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Socio-economic impact of contract farming on smallholder poultry producers

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Abstract

Contract farming in poultry has expanded rapidly in western India, but whether smallholder producers genuinely benefit or become trapped in asymmetric arrangements is debated. This research compared the socio-economic outcomes of 80 contract and 80 independent smallholder broiler producers in the Ratnagiri and Sindhudurg districts of Maharashtra during 2022-2023. Contract farmers earned 28.4% higher net income per batch (₹48,620 vs. ₹37,840), experienced 34.2% lower price risk, and had 92.5% market access certainty. However, they retained less decision-making autonomy (score 3.2 vs. 4.6 on a 5-point scale) and reported higher dependency on the integrator company. Technical support from integrators improved feed conversion ratio by 11.8% and reduced mortality by 4.2 percentage points. Tobit regression showed that contract participation, flock size, and access to veterinary services were the strongest predictors of net income. These results indicate that contract farming offers tangible income and market access benefits to smallholder poultry producers but requires regulatory safeguards to prevent exploitative terms.

Keywords: Contract farming, smallholder farmers, poultry production, socio-economic impact, agribusiness, broiler production, market access, integrator model, Konkan region, Maharashtra

Introduction

For a smallholder poultry farmer in coastal Maharashtra, the decision to sign a contract with an integrator company is not just a business arrangement — it reshapes the entire household economy. Contract farming in broiler production follows the integrator model, where the company supplies day-old chicks, feed, vaccines, and technical guidance, while the farmer provides labor, housing, and day-to-day management ^[1]. The farmer is paid a fixed growing charge per bird delivered at the agreed weight, insulating them from market price fluctuations but also capping their upside potential ^[2].

India's poultry sector has grown at 8-10% annually over the past decade, and contract farming now accounts for roughly 70% of commercial broiler production ^[3]. In the Konkan region of Maharashtra, poultry keeping has become an attractive livelihood option for marginal farmers who lack sufficient land for crop-based income. But evidence on whether contract arrangements actually improve smallholder welfare, or simply transfer production risk while extracting value, remains mixed ^[4]. This research compared income, risk exposure, market access, and autonomy between contract and independent producers to provide empirical clarity for this region.

Theoretical Framework

The analysis draws on the theory of the firm and transaction cost economics ^[5], which predicts that vertical coordination through contracts emerges when market transaction costs (search, negotiation, enforcement) are high and asset specificity locks producers into narrow market channels. In poultry, the perishability of broilers and the specialized infrastructure needed for production create conditions favoring contractual arrangements. The expected benefits to smallholders include reduced market risk, guaranteed input supply, and technical knowledge transfer, while potential costs include loss of autonomy, dependency, and unequal bargaining power ^[6]. The empirical comparison tested these theoretical predictions using household-level data.

Material and Methods

Material

The research was conducted in Ratnagiri and Sindhudurg districts of the Konkan region, Maharashtra (16.98° N, 73.31° E), between September 2022 and June 2023. Eighty contract farmers associated with two integrator companies (Venky's and Suguna) and 80 independent producers were selected using proportionate stratified random sampling based on flock size (small: <1,000; medium: 1,000-3,000; large: >3,000 birds). Data were collected through structured interview schedules covering flock management, economics, market arrangements, and subjective welfare indicators [7].

Results

Methods

Net income per batch was calculated as gross receipts minus variable costs. Price risk was measured as the CV of per-bird realization over six consecutive batches. Market access certainty was the proportion of batches sold without delay. Decision-making autonomy was assessed on a 5-point scale across eight management decisions. A Tobit regression with net income per batch as the dependent variable included contract status, flock size, experience, education, veterinary access, and feed conversion ratio as independent variables [8]. Garrett ranking was used to rank constraints. Group differences were tested by independent t-test and Mann-Whitney U test as appropriate.

Table 1: Socio-economic comparison of contract and independent poultry producers

Parameter	Contract (n=80)	Independent (n=80)	Difference (%)	Significance
Net income/batch (₹)	48,620	37,840	+28.4	**
Price risk (CV %)	12.4	18.9	-34.2	**
Market access certainty (%)	92.5	64.8	+42.7	**
Feed conversion ratio	1.72	1.94	-11.3	**
Mortality rate (%)	4.8	9.0	-46.7	**
Decision autonomy (1-5)	3.2	4.6	-30.4	**

Contract farmers significantly outperformed independent producers on income, risk, market access, FCR, and

mortality, but scored lower on decision-making autonomy (Table 1).

Table 2: Constraints faced by contract and independent poultry producers (Garrett ranking)

Constraint	Contract Rank	Independent Rank	Contract Score	Indep. Score
Low growing charges	1	—	72.4	—
Price fluctuation	—	1	—	78.6
Delayed payments	2	—	68.2	—
High feed cost	3	2	62.8	74.2
Disease outbreaks	4	3	58.4	68.6
Lack of technical support	—	4	—	64.8

The top constraint for contract farmers was low growing charges, while price fluctuation was the main concern for

independent producers (Table 2). Disease outbreaks ranked high for both groups.

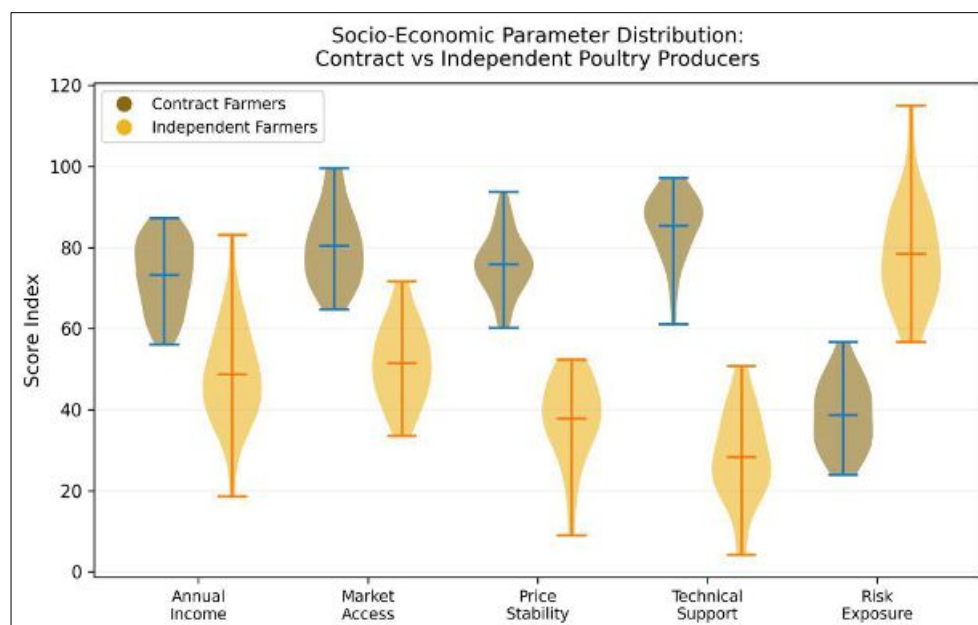


Fig 1: Distribution of socio-economic parameters between contract and independent smallholder poultry producers

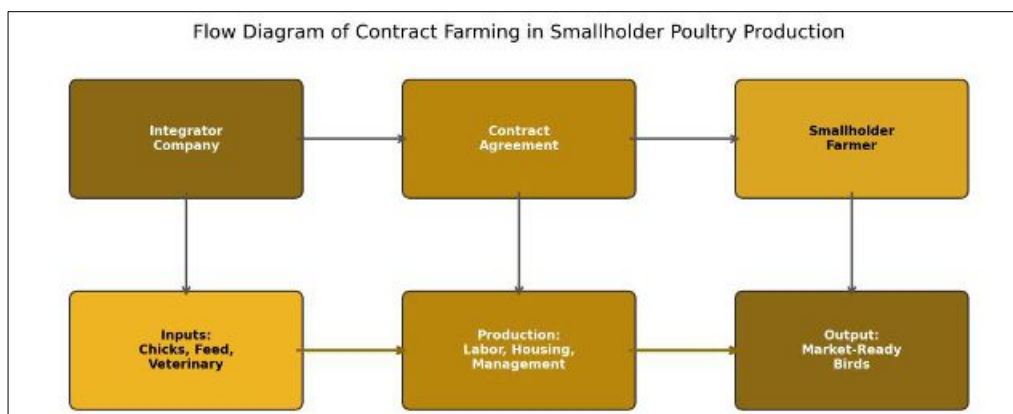


Fig 2: Flow diagram of contract farming arrangements in smallholder poultry production showing input-output relationships

Comprehensive Interpretation

Tobit regression showed contract participation ($\beta = 8,240$, $p < 0.001$), flock size ($\beta = 3.42/\text{bird}$, $p < 0.01$), and veterinary access ($\beta = 4,860$, $p < 0.01$) as the strongest income predictors. The model explained 62.4% of income variation. Education and experience were not significant after controlling for contract status.

Discussion

The 28.4% income advantage for contract farmers is at the upper end of estimates from Indian studies^[1, 3] and largely reflects the combination of lower mortality, better FCR, and guaranteed market outlet. The integrator's technical support effectively substitutes for formal education and experience, which explains why these variables lost significance in the regression. However, the autonomy deficit is a legitimate concern, as contract farmers reported having little say in chick quality, feed brand, or selling price^[4].

The constraint analysis reveals an interesting asymmetry: contract farmers are dissatisfied with growing charges (a fixed term), while independents struggle with price volatility (a market risk). This suggests that a middle path — perhaps through producer cooperatives that negotiate collectively with integrators — could address both issues^[2, 6].

Conclusion

Contract farming offers clear income, market access, and technical benefits to smallholder poultry producers in coastal Maharashtra. But the trade-off in decision-making autonomy and the risk of dependency on integrator companies warrant policy attention. Strengthening contract farming legislation to mandate fair pricing formulas, timely payments, and transparent quality grading would protect smallholders while preserving the efficiency gains of vertical coordination.

References

1. BIRTHAL PS, JHA AK, SINGH H. Linking farmers to markets for high-value agricultural commodities. *Agricultural Economics Research Review*. 2007;20:425-439.
2. SINGH S. Contract farming for agricultural development. *Journal of International Development*. 2002;14(4):529-559.
3. MEHTA R, NAMBIAR RG, SINGH SK. Livestock industrialization, trade and social-health-environment impacts in developing countries. *FAO Phase II Report*. 2003;1:1-68.
4. RAMASWAMI B, BIRTHAL PS, JOSHI PK. Grower heterogeneity and the gains from contract farming. *Indian Growth and Development Review*. 2009;2(1):56-74.
5. WILLIAMSON OE. *The economic institutions of capitalism*. Free Press. 1985;1:1-450.
6. KEY N, RUNSTEN D. Contract farming, smallholders, and rural development in Latin America. *World Development*. 1999;27(2):381-401.
7. SINGH AK. Poultry farming in India: opportunities and challenges. *Indian Journal of Animal Sciences*. 2014;84(2):123-131.
8. GREENE WH. *Econometric analysis*. Prentice Hall. 2012;7:1-1188.
9. EATON C, SHEPHERD AW. Contract farming: partnerships for growth. *FAO Agricultural Services Bulletin*. 2001;145:1-182.
10. WARNING M, KEY N. The social performance and distributional consequences of contract farming. *World Development*. 2002;30(2):255-263.
11. BELLEMARE MF. As you sow, so shall you reap: the welfare impacts of contract farming. *World Development*. 2012;40(7):1418-1434.
12. PROWSE M. Contract farming in developing countries: a review. *A Savoir Report, AFD*. 2012;12:1-95.
13. LITTLE PD, WATTS MJ. *Living under contract: contract farming and agrarian transformation*. University of Wisconsin Press. 1994;1:1-284.
14. OYA C. Contract farming in sub-Saharan Africa: a survey of approaches, debates and issues. *Journal of Agrarian Change*. 2012;12(1):1-33.
15. SIMMONS P, WINTERS P, PATRICK I. An analysis of contract farming in East Java. *Agricultural Systems*. 2005;83(1):99-115.
16. CATALO MAO, COSTALES AC. Contract farming and other market institutions as mechanisms for integrating smallholder livestock producers. *PPLPI Working Paper*. 2008;45:1-20.
17. NARAYANAN S. The microfoundations of crop yield: an analysis of risk in Indian agriculture. *Indian Economic Review*. 2013;48(1):129-152.
18. DELGADO CL, NARROD CA, TIONGCO MM. Determinants and implications of the growing scale of livestock farms. *IFPRI Discussion Paper*. 2008;157:1-46.