International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Traders' Perception about Agri-commodity Futures Market a Case Study of Ncdex Delivery Center at Davangere in Karnataka State

Dr. Jyothi Shivakumar N.M

Assistant Professor, Department of Commerce, Lal Bahadur Shastri Government First Grade College, R1T Nagar, Bengaluru – 560032

ABSTRACT

Indian economy is witnessing a growth in commodity futures market since 2003 after the removal of its ban. India has a long history of commodity futures market, trading extended over a period of more than hundred years. Futures trading began in India almost at the same period as in U.S.A., yet Indian commodity futures market is not developed. Certainly, some issues/problems exist which are the hindrance for the growth and development of this particular market. Derivatives are considered risky for investors/traders because of lack of awareness/knowledge about its operation. In this backdrop, the present study has been undertaken and an attempt is made to highlight the awareness and perception prevailing among the traders of commodity futures market. This paper is an empirical study. Data is collected through questionnaire and interaction with the traders at Davangere APMC and NCDEX center. Convenience sampling has been adopted to select the respondents in order to collect the data through questionnaire. Statistical tools such as Percentage and SPSS software are used to analyse the collected data. Summary of findings and other observations are used to develop a framework for further studies in this area. The overall result proves that the respondents have perceived agri-commodity futures market in a positive manner.

KEYWORDS :Agri Commodity futures market, Traders' perception, NCDEX futures, trade, Spot market, Delivery Centre.

INTRODUCTION

The commodity futures market in India has completed twelve years of its existence. Primary function of commodity futures market is "Price Discovery and Price Risk Management". A well developed commodity futures market would help in controlling the agricultural price fluctuation by achieving food security for a rapidly growing population. Statistical report says that Competitiveness of India is at 71st rank out of 144 economies in 2014-15 and stands at 55th place out of 140 countries in terms of overall Index (GCI report 2014-15 and 2015-16). As described in the report, out of the 12 pillars of Competitiveness, Financial Market (stock and commodity market), is one of the important pillars to measure the performance of an economy. Apart from being a major consumer of bullion and energy products, India is one of the top producers of the most of agri commodities in the world. Agriculture sector contributes about 13.7% to GDP of the Indian economy (times 2013). Around 52% of the labour force on a total of around 159.18 million hectares of land is employed in agricultural sector (GOI

2012).

India is predominantly rural and the rural population depends upon farming. In spite of technological and economical advancement, the condition of farmers continues to be unstable due to price fluctuation and natural calamities. In India, crop insurance is one of the instruments for protecting farmers from agricultural variability. But certain problems like adverse selection, moral hazard, and claim settlement in crop insurance sector of India has given path for existence of commodity derivative market in India. There are several risks, which are associated with the agricultural production, such as yield risk, monsoon risk and price risk. Yield risk is covered under the crop insurance schemes. Coverage of monsoon risk is based on weather based index insurance. Managing the price risk depends on the market driven mechanism like commodity derivatives, in particular, Agri-commodity futures market in India.

REVIEW OF LITERATURE: Literatures which were reviewed to analyse the status of agri commodity futures market in India are as follows:

1. Sahadevan (2001) attempted to highlight the status of Indian Agri Commodity futures market. The author has taken secondary data for a sample of six agri commodities like pepper, cotton, castor seed, castor oil, mustard seed and gur which are traded at four commodity exchanges i.e. Pepper Exchange in Cochin, Cotton Exchange in Mumbai, Bombay Commodity Exchange and Kanpur Commodity Exchange respectively. These segments face many problems. They are lack of modern and efficient Infrastructure facility, lack of automation and online trading method, existence of black market and so on. These problems are common across exchanges. As per the results of statistical analysis of data on price discovery process the commodity futures market is not efficient to provide hedge against price risk.

2. Kedar (2011) reviewed the impact of futures trading on agri commodity market in India. To understand whether futures contracts are suitable for a developing economy and agro-based economy like India. Here, daily price data of spot and futures markets for nine agri commodities were considered. The duration is for a period of seven years from 2007-10. Selected data were incorporated in to various econometrics models such as multiple regression, vector auto regression, granger causality test and GARCH model. Findings show that the effect of futures contract is casual in nature and tends to vary over a long period of time. Further, the author expressed that having futures market in order to manage price risk and price discovery functions would definitely help to develop the underlying commodity futures market in India.

Harwinder et.al., (2013) studied and observed the results of empirical study taken up on agricultural commodity futures for the period 2001-2013. The study was divided into three areas: Growth of commodity futures market, relationship between spot and agri-commodity futures market and Price risk management through agricultural commodity futures market. The overall results indicate the problems that are affecting the growth and performance of agricultural commodity futures market in India. These problems are: Lack of awareness among the farmers, Lack of efficient modern infrastructural facilities, No integrity between spot and futures market which can be reduced by arranging for awareness programme or workshop by Govt., or Commodity Exchange.

3. Shamim et.al., (2014) observed spot and futures market integration, regulatory framework, problems of small farmers' linkage to the markets and so on. However, his analysis with some statistical report has given some recommendations. They are- improvement in Governance - Revamping the market process like introducing single point registration through KYC. Farmers to have trading cum demat account linked with respective bank account in order to have portfolio of commodities. Further, empower farmers through Agriculture Research Institute or NGO's and by facilitating PPP Model.

4. Tarun (2012) expressed the market efficiency among the fifteen agricultural commodities futures contract traded at NMCE (National Multi-Commodity Exchange of India) ltd. Statistical tools like Johansen's Co integration approach and OLS approach to study the long run relationship and to estimate the coefficients in co integration equation followed by Wald test. The result shows that the commodity futures contracts are not efficient in terms of hedging against price volatility and also urge for reforms through awareness programme, wider participation of traders and farmers and better infrastructure.

NEED FOR THE STUDY:

Risks associated with agricultural sector are yield risk, rainfall risk and price risk. The traditional mechanisms like crop insurance schemes, Govt. intervention through MSP (Minimum Support Price) to some agri-commodities etc. needs to be revived and need to focus on market driven mechanisms like commodity futures market in India. Derivatives are considered risky for investors/traders because of lack of awareness/knowledge about its operation. In this backdrop, the present study has been undertaken and an attempt is made to highlight the awareness and perception prevailing among the APMC traders of Davangere about agri commodity futures market.

SCOPE OF THE STUDY:

Futures market centers are located in different part of India mainly at Mumbai, Ahmadabad, Delhi, Nizamabad, and Davangere. The study covers only the geographical area of Davangere in order to conduct survey. Davangere is the major area of maize production in Karnataka and the delivery center of agri commodity (maize) from NCDEX futures market platform. Further, respondents are the traders who are registered traders at APMC Davangere out of which some traders are NCDEX futures traders (traders and processors) at Davangere.

OBJECTIVES OF THE STUDY:

1. To know the awareness among the traders of Davangere APMC Centre about agri commodity futures trading.
2. To study their motives behind NCDEX agri commodity futures trading.
3. To analyse the perception of traders about agri commodity futures trading.

Hypotheses: Following hypotheses have been framed in accordance with the set of objectives listed above.

1. H0 "There is no awareness among the traders about agri commodity futures trading". H1 "There is awareness among the traders about agri commodity futures trading".
2. H0 "Traders of Davangere APMC centre are not trading for hedging purpose". H1 "Traders of

Davangere APMC centre are trading for hedging purpose".

3. H0 "Traders in Davangere APMC center perceive that the futures market is not efficient". H1 "Traders in Davangere APMC center perceive that the futures market is efficient".

RESEARCH METHOLOGY:

As a part of research, to know, understand and sense the practical market scenario, this pilot study has been undertaken to explore the hidden facts at Davangere market- a place of delivery centre for maize - which is traded at NCDEX futures market platform.

The present research is carried out with the help of both primary and secondary sources of data. Primary data has been collected from the select traders at maize futures market center and APMC of Davangere in Karnataka. The research has been developed through observation and collection of data through questionnaires, feedback obtained through e-mail, queries solved through telephonic conversation. The study also gathers the data from online secondary sources such as FMC annual report, reports from NCDEX as well as journals, magazines and newspaper.

The population of Maize futures market has been identified at the NCDEX delivery center located in different part of India mainly at Sangli, Delhi, Gulbang, Nizamabad, and Davangere. For the purpose of the study, Davangere Center is taken as sample. Convenience sampling has been adopted to select the respondents in order to collect the data through questionnaire which was distributed to collect the details from traders. The questionnaires were given to 40 respondents. However, Data was collected from 28 respondents who frequently do trading. The collected data is analyzed by percentage, graph and one sample T test is carried out by using SPSS software.

ANALYSIS AND INTERPRETATION:

1. Age group of traders:

T able 1 : Age of the respondents

Age	No. of Respondents (Frequency)	Valid Percent
26-35	3	10 %
36-45	12	43 %
46-55	10	36 %
M ore than 55	03	11 %
T otal	28	100 %

Source: Field work

Interpretation: From the above table, it is found that Majority of the respondents' i.e. 43% and 36% fall in the category of age group 36 – 45 and 46-55 respectively, followed by 11% of the respondents who come in the category of age group above 55 years. 10% of the respondents fall under the category of 26 -35 yrs. It is interpreted from the above analysis that majority traders are in the middle age group of 36-55 years.

2. Education Qualification of traders:

Table 2: Education Qualification of the respondents		
Education	No. of Respondents (Frequency)	Valid Percent
Degree	22	78%
Post-graduation	03	11%
0thers	03	11%
Total	28	100%

Source: Field work

Interpretation: It was found that majority of the respondents (78%) are qualified with degree by education. It is inferred from the above analysis that traders are well educated which helps the researcher to assess their awareness level about commodity futures market.

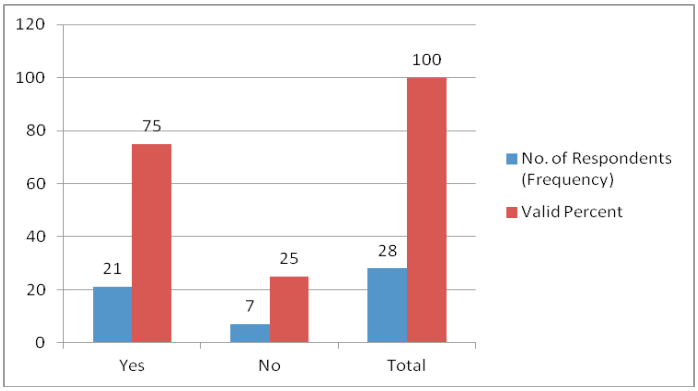
3. Occupation of traders:

Table 3. Occupation of the respondents		
Occupation	No. of Respondents (Frequency)	Valid Percent
Agriculture	6	21
Business(APMC Commission Agents)	22	79
Total	28	100

Source: Field work

Interpretation: Out of the total respondents, 21% of respondents' occupation is agriculture as a part of their family history. Along with this, they are also occupied as dallali agent or commission agent at APMC, Davangere. In total, 79% of respondents are occupied as APMC traders (Commission Agents at Davangere taluk). However, as a supplementary business, some of these APMC traders (9) are also trade at Commodity Futures market through NCDEX/MCX platform.

4.Awareness among traders about futures market:



Source: Field work

Interpretation: It was found from the above analysis that 75% of respondents are aware about agri commodity futures market and 25% are not aware of the concept "futures market".

5 Source of Awareness:

Table 5: Source of awareness, through whom?		
	. of Respondents (Frequency)	Valid Percent
Brokers	19	90
Others-Member	02	10
Total	21	100

Source: Field work

Interpretation: It was found that 90% of respondents are aware of futures trading by Brokers and 10% by NCDEX member.

6. Participation of Traders at futures market:

Table 6: Respondents' participation/trade at NCDEX futures trading		
	No. of Respondents (Frequency)	Valid Percent
Yes	9	32
No	19	68
Total	28	100

Source: Field work

Table 6a: If yes, the purpose of entry into the future markets			% of cases(9)
	No. of Responses (Frequency)	Valid Percent	
As a Speculator	2	15	22
As an Arbitrager	4	31	44
As a Hedger	7	54	77
	13	100	

Source: Field work

Interpretation: From the above table 6 and 7, it was found that 32% of respondents are futures traders and remaining 68% of respondents are not trading at futures market platform. But they are trading at APMC spot market. Out of nine respondents, some respondents are trading either as hedger and arbitrager or as a hedger and speculator. However, their main focus is to hedge (hedger) the underlying commodities like Maize (major) and Soya in order to protect from the price volatility in the market. They trade in commodities like chana, soya as an Arbitrager and soya, gold as a speculator.

7.Traders' reasons for not trading at futures market:

Table 7 : The reasons for not trading at future markets		
	No. of Respondents (Frequency)	Valid Percent
Not interested	6	32
Information not available	1	04
High investment	6	32
Complexity in understanding	6	32
Total	19	100

Source: Field work

Interpretation: Reasons i.e., Complexity in understanding, no interest and high investment in futures trading carry the same percentage (32%) of responses. However, information is available. Other reason, being a sole trader, along with spot trading not able to focus on futures trading activity.

8. Facilities/factors which need to be focused so as to make them trade at futures market:

Table 8: Facilities/factors which needs to be focused	
	Respondents' order of preference
Training and Market information to participate in trading	1
Bank finance against Commodity	2
Warehouse Facility	3
Proper Transportation Facility	4

Source: Field work

9. Traders' volume of trade in futures market:

Table 9: Volume (in %) of traders trading in futures markets		
	No. of Respondents (Frequency)	Valid Percent
Less Than 25%	2	22
25% - 50%	4	45
50% - 75%	2	22
Above 75%	1	11
Total	9	100

Source: Field work

Interpretation: Survey was conducted during December 2022. The peak season was going on and trading volumes were still in the process of movement. Therefore, traders were not able to provide the exact information and also it is the first year of trading at NCDEX after a gap of 2-3 years where the delivery centre of maize at Davangere was stopped. However, approximate 50% of their trading volume concentrated at APMC spot market and approx. 50% of their trading volume at NCDEX futures market.

10. Reasons for trading less than 50%:

Table 10: Reasons for trading less than 50 % in future markets			
	Responses		Percentage of Cases(9)
	N	Percent	
More Brokerage Charges	2	12.5%	22%
Lack of Complete Information	7	43.8%	78%
Less Knowledge/Awareness	6	37.5%	67%
Interested in other agri-product	1	6.2%	11%
Total	16	100.0%	

Source: Field work

Interpretation: It is found from the above table about the reasons for trading less than 50%. 78% of the cases said due to lack of complete information, 67% of respondents gave the reason as less knowledge or awareness, 22% of the cases said due to more brokerage charges and only 11% of the respondents said it is due to their interest in other agri-products.

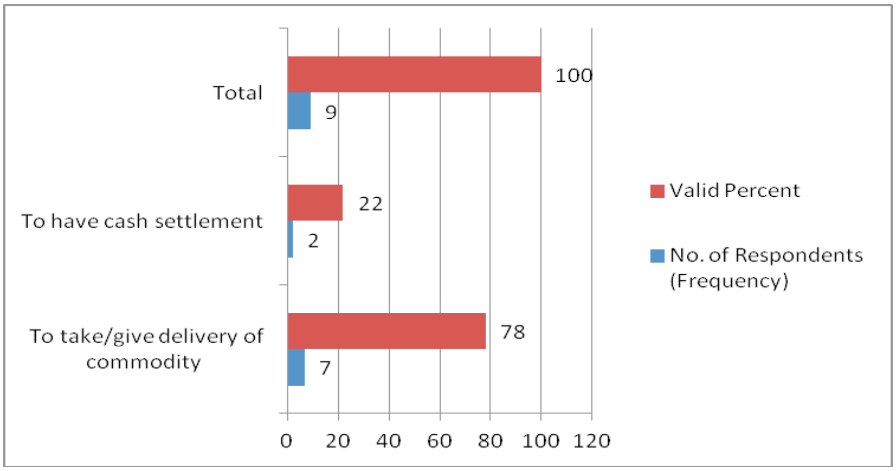
11.Reasons for trading more than 50%:

Table 11: Reasons for trading more than 50 % in futures markets			
	Responses		Percentage of Cases(9)
	N	Percent	
More safety due to price hedge	3	60.0%	33%
Due to the facilities provided	2	40.0%	22%
Total	5	100.0%	

Source: Field work

Interpretation: The above table shows that majority that is 60% of responses trade as there is more safety provided due to hedging strategy and 40% of responses trade due to the facilities provided.

12. Traders' mode of settlement at futures market:



Source: Field work

Interpretation: The above table shows that majority that is 78% of respondents trade to take/give delivery of commodity. Remaining 22% of respondents trade only to have cash settlement. As all seven respondents are hedgers entering into futures contract to hedge against price fluctuation and at the time of expiry of contract they take/give delivery of commodity. Only two respondents are trading as either speculator or as an arbitrager.

13. Traders' position in commodity futures:

Table 13: Respondents' position in commodity futures was mainly based on:

	No. of Respondents (Frequency)	Valid Percent
Advice from broker operator	3	34
Own analysis of supply and demand condition	6	66
Total	9	100

Source: Field work

14. Traders' future plan for trade:

Table 14: Respondents' plan for trading in commodity future market in a better way in future days

	No. of Respondents (Frequency)	Valid Percent
Yes	13	48
No	9	34
Can't say	5	18
Total	28	100.0

Source: Field work

Interpretation: It can be inferred from the above table that 48% of the respondents would like to trade at futures market platform. 34% of the respondents don't have any plans to trade at futures market. Remaining 18% of the respondent's opinion is neutral which shows that at that point of time, they cannot decide about their future trading activity.

Test of hypotheses: The hypotheses to be tested would be as follows;

1. H0 "There is no awareness among the traders about agri commodity futures trading". H1 "There is awareness among the traders about agri commodity futures trading".

One-Sample T Test result:

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Are you aware of agri commodity futures market?	15.000	27	.000	1.250	1.08	1.42

Source: SPSS output

The test reveals that calculated value is greater (15.000) than the table value of T (1.703) for level of significance at 0.05 and df (degree of freedom 28-1) at 27. Therefore, it is inferred from the above test that awareness among the traders about agri commodity futures trading is significantly high. Further, from the above one sample T test result, it is observed that the p-value is 0.000. As this p- value is less than the significance alpha level of 0.05 which is said to be highly significant. Therefore null hypothesis is rejected and alternate hypothesis is accepted. In a sense, there is significantly high awareness among the traders about agri commodity futures trading.

2. H0 "Majority of traders are trading not for hedging purpose". H1 "Majority of traders are trading for hedging purpose".

One-Sample T Test result:

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	Confidence Interval of the Difference	
					Lower	Upper
What is the purpose of entry into futures trading?	6.841	8	.000	3.111	2.06	4.16

Source: SPSS output

The test reveals that calculated T value is greater (6.841) than the table value of T (1.703). Further, calculated T value is 6.841 which is above the acceptable limit (value of 2.492). Null hypothesis would be rejected and alternate hypothesis is accepted. Therefore, it is inferred from the above test that traders are trading for hedging purpose. From the above one sample T test result, it is also observed that the p-value is 0.000. As this p-value is less than the significance alpha level of 0.05, null hypothesis is rejected and alternate hypothesis is accepted inferring that traders are trading for hedging purpose.

3. H0 "Traders in Davangere APMC center perceive that the futures market is not efficient". H1 "Traders in Davangere APMC center perceive that the futures market is efficient".

As the number of respondents, who are trading at futures market, are only nine and it is too less numbers to test the above hypotheses with the help of SPSS software. Therefore, the following percentage table shows that these nine traders, who are actively trading at NCDEX futures market, are satisfied with the different aspects which show that futures market is efficient. Traders' perception about the efficiency of futures market is positive.

Table 15: Respondents' Opinion about efficiency of futures market in terms of the following variables:

(SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree)		Percentage of respondents (N =9)				
I. Storage/Warehouse facility		SA	A	N	D	SD
1	I use storage facility as per the standards prescribed by the exchange	0.0	100	0.0	0.0	0.0
2	I get/deliver quality and price for agri-products with help of better storage facility in future markets	12.5	87.5	0.0	0.0	0.0
3	Less risk of getting damaged and longevity of freshness of agri products would yield better price when traded in future markets	12.5	37.5	50.0	0.0	0.0
4	Less storage cost has resulted in going for future markets trading most often	12.5	25.0	50.0	12.5	0.0
II. Standardization and Grading System						
1	I find the product match with quality specification and hence able to trade in future markets	50.0	50.0	0.0	0.0	0.0
2	Acceptance of standard grading norms as per the contract specification would fetch better futures market for agri commodity	37.5	25.0	37.5	0.0	0.0
3	Standardization and grading would always guarantee better hedging of agri commodities in futures market	28.6	42.9	28.6	0.0	0.0
III. Operational Procedure						
1	It is risky for me to understand the process of operation	0.0	83.3	0.0	16.7	0.0
2	It is too lengthy process to complete and take delivery of the product	0.0	18.6	64.6	0.0	16.7
3	Trading hours are acceptable	33.3	66.7	0.0	0.0	0.0

IV. Infrastructural facility						
1	Availability of adequate number of storage and warehouse facilities would often result in selling products at futures market.	25.0	62.5	0.0	12.5	0.0
2	Irregularity in power supply pose more damage to products and hence would often result in selling products at their doorsteps	0.0	12.5	75.0	12.5	0.0
3	If adequate infrastructure is available for agri commodities, I would do futures market trading more often in future.	12.5	62.5	12.5	12.5	0.0
V. Trading Delivery and Settlement System						
1	Delivery and settlement process in future markets trading is transparent and upto the mark	37.5	62.5	0.0	00	0.0
2	Delivery centers should be more in numbers	12.5	62.5	12.5	12.5	0.0
3	Settlement process should be much faster in future market trading	12.5	62.5	12.5	12.5	0.0
VI. Financial Management						
1	Margin money, mark to market, tax etc as per the policy of future market is acceptable to me	0.0	25.0	0.0	62.5	12.5
2	Financial settlement criteria in future markets trading is satisfactory	45	55	0.0	0.0	0.0
3	Traditional method of financial transaction is still better	0.0	0.0	10	40	50
VII. Future market trading						
1	I am oriented towards spot trading rather than future market trading	0.0	12.5	25.0	62.5	0.0
2	A tool to hedge against the price risk/transfer the risk	12.5	62.5	25.0	0.0	0.0
3	Futures market offer **Hedge against price fluctuations/volatility**	0.0	100.0	0.0	0.0	0.0
4	I would highly recommend future markets to my fellow traders/farmers	87.5	12.5	0.0	0.0	0.0
VIII. Better Risk Management and Returns						
1	A better platform to invest	20.0	0.0	20.0	40.0	20.0
2	It helps for better price risk management and better returns	20.0	80.0	0.0	0.0	0.0
3	Transaction is transparent	20.0	80.0	0.0	0.0	0.0
4	It minimizes the risk and maximizes the returns/profit	00.0	40.0	60.0	0.0	0.0

Summary of findings and other observations at the time of interaction are: Major Commodities produced and traded at APMC spot market, Davangere are Maize, Paddy and Cotton. Major commodity traded at NCDEX futures market is Maize as Davangere is major production centre and also it is a delivery centre of Maize under NCDEX futures market platform. Some of the traders who are trading at

NCDEX platform are not only trading Maize for delivery purpose but also, they are trading soya (from Madya Pradesh). Only some of APMC traders are actively trading at NCDEX Futures market. Farmers are not participating at NCDEX futures market by entering into futures contract in order to hedge their price risk. Major Hedgers are cattle feed manufacturing companies like Nandi feeds, Exporters like Sannagoudara Agro products Pvt. Ltd. Kargil India Private ltd., LD and CP etc.

CONCLUSION:

The overall result proves that the respondents have perceived agri-commodity futures market in a positive manner. Efforts must be made to ensure that the platform of NCDEX agri commodity futures trading reach to all the traders as well as farmers even in those remote villages faster, more efficiently and with lesser intermediation cost. Since awareness among farmers is very limited or negligible. Training and awareness programme should be arranged.

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