

Efficacy of Market Facilities on Farmers' Management Skills Development in Uttarakhand

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Abstract

Developing country like India emerged as a potential market for world consumer goods with demographical advantages. This refers to adopt the dynamic strategies inclined towards economic development. The large portion of Indian population resides in rural areas and depending on agriculture. The non-farm economy is also depending on the agricultural and allied sector. Hence, for the sustainable growth, we need to revisit our tradition and should merge the agriculture to the entrepreneurship. The study highlighted the challenges and issues in agricultural entrepreneurship and assessed the status of market infrastructure facilities and farmers' skill to enhance the entrepreneurial development. This paper is based on an interview of farmers in rural areas of Dehradun (Uttarakhand) and includes the qualitative and quantitative methodology to examine the objectives. This study found that Market Infrastructure and Farmers' Skill Development is related to each other but the association is very less. With the help of personal interview of farmers, local language problem and lack of close supervision of policy and regulation highlighted as a key hindrance to farmers' skills development.

Key Words

Agriculture Marketing, Farmers' Wellbeing, Skill Development

INTRODUCTION

Present scenario depicts the difficulty level of producer and challenges faced due to global competition, regulation, and high-tech technologies. Any firm, that wants to sustain in a market, has to be adaptable to the external and internal environment. Environmental scanning is a high priority to conduct the successful business activity and should be done at micro and macro level.

Indian economy is an emerging economy with the construct of the societal attribute. Further, it consists of primary sector to engage a large proportion of the population. As per the census (2011), the dependence on agriculture is brought out by the fact that of the 313 million main workers in the country, 166 million (56.6%) has been engaged in 'Agricultural and allied activities'. Hence, it can easily be assessed that at present more than 60% population is depending on agricultural and allied activities. Moreover, we need to emphasize on the agriculture sector and have to strengthen it in many innovative ways to sustain in the global economy (Nashi, 2011).

Apart from providing food security, agriculture also provides employment and earning too many households to maintain their daily life (Acharya, 1987). Therefore, it is high time to inject innovative techniques and investment in the agricultural sector to strengthen and attract youth population (Shankar, 2013).

Since youth population is inclining towards taking risk and challenges, so the entrepreneurship concept is very cogent to introduce in this scenario (FAO, 2014). According to Rao & Mehta, "Entrepreneurship can be described as the creative and innovative response to the environment". Traditionally, agriculture is an occupation which is depending on a specific skill to cultivate crops and old techniques adopted by farmers' ancestors. But the era has changed and required the innovative technique to sustain in the long-term (Govindrajan, 2014). Hence, the combination of entrepreneurship and agriculture can bring a dramatic change in economic growth. In the context of farm entrepreneurship, David Kahan (2015) explained the significance of entrepreneurial development in agriculture and consider entrepreneurship as a key factor for the survival of small-scale farming in an everchanging and increasingly complex global economy. He also put his thought on farmers as entrepreneurship issue and explained "Farmer-entrepreneurs see their farms as a business. They see their farms as a means of earning profits. They are passionate about their farm business and are willing to take calculated risks to make their farms profitable and their businesses grow". However, important aspects of accessibility of market for farmers are based on three principles consisting structure of the market, physical access, and producers' marketing skills and knowledge

about the market (IFAD, 2003).

For this matter, UNIDO (United National Industrial Development Organization) revealed that it focuses to encourage sustainable, inclusive business opportunities for the rural poor through agri-business and agro-value chain development. UNIDO's technical cooperation activities in this regard focus on adding value to agricultural commodities including non-food sectors at various points of the chain of economic transactions that links input providers, farmers, traders, processors, logistics providers, distributors, and retailers.

The case study of BAIF (Bharatiya Agro Industries Foundation) Maharashtra, studied by N. G. Hedge (2005) explored the benefits of the program to the local population in terms of accumulating livestock. BAIF decided to produce grafted plant through the participation of family itself. The tribal women learned grafting and nursing development techniques within a few weeks and started raising grafted plants in their backyard. BAIF offered a minimum support price of Rs. 15. This program refined various skill development contents to produce other agriculture-related goods. The tribal women are also allowed to sell their plants in open market. With the help of institutional support, the tribal women started to identifying the customer behavior and were capable to mould their goods.

The above-mentioned cases are indicating towards a high approach to adopt entrepreneurial farming with high technology, supporting marketing system and value addition to the agricultural produce. Entrepreneurial development will ensure to the young population to get engaged in high return activities to influence the employment structure.

LITERATURE REVIEW

Entrepreneurial development fairly influences the farmers' welfare incorporating income growth, the standard of living and skill management. It also affects the employment structure of any economy. Entrepreneurship, value chains, and market linkages are terms that are being used more and more when talking about agriculture and farming. Many small-scale farmers and extension organizations understand that there is little future for farmers unless they become more entrepreneurial in the way they run their farms. They must increasingly produce for markets and for profits. Becoming more entrepreneurial can be a challenge for small-scale farmers. (David Kahan 2015) Further, he explored that farmer-entrepreneurs are free and independent, they do not work alone. They operate in a complex and dynamic environment. They are part of a larger collection of people including other farmers, suppliers, traders, transporters, and processors, each of whom has a role to play in the value chain.

Studies are conducted in many different regions indicating only one suggestion that effective and adequate entrepreneurship policies and programs should be developed for farmers while urgently addressing the negative factor that obstacle its growth and diverse enterprises in agriculture were developed Esiobu *et al.* (2015). Moreover, studies in hill areas addressed the issues of migration with agriculture entrepreneurial development. Sing *et al.* (2007) found in his study during a programme on "Enhancing entrepreneurship programme in Northwestern Himalayas", the proportion of the unemployed youth in the area are migrating from the hill in search of employment and livelihood. Under the scheme, an agro-processing center (APC) was established with the institutional support and was operating through an entrepreneur. This case study shows the effectiveness of APC in terms of generating income from processing and value addition of food grains. The author also investigated the challenges and issues related to hill farming entrepreneurship like raw material unavailability and connectivity. Despite all these obstacle, farmers engaged in programs and reflecting a healthy sign of welfare indicators. The authors recommended extending APC for rural areas for the opportunity of investment to establish the infrastructure to support the marketing of agricultural produce.

The only entrepreneurial concept is not going to work without educational foundation. An entrepreneurial curriculum may be devised especially in the context of agri-education and be introduced as a part of the total curriculum. Daya Ram *et al.* (2012). Moreover, added a suggestion to strengthening the effective linkages between the state government and ICAR along with CAU and other organizations.

There are ample techniques to accommodate the entrepreneur. First is to connect companies, distributors, retailers, and farmers, who can step out a discovery of agri-hub. Agri-hub provides authentic product information with all content including price, technology, brand etc. (Sameeksha Jain, 2016). Another dimension she discussed, m-commerce platform to link the farmers directly to the market yard with the help of mobile app through which a farmer can procure agri-input needed for their farms by simply giving the missed call. Next methodology she explored evolution from booth to mobile platform for rural India. This program functioned to maintain inter-linkages between IFFCO (Indian Farmer Fertilizer Cooperative Limited) and telecom giant Bharti Airtel & Star Globalization Ltd. They promoted IFFCO Kisan Sanchar Limited as a joint venture. The author further elaborated the "RikinGandhi" efforts for going digital to improve rural livelihood, who is the founder of Digital Green that developed

a project to educate farmers in the farms with the help of videos in the local language.

Indeed, entrepreneurial development defined various dynamic deviations in market and infrastructure in the farm sector. Among all objectives of farming activities, profit-making which involves market orientation can encourage entrepreneurial development among farmers in a particular region **Onubuogu et al.** (2015). Further, in study explored that farmers with more experience in agriculture would be more efficient and have better knowledge of the market situation to motivate entrepreneurial skill development. Market infrastructure encourages farmers to prepare agriculture produce competitive by value addition. Farmers have adopted many more entrepreneurial skills to sustain in the market like networking, grading, operating credit facility etc. Olatomide Waheed (2015) indicated in his study that knowledge of national and regional market can play a vital role to develop agricultural enterprises with entrepreneurial skill management.

To answer who can be an entrepreneur or can have the skill to start enterprises David Kahan (2015) discussed how a small scale farmer can be entrepreneurs. According to author, entrepreneurial farmers need access to finance, land, labor, information, and knowledge to be successful. The entrepreneurial skill concept is far from unambiguous one and aim to develop through learning and training (Pyysiainen *et al.*, 2006). Entrepreneurial development required many supportive infrastructures and program policies for the farmers' skill to address the avoidable and acceptable factors (Esiobu *et al.*, 2015). Farming cultures are labor intensive and include family labor and household members. Especially women and child engage in supportive and allied agricultural activities. Women are highly deprived section to inculcate skills to set up enterprise and market network but group membership can reduce these deficiencies. Kathleen Collette (2009) suggested overcoming these deficiencies that imparting training can help the women to support quality control and capital accumulation and price awareness. These training policies help in creating direct linkages with market intermediaries to empower women. Ensuring both financial and marketing is directly relevant to women's enterprises helps to make good use of it. Family can increase income by diversifying their enterprises by incorporation of new technology and innovation and marketing system of the production line to allow more engagement to earn a living from farm to different standard of life and abilities (Soshanah, 2013). Farmers' skill management attracts to expand farm enterprises and increase

agricultural productivity that helps them to meet their day to day needs for survival (Mujuru, 2014). Expanded enterprises need to grab the opportunity of available market infrastructure with interlinked business. Good market infrastructure worked as a catalyst to promote farm enterprises (Wilson, 2008). The accessibility of value chain of marketing system is an indispensable benefit for farmers and local market availability contribute the higher market share to secure farm income (Gmeiner, 2016).

Since agricultural entrepreneurial development is consisting of manifolds in it and not going to end with limited argument, hence, we will discuss only those parameters which can be measurable in the study through proper scaling. From the above literature review, the study includes skill, technology level, farmers' networking pattern and market perception to measure the entrepreneurial development in farming activities.

OBJECTIVES OF THE STUDY

- To investigate the level of entrepreneurship among the farmers
- To analyse the influence of market infrastructure on entrepreneurial skill development
- To assess the challenges and issues for entrepreneurial development in agricultural activities.

NULL HYPOTHESIS OF THE STUDY

- H_0 : Marketing facilities are not satisfactory among the farmers.
- H_0 : Farmers have no management skills to access market facilities and entrepreneurial development.
- H_0 : Farmers' skill management to acquire farm enterprises does not depend on marketing facilities
- H_0 : Farmers' skills do not relate to technical equipment used for farm enterprises
- H_0 : Farmers' age is not a factor for acquiring technological development
- H_0 : Farmers' age and management skills exercises are not correlated.
- H_0 : Farmers' education is not a factor for acquiring technological development
- H_0 : Farmers' education and management skills are not associated with each other.

RESEARCH METHODOLOGY AND DATA ANALYSIS

This study is descriptive and scientific in nature based on primary data collected through schedule prepared on the basis of literature survey.

Five-point Likert Scale is used to measure the parameter of skill development and market perception.

This entrepreneurial development can be measured by skill development that is influenced by market perception towards infrastructure, technology, and various value-added activities for agriculture produce.

Study areas are villages of districts of Dehradun and Haridwar (Uttarakhand). Cluster Random Sampling Methodology is used to select the respondent from the different areas of the mentioned districts.

- Total six villages have been chosen to conduct the survey, namely *Jwalapur, Bhongla, Pherpur from Haridwar, Kalsi, Bhudhbyas, and Thanu from Dehradun.*
- Seventy farmers, who deal with cash crops (Sugarcane, Potato, Apple, Rajma, Ginger) are randomly selected to query about close-ended structured schedule developed at Likert scaling.

CONCEPTUAL FRAMEWORK AND HYPOTHESIS

This study examines the relationship between market infrastructure (consisted ten dimensions like weighting system, pricing system, dispute resolution) and farmers' entrepreneurial skill development included fourteen various measurements included financial skill, marketing skill, managerial skill.

As diagram depicts farmers' management skills were influenced by market facilities. Pieces of literature also explained this relationship. If the market will enhance the infrastructure and marketing facilities, farmers will also improve their management skills to sustain their profits. Management skills are also important to utilize all marketing facilities for their crops' sales.

Further, Level of technology decided the entrepreneurial development among farmers.

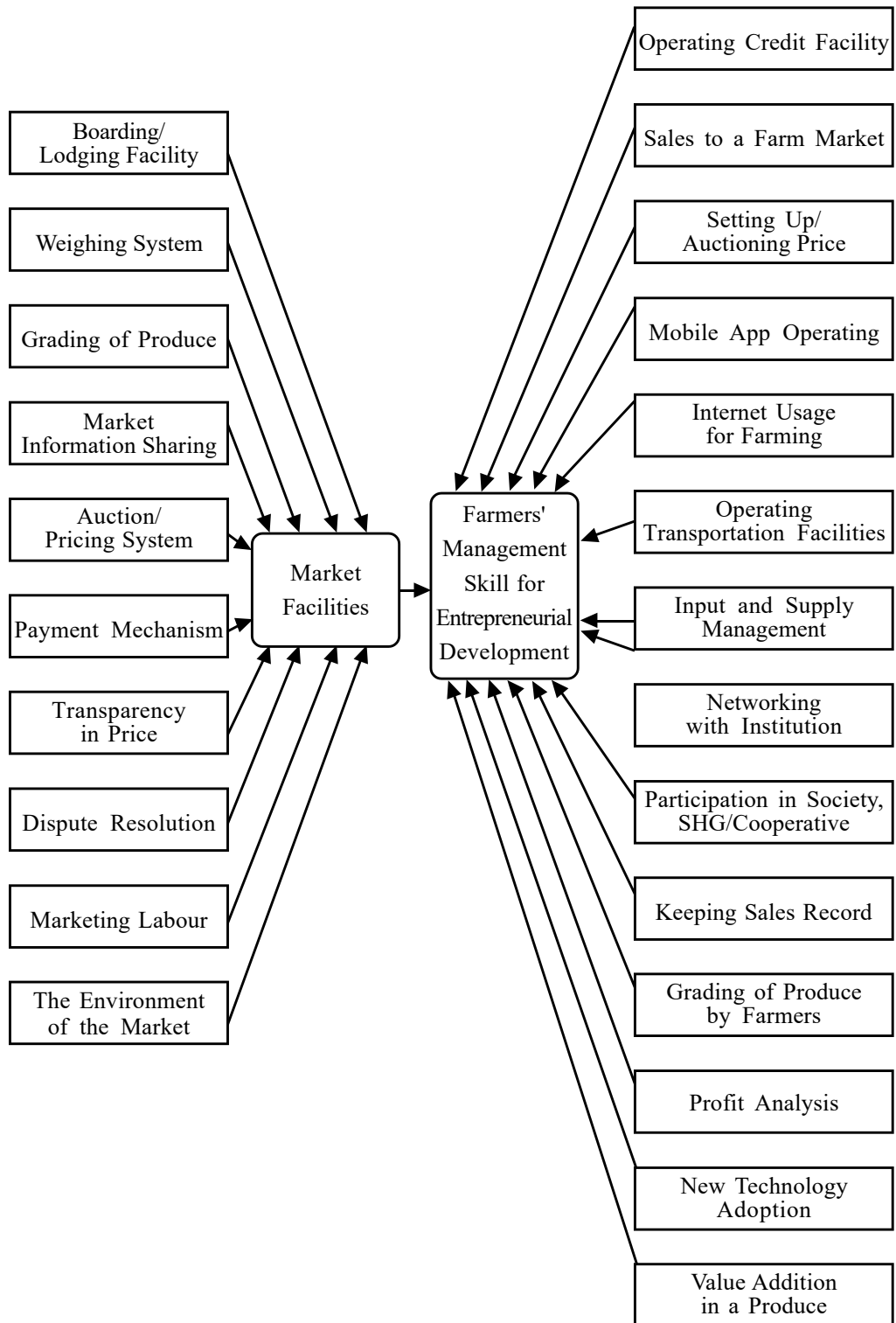


Figure 1 : Inter-Linkages Between the Variables

Working Hypothesis

- H1** : Marketing facilities are highly satisfactory among the farmers
- H2** : Farmers have high-level management skills to access market facilities and entrepreneurial development
- H3** : Farmers' skill management to acquire farm enterprises depends on marketing facilities
- H4** : Farmers' skills are the responsive factor to technical equipment used for farm enterprises
- H5** : Farmers' age is a factor for acquiring technological development
- H6** : Farmers' age and management skills exercises are positively correlated.
- H7** : Farmers' education is a factor for acquiring technological development
- H8** : Farmers' education and management skills are associated with each other.

Scale Testing of Schedule

This study used 5-Points Likert scale and depicts high Cronbach' Alpha (.902) which is a good indication of scale reliability. That means we can get the reliable result through our schedule with the help of structured interview.

Reliability Statistics

Table 1

Reliability Test for the Scale to Measure Farmers' Entrepreneurial Skill and Market Infrastructure Level

S.No.	Name of the Variables	Cronbach's Alpha	Number of Items
1.	Farmers' Skill Measurement	.89	14
2.	Farmers' Market Infrastructure Perception	.85	10

DATAANALYSIS

Chart, pie diagram and tabulation are used to present the data collected through structured interview schedule. Further, Chi-square and Regression are applied to test the formulated hypothesis.

Demographical Assessments of Respondents

Age Distribution of the Respondents

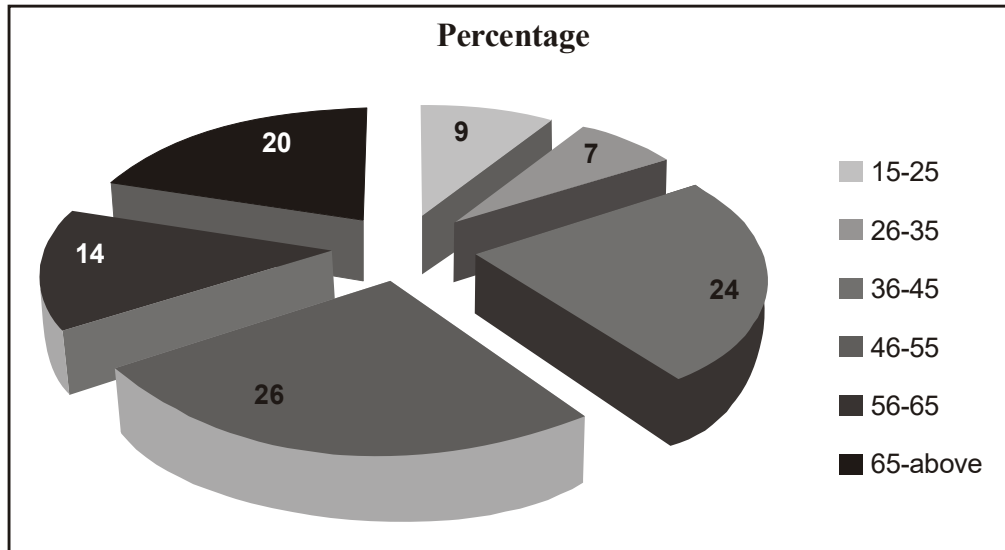


Figure 2 : Age Distribution of Respondent Farmers

The figure shows that 26% of the farmers belong to the 46-55 age group followed by 36-45 age group. The contribution of the young population in farming sector is very less (7% only).

Education Qualification of the Farmers

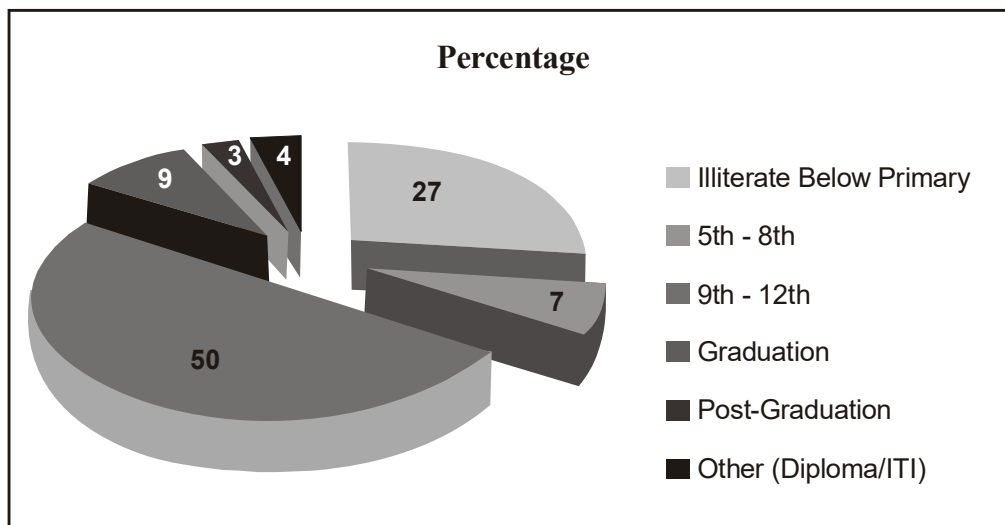


Figure 3 : Educational Qualification of the Farmers

Half of the proportion of the farmers is educated till 9-12th class and 27 % are illiterate or below primary education. Only 3% of farmers are highly educated. 4% farmers are diploma and training holders in small mechanical skills. 9% of farmers are graduates.

Assessment of Market Infrastructural Facilities and Farmers' Skill Management
Farmers' Perception Towards Market

Farmers' perception towards market facilities are measured on five scales scoring method namely Highly Satisfied-5, Satisfied-4, Neutral-3, Dissatisfied-2, Highly Dissatisfied-1.

S. No.	Name of the Indicators	Mean Value	Std Deviation
1.	Boarding/ Lodging System	4	0.79
2.	Weighing System	3	0.89
3.	Grading of Produce	4	0.69
4.	Market Information Sharing Among the Farmers	3	0.89
5.	Auction / Pricing Platform	3	0.70
6.	Payment System	3	1.26
7.	Transparency Regarding Price	4	0.81
8.	Dispute Resolution Management in the Market	4	0.80
9.	Marketing Labour	4	0.76
10.	An Environment of the Market	3	0.86

Farmers' perception towards market facilities is quite satisfactory but not highly satisfied. Boarding or lodging provided to the farmers, grading of farm produce, transparency regarding price, dispute resolution and marketing labor-recorded satisfaction among the farmers but other facilities like the weighing system, market information sharing, pricing platforms, payment system and environment of the market-documented neutral response of the farmers. The payment mechanism is a less significant market facility to the farmers as showing highest standard deviation and pricing platform is a significant marketing system for the farmers as showing lowest standard deviation.

Farmers' Skill Management

Farmers' skill management is measured by the functioning of selected operations related to the marketing of the agricultural produce. Operating functions

are scaled on the basis of following :

Mostly-5, Frequently-4, Sometime-3, Rarely-2, Never-1

S. No.	Name of the Indicators	Mean	Std Deviation
1.	Operating Credit Facilities	2	1.42
2.	Selling Product to the Farmers	4	1.04
3.	Setting Up Prices/ Auction Dealing	3	1.09
4.	Mobile App Operating for Trading Purpose	2	1.48
5.	Internet Usage for Farming Techniques	2	1.51
6.	Operating Transportation Facilities	4	1.01
7.	Handling Inputs and Supply of Agricultural Produce	4	1.02
8.	Networking with Institution	3	1.36
9.	Institutional Participation in SHG / Cooperatives / Societies	3	1.19
10.	Keeping Sales Records	3	1.19
11.	Grading and Soothing of Produce	3	1.22
12.	Profit Analysis	3	1.386
13.	Technological and Innovation Adoption	1	0.73
14.	Value Addition in Agricultural Produce	2	0.97

Skills that are responsible for entrepreneurial development like credit facilities day to day operation, usage of mobile app and internet for the trading of agricultural produce and value addition managed and performed rarely. Technology and innovation never opted for by the farmers. Input and output management are frequently performed.

Technology Used for Farming Productivity

Technological development is the key factor that supports any enterprises. Profit of agri-business based on product and its quality. So it is the primary concern towards the adoption of technology. While interviewing of 70 farmers, it is explored that 51.4% of farmers are still dependent on traditional techniques of agriculture to cultivate fields. This includes types of equipment like Hal (ox draws Plow), Khurpa (flat blade), Self-developed seeds, hand spread seeding and fertilizer etc. And 42.8% are engaged with modern technology like tractor, thresher, tillers, urea spreading tank etc. to cultivate their fields and very less proportion (5.71%) are using high technology like high-quality seeds tested from research institution, automated machinery for seeding, nozzles, smart cabs and internet technology to learn modern

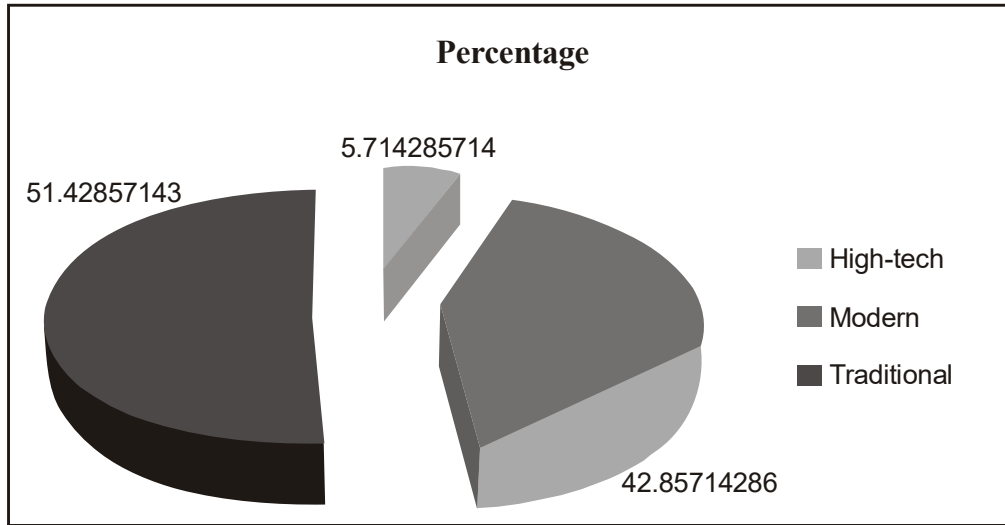


Figure 4 : Level of Technology Used for Agricultural Productivity

techniques. As the scenario depicts, farmers' needs to provide training and assistant to adopt new technology as data shows farmers started to be inclined to modern technology. That will definitely bring evolution in the agricultural sector and forced to develop the entrepreneurial skill to have a higher return on their investment.

Farmers' Perception Towards Market Facilities

Likewise, the schedule is prepared to analyze the satisfaction of farmers and perception towards market infrastructure. Indirectly it visits into the market regulation policies provided to the agriculture producer. It is found that approx (58%) are satisfied with market regulation and infrastructure. and 38% are neutral towards market perception. They are neither satisfied nor dissatisfied with market facilities. Only 2% are dissatisfied and 1% is highly dissatisfied with market facilities.

Figure 6 : Satisfaction Level of Farmers for Marketing Facilities

Assessment of Farmers' Management Skills to Develop Farm Enterprise

The schedule comprises several dimensions to measure the skill development. After coalescing the results, we create a slot [below 1.6, 1.6 to 3.3, above 3.3] to decide the level of entrepreneurial skill incorporated credit facilities, farming techniques, product selling, pricing techniques, dealing with new

Figure 7 : Assessment of Management Skill Among the Farmers'

technology (internet, mobile app etc.), transportation (supply chain), input & output management, networking, participation in enterprises, recording profit, new technology adoption and value addition and sales and grading of the product. The study explored that large proportion (61.4%) of farmers possess middle level of skill that means they conduct the particular activity for some time or frequently not mostly. 30% are mostly involved in these entrepreneurial skills. But it is clearly observed that only 8.5 % are engaged for very less time. This reflects that with the development of market infrastructure and other factors, farmers are inclined towards the frequent application of entrepreneurial skill.

Moreover, much literature claimed that farmers' skill is influenced by market facilities. Hence, this study examines the dependency between market infrastructure and skill development. Empirically, test is done and produced the following results. One of them is Chi-square test to know the inter-dependency between farmers' skill and market infrastructure perception in rural areas. Since $P(.000) < .05$ hence, we reject the null hypothesis i.e. there is significant dependency between market infrastructure facilities and skill development.

Relationship Between Farmers' Skill Management and Technological Adoption

Chi-Square Tests

Table 2

Interdependency Between Farmers' Skill Management and Used Technical Equipment for Production

Chi-Square Tests

	Value	of	Asymp. Sig. (2-sided)
Pearson Chi-Square	98.861a	50	.000
Likelihood Ratio	82.274	50	.003
Linear-by-Linear Association	2.527	1	.112
Number of Valid Cases	70		

a. 78 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

As the Table depicts that p is less than .05. hence, we will reject the null hypothesis that there is no dependency between farmers' skill management and used technical equipment for agricultural produce. However, the study concluded that farmers' skill influences the technology adoption for agricultural productivity.

Impact of Market Facilities on Farmers' Management Skill

Farmers' all economic activity is highly influenced by market facilities like environment, pricing system, payment mechanism, information flow, coordination among all players etc. the following Table shows the impact of market facilities on farmers' management skill to attract new technology or farm enterprises. The result shows that if market facilities improve, the farmers' skill will also get improved. And the rate of improvement in skill management for farm enterprises is 38.6%. It's not a very good influence as many other factors also attract skill development and management. But market facilities can be proved a good investment area to attract farmers for farm enterprises development by enhancing their skills.

Table 3

Impact of Market Structure to Develop Skill Among the Farmers Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.970	.553		1.755	.084
Market Facilities	.542	.157	.386	3.453	.001

a. Dependent Variable : SKIILL_MGT

Nevertheless, skill is also influenced by demographical factors. In this study, one of the demographical factors is chosen i.e. age and analyzed the association between age and entrepreneurial skill development and found the negative association between these two indicators. They are associated with each other by 40% in opposite direction.

Demographical Advantages and Farmers' Management Skill

Young farmers are highly-oriented to manage innovative ideas and skills. Table 4 explained the relationship between farmers' age and skill development. Results indicate a negative relationship between age and management skill that means as age will increase farmers tend to stick to traditional techniques. Young farmers possess high-level management skills like app operation, internet usage to acquire innovative ideas, sales record and networking with traders etc.

Table 4
Relationship Between Farmers' Skill Development and Age of the Farmer
Correlations

		Age	Skill Mgt.
Age	Pearson Correlation	1	-.417**
	Sig. (2-tailed)		.000
	N	70	70
Skill Mgt.	Pearson Correlation	-.417**	1
	Sig. (2-tailed)	.000	
	N	70	70

** . Correlation is significant at the 0.01 level (2-tailed)

Furthermore, age also influences the technology adoption in farm enterprises. As P value <.05 null hypothesis will be rejected, which means age will influence the decision of technological adoption for farm enterprises.

Table 5
Dependency Between Farmers Age and Technological Adoption
Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	90.213a	52	.001
Likelihood Ratio	83.813	52	.003
Linear-by-Linear Association	7.166	1	.007
Number of Valid Cases	70		

a. 81 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

Relationship Between Farmers' Education and Management Skill and Technological Adoption

Many works of literature supported that farmers' income and welfare is directly related to education quality possessed by farmers. Following Table shows that there is the significant dependency between farmers' education and management skills (as p < .05, null hypothesis will be rejected and alternative will be accepted). Farmers' education influence the management skills of the farmers.

Table 6
Relationship Between Farmers' Education and Management Skills

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	216.919a	150	.000
Likelihood Ratio	169.464	150	.132
Linear-by-Linear Association	3.728	1	.053
N of Valid Cases	70		

a. 182 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Moreover, this study explored the relationship between farmers' education and techniques used in agriculture. As $P > .05$, the null hypothesis will be accepted and no influence on technological adoption is recorded. The reason may be high dependency on weather and other factors of farming sectors and not specialized education and training in the farm enterprises sector.

Table 7
Relationship Between Farmers' Education and Technological Adoption for Farm Enterprises

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.422a	12	.339
Likelihood Ratio	15.672	12	.207
Linear-by-Linear Association	.642	1	.423
Number of Valid Cases	70		

a. 15 cells (71.4%) have expected count less than 5. The minimum expected count is .11.

CONCLUSION

Consequently, the study tested the theory which is formulated on the basis of literature that market infrastructure plays a vital role to decide the entrepreneurial skill development among the farmers. The main objective of the study was to assess the level of management skills among the farmers, further to test the association between management skill of the farmers and market facilities perception of farmers. As per the entrepreneurial development definition, farmers should be adaptable towards the technological development. But this study shows that large proportion of the farmers are comfortable with traditional

techniques, less than 50% are engaged with modern techniques and very less have adopted new techniques of agriculture. The hypothesis of the study are discussed as follows :

- H1 : Farmers are highly satisfied with market facilities
This hypothesis is not true as the farmers' responses are recorded at just satisfied or neutral on measurement scaling.
- H2 : Farmers have high-level management skills to access market facilities and entrepreneurial development.
This hypothesis is also false as most of the farmers are possessing only middle-level management skills and the entrepreneurial development skills are never exercised by farmers like new technology adoption and value addition to the farm produce.
- H3 : Farmers' management skills are influenced by market facilities.
This hypothesis is true and influence of improved market facilities affect 38.6% to the management skill development that is directly proportional to the farmers' income.
- H4 : Farmers' management skills are positively depending on technological adoption behavior of farmers
This hypothesis is also true, as the study shows management skill influence the behavior of technological adoption.
- H5 : Farmers' age is a factor for acquiring technological development
Yes, this is the fact that young mind is highly tentative to acquire new technology. This study depicts that hypothesis is true in the context of the age of farmers and technological adoption behavior.
- H6 : Farmers' age and management skills exercises are positively correlated.
There is an association of age and management skills exercises of farm enterprises. But this hypothesis is not true as the study is showing the negative relationship with the age factor. As age will increase the management skills exercised will be performed less by the farmers.
- H7 : Farmers' education is a factor for acquiring technological development.
This hypothesis is also not true. In this context, education needs specialization of agricultural branches and specific training for technology used in farm sector. General education has no impact

on farmers' technology adoption.

H8 : Farmers' education and management skills are associated with each other.

But farmers' education influence the management skills to incorporate innovation value addition in farm produce.

To assess the entrepreneurship among the farmers we observed parameters defined in literature like technology adoption for farming, innovative techniques for agriculture, value addition of farm produce and risk-taking like networking with new clients and private partnership etc. Study revealed that 51.43% farmers are using traditional techniques (Oxcart, Plow, Small traditional soil tiller etc.) for agricultural production function whereas only 5.71% farmers are using high technology (High variety scientific seeds, Drip irrigation methodology, good quality Fertilizers etc.) for agricultural production, the rest 42.86% are using moderate technology (Tractors, small tillers, tubewell, and self-created seeds).

Farmers are equipped with middle-level management skills. 61.42% applied routine and necessities management skills, and only 30% opted for high-level management skills like internet usage, App operating, high seeds variety usage, knowledge sharing, and value addition, partnership networking etc. 8.57% farmers are not applying any management skills. They are only occupied with production activities and selling farm produce.

Therefore, farmers consisting low entrepreneurial development structure. Entrepreneurship implies new technology adoption and inclined towards innovation. It refers to evolve all management skills. But the study does not support entrepreneurial features and indicates the absence of entrepreneurship activity.

As far as, level of skill development is the concern, high proportion of farmers stay with a middle level of marketing activities and operating skills. They operate many marketing and entrepreneurial activities sometimes or frequently, not mostly. Furthermore, one more factor appeared to stress upon the agriculture enterprises i.e. age factor. It is revealed that old people are not inclined to develop new entrepreneurial skills. Hence, our thrust area to make an investment is in the young generation to develop agribusiness enterprises.

RECOMMENDATION FOR THE POLICYHOLDERS

Above all, there are lots of challenges to develop entrepreneurship among farmers. One major factor is the age which is a hindrance to high learning capacity of farmers. Another obstacle is technology development which again has

the accessibility of limited resource persons to train rural farmers. This is also observed through the study that farmers who resided near to the city, have adopted modern technology or high techniques in agriculture and developed entrepreneurial skill.

Furthermore, the study revealed that technological level has not improved among the farmers' in spite of providing the subsidy. The government should adopt other methods to reach farmers. Micro and local supervision of the policy is required to address the technical issues. Institutional participation of the farmers is made for sometimes. Even only large-scale farmers participate in meetings, and cooperatives' decision-making process. The government should focus on inclusive growth and incorporate small-scale farmers in the decision-making process.

Youth should be attracted by starting cottage or small farm industries. Credit facilities for young and educated farmers should be involved with new features. Old farmers should be treated separately to make them learn new and advanced technology as they face problem in a learning process. Institutional linkages should be emphasized to promote entrepreneurial skill among the farmers. In addition, the recommendation is made to set up more training centers in local areas for technology as well as accumulation of entrepreneurial skill.

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