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MARKET ACCESS FOR ORGANIC PRODUCTS: EVIDENCE FROM KOLAR AND CHIKKABALLAPUR DISTRICTS

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Abstract:

This study examines the patterns of the market participation of the organic agrarian producers by comparing the effectiveness of the traditional physical marketplaces with the latest digital platforms using the descriptive statistical measures and the paired sample analysis methods. Demographic profiling shows the population predominantly be male, showing large inequalities in educational attainment. Empirical results show the growing ascendancy of physical market over digital market; yet digital platforms consistently exhibit better transactional results. Paired-sample t-test results show statistically significant improvements in sales performance and payment reliability in online markets while Wilcoxon signed-rank tests show greater profit margins than traditional physical venues. Respondents raise issues with prevailing challenges which include high commission fees, inadequate infrastructural provisions, few channels of communication and few digital competencies. Preferences for governmental intervention focus on subsidies in the area of transport cost of subsisting (bearing costs) in educational mingle market place conscience and programs and work forward and upgrade the education level in the field of digital literacy. Collectively, the fortification of both types of markets offers the promise of increased profitability, expanded accessibility and support of long-term sustainability to producers involved in organic agriculture.

Keywords: Market access, Organic products, Profit margin, Payment reliability, Sales

Introduction

Organic farming has become a major issue in diverse areas of the world precisely in regions where degradation of soils, reliance on chemical inputs, and low profitability of farms have been significant threats to the long-term sustainable development of agricultural systems. In a number of districts of the country, particularly in the arid zones prone to drought and where the ecological health is precarious, the cultivation opting for organic farming is increasingly being considered as a viable alternative which can help to improve the fertility of soil, use of organic resources, and promote environmental sustenance. Nonetheless, the economic viability of organic farming is not only dependent on ecologically sound principles of agricultural production, but also on the ability of the farmer to channel their produce to markets that recognise and reward the added value of organic produce. Adequate market access is crucial in ensuring fair, stable and remunerative prices and hence facilitate the adoption of organic practices. In the absence of such linkages, the profitability of organic farmers may suffer in spite of their labour intensive and nature-better methods. Empirical studies indicate that the dearth of credible and organised market channels is one of the biggest structural constraints to the growth of however the organic farming industry in India (IAMRenew, 2023). Whilst there is a good body of literature which documents the environmental benefits of organic farming, it is equally important that the economic challenges facing producers are scrutinised. Lack of proper price premiums, excessive reliance on intermediaries and fluctuating market demand have significant impact on the willingness of the farmers to engage and maintain organic farming (ACS Publisher, 2022). Furthermore, lack of transparent pricing mechanisms, poor consumer awareness and inadequate marketing infrastructure limit the potential of the development of organic agriculture in India (Agriculture Institute, 2023). Although empirical evidence at the district level for Kolar and Chikkaballapur is scarce, there are nationally representative studies which show consistently that inadequate access to markets is one of the most important constraints to the sustainable development of organic farming in the country as a whole.



I. Literature Review

Sankhla, D. (2024). This paper examines organic agriculture industry by analysing systematically the market dynamics, economic driving forces and the rising demand for ethically produced commodities. It highlights major challenges facing the organic industry and underlines the need to understand consumer behaviour and marketing strategies as these variables have an enormous impact and influence on consumer buying behaviour and product performance. Additionally, the study also argues that there exists a lacuna with regards to the effects of public policy and incentive mechanisms with census to the economic sustainability of organic farming. In sum it aims at giving a broad survey of the organic market, including current patterns, the economic forces behind them, and incipient trends in the future.

Yadav et al (2024). The research brings to the forefront the rapid growth of the organic agriculture industry and identifies key regions and drivers that support the growth of the sector despite the challenges. It highlights the need to use sustainable and economically sound methods that will benefit the environment and local economies. Consumer trend analyses suggest that confidence in organic labelling and a willingness to pay premium prices have a decisive influence on behaviour when buying. Furthermore, the research anticipates the revolutionary changes in the sector due to the emerging technologies and evolving consumer preferences, exploring the branding, certification and promotional plan, which creates the impetus for success in the organic market.

Nainggolan, et al (2024). This paper examines the way in which food inflation reduces the availability of food on the market, a predicament that agricultural production is worsened by the limited distribution of organic fertilisers limiting agrarian production. The problem is of considerable significance, for it affects the accessibility of foodstuffs to consumers, causes the price to shoot up and restricts the supply of indispensable foodstuffs. The study highlights a gap with respect to the understanding of the conjoint effects of inflationary pressures and distribution dynamics on the availability of food. Its objective is to analyse the repercussions of the food inflation, distribution of staple foodstuffs and distribution of organic fertilisers, with market access as a moderating variable.

Hurakadli, K., & Gaddi, G. M. (2023). This work examines the factors affecting vegetable marketing channel choice by vegetable growers in the district of Chikkaballapur, focusing on the fact that smallholders face barriers to accessing modern markets because of high quality standards and high transaction costs. An in-depth understanding of these preferences is instrumental in supplementing the farmer's income and enhancing the livelihood. The provision of adequate collection centres, the main requirements for facilitating access to modern retail outlets is revealed in the manuscript to be deficient. The research aims at analyzing the socio- economic variables affecting channel choice and providing actionable information that will facilitate better market access and boost the productivity of agriculture.

Vadivel, et al., (2024). This is the study that traces the marketing hurdles in the Jayavati Hills of Tamil Nadu faced by the tribal population and the marketing of handicrafts and organic commodities in particular. Such impediments have a detrimental effect both in terms of economic development and of preserving cultural heritage. The investigation reveals the limitations in current marketing strategies and aims to analyze contemporary practices and provide suggestions for better methodologies such as digital marketing and strong brand positioning in order to expand access to markets and strengthen tribal livelihoods.

Sobocińska, et al., (2020). This paper examines the role of marketing in the growth of the organic agriculture sector in Poland in recognition of the problems coming from the requirements of sustainability and the rise of consumerism. Bountiful marketing is an indispensable for cultivating ecological conduct and encouraging growth of organic things. The research detects a gap in the understanding of the multi-paradigmatic nature of marketing and attempts to examine the dynamics between producers and distributors, determinants of sales, and the overall effect of the marketing on the organic market in Poland.

Kaakandikar, et al., (2024). This study examines the effect of price sensitivity on customer satisfaction towards foods that are ready to eat and organic foods, which leads to an understanding of the relationship between people's financial limitations and seeking for value. It shows the ripe of health and environmental consciousness and outlines a gap in the understanding of psychological and socio-economical aspects that shape food choices. The research is meant to provide guidance to marketers and policymakers in order to promote sustainable and healthful dietary consumption.



Gupta, et al., (2020). This research focuses on the role of own-production in dietary diversity in rural India, highlighting the roles of production diversity and market integration in dietary diversity and consequently the role of own-production in nutrition improvement. It identifies a research gap in the understanding of the relationship between field level and on farm diversity on diets in Cereal dominated systems. Using data from 3600 households, in the paper the relative importance of production diversity and market integration for diet outcomes is explored.

Becchetti, et al., (2012). This paper examines the effects on economic conditions of Thai rice producers affiliated with Fair Trade (FT) and the incorporation of organic farming on the level of their per capita income. It emphasizes the need for understanding the role that FT should have in facilitating access to the market, and reducing productivity losses during the organic transition. The study assesses income results of the Green Net farmers, as well as digging deeper into whether FT helps compensate for the difficulties of organic farming.

Aim of the Present Study

In view of the above, the present study is aimed at studying the market access for organic farmers in the districts of Kolar and Chikkaballapur in a systematic manner by:

1. To compare the usage of physical and alternative marketing channels for organic produce.
2. To assess marketing outcomes in terms of profitability, costs, price realization, sales volume, and farmer satisfactions of physical & online markets
3. To identify policy and institutional measures needed to strengthen market linkages for organic agriculture.

Hypotheses of the Study:

SL .NO	Hypothesis Type	
	Null Hypothesis	Alternative Hypothesis
1	H ₀ : There is no difference in the mean value between the sales performance of Physical Market & sales performance online market.	H _a : There is a difference in the mean value between the sales performance of Physical Market & sales performance online market.
2	H ₀ : There is no difference in the mean value between the Payment reliability system of Physical Market and Payment system reliability of Online Market.	H _a : There is a difference in the mean value between the Payment reliability system of Physical Market and Payment system reliability of Online Market.
3	H ₀ : There is no difference between the profit margin of Physical Market and profit margin online market	H _a : There is a difference between the profit margin of Physical Market and profit margin online market

Research methodology

1. **Research Design:** The research is developed according to descriptive and exploratory design to evaluate the existing position, problems, and potential of the market access of organic farmers in Chikkaballapur and Kolar districts. Quantitative as well as qualitative methods is used.
2. **Location of the Study:** The study will be carried out in Chikkaballapur and Kolar districts as the area of organic farming is growing and market access difficulties are on the rise.
3. **Population and Sampling:** Sampling: Sampling was done purposively with organic farmers and stratified random sampling among crops and type of market.
4. **Sample Size:** The sample size will be about 200 farmers.



5. Data Collection: Primary Data: Questionnaire and personal interview with structured questions on the profile of farmers, marketing platforms, problems and satisfaction, and recommendations. **Secondary Data:** Government sources, research reports, documents of NGOs concerning organic farming and marketing.

6. Data Analysis: Descriptive statistics, online and offline markets comparison and paired samples t -test. Thematic analysis of qualitative answers.

7. Tools: Excel / SPSS/data tab

Limitations of the Study

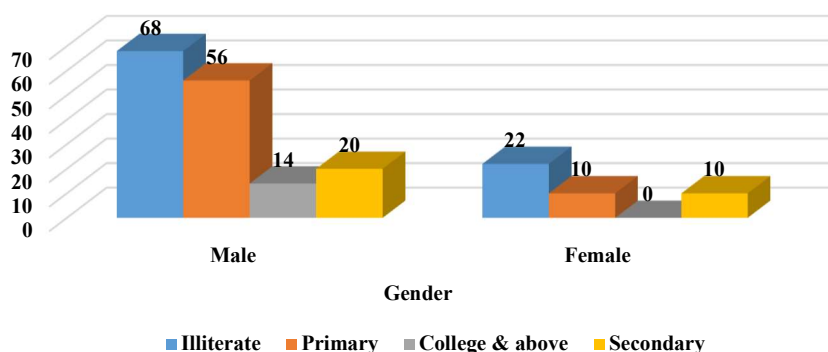
1. The results are limited to two districts and hence they do not generalize the results.
2. The sample size may not reflect the range of variation between organic farmers.
3. The study was one season, so seasonal fluctuations of the market are not represented.
4. The issue with recall bias and subjective opinions is that they both have potential to compromise the accuracy of the responses.
5. The main focus on the physical and online markets meant that other market channels were not well studied.
6. External variables, like the fluctuation of prices and changes in policies may bring some influence in the study results.

Results and Discussion

Table: 1. Frequencies & percentages of Gender - Education

SL.No	Education	Gender		
		Male	Female	Total
1	Illiterate	68	22	90
2	Primary	56	10	66
3	College & above	14	0	14
4	Secondary	20	10	30
	Total	158	42	200

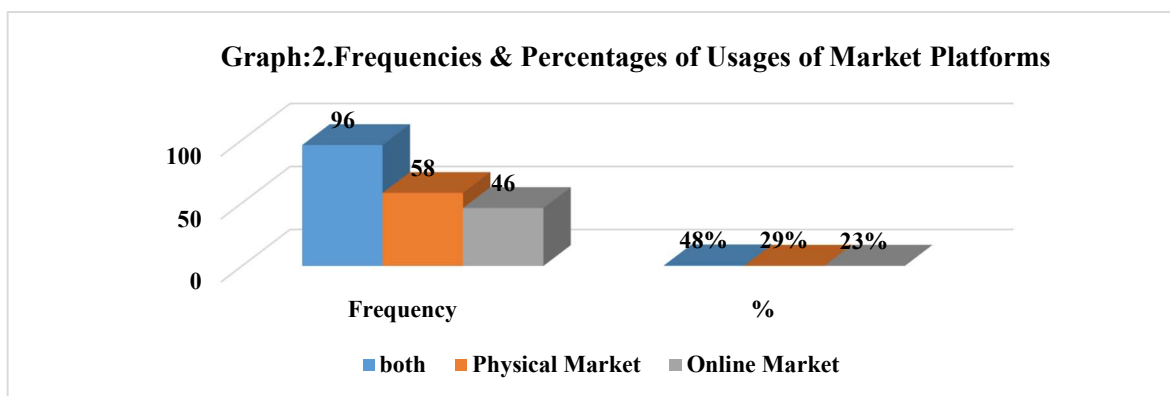
Graph:1. Frequencies & percentages of Gender - Education





The distribution of educational attainment among the respondents, separated by gender is shown in the table. Among the 200 people that took part, males (158) outnumber females (42) widely. Illiteracy is the category of most students for both genders. 90 students including both males (68) and females (22) suggested limited access to education. The next largest segment is primary education (66) mostly males. College level education or above is obtained only by 14 respondents, all of whom are male in nature thus illustrating high gender disparity in tertiary education. Secondary education is said by 30 people, of which, again, males are in the majority. Collectively the data point towards a male predominance within the sample and a huge gender gap in educational achievement, especially when it comes to higher educational attainment.

Table:2.Frequencies & Percentages of Usages of Market Platforms		
Market platform mostly use for selling organic Produce	Frequency	%
both	96	48%
Physical Market	58	29%
Online Market	46	23%
Total	200	100%



The table shows market platforms that organic farmers are more comfortable with to sell their produce. Of the 200 respondents, about 48% indicated both the physical and online market use, indicating the emerging trend of adopting a hybrid marketing approach with a view to reach a wider customer base and drive sales in a better way. Physical markets are still important, with 29% of respondents noting mainly shops as a means of buying that might relate to established familiarity and connectivity and existing buyer relationships. Meanwhile, 23 per cent of the participants like online platforms, though at a slower digitisation pace, compared to the physical and/or combined approaches. Overall, the data indicate that farmers are slowly moving towards diversified channels of marketing instead of relying on a single platform.



Table:3 Hypothesis-1

Null hypothesis	Alternative hypothesis
There is no difference in the mean value between the sales performance of Physical Market & sales performance online market	There is a difference in the mean value between the sales performance of Physical Market & sales performance online market

Table: 4 t-Test scores for paired samples

	t	df	p	Cohen's d
Sales performance of Physical Market - Sales performance of online market	-4.04	199	<.001	0.29

The paired - sample t - test was used to compare the sales performance for the physical and online markets. Results show that $t(199) = -4.04$, $p < .001$ signifying a statistically significant difference, hence the null hypothesis (no difference in sales) is rejected. The negative t -value shows that sales in the online market exceed the physical market sales by some margin. Cohen's $d = .29$ is a small but meaningful effect size, pointing out that although there is a significant difference, it is small. All things considered, online platforms give farmers a measurable advantage in sales performance.

Table: 5 Hypothesis-2

Null hypothesis	Alternative hypothesis
There is no difference in the mean value between the Payment reliability system of Physical Market and Payment system reliability of Online Market	There is a difference in the mean value between the Payment reliability system of Physical Market and Payment system reliability of Online Market

Table: 6. t-Test scores for paired samples

	t	df	p	Cohen's d
Payment reliability system of physical market and online Market	-4.88	199	<.001	0.35



The paired-sample t-test was used to test the difference in the reliability of payment systems in the physical and online market. Results showed $t(199) = -4.88$, $p < .001$, which is a statistically significant difference. As the p-value was less than .05, the null hypothesis (which states that there is no difference in the reliability of payments between the two platforms) was rejected. The negative t - value indicates that the online markets have reliable payment systems than the normal markets. Cohen's $d = 0.35$ = small to moderate difference: Indicates that even though statistical difference is significant its practical significance is small. Collectively, farmers inform the problem of online platforms which they report support more reliable and more timely payments systems in comparison to physical markets.

Table: 7. Hypothesis-3	
Null hypothesis	Alternative hypothesis
There is no difference between the profit margin of Physical Market and profit margin online market	There is a difference between the profit margin of Physical Market and profit margin online market

Table: 8. Wilcoxon-Test scores				
	W	z	p	r
profit margin of Physical Market and profit margin online market	3346.00	-5.68	<.001	0.40

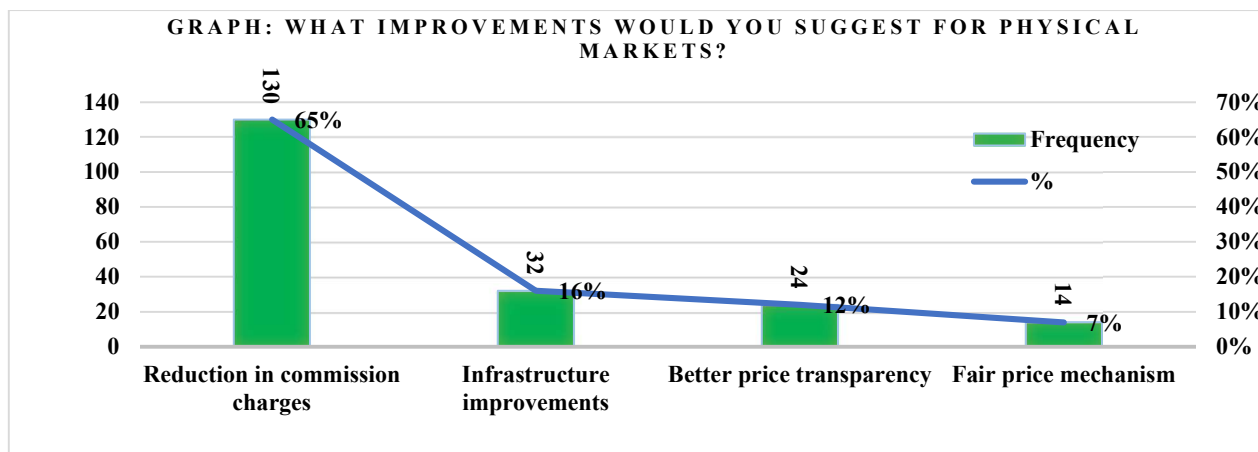
The Wilcoxon Signed-Rank Test was used to compare physical and online market profit margins. The test produced the statistic $W=3346.00$, a z score of -5.68 and an associated probability value of $p<0.001$, an indication of a very significant difference between the two platforms. Because the probability value is less than the conventional alpha level of .05, we reject the null hypothesis that states there is no difference in the profit margin. The negative z values also mean that profit margins are very large in online markets compared to physical markets. An effect size of $r = 0.40$ which can be understood as moderate evidence for the observed difference not only being statistically significant but also having practical relevance for real world market contexts. Thus, online platforms have better profit margins for the farmers.

Table: 9. What improvements would you suggest for physical markets?		
Indicators	Frequency	%
Reduction in commission charges	130	65%
Infrastructure improvements	32	16%
Better price transparency	24	12%



Table: 9. What improvements would you suggest for physical markets?

Indicators	Frequency	%
Fair price mechanism	14	7%
Total	200	100%



The table marks out the priority areas that farmers identified in terms of upgrading the physical markets. A majority of them, i.e. 65 per cent, express the desire for reduction in commission charges, thereby implying that high intermediary charges severely affect farmers' income. Approximately 16 percent of respondents want improvements in infrastructure highlighting the need for improved facilities including storage, sanitation and transportation. Moreover, 12 per cent of them opted for price transparency while only 7 per cent supported a fair price mechanism, pointing to a general discontent with the current price mechanisms. In aggregate, reduction of commissions results as the foremost improvement.

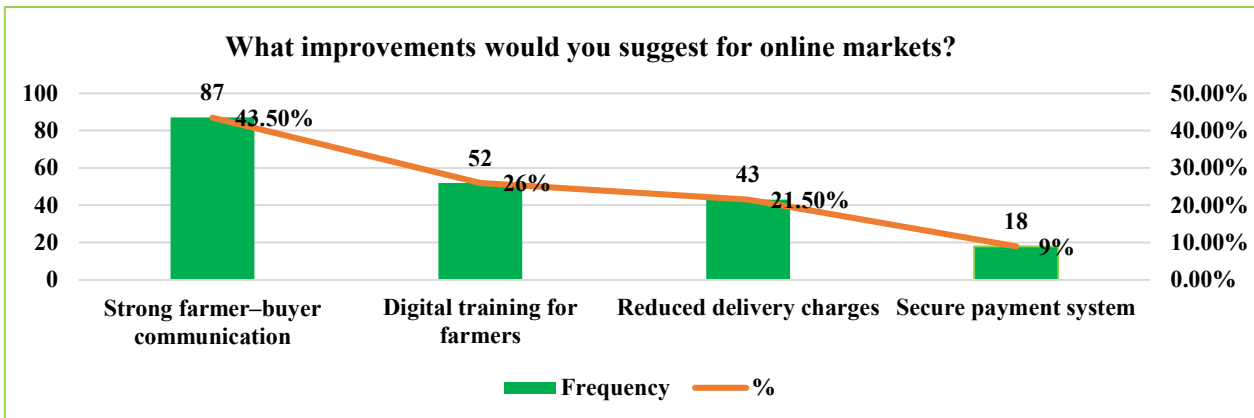
Table: 10. What improvements would you suggest for online markets?

Indicators	Frequency	%
Strong farmer–buyer communication	87	43.5%
Digital training for farmers	52	26%
Reduced delivery charges	43	21.5%
Secure payment system	18	9%



Table: 10. What improvements would you suggest for online markets?

Indicators	Frequency	%
Total	200	100%



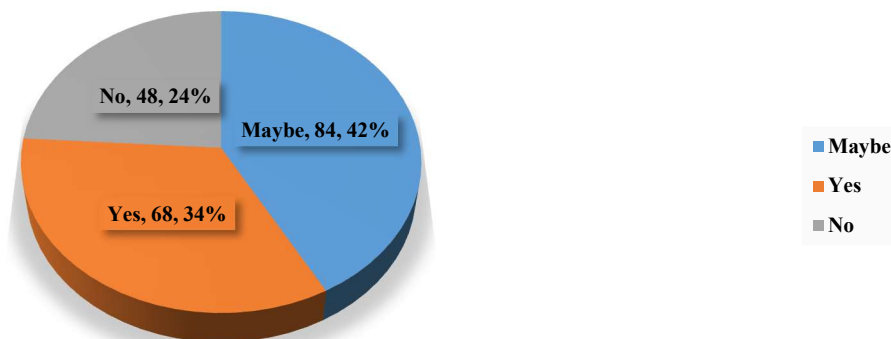
The table gives the example of key improvements expected from farmers by online market. The most salient demand is for enhanced communication between farmers, and buyers (43.5 per cent), pointing at mostly significant gaps in direct communication and trust. Approximately 26 inherent 26 intricacy for digital training revealed that there is still much work on the society that need to be possessed by farmers which may not be proficient in using online platforms. Additionally, 21.5% wish for an improvement in the cost of delivery, highlighting the issue linked to costs. Only 9 per cent say we need a more secure system of payments, which implies that existing systems are generally considered acceptable. In all this, it becomes clear that communication and digital skills development are the main fields that need to be improved.

Table: 11. Are you interested in expanding your online marketing in future?

Options	Frequency	%
Maybe	84	42%
Yes	68	34%
No	48	24%
Total	200	100%



Are you interested in expanding your online marketing in future?

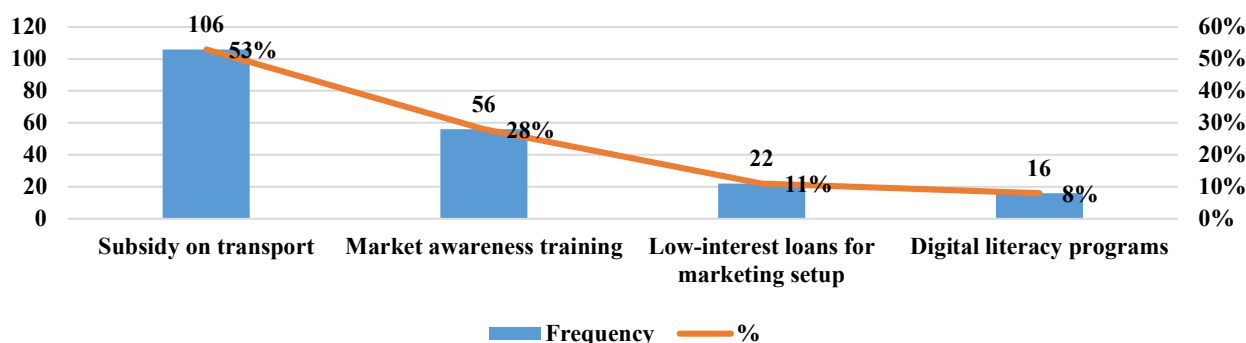


The table indicates future interest of farmers in the expansion of online marketing. Quite a big percentage (42) answered with maybe, which denotes the lack of confidence and the necessity to have more digital support or market assurance. Approximately 34 percent said a resounding yes as they gained confidence in online platforms. In the meantime, 24 per cent indicated No due to technology, cost, or trust issues. In general, the vast majority of farmers are open or even open to increasing online marketing, although many of them are reluctant.

Table: 12. What type of government support would motivate you to use both markets effectively?

Indicators	Frequency	%
Subsidy on transport	106	53%
Market awareness training	56	28%
Low-interest loans for marketing setup	22	11%
Digital literacy programs	16	8%
Total	200	100%

Graph: What type of government support would motivate you to use both markets effectively?





The table indicates the kind of government assistance farmers feel would enable them utilize physical as well as online markets efficiently. More than half (53) likes subsidies on transport, which implies that high transportation cost is a big challenge. Approximately 28% of them would want a market awareness training, which demonstrates that they need a more comprehensive understanding of market systems. Unless there is the demand, low-interest loans (11%) and digital literacy programs (8%) are needed but are significant. In general, cutbacks on transport expenses and better market knowledge are also major motivators.

FINDINGS & SUGGESTIONS

Key Findings:

1. The marketing of organic farming is dominated by men, and the gender disparity in university education would potentially apply to the market and decision making.
2. Farmers are becoming more active in physical and online markets, which is an indication of diversified marketing channel.
3. The statistical findings (t-test and Wilcoxon test) validate that the online markets are higher than the physical markets in terms of performance in sales, reliability in payment and profit margins.
4. High commission fee, lack of proper infrastructure and transparency in prices influence physical markets.
5. Weak communication between farmers and buyers, low digital skills, and high costs of delivery are some of the limitations of online markets.
6. Most farmers are interested in the growth of online marketing although there is a question mark concerning this owing to technical and operational challenges.

Suggestions:

1. Encourage women to participate by educating them and providing them with market-support.
2. Enhance physical market infrastructure and control commission charges.
3. Promote online systems that are characterized by clear pricing and secure payment.
4. Training on digital literacy and e-marketing among organic farmers.
5. Implement delivery subsidies and cut online sales transport costs.
6. Provide low interest marketing loans and market awareness perpetual programs to enhance confidence and sustainability of farmers.

Conclusion

The conclusion of the study is that organic farmers are slowly moving towards dual market strategy, which includes physical and online marketing to enhance market penetration and revenue. Despite the demographic trends showing the influence of gender and education-based differences in the participation, farmers substantially acknowledge the monetary benefits of online markets. The statistical findings prove online platforms to be more successful than the real-life markets in terms of sales, payment reliability, and profit margins. Necessary limitations, however, include high commissions and bad infrastructure in the physical market and the digital and logistical barriers in the online markets. To enhance market efficiency and sustainable growth of organic farming, government subsidies of transport, digital literacy, market awareness, and affordable credit are necessary.

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