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INDIAN COMMODITY MARKETS AND THEIR RELEVANCE TO THE ECONOMY

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KEYWORDS :

1.1 Introduction

It is unfortunate that in a predominantly agrarian economy like India, the full potential of commodity markets remains unrealised. Hedgers are unhappy with the hedging efficiency of our commodity exchanges although they are not that unhappy with their price discovery capabilities. Arbitrageurs do not participate actively since the transaction cost is higher. The resultant higher level of basis risk reduces the effectiveness of the hedge. It is often alleged that speculators do not show as much interest in agricultural commodities as they do in non-agricultural commodities. Even in agricultural commodities, they prefer only such items as are produced inadequately in the country and as are characterised by questionable and stale data. The market misses out on liquidity and the plight of the hedgers worsens. The country is woefully short of sophisticated, cost-effective and reliable warehouses.

1.2 Statement of the problem

Commodity markets should witness active participation by hedgers, arbitrageurs and speculators. Their active participation will lend depth and width to the market. This is all the more essential in the present-day scenario of the commodity markets in the country since retail investors and traders can participate in them. In a country like India where agriculture is a force to reckon with on the economic front, commodity markets need to play an active role by helping producer hedgers and consumer hedgers protect themselves against price volatility in a cost-effective manner. Price volatility in the commodities market has been lower than that obtaining in the stock market. In that sense, participants in the commodities market are exposed to a lesser degree of risk. Given the humongous number of producers and consumers in the country, there is vast scope for the commodities market to expand its operations in the country, benefit the producer hedgers and consumer hedgers and improve its own bottom line in the process. But this has not been happening for a variety of reasons – many of them regulatory in nature. This is unfortunate considering that trading in commodity derivatives commenced in India barely a decade after it made its debut in Chicago.

As a result, the commodity exchanges in the country are not very efficient in price discovery. Agriculturists find it difficult to use the commodities market as a forecasting and planning tool. Hedging becomes less effective for producer hedgers and consumer hedgers. Price stabilisation proves difficult. This is something that a predominantly agrarian economy like India can ill afford! Hence this study examines the functioning of the commodity markets in the context of their relevance to the country's economy.

1.3 Review of literature

1. Futures trading is about planning and about taking control of uncertainty (123HelpMe.com, 2017). Banning futures trading amounts to forcing people not to plan. Instead, the market inefficiencies should be addressed.

2. Binu, Alex seeks to know why the core focus of the exchanges, namely, price discovery and hedging efficiency, is not being taken seriously by the government (123HelpMe.com, 2017). It is ironical that despite not concentrating on commodity market, the government has left no stone unturned to tax it leaving out the day traders in limbo. The intraday traders are finding it tough to make even a small amount of profit in a stagnant market since they have to pay as brokerage and tax more than what they earn.

3. According to SEBI, commodity exchanges are competing unhealthily against each other. It leads to disproportionally higher business for one of the exchanges, thereby denting the stability of the markets (Upadhyay, 2016).At present, the National Commodity and Derivatives Exchange (NCDEX) and Multi Commodity Exchange of India (MCX) are the two main nationwide commodity exchanges. However, NCDEX is dominated by MCX. The former clocks an average monthly turnover of a measly 10.61 percent! At the end of June 2016, the aggregate turnover in agricultural commodities on all the three national exchanges, namely, MCX, NCDEX and NMCE, was worth INR 77,696 crore. But the turnover in non-agricultural commodities was a whopping INR 5.73 trillion.This, virtually places MCX in a dominant position in the commodities market. After all, 90 percent of total trades are carried out on its platform!

1.4 Research gap

The reviewed literature has done well to highlight the absence of a level playing field in the commodity markets, among other things. It also explains convincingly that banning futures amounts to banning strategic planning on the part of the farmers. However, the relevance of the commodity markets to the country's economy could have been explained too. It is this gap the present study proposes to bridge.

1.5 Scope of the present study

The study confines itself to hedgers, arbitrageurs and speculators based in and around Bangalore and participating in commodity markets.

1.6 Objectives of the study

The objectives of the study are to:

1. Ascertain the relevance of commodity markets to the national economy
2. Ascertain ways and means of raising the relevance of commodity markets to the national economy

1.7 Hypothesis proposed to be tested

The study proposes to test the following hypotheses:

"Commodity markets send out price signals in advance to ensure that farmers grow only such produce as is in demand"

1.8 Research design

1.8.1 Research methodology

The study is descriptive in nature and has used the 'fact-finding' survey method

1.8.2 Sources of data

Primary data has been collected from the respondents, viz., 30 hedgers, 30 arbitrageurs and 30 speculators.

Secondary data has been collected from reputed finance journals, magazines and newspapers, in hard version and soft version.

1.8.3 Sampling plan

Hedgers: Given the rather limited number of hedgers (producer hedgers or consumer hedgers) operating in the vicinity where the researcher lives and the time constraint, purposive or judgement sampling under the non-probability method has been deployed.

Applying a minimum exposure of five years to hedging as the criterion, the researcher selected 30 such hedgers. This criterion, according to the researcher, is the most appropriate one for the present study.What is important is the typicality and the relevance of the sampling units to the study and not their overall representativeness to the population. Thus it guarantees inclusion of the relevant elements in the sample. Probability sampling plans cannot give such a guarantee.

Arbitrageurs: Given the rather limited number of arbitrageurs operating in the vicinity where the researcher lives and the time constraint, purposive or judgement sampling under the non-probability method has been deployed. Applying a minimum exposure of five years to arbitrage activity as the criterion, the researcher selected 30 such arbitrageurs. This criterion, according to the researcher, is the most appropriate one for the present study.What is important is the typicality and the relevance of the sampling units to the study and not their overall representativeness to the population. Thus it guarantees inclusion of the relevant elements in the sample. Probability sampling plans cannot give such a guarantee.

Speculators: Given the rather limited number of speculators operating in the vicinity where the researcher lives and the time constraint, purposive or judgement sampling under the non-probability method has been deployed. Applying a minimum exposure of five years to speculation as the criterion, the researcher selected 30 such speculators. This criterion, according to the researcher, is the most appropriate one for the present study.What is important is the typicality and the relevance of the sampling units to the study and not their overall representativeness to the population. Thus it guarantees inclusion of the relevant elements in the sample. Probability sampling plans cannot give such a guarantee.

1.8.4 Data collection instruments

Interview schedules, specially designed for the purpose, were administered to the respondents for collection of primary data.

1.8.5 Data processing and analysis plan

Non-parametric statistical units were used to test the association between some qualitative characters and conclusions were drawn on the basis of formation of H_o and H_1.

1.8.6 Limitations of the study

Primary data has sometimes been deduced through constant topic-oriented discussions with the respondents. It is possible that a certain degree of subjectivity, even if negligible, has influenced their views.

1.9 Hedgers

In the following paragraphs, the primary data collected from hedgers, producer hedgers as well as consumer hedgers, is analysed.

1.9.1 Relevance of commodity markets to the national economy

With several stakeholders viewing the relevance of commodity markets to the national economy differently, the researcher sought to know from the respondents how they viewed the relevance of commodity markets to the national economy. Their replies to the query appear in the following Table.

Table-1
Relevance of commodity markets to the national economy

Relevance	Number of respondents
By sending out price signals in advance they ensure that farmers grow only such produce as is in demand	27
Entrepreneurs can take risks unmindful of price volatility in raw materials	22
They can minimise intermediation leading to lucrative prices for agriculturists	21

By sending out price signals in advance the commodity markets ensure that farmers grow only such produce as is in demand, according to 27 respondents. Entrepreneurs can take risks unmindful of price volatility in raw materials, according to 22 respondents. Commodity markets can minimise intermediation leading to lucrative prices for agriculturists, according to 21 respondents.

1.9.2 Raising the relevance of commodity markets to the national economy

With the respondents explaining the relevance of the commodity markets to the national economy, the researcher sought to know from them how such relevance can be raised. Their replies to the query appear in the following Table .

Table-2
Raising the relevance of commodity markets to the national economy

Measures to raise the relevance	Number of respondents
The commodity markets should be widened	26
The commodity markets should be deepened	25
Domination by speculators should be curtailed	23

26 respondents suggest that the commodity markets should be widened. 25 respondents suggest that the commodity markets should be deepened. 23 respondents suggest that in the commodity markets the domination of speculators should be curtailed.

1.10 Arbitrageurs

In the following paragraphs, the primary data collected from the arbitrageurs is analysed.

1.10.1 Relevance of commodity markets to the national economy

With several stakeholders viewing the relevance of commodity markets to the national economy differently, the researcher sought to know from the respondents how they viewed the relevance of commodity markets to the national economy. Their replies to the query appear in the following Table.

Table-3
Relevance of commodity markets to the national economy

Relevance	Number of respondents
Commodity marketsensureallocation of scarce resources like land and water only to grow the produce the consumers need	27
By sending out price signals in advance they ensure that farmers grow only such produce as is in demand	25
Commodity markets eliminate the uncertainty associated with the price of the harvested produce	24

Commodity marketsensureallocation of scarce resources like land and water only to grow the produce the consumers need, according to 27 respondents. By sending out price signals in advance they ensure that farmers grow only such produce as is in demand, according to 25 respondents. Commodity markets eliminate the uncertainty associated with the price of the harvested produce, according to 24 respondents.

1.10.2 Raising the relevance of commodity markets to the national economy

With the respondents explaining the relevance of the commodity markets to the national economy, the researcher sought to know from them how such relevance can be raised. Their replies to the query appear in the following Table.

Table-4
Raising the relevance of commodity markets to the national economy

Measures to raise the relevance	Number of respondents
Commodity markets reducethe subsidy burden of the government by ensuring that MSP commodities are not surplus to requirements.	27
The commodity markets should be widened	26
The commodity markets should be deepened	24

Commodity markets reducethe subsidy burden of the government by ensuring that MSP commodities are not surplus to requirements, according to 27 respondents.26 respondents suggest that the commodity markets should be widened. 24 respondents suggest that in the commodity markets should be deepened.

1.11Speculators
In the following paragraphs, the primary data collected from the speculators is analysed.

1.11.1 Relevance of commodity markets to the national economy
With several stakeholders viewing the relevance of commodity markets to the national economy differently, the researcher sought to know from the respondents how they viewed the relevance of commodity markets to the national economy. Their replies to the query appear in the following Table.

Table-5
Relevance of commodity markets to the national economy

Relevance	Number of respondents
Commodity marketsensureallocation of scarce resources like land and water only to grow the produce the consumers need	27
Commodity markets represent an effective marketing forum for the produce raised by the biggest chunk of the country's population, namely, agriculturists	26
By sending out price signals in advance commodity markets ensure that farmers grow only such produce as is in demand	24

Commodity marketsensureallocation of scarce resources like land and water only to grow the produce the consumers need, according to 27 respondents. Commodity markets represent an effective marketing forum for the produce raised by the biggest chunk of the country's population, namely, agriculturists, according to 26 respondents. By sending out price signals in advance they ensure that farmers grow only such produce as is in demand, according to 24 respondents.

1.11.2 Raising the relevance of commodity markets to the national economy
With the respondents explaining the relevance of the commodity markets to the national economy, the researcher sought to know from them how such relevance can be raised. Their replies to the query appear in the following Table .

Table-6
Raising the relevance of commodity markets to the national economy

Measures to raise the relevance	Number of respondents
The commodity markets should be widened	27
The commodity markets should be deepened	27
Commodity markets reducethe subsidy burden of the government by ensuring that MSP commodities are not surplus to requirements.	25

27 respondents suggest that the commodity markets should be widened. 27 respondents suggest that in the commodity markets should be deepened.Commodity markets reducethe subsidy burden of the government by ensuring that MSP commodities are not surplus to requirements, according to 25 respondents .

1.12 Summary of findings
In the following paragraphs, a summarised version of the findings arrived at in respect of the three categories of respondents is furnished.

1.12.1 Hedgers

- By sending out price signals in advance the commodity markets ensure that farmers grow only such produce as is in demand, according to 27 respondents. Entrepreneurs can take risks unmindful of price volatility in raw materials, according to 22 respondents. Commodity markets can minimise intermediation leading to lucrative prices for agriculturists, according to 21 respondents.
- 26 respondents suggest that the commodity markets should be widened. 25 respondents suggest that the commodity markets should be deepened. 23 respondents suggest that in the commodity markets the domination of speculators should be curtailed.

1.12.2 Arbitrageurs

- Commodity marketsensureallocation of scarce resources like land and water only to grow the produce the consumers need, according to 27 respondents. By sending out price signals in advance they ensure that farmers grow only such produce as is in demand, according to 25 respondents. Commodity markets eliminate the uncertainty associated with the price of the harvested produce, according to 24 respondents.
- Commodity markets reducethe subsidy burden of the government by ensuring that MSP commodities are not surplus to requirements, according to 27 respondents . 26 respondents suggest that the commodity markets should be widened. 24 respondents suggest that in the commodity markets should be deepened.

1.12.3Speculators

- Commodity marketsensureallocation of scarce resources like land and water only to grow the produce the consumers need, according to 27 respondents. Commodity markets represent an effective marketing forum for the produce raised by the biggest chunk of the country's population, namely, agriculturists, according to 26 respondents. By sending out price signals in advance they ensure that farmers grow only such produce as is in demand, according to 24 respondents.
- 27 respondents suggest that the commodity markets should be widened. 27 respondents suggest that in the commodity markets should be deepened.Commodity markets reducethe subsidy burden of the government by ensuring that MSP commodities are not surplus to requirements, according to 25 respondents .

1.13 Conclusions
Conclusions relate to the hypotheses. They are answers to the research questions.

1.13.1 Hypothesis testing
Hypothesis
As explained, the following is the first hypothesis proposed to be tested:

"By sending out price signals in advance they ensure that farmers grow only such produce as is in demand".
Hence H_0 and H_1 are as follows:

H_0: Commodity markets do not send out price signals in advance to ensure that farmers grow only such produce as is in demand
H_1: Commodity markets send out price signals in advance to ensure that farmers grow only such produce as is in demand

On the basis of the primary data collected from the respondents, vide Tables: 1, 3 and 5, a chi-square test was applied to ascertain the association, if any, between the two variables. The following Table reveals the computation made using MS-Excel:

	Observed Values		
Category	*Yes*	*No*	*Total*
Hedgers	27	3	30
Arbitrageurs	25	5	30
Speculators	24	6	30
Total	*76*	*14*	*90*
	Expected Values		
Category	*Yes*	*No*	*Total*
Hedgers	25.33333333	4.666666667	30
Arbitrageurs	25.33333333	4.666666667	30
Speculators	25.33333333	4.666666667	30
Total	*76*	*14*	*90*
	Yes	*No*	
o-e	1.6667	-1.6667	
	-0.3333	0.3333	
	-1.3333	1.3333	
(o-e)^2	1.0000	1.0000	
	1.0000	1.0000	
	1.0000	1.0000	
((o-e)^2)/e	0.0395	0.2143	
	0.0395	0.2143	
	0.0395	0.2143	
CV	*0.1184*	*0.6429*	*0.7613*
TV			*5.991464547*
p			*0.88*

The calculated value of x^2 is *0.7613*, lower than the table value of *5.991464547*for an alpha of 0.05 at four degrees of freedom. Hence the null hypothesis is accepted and the alternate hypothesis is rejected.

1.13 Researcher's recommendations

1. Among other things, commodity markets do send out price signals in advance to the farming community. This can be exploited by the latter to grow only such produce as will yield a lucrative price. This is something the farming community is yet to appreciate fully. SEBI should address this perception gap jointly with the State governments by undertaking awareness campaigns.

2. After all, the price signals,determined by the forces of demand and supply, ensure that the country is not saddled with commodities that are surplus to requirements. Hence the regulator, namely SEBI, should ensure that the commodity markets grow deeper and wider.It should ensure the expansion of the product basket. It should ensure that transaction costs are reduced. Fortunately, the introduction of commodity options has addressed this problem to a certain extent. This will go some way in reducing the domination of the markets by speculators too.

3. Price signals, originating from the commodity markets, represent a blessing in disguise for the government. This is because in respect of commodities subject to the minimum support price or MSP regime, the government has to release subsidy. When such commodities are in surplus, the government's subsidy burden rises and vice-versa. Efficient commodity markets minimise the surplus and by extension, minimise the subsidy outflows from the exchequer and improve the country's fiscal health. Hence the government and SEBI should go the extra mile to persuade the farming community in particular to participate in the commodity markets. The easiest way of doing this is by reducing the transaction costs. The resultant loss in income to the government can be more than made up by the subsequent rise in transaction volumes.

4. A collateral benefit conferred by the commodity markets is that the country gets to exploit scarce resources like land and water optimally. Producers take up production of only such commodities as can be gleaned from the signals sent out by the commodities market leading to exploitation of such resources only to the extent the market permits. Hence when an industry lobbies against the listing of some commodity or the other at some point of time, the government as well as SEBI should not budge.

5. Commodity markets represent an effective marketing forum for the produce raised by the biggest chunk of the country's population, namely, the agriculturists. The contribution of agriculture to the country's GDP may have fallen to a level that is below 20 percent but this has to be viewed against another stark reality – that agriculture keeps at least 60 percent of the country's population employed! What is more, agriculture entertains unskilled workers too! Given that a huge chunk of rural Indians does not embrace formal education, the implication of agriculture for the country's economic growth can be ignored only at great peril! The anomaly posed by the agricultural sector in the context of the country's GDP notwithstanding, the commodity markets have to ensure that they support the agricultural commodities in letter and spirit!

1.14 References

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