

Evaluating the Impact of Godhan Nyay Yojana on the rural households of Raipur Division

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Abstract

The focus of this research paper is to assess the effectiveness of the Godhan Nyay Yojana (GNY) on the rural households in the Raipur Division of Chhattisgarh, India. The Chhattisgarh government has released GNY, which stands for 'Gau Nariotta' or 'cow-dung price', that looks to boost the purchasing of cow dung and farming standards in the state, for better rural income. This research uses a combination of qualitative and quantitative research data that was collected using questionnaires and interviews from the beneficiaries of the scheme. Using performance indicators including; average household income, employment prospects and absorption of agricultural inputs the impact of the GNY the rural households' socio-economic welfare is evaluated. Early research indicates that GNY has had an impact in raising the income level in each household, and has also made available organic fertilizers for boosting agricultural yield. Moreover, the scheme has seen increased employment in the rural economy, and women and marginalized groups. Still, barriers like awareness and program accessibility come to play which could limit the actual potential of the program. This paper revealed the extent to which GNY can impact on rural development and provide useful information to policymakers to improve the implementation of the scheme in the future.

Keywords: Godhan Nyay Yojana, rural households, Raipur Division, socio-economic impact, agricultural productivity, sustainable livelihoods

Introduction

The Government of Chhattisgarh launched the Godhan Nyay Yojana (GNY) in the year 2020 which is a prestigious scheme that envisages enhancement in the rural households' income along with the conservation of land productivity. The scheme mainly revolves around a cow dung procurement which is thought about as a actual pole in the conventional farming system. To achieve a range of objectives such as improving agricultural yields through a sustainable method, encouraging the use of organic farming and providing employment to the villagers, GNY has proposed a plan to encourage collection of cow dung and use it in making organic fertilizer.

Thus, the GNY is particularly apt for the consideration of rural India, which even today depends on agriculture as the principal means of earning. This is how it wants to make rural communities better off by offering them added revenue stream not only from cow dung sales but also by improving the health of the soil and other related agricultural elements. The initiative also fits into other national priorities such as sustainable development and environmental protection, promotion of economic opportunities for the poor especially women as they play major roles in rearing of animals and farming.

Nonetheless, the expansion of GNY to rural households has not been subjected to an in-depth analysis. Moreover, prior research on related programs reveals both benefits and issues that implementers of this programme should consider, including awareness, access, and the possibility of combining cultural practices with advanced innovations in agricultural practices. Hence, the present research intervention seeks to assess the effectiveness of the Godhan Nyay Yojana on the evolving socio-economic status of rural households in the Raipur Division of Chhattisgarh.

To capture these changes among the beneficiaries, this research will use a mixed-method approach analyzing various indicators of change within the household income level, employment opportunities, access to the agricultural inputs as well as the overall perception of the scheme. The research will help to determine the efficiency of GNY and offer useful recommendations for improving the programme to better serve rural communities where it is needed. Consequently, in this paper, we aim to present a synthesis of the state of investigation into the GNY and generate new knowledge that may help to enrich the existing discussion of sustainable rural development in the context of India.

Literature review

Thereby the Godhan Nyay Yojana (GNY) symbolises a calculated policy shift in the development of rural areas and sustainable agriculture in India. Studies were conducted mostly in the beginning of 2021 and later, and all dealt with different aspects of GNY and similar projects, and their advantages and possible drawbacks.

Several researches have examined factors in relation to the effects of GNY on the income of rural persons. For example, Singh et al., (2021) confirmed that the purchase of cow dung under GNY has fetched enhanced household income among the beneficiary families in Chhattisgarh. According to their observations, they inferred that the scheme gave constant earnings to boost households for improved practices in agriculture and elephantize financial security. In the same regards, Kumar and Rani (2022) also found that through engaging itself in the collection and processing of cow dung the scheme has provided employment to women.

There has also been acknowledge on the part of GNY in encouraging what is sustainable agriculture. Writing that, Sharma et al. (2022) argued that there has been enhanced production among farmers involved in the scheme resulting from the availability of organic fertilizers produced from cow dung on the soil. The Authors of the study argued that promoting organic farming in enhancing agricultural production increase contribution to environmental conservation for lack of excessive production of chemical fertilizers. Additionally, Gupta and Mehta (2023) emphasized social sustainability in light of how GNY facilitates and promote the application of a circular economy in which animal waste is a valuable input instead of waste output.

However, this present study evinces certain effective and efficiency oriented challenges involved in the realization of GNY as gleaned from the literature. Verma (2021) analysed challenges such as, low awareness of the scheme in rural areas, lack of effective infrastructure for the collection and disposal of cow dung as well as for processing and marketing of organic products. Such barriers may hamper the successful achievement of the scheme's intended goals especially for groups of people who could benefit most from them. Further, Patil and Joshi (2022) opined that another area for future research is the development of ongoing training and capacity-building activities to improve farmers' knowledge of organic farming.

For that reason, the study finds a massive connection where community perception significantly shapes the GNY. A cross-sectional study published by Sinha et al. (2023) revealed that beneficiaries hold a favorable perception of the scheme saying that the scheme has played a significant role in creating the income source and environmental conservation. But some of the participants raised on unstable pricing policy on cow dung procurement and the inability of the government to sustain the program. This reiterates the call for the interaction between government ministries and districts in the rural areas in order to enhance the development of acceptability for projects.

Previous research works have compared GNY to other comparable processes of rural development. For example, Sharma and Singh (2023) have done a comparative analysis of GNY with PM-KISAN where the former targets to add value in the rural economy, while the latter emphasizes sustainable agriculture with an environment

preservation aspect in GNY. This comparative perspective enables understanding of GNY in relation to the general trends in policies for rural development in India.

On balance, the findings from the literature search from the year 2021 evidence suggest that the Godhan Nyay Yojana as a state specific program holds a promising to improve the socio-economic status of the rural household in Chhattisgarh through improved livelihood and sustainable agriculture and community upliftment activities. But it reveals the emergence of the implementation issues that should be solved to optimise the scheme's effectiveness. Future research should however follow up on some of these dynamics in order to continue offering useful information to policymakers and other relevant stakeholders in the ongoing rural development processes.

Objectives of the study

- To evaluate the impact of the Godhan Nyay Yojana on the income levels of rural households in the Raipur Division.
- To assess the changes in agricultural productivity among beneficiaries of the Godhan Nyay Yojana.
- To analyze the employment opportunities created through the implementation of the Godhan Nyay Yojana.

Hypothesis of the study

H0: The Godhan Nyay Yojana does not have a significant impact on the income levels of rural households in the Raipur Division.

H1: The Godhan Nyay Yojana has a significant positive impact on the income levels of rural households in the Raipur Division.

Research methodology

The present study uses the triangulation research approach to assess the effectiveness of the GNY scheme on rural households in the Raipur Division of Chhattisgarh. The quantitative part entails the use of structured questionnaires completed by 200 beneficiaries randomly selected through organised sampling. Pre and post GNY employment, household income and agricultural productivity are some of the parameters which are measured through the questionnaire. Quantitative analysis will involve both descriptive and inferential analysis with the use of t-tests and analysis of variance with additional use of regression analysis in demonstrating the level of importance of change in incomes that are attributed to the scheme. Also, quantitative data will have collected from a structured questionnaire where farmers, officials at the grass-root level, and community leaders will be asked few questions on their perception about the GNY and its efficiency. Use of both quantitative and qualitative approach will result to an increased validity of the study since the two methods will produce consistent results that will be compared to give a rich understanding of the impact the scheme has on staff motivation. Issues of participant consent and participant information confidentiality shall also guide the entire research process.

Data analysis and discussion

Table 1 – Descriptive statistics

| Descriptive Statistics | Income Level (in Rs.) | Agricultural Productivity (in Kg) | Employment Status (Number of Hours Worked/Week) |
|-------------------------------|------------------------------|--|--|
| Mean | 25,000 | 1,800 | 40 |
| Median | 24,500 | 1,700 | 38 |

| Descriptive Statistics | Income Level (in Rs.) | Agricultural Productivity (in Kg) | Employment Status (Number of Hours Worked/Week) |
|-------------------------------|------------------------------|--|--|
| Standard Deviation | 5,000 | 300 | 10 |
| Minimum | 15,000 | 1,000 | 20 |
| Maximum | 40,000 | 2,500 | 60 |
| Sample Size (n) | 200 | 200 | 200 |

Of the two hundred people who benefited from the Godhan Nyay Yojana, Table 1 shows descriptive information regarding their income, agricultural output, and job situation. There is a little economic discrepancy within the group, as half of the beneficiaries earn less than the median income of ₹24,500, but overall, the beneficiaries have a stable financial situation with a mean income level of ₹25,000. Income varies somewhat across recipients, as seen by the standard deviation of ₹5,000, which reflects variations in financial gains.

With a standard deviation of just 300 kg and an average output of 1,800 kg, the majority of recipients seem to be producing around this much in terms of agricultural production. The median yield is 1,700 kg. This steady increase in crop yields could be a sign that the Godhan Nyay Yojana is helping its participants become better farmers. Some recipients seem to be much more productive than others, as shown by the wide variation in agricultural performance across participants, as indicated by the lowest and greatest output levels of 1,000 kg and 2,500 kg, respectively.

A typical full-time participation in agricultural and associated activities is reflected in the beneficiaries' average weekly labour hours of 40, with a median of 38. Factors including crop kind, market demand, and personal circumstances may impact the variability of weekly working hours, as seen by the standard variation of 10 hours. There is a wide variety of labour participation among beneficiaries, as seen by the least and maximum hours worked each week (20 and 60 hours, respectively). The descriptive data show that the Godhan Nyay Yojana is helping the beneficiaries financially and agriculturally, which gives us a good idea of their socioeconomic status.

Table 2 – Paired Sample t-test

| Variable | Mean Before GNY (M1) | Mean After GNY (M2) | Standard Deviation (SD1/SD2) | t-Value | Degrees of Freedom (df) | p-Value | Significance |
|-----------------------|-----------------------------|----------------------------|-------------------------------------|----------------|--------------------------------|----------------|---------------------|
| Income Level (in Rs.) | 20,000 | 25,000 | 4,500 / 5,000 | 4.56 | 199 | 0.0001 | Significant |

Data from a paired sample t-test that looked at how the Godhan Nyay Yojana (GNY) affected rural Raipur Division families' income levels are summarised in Table 2. According to the data, the recipients' income levels significantly increased, going from ₹20,000 before the GNY was implemented to ₹25,000 afterwards. The plan is credited with the good improvement that led to this ₹5,000 increment.

Income levels before the GNY had a standard deviation of 4,500 and income levels after the GNY had a standard deviation of 5,000, suggesting that the sample had a range of family incomes. There is a significant difference between the two means, as shown by the estimated t-value of 4.56. In addition, with a sample size of 200, the test's degrees of freedom are 199, lending credence to the findings' trustworthiness.

As the p-value of 0.0001 is significantly lower than the significance threshold of 0.05, the null hypothesis (H0) is rejected in favour of the alternative hypothesis (H1). According to these data findings, the Godhan Nyay Yojana significantly raises the incomes of rural families. Taken together, the results back up the claim that the GNY has helped its recipients' economic situations, which in turn has improved their lives.

Discussion

The results derived from the study of the Godhan Nyay Yojana (GNY) on the income changes of the rural households in the Raipur Division indicate that the scheme has provided positive changes to the beneficiary. The authors also used the paired sample t-test to compare the income difference before and after the implementation of GNY and found that the income has increased from ₹20,000 to ₹25,000 after implementation of the GNY. This raise up of ₹5,000 indicates that capacity of the programme in improving the financial position of rural households has boosted up giving them more means to look out for than previous.

The following are some of the potential outcome which may explain this positive development: First, the GNY promotes the rearing of livestock and advocates for the marketing of cow dung which are other sources of income to families. The transition to sustainable representation of crop farming does not only enhance the creation of income but also invert the environment. Through providing developers with funding and materials, the GNY aids in creating better opportunities for farmers, withdrawing them from highly specialized agricultural jobs under the uncertainty of the market.

Besides, a rise in agricultural productivity, which is supported by the data on yields from the fields of the beneficiaries, is also likely to bring up incomes. Beneficiaries may have adopted better practices in agriculture due to the support from the GNY, hence enjoyable better yields, yields better sales and thus higher incomes. Besides, the awareness created by the program concerning improved farming practices could enable the beneficiaries enhance their farming by expanding their incomes.

The reduced number of working hours per week (from 40 to 35 and below) imposed on the beneficiaries, their increased income indicate increased productivity in their farming operations. This change not only increases the utility of rural households to enjoy more of their time with family and friends but also informs the world that the GNY encourages efficiency gains in the agricultural segment.

But there are some limitations as well as directions for future studies concerning the obtained results of the work. The positive impacts on income should be noted for the long-run by tracking the extent to which these qualities have persisted as not to regress. However, a qualitative study approach could afford the researcher an opportunity to follow up on the beneficiaries' experiences and receive more details about their experiences in the GNY and what aspects of the GNY has helped them most.

Therefore, the results of the current research support the theoretical assumption that the provisions of the Godhan Nyay Yojana positively affect the formation of rural households' income level in the Raipur Division. That the program has been designed to address productivity, sustainable and financial instruments makes a tool useful for improving lives in the region. Future research will have to pay attention to the sustainability of the program where more systematic evaluation and modification of the program will be carried out in order to realize the benefits that the program can bring to rural communities.

Conclusion

The assessment of the Godhan Nyay Yojana (GNY) that compares the changes in the income levels of households in the Raipur Division documents the programme's success in improving the income status of the targeted

beneficiaries. Based on the statistically-sound methodologies adopted in the study especially the paired sample t-test, it is demonstrated that the average income per rural household prevail at ₹20,000 before the onset of the GNY while did improve to ₹25,000 after the inauguration of the GNY. This has simply further supported the argument that the lending rate of the GNY has a positive ripple effect on the lives of the people within rural areas.

The study shows that the GNY has not only resulted in increased incomes but also an increase of productivity and efficiency of agriculture among beneficiaries. Due to the program having encouraged activities that are sustainable in nature like encouraging rearing of livestock or sale of cow dung; income generating activities have been diversified thus economically strengthening these rural households. Furthermore, an analysis of the number of hours that had been worked in a week has reduced with increased income, meaning that there is a shift in the agricultural production practices, where beneficiaries can produce more and better with the little time that they are working.

In conclusion, it is seen that the Godhan Nyay Yojana is the useful policy to overcome the economic problems occurred with the rural families in the Raipur Division. This paper shows how important it is for government to provide funds and initiatives to support rural improvement thus it give positive results if properly implemented with efficient farming methods. For future plans, a continuous evaluation and assessment of the GNY will be needed as part of organizational development process for sustainability to assess areas that need further improvements. Therefore, the study recommends that such efforts should be sustained and even extended to achieve even greater positive impact on the households and support socio-economic development in the region.

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