



An Empirical Analysis of Agricultural Income Growth and Its Challenges in Bhojpur, Bihar

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Abstract

This empirical research examines agricultural earnings growth trends and points out the most pressing issues that afflict the farming households in the Bhojpur district of Bihar in India. The goals are to study trends in agricultural income and crop production in 2015-16-2023-24 and study the socio-economic factors that hinder the growth of income. A descriptive analytical research design was adopted using secondary data including the Bihar Economic Survey, Agriculture Census, NABARD NAFIS, NSO 77th Round and Directorate of Economics and Statistics. Compound Annual Growth rate (CAGR) analysis, growth rate divergence ratio analysis and Pearson correlation coefficient were used to test three hypotheses. It concludes that the agricultural income CAGR of Bihar (4.32) is significantly lower compared to the national CAGR (7.35), and the level of absolute income difference between 2015-16 and 2021-22 expanded by 151%. In spite of average crop production growth of 6.08% CAGR, the growth in income was at 4.32%, which validates the production-income disconnect. The analysis of cross-state correlation demonstrates that there is a strong negative correlation ($r = -0.888$, $p < 0.01$) between marginal landholding proportion and the income of the farm. The research paper concludes that agricultural development in Bhojpur is necessary, which can be achieved by land consolidation, credit growth, diversification of crops, and enhancement of market infrastructure.

Keywords: Agricultural Income, Bhojpur District, Land Fragmentation, Empirical Analysis, Farmer Livelihood

1. Introduction

The economic activity of agriculture is the main activity in Bhojpur which is a district based in Patna division in southwest of Bihar with its headquarters located at Arrah. Out of 27,28,407 (Census 2011) population of the district, more than half of the population is directly reliant on farming and practice of rice, wheat, pulses and oilseeds on the fertile alluvial soil of the Sone and Ganges rivers (Census of India, 2011). In 2019-20 the second largest of Bihar after Buxar with a cropping intensity of 144%, the net sown area in Bhojpur was 81.3% of the total geographical area (Bihar Economic Survey, 2024-25). It has an annual rainfall of around 960mm, falls under a South Bihar Old Alluvial Plains agro-climatic zone, and its soil type is heavy to sandy clay soils which are favorable to cultivating cereals and pulses (KVK Bhojpur, 2023). Even in the face of such natural benefits, the economic performance of agricultural activities in Bhojpur is on the critical side.

The agricultural structure of the state is paradoxical because Bihar produces 60% of the national average of 42% of geographical area; but farmers in Bihar get the lowest agricultural income in India (Kannan & Pohit, 2021). The 2021-22 NABARD All India Rural Financial Inclusion Survey (NAFIS) registered the average monthly agricultural



household income in Bihar as 9,252, compared to the national average of 13,661, and thus, Bihar was ranked second last across the states (NABARD, 2024). Agriculture is made up of 19.9% of the Gross State Value Added (GSVA) of Bihar, but it is still sucking almost 47% of the labour force, indicating a devastating disguised unemployment and its low labor productivity (Bihar Economic Survey, 2024-25; Kumar et al., 2021). The agrarian distress is particularly seen in Bhojpur. Although it was considered the rice bowl of Bihar with a relatively progressive farmers and high levels of mechanization compared with most of the districts, it was declared as one of the 250 most backward districts in India in 2006 under the Backward Regions Grant Fund Programme (KVK Bhojpur, 2023). Over 91% of all holdings of the district are marginal (little less than 1 hectare) and the average landholding is at 0.39 hectares 60% lower than the national average and the marginal farmer reports net savings worth only about Rs 7000 per hectare of paddy or wheat even during a good crop season (Pohit et al., 2019). This has led to a long-term out-migration of youthful farmer's off-block as in Sahar to wage labor employment in the cities (Urfels et al., 2023). The paper thus presents a strict empirical research, based on the confirmed secondary data and statistical tests, to study the trends in agricultural incomes, systematically determining the limitations that are present in the farming economy of Bhojpur.

2. Literature Review

However, since the bifurcation of the state of Bihar that happened in the year 2000, depriving the state of mineral deposits and leaving behind a large farmland, the academic discussions of Bihar agricultural income have intensified. Kumar, Birthal, and Kumari (2021) examined the origin and factors of agricultural growth in Bihar between 2001-02 and 2017-18 and indicated that the agricultural growth was volatile at 3.1%, which was caused by successive floods and droughts. They reported that as of 2015-16 the average farming household in Bihar earned 7175 per month as compared to the national average of 8931 and that the small and marginal farmers, who own 96.9% of all landholdings, were experiencing acute restrictions to institutional credit. Notably, as they discovered, the number of Kisan Credit Cards issued in Bihar had been decreasing, and their achievement against targets has dropped to 35.5% in 2017-18, further increasing the reliance on informal high-cost credit. Kannan and Pohit (2021) put a specific Hausmann growth diagnostic model on Bihar and found the extent of poor market functioning and limited crop diversification to be the most binding constraint.

They discovered that the instability of the prices of agricultural produce showed that there was a weak transmission of the price even after the repeal of the APMC Act, which directly reduced the income of the farmers in the production intensive districts. The authors Sen, Venkatesh, Jha, Singh, and Suresh (2017) empirically evaluated the level of crop diversification at the national and farm level by concentrating on the ratio of concentration (CR4) of four major agricultural sub-sectors, they found that the concentration ratio of four major agricultural sub-sectors (CR4) decreased by 73.6% to 69.6% in 1999-00 to 2013-14 indicating a slow evolution of crop diversification, although the districts such as Bhoj Sinha (2020) examined 300 samples of farm households in Bihar in terms of profitability erosion caused by market imperfections, which reported that the growth in the prices of inputs after the mid-2000s, exponentially eroded the profitability of farm households with Bihar consuming the second highest fertilizer amounts of 227.30 kg/ha reporting no proportional increase in the yield.



A large-sized empirical study conducted by Urfel et al. (2023) of rice-wheat farm households in the Eastern Gangetic Plains revealed that the Intensification Benefit Index showed that the size of a farm is the basic limiting factor to the poverty reduction capability of agriculture; even intensification through irrigation could not increase the daily incomes of smallholders above the poverty line. Kumar (2020) considered the System of Rice Intensification (SRI) in Patna district as a social innovation and discovered that 42% of farmers who took part in it experienced an improvement in food sufficiency and 57% had higher income in terms of surplus sales, but the implementation of the technology was not widespread (poor extension services). According to the Bihar Economic Survey 2024-25, in the recent years rice production was up 21% and wheat by 10.7%, and the production of maize more than 65% in three years, but the agricultural household income in the state was the lowest in the country.

3. Objectives

1. To examine the trends and patterns of agricultural income growth and crop production performance in Bhojpur district, Bihar, from 2015–16 to 2023–24.
2. To identify and analyze the key socio-economic, structural, and institutional challenges constraining agricultural income growth among farming households in Bhojpur.

4. Hypotheses

H₁: Agricultural income growth (CAGR) among farming households in Bihar is substantially lower than the national average, and the absolute income gap has widened over the period 2015–16 to 2021–22.

H₂: There exists a significant divergence between the rate of crop production growth and the rate of agricultural income growth in Bihar, indicating that production increases have not proportionally translated into income gains.

H₃: There is a statistically significant negative correlation between the proportion of marginal landholdings and the average agricultural household income across major Indian states.

5. Methodology

The research design adopted by this study is descriptive-analytical research design where the empirical analysis is done using only secondary data. The following authenticated sources were used to draw data: Agriculture Census 2010-11 and 2015-16 (Government of India), Bihar Economic Survey 2023-24 and 2024-25 (Government of Bihar), NABARD All India Rural Financial Inclusion Survey (NAFIS) 2016-17 (released 2018) and 2021 - 22 (released October 2024), National Statistical Office 77th Round Situation The main unit of analysis is the district of Bhojpur with the state of Bihar and all-India aggregates as the points of comparisons. The time frame will be 2015-16 to 2023-24. The analysis procedures used included the following ones. In the case of H₁, Agricultural household income in both Bihar and India Compound Annual Growth rate (CAGR) was calculated based on NABARD NAFIS 2016-17 and 2021-22 data and the measure of the growth of the absolute and relative income difference was determined. In the case of H₂, it was found that the CAGR of five major crop productions (rice, wheat, maize, pulses, oilseeds) was calculated using data on the Bihar Economic Survey and Directorate of Economics and Statistics and ratio of growth

rate divergence was calculated against the income CAGR. In the case of H₃, the Pearson product-moment correlation coefficient (r) between the proportion of marginal landholdings (using Agriculture Census 2015-16) and average monthly agricultural household income (using NABARD NAFIS 2016-17) was computed across eight major Indian states and the statistical significance of the result assessed against the t-distribution at the levels of 0.05 and 0.01 (Kerala was omitted as its structural atypicality as a remittance-based economy was noted as well- Other tools are trend analysis, calculation of percent age growth and presentation in tabular format.

6. Results

H₁: Agricultural Income Growth: Bihar vs. India

Table 1: Comparative Agricultural Income Growth Analysis: Bihar vs. India (2015–16 to 2021–22)

| Parameter | Bihar | India | Gap |
|---|-------|--------|----------|
| Avg. Monthly Farmer Income — NAFIS 2016–17 (Rs) | 7,175 | 8,931 | -1,756 |
| Avg. Monthly Farmer Income — NAFIS 2021–22 (Rs) | 9,252 | 13,661 | -4,409 |
| Absolute Income Increase (Rs) | 2,077 | 4,730 | -2,653 |
| CAGR of Agricultural Income (5-year) | 4.32% | 7.35% | -3.03 pp |
| Income Gap Widening (Absolute, Rs) | — | — | +2,653 |
| Income Gap Widening (Relative, %) | — | — | 151.0% |
| Bihar Income as % of National Average — 2016–17 | 80.3% | — | — |
| Bihar Income as % of National Average — 2021–22 | 67.7% | — | — |

Note: CAGR formula applied: $CAGR = (End\ Value/Begin\ Value)^{(1/n)} - 1$, where $n = 5$ years (2016–17 to 2021–22). A stringent comparative study of growth in agricultural income is given in table 1. The agricultural household income increased at a rate of 4.32% a year over a period of five years compared to India which experienced 7.35% a year which is a difference of 3.03% age points. The gap between absolute income has grown by 151% where the gap between absolute income increased by 1,756 to 4,409. More importantly, the income of farmers in Bihar in terms of national average is fallen to 67.7% against 80.3% in the country which not only shows slower growth but also active divergence. H₁ is accepted: the growth of agricultural income in Bihar is significantly lower than the national growth, and the difference is increasing. This observation goes hand in hand with the fact that NABARD (2024) also records that Bihar is the state with the lowest agricultural income in the country.

H₂: Production Growth vs. Income Growth Divergence

Table 2: CAGR of Major Crop Production vs. Farmer Income CAGR in Bihar

| Indicator | CAGR (%) | Period |
|---|-------------|--------------------|
| Rice Production | 5.76 | 2019–20 to 2023–24 |
| Wheat Production | 3.18 | 2019–20 to 2023–24 |
| Maize Production | 10.49 | 2019–20 to 2023–24 |
| Pulses Production | 1.67 | 2019–20 to 2023–24 |
| Oilseeds Production | 2.42 | 2019–20 to 2023–24 |
| Average Crop Production CAGR | 4.70 | — |
| Agricultural Household Income CAGR (Bihar) | 4.32 | 2016–17 to 2021–22 |
| Growth Divergence Ratio (Prod. CAGR / Income CAGR) | 1.09 | — |



| | | |
|-------------------------------|------|---|
| Maize-Income Divergence Ratio | 2.43 | — |
| Rice-Income Divergence Ratio | 1.33 | — |

Note: *Production CAGRs computed from Bihar Economic Survey reported figures; Income CAGR from NABARD NAFIS surveys. Production period (2019–20 to 2023–24) overlaps partially with income survey period (2016–17 to 2021–22).*

The analysis on Table 2 is to determine whether the growth of crop production has corresponded to the growth of income. CAGR (4.70) average crop production is greater than the average income CAGR (4.32) giving a growth divergence ratio of 1.09. Nonetheless, the dispersion is greatest among individual high-growth crops: the production of maize increased at a 10.49% CAGR that is 2.43 times faster than the rate of increase in income and that of rice at 5.76% (1.33 times income growth). H_2 is verified: the growth in production has not been proportionately reflected in the growth of income. This discrepancy may be explained by three factors that are mentioned in the literature: the increase in the cost of inputs Bihar has the second-highest fertilizer use of 227.30kg/ha, but the low yields are not accompanied by the corresponding price recovery (Sinha, 2020); inadequate price realization given by the lack of market infrastructure Bhojpur has only 91 rural markets and 3 cold storages with the total capacity of 10,000MT (KVK Bhojpur, 2023).

H₃: Correlation between Land Fragmentation and Agricultural Income

Table 3: Marginal Landholdings (%) and Average Monthly Agricultural Household Income across Major States

| State | Marginal Holdings — Agri. Census 2015–16 (%) | Avg. Monthly Agri. Income — NAFIS 2016–17 (Rs) |
|---|--|--|
| Punjab | 18.7 | 23,133 |
| Haryana | 46.4 | 18,496 |
| Gujarat | 43.5 | 11,899 |
| Andhra Pradesh | 61.6 | 6,920 |
| Odisha | 72.6 | 7,731 |
| Jharkhand | 73.8 | 6,991 |
| Uttar Pradesh | 76.3 | 6,668 |
| Bihar | 91.2 | 7,175 |
| Pearson r | -0.888 | |
| t-statistic (df = 6) | -4.74 | |
| p-value | < 0.01 | |
| R² (Coefficient of Determination) | 0.789 | |

Note: Kerala was excluded from the analysis due to its well-documented structural atypicality its agricultural income is substantially augmented by remittance flows from Gulf countries, plantation crop returns, and a service-dominated economy, making it an outlier in the farm-size-income relationship. With Kerala included ($n=9$), $r = -0.589$ ($p = 0.095$), reflecting its outlier effect.

Table 3 shows the Pearson correlation between the marginal landholding proportion and agricultural household income using eight major Indian states. The $r = -0.888$ shows that the relationship is very negative since as the % age of marginal holdings grow, the agricultural household income goes down drastically. This is proven to be statistically significant by t-test ($t = -4.74$, $df = 6$, $p < 0.01$). The value of R^2 is 0.789, which means that about 78.9% of the inter-state agricultural household income variance can be captured by the share of marginal landholdings itself. H_3 is

accepted by the 1% level of significance: land fragmentation is a statistically significant negative predictor of agricultural income. The state of Bihar with the highest marginal holdings of 91.2% takes the extreme end on this regression, which supports the argument of Urfels et al. (2023) that the size of farms is a fundamental constraint to income potential. The result has a direct implication to Bhojpur, where 0.39 hectares average holding and the distribution of the plots make mechanization economically infeasible and increases the per-unit cost of cultivation (Kumar et al., 2021).

Supplementary Empirical Analysis

Table 4: Sectoral Composition of GSVA in Bihar (2018–19 to 2023–24)

| Year | Agriculture & Allied (%) | Industry (%) | Services (%) |
|---------|--------------------------|--------------|--------------|
| 2018–19 | 22.8 | 19.6 | 57.6 |
| 2019–20 | 21.5 | 19.8 | 58.7 |
| 2020–21 | 23.1 | 18.2 | 58.7 |
| 2021–22 | 20.7 | 18.2 | 57.1 |
| 2022–23 | 20.1 | 21.0 | 58.9 |
| 2023–24 | 19.9 | 21.5 | 58.6 |

Table 4 follows the sectoral loss of the agricultural sector of the economy of Bihar. The GSVA share of agriculture dropped to 19.9% compared to 22.8% in a period of six years and services remained dominant at 57-59%. The 2020-21 peak of 23.1% is the COVID-19 shrinkage of non-agricultural sectors, as opposed to agricultural growth (Bihar Economic Survey, 2024-25). The industry grew slowly with an increase of 19.6% to 21.5%. This falling agricultural share despite the fact that agriculture still represents the job of around 47% of the state workforce confirms the inherent structural productivity gap that directly takes down per capita farm incomes in Bhojpur, where non-agricultural work options are already very limited because of the very low industrialization levels in the district (KVK Bhojpur, 2023).

Table 5: Major Crop Production Trends in Bihar (2019–20 to 2023–24)

| Crop | Production 2019–20 (Lakh MT) | Production 2021–22 (Lakh MT) | Production 2023–24 (Lakh MT) | Growth 2019–24 (%) |
|----------|------------------------------|------------------------------|------------------------------|--------------------|
| Rice | 62.47 | 68.30 | 82.65 | +32.3 |
| Wheat | 55.80 | 58.96 | 65.26 | +16.9 |
| Maize | 26.45 | 31.10 | 43.55 | +64.6 |
| Pulses | 5.32 | 5.50 | 5.78 | +8.6 |
| Oilseeds | 1.82 | 1.90 | 2.05 | +12.6 |

The output of major crops is recorded in the Table 5. Maize was the most growing crop with a growth of 64.6%, which is in line with the record of Bihar Economic Survey that documented that maize production increased by over 65% in three years (Government of Bihar, 2025). The most common crops in Bhojpur; rice and wheat increased by 32.3% and 16.9% respectively, which is an indication of better seed varieties and irrigation sprawl as part of the Agriculture Roadmap. Nonetheless, there was slow growth in pulses (8.6%), and oilseeds (12.6%), and this shows that there has been less diversification of the cropping trends of cereals. More than 75% of the gross cropped area in Bhojpur is rice and wheat, and to date, the state government has been looking to divert about 20% of the rice-wheat area of the district to vegetable crops (Government of Bihar, 2023). This growth in production has not proportionately strengthened incomes at the households level as determined by the H₂ testing (Table 2).

Table 6: Agricultural Infrastructure and Challenge Indicators: Bhojpur/Bihar vs. National Average



| Indicator | Bhojpur/Bihar | National Average | Source |
|--------------------------------|------------------------|------------------|-----------------------------|
| Avg. Landholding Size (ha) | 0.39 | 1.08 | Agri. Census 2015–16 |
| Marginal Holdings (%) | 91.2 | 68.5 | Agri. Census 2015–16 |
| Fertilizer Consumption (kg/ha) | 227.30 | 133.12 | Bihar Eco. Survey 2024–25 |
| Tractors per 1000 ha | ~17 | ~42 | Directorate of Agri., Bihar |
| KCC Achievement (%) — 2017–18 | 35.5 | ~44.0 | Kumar et al. (2021) |
| Cold Storages in Bhojpur | 3 (10,000 MT capacity) | — | KVK Bhojpur (2023) |
| Rural Markets in Bhojpur | 91 | — | KVK Bhojpur (2023) |

Table 6 shows the multi-dimensional structural constraints working in Bhojpur. The low level of farmer income (third lowest in the country) in conjunction with high fertilizer use (227.30 kg/ha second in the country) indicates the presence of diminishing returns to chemical intensive farming on highly fragmented farms (Sen et al., 2017). Mechanization is also severely lacking at 17 tractors per 1000 hectares compared to half the national average that compels them to rely on the costly manual labor. The fact that the KCC has gone down to 35.5% in 2017-18 compared to 71.6% in 2013-14 is an institutional credit crisis that is driving the farmers of Bhojpur into informal moneylenders (Kumar et al., 2021). Its 3 cold storages comprising of 10,000 MT are pathetically poor to work with the volumes of the perishable produce that lead to distress selling and post-harvest losses (KVK Bhojpur, 2023).

7. Discussion

Empirical findings of this paper which are anchored on certified secondary data and statistical hypothesis testing confirm that the agricultural income growth in Bhojpur, Bihar has continued to be very poor in comparison with national standards as well as the development trend of the same district. The three hypotheses are all empirically supported, and this gives them strong analytical backgrounds. In response to the first objective, the CAGR analysis (Table 1) shows that Bihar recorded an increasing agricultural income of only 4.32% per year as compared to that of India which was growing at 7.35% per year. The fact that in Bihar, the income of farmers has worsened to 67.7% of the national average in 2021-22 as compared to 80.3% in 2016-17 demonstrates a growing relative worsening, and not a simple stagnation, in the position of Bihar. This was done at a time when the total GSDP in Bihar has been increasing by 2.47 lakh crore to 8.54 lakh crore which shows that the macroeconomic growth in terms of services and industry has completely bypassed the farming households (Bihar Economic Survey, 2024-25). Kumar, Birthal, and Kumari (2021) explained this by the fluctuating agricultural development that causes floods and droughts in Bihar gives the output variability over the years, which deterritories investment and therefore did not allow the accumulation of income by a risk-averse smallholder.

The disconnect between production and income proved by H_2 (Table 2) is the main paradox of the agricultural economy at the Bhojpur. The fact that the ratio of divergence (average production CAGR to income CAGR) is increasing at a rate of 1.09 (average production CAGR to income CAGR) to 2.43 (maize) suggests that more physical output is being consumed by rising costs instead of being transformed into net income gains. This disconnect is accounted by three processes. First, Sinha (2020) reported that after mid-2000s the inflation of input costs in Bihar



became exponential; the use of fertilizers on 227.30 kg/ha is much more than is agronomically optimal in the given soils, which is a result of excessively applying fertilizers because of subsidy regimes, thus inflating costs without commensurate increases in productivity. Second, the study by Kannan and Pohit (2021) revealed that price transmission is weak in the markets of agricultural products in Bihar, which implies that the process of increase in output prices at the consumer level does not translate into the farm gates. The market infrastructure in Bhojpur 91 rural markets are present in 14 blocks and the main issue with that infrastructure is that there are only 3 cold storages that are forcing farmers to make distress sales to local intermediaries at 20-30% less than what would be possible in the market (KVK Bhojpur, 2023). Third, the lack of post-harvest processing facilities implies that the total maize and cereals excess are flooded into the market at the same time the harvest occurs, which lowers the prices at the highest time of supply.

The significant negative relationship ($r = -0.888$, $p < 0.01$) between the marginal landholdings and the agricultural income (H_3 , Table 3) proves land fragmentation as the only most significant structural factor of low farm incomes, which accounts 78.9% variation across the inter-state incomes. Bihar has 91.2% marginal holdings that put it at the far end of this relationship. This is made worse at Bhojpur in particular by subdivision of plots by inheritance, so that parcels of farmland are scattered throughout an area instead of being consolidated in contiguous blocks, which not only increases the cost of transporting but also the cost of managing. The Agricultural Officer of the Bhojpur District has admitted that small parcels prevent the adoption of the scientific method because farmers who temporarily adopt modern methods will go back to the traditional methods when the scale is too small to have a viable mechanization (Pohit et al., 2019). This was empirically confirmed by Urfels et al. (2023) in their large-scale research and it was shown that even intensification through irrigation cannot bring smallholders above the poverty line when the size of the farm is below critical sizes. Also, due to the lack of formal land titles through unfinished inheritance mutations, Bhojpur farmers are ineligible to obtain institutional credit, which further leads to the constraint of fragmentation an access credit constraint (Pohit et al., 2019).

Sharma et al. offer the positive phase, which shows that online agricultural services such as UPI/net banking services and agricultural information services had a significant positive impact on farm income in terms of per-acre farm income in their sample of 1,078 Bihar households. This implies that the structural constraints of small size and poor physical market infrastructures may be partially overcome through technological leapfrogging in the form of digital extension, real time market price information, and direct-to-consumer marketing platforms. The Fourth Agriculture Roadmap of the Bihar government (2023-28) has identified diversification of crops, the promotion of agri-processing, and expansion of Kisan Credit Card as some of the strategies, yet their implementation in backward districts such as Bhojpur has been sluggish, as reflected by the ongoing drop in KCC coverage to 35.5% (Government of Bihar, 2025; Kumar et al., 2021). As noted by Sen et al. (2017), the swapping of the cereal dominated with horticulture and vegetables as the most viable income boosting channel has been highlighted because Bhojpur has a 20% diversion of its rice-wheat cropped area to vegetables which is found to increase its income and this has not been realized yet (Government of Bihar, 2023).



8. Conclusion

This is an empirical study based on the verified secondary sources of data through the NABARD NAFIS, Bihar Economic Survey, Agriculture Census, and other government sources that prove the existence of three important findings on the growth of agricultural income in Bhojpur, Bihar. To begin with, the agricultural income of Bihar is decreasing at 4.32% CAGR, which is significantly lower than the national CAGR of 7.35%, and the absolute level of income is falling by 151% between 2016-17 and 2021-22 between 2016-17 and 2021-22, and the farmer income in Bihar is declining to 80.3 % and 67.7% of the national average. Second, growth in crop production (average CAGR 4.70) has not been proportionately converted to income growth (CAGR 4.32%), with the crop most dynamically produced (maize, 10.49% CAGR) having the greatest disengagement with increase in income. Third, cross-state correlation analysis establishes a statistically significant negative relationship between marginal landholding proportion and agricultural income ($r = -0.888$, $p < 0.01$) in which, with marginal holdings of 91.2%, Bihar is at the extreme end (in an inverted relationship) of this correlation. The policy interventions needed in Bhojpur should focus on cooperative farming model of functional land consolidation, achievement of Kisan Credit Card targets of over 70%, establishment of custom hiring centers of shared mechanization, systematic crop diversification other than rice-wheat to high-value vegetables and horticulture, and agri-processing cluster with connections to digital market platforms to achieve realization of farm-gate prices.

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