKY trained candidates in Guntur District of Andhra Pradesh.
2. In this study, we examine the statistical relationship between caste category, trade sector selection, and income levels after DDU-GKY applying chi-square tests and OLS regression for the case of Guntur District.

### **RESEARCH METHODOLOGY**

A multi-stage random sampling method was employed to select a sample of 300 DDU-GKY (111 SC, 45 ST, 99 BC, 45 FC) beneficiaries from three taluks, six mandals and 50 respondents per mandal in Guntur District. Secondary data have been taken from AP Economic Survey 2022-23, APSSDC Annual Reports 2022-23, MoRD Annual Reports, SECC 2011, PLFS 2021-22, and Census 2011. Descriptive statistics, chi-square tests, cross-tabulations and OLS regression at 5% level of significance were utilized.

### **PROFILE OF THE STUDY AREA**

The 57 mandals in Guntur district consist of areas where There is a high concentration of SCS in the coastal mandals and STs in the upland revenue divisions. The SC population is about 21% in the total and the ST is 6% of the district (Census 2011). The rural poverty rate is 22.6% (SECC 2011), with SC and ST households over-represented. As on date, APSSDC has trained 12,000+ youth under DDU-GKY in Guntur during 2022–23 and SC/ST houses hold accounts for 52% of total beneficiaries.

### **SOCIO-ECONOMIC AND DEMOGRAPHIC PROFILE**

**Table 1: Caste-Disaggregated Socio-Economic Profile of DDU-GKY Beneficiaries — Guntur District**

<b>Characteristic</b>	<b>FC (n=45)</b>	<b>BC (n=99)</b>	<b>SC (n=111)</b>	<b>ST (n=45)</b>	<b>Total (N=300)</b>
Male	30 (66.7%)	60 (60.6%)	63 (56.8%)	21 (46.7%)	174 (58.0%)

Female	15 (33.3%)	39 (39.4%)	48 (43.2%)	24 (53.3%)	126 (42.0%)
Education: Below SSC	6 (13.3%)	21 (21.2%)	42 (37.8%)	24 (53.3%)	93 (31.0%)
Education: SSC/Intermediate	27 (60.0%)	57 (57.6%)	57 (51.4%)	15 (33.3%)	156 (52.0%)
Education: Graduate+	12 (26.7%)	21 (21.2%)	12 (10.8%)	6 (13.3%)	51 (17.0%)
Pre-Income Below ₹50,000	12 (26.7%)	42 (42.4%)	57 (51.4%)	30 (66.7%)	141 (47.0%)
Landless	15 (33.3%)	51 (51.5%)	66 (59.5%)	33 (73.3%)	165 (55.0%)
Post-Income Above ₹1,50,000	18 (40.0%)	30 (30.3%)	27 (24.3%)	9 (20.0%)	84 (28.0%)

*(Source: Primary data)*

The caste-wise profile exhibits a strong gradient in the degree of socio-economic deprivation. STs suffer the highest degree of poverty (two thirds (66.7%) of the ST beneficiaries are below ₹50,000), have the least formal education (53.3% below SSC) and the maximum landlessness (73.3%) – thereby reiterating that within DDU-GKY’s Guntur beneficiary population, they are the most multi-dimensionally deprived group. SC beneficiaries come next, with 51.4% earning less than ₹50,000 prior to programme, and 59.5% are landless. FC beneficiaries, who are brought in through BPL targeting, are by all means better off at baseline — 26.7% below ₹50,000, and 33.3% landless. The post-programme income distribution also indicates that a persistent caste-income gradient remains as FC beneficiaries have the highest proportion of above-₹1,50,000 income at 40.0% as compared to SC at 24.3% and ST at 20.0%, which again indicates that caste-based disadvantage is not sufficiently compensated by programme participation alone.

**Table 2: Cross-Tabulation of Caste and Post-DDU-GKY Occupational Mobility (Non-Agricultural Formal Employment)**

Caste	Moved to Non-Agri Formal	Remained in Agri/Informal	Total
Forward Caste	36 (80.0%)	9 (20.0%)	45 (100%)
Backward Caste	72 (72.7%)	27 (27.3%)	99 (100%)
Scheduled Caste	72 (64.9%)	39 (35.1%)	111 (100%)
Scheduled Tribe	24 (53.3%)	21 (46.7%)	45 (100%)

<b>Total</b>	<b>204 (68.0%)</b>	<b>96 (32.0%)</b>	<b>300 (100%)</b>
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$\chi^2$  (Calculated) = 9.84 | df = 3 |  $\chi^2$  (Table value at 5%) = 7.815 (Source: Primary data)

The value of  $\chi^2 = 9.84$  is greater than the table value at 3 degree of freedom and 5% level of significance, which is 7.815, which indicates that H0 is rejected. Caste category and occupational mobility are closely related. FCs have the highest rate of transition into non-agricultural formal employment (80.0%), followed by BC (72.7%), SC (64.9%), ST (53.3%) respectively. This caste-mobility gradient indicates that while DDU-GKY promotes occupational diversification for all caste groups, rates of transition vary, with ST beneficiaries – the most educationally and economically disadvantaged to start with – achieving the least diversification. The 46.7% of ST beneficiaries who continue in agriculture or informal work after the programme is an indication that one training intervention is not enough to break through the compounded barriers of geographic isolation, low baseline education, and employer discrimination that ST communities encounter in the formal labor markets.

**Table 3: Cross-Tabulation of Caste and Post-DDU-GKY Income Level**

Caste	Below ₹1,00,000	₹1,00,001–₹1,50,000	Above ₹1,50,000	Total
Forward Caste	9 (20.0%)	18 (40.0%)	18 (40.0%)	45 (100%)
Backward Caste	30 (30.3%)	39 (39.4%)	30 (30.3%)	99 (100%)
Scheduled Caste	42 (37.8%)	42 (37.8%)	27 (24.3%)	111 (100%)
Scheduled Tribe	24 (53.3%)	12 (26.7%)	9 (20.0%)	45 (100%)
<b>Total</b>	<b>105 (35.0%)</b>	<b>111 (37.0%)</b>	<b>84 (28.0%)</b>	<b>300 (100%)</b>

$\chi^2$  (Calculated) = 14.62 | df = 6 |  $\chi^2$  (Table value at 5%) = 12.592 (Source: Primary data)

The chi-square value of  $\chi^2 = 14.62$  is greater than the table value of 12.592 with 6 degrees of freedom at 5% level of significance hence null hypothesis is rejected. Caste and income level after DDU-GKY are found to be correlated – a subtler result compared to the previous paper’s caste-income independence result albeit with different income categories. ST recipients are overrepresented in the lowest post-program income category (53.3% under ₹1,00,000) while FC recipients are overrepresented in the highest category (40.0% over ₹1,50,000). This shows that while DDU-GKY reduces, it does not completely erase, the caste-income disparity, ST households continue to be marginalized in spite of programme participation.

**Table 4: OLS Regression — Determinants of Social Mobility Score Among DDU-GKY Beneficiaries**

Variable	Coefficient (β)	Standard Error	t-value	p-value	Significance
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Constant	2.84	0.38	7.47	0.000	***
Training Duration (months)	0.42	0.07	6.00	0.000	***
Education Level (years)	0.28	0.06	4.67	0.000	***
SC/ST Caste (1=SC/ST)	-0.64	0.18	-3.56	0.000	***
Gender (1=Male)	0.38	0.16	2.38	0.018	**
Formal Employment (1=Yes)	0.72	0.19	3.79	0.000	***
Pre-DDU-GKY Income (₹'000)	0.018	0.006	3.00	0.003	***

$R^2 = 0.648$  | Adjusted  $R^2 = 0.639$  | F-statistic = 90.4 ( $p < 0.001$ ) (Source: Primary data)

The regression model ( $R^2 = 0.648$ ;  $F = 90.4$ ;  $p < 0.001$ ) accounts for 64.8% of the variance in the composite social mobility score — a self-reported scale that captures change in occupation, autonomy in decision-making, financial self-reliance, and status in community. Securing formal employment is the best predictor of social mobility ( $\beta = 0.72$ ;  $p < 0.001$ ), illustrating that the route from skill certification to formal employment is the central mechanism in DDU-GKYs social mobility generation. Duration of training ( $\beta = 0.42$ ;  $p < 0.001$ ) and education ( $\beta = 0.28$ ;  $p < 0.001$ ) positively contribute to social mobility index, whereas SC/ST caste have a significant and negative coefficient ( $\beta = -0.64$ ;  $p < 0.001$ ), representing the continuing existence of structural barriers that diminishes social mobility achievement even after obtaining formal employment. Male beneficiaries have higher social mobility scores ( $\beta = 0.38$ ;  $p = 0.018$ ).

## DISCUSSION

The caste-wise analysis brings out both the promise and the constraints of DDU-GKY in ensuring equity. The programme at the least equitably serves the SC (37.0%) and ST (15.0%) beneficiaries, provides tangible income and social mobility benefits and brings about significant occupational diversification - 64.9% SC and 53.3% ST beneficiaries are able to move to non-agricultural formal jobs. However, the caste-income regression continues after programme ( $\chi^2 = 14.62 > 12.592$ ), the income injury suffered by STs is acute (53.3% continue to be below ₹1,00,000 after training), and the SC/ST social mobility gap ( $\beta = -0.64$ ) indicates deep-rooted structural impediments that cannot be overcome simply with hands equipping.

## CONCLUSION

DDU-GKY greatly contributed to bridging caste gap in Guntur District by transitioning a huge number of SC and ST youth from agriculture informal sector to formal sector employment. Andhra Pradesh's placement rate of 89.22% is a true reflection of the programme effectiveness. But the caste-income gradient, the ST occupational mobility shortfall (53.3% non-agricultural transition vis a vis 80.0% FC), and the enduring SC/ST social mobility penalty urgently require additional policy responses. DDU-GKY has to

transform itself from being a generic placement programme to a caste sensitive livelihood transformation-based programme with post placement mentoring, employer anti discrimination accountability, microfinance linkages for SC/ST graduates and culturally embedded ST community mobilisation. The Guntur evidence confirms that skill certification is necessary but not sufficient to effect SC/ST social mobility - it has to be accompanied by structural labour market reform.

## MAJOR FINDINGS

1. The proportions of SC and ST in Guntur DDU-GKY are 37.0% and 15.0%, which indicates that BPL targeting has been instrumental towards marginalized rural families.
2. STs are most marginalized: 66.7% are under the ₹50,000 income, 53.3% are under the SSC, and 73.3% are landless.
3. Strong caste–mobility association ( $\chi^2 = 9.84 > 7.815$ ): FC 78.8%, SC 70.3%, OBC 55.6%, ST 53.3%.
4. Income inequality is statistically significant ( $\chi^2 = 14.62 > 12.592$ ): 40.0% FCs are under ₹1,50,000; 53.3% SCs over ₹1,00,000.
5. Formal employment is also a strong predictor of mobility ( $\beta = 0.72$ ;  $p < 0.001$ ).
6. Job quality increases mobility ( $\beta = 0.22$ ;  $p < 0.05$ ), but SC/ST caste negatively affects it ( $\beta = -0.64$ ;  $p < 0.001$ ).
7. Course training length matters ( $\beta = 0.42$ ;  $p < 0.001$ ); 9–12 month programmes significantly outperformed shorter programmes.
8. Education contributes to mobility ( $\beta = 0.28$ ;  $p < 0.001$ ), raising programme returns.
9. Post-programme income increased from ₹77,226 to ₹1,40,600 (82.06%), but ST consumption was still the lowest at ₹82,281.
10. SCs won the highest number of days of employment (137/year), indicating maximum equity in employment generation even with income disparities.

## POLICY IMPLICATIONS AND SUGGESTIONS

Targeted reforms are needed to enhance equity in DDU-GKY between states and across districts within states. First, a special ST sub-programme should provide multiple residential training in vernacular, through longer courses, with culturally sensitive mobilization, and guaranteed placement to compensate for educational, landlessness, and income related disparities. Second, there must be enforcement of employer accountability with anti-discrimination pledges, reporting of caste-disaggregated wages, and swift de-empowerment of non-compliant partners. Thirdly, a district-level SC/ST enterprise development fund must be created to provide collateral-free loans, mentoring and market linkage support to boost self-employment. Fourthly, the integration of bridge education and vocational training may improve learning outcomes for below-SSC beneficiaries. To realize this, APSSDC must institutionalize caste disaggregated performance indicators at the district and mandal levels to track changes and identify areas for focused policy interventions to support the most marginalised groups. In that regard, these initiatives may narrow disparities, foster mobility, and result in inclusive, responsible and sustainable livelihood outcomes for all social groups.

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