The Influence of Demographic Factors on Commodity Trading in India

G. Chaitanya Eswara Naidu, MSV Prasad, B. Sandhya Sri

Abstract: *The India, being an agro-based economy, has markets for most of the agro-based commodities. India is the largest consumer of gold in the world, which implies a huge market for the yellow metal. India has huge spot markets for all these commodities. For instance, .Indore has a huge market for soya, Ahmedabad for castor seeds and Surendranagar for cotton, etc. Commodity futures trading in India is almost as old as that in the united states with India's first organized futures market. Bombay Cotton Trade Association, being set up 1875. Futures market in bullion was inevitable and began to emerge in Mumbai in 1920. And there are three major electronic commodity exchanges for the commodity trading in India, they are: National Multi-Commodity Exchange Limited (NMCE), Multi Commodity Exchange of India Limited (MCX) and The National Commodity and Derivatives Exchange Limited (NCDEX). The main purpose of this study is to assess the influence of demographic variables on commodity trading. The commodity market provides trading to trade commodities of varied types.*

Keyword. Association, being set up 1875. Futures market in bullion was inevitable and began to emerge in Mumbai in 1920.

I.   INTRODUCTION

The commodity futures market is poised to play an important role of performance two important functions of price discovery and price risk management for the de-velopment of agriculture and other sector in the econo-my. Gradual evaluation of commodity markets in India has been of great significance for both the country's general economic distribution and its linkages with fi-nancial sector. Being a unique hedging instrument, it provide for efficient portfolio management arising from diversification benefits, which result in improved returns to domestic as well as international investor.A commodity is a product that has commercial value. It can be produced, bought, solid, and consumed. Com-modities are basically the product of primary sector of an economy. The primary sector of an economy is con-cerned with agriculture and extraction of raw materials such as metals and energy (crude oil, natural gas), which serve as basic inputs for the secondary sector of the economy. Agriculture is backbone of Indian economy. About 70% of Indian population depends directly on agriculture and it account for around 23% of GDP.

G. Chaitanya Eswara Naidu, Research Scholar- Dept. of Finance-GITAM Institute of Management- GITAM- Visakhapatnam

MSV Prasad, Head – Dept. of Finance, GITAM Institute of Management – GITAM – Visakhapatnam.

B. Sandhya Sri, Associate Professor- Mrs. AVN College, Visakhapatnam.

Trading in derivatives first started to protect farmers from the risk of the value of their crop going below the cost price of their products. Derivative contract were offered on various agricultural products like cotton, rice, wheat, coffee, pepper etc. A market where commodities are traded is a commodity market. These commodities include bullion (gold, silver), non-ferrous (base) metals (copper, zinc, nickel, lead, aluminum, tin), energy (crude oil, natural gas) and agricultural commodities such as soya oil, palm oil, coffee, pepper, cotton, rice, wheat and cashew. Vibrant, active, liquid, and transparent commodity markets characters developed economies. India is well placed to ac-quire such a commodity market. The commodity market that is referred to today pertains, to the derivative market in the country for various commodities that are dealt with on exchange.

II.   REVIEW OF LITERATURE

The performance of commodities futures market can be evaluated using certain broad parameters which include basis risk, price discovery, and impact of futures trading on spot price volatility. The present studies outline theoretical literature the commodity futures market in India. The review of the earlier studies here is attempted chronologically in order to get a comprehensive picture. Abundance literature on commodity market in general gives theoretical explanation for the emergence of commodity futures market. There are several studies examine the market efficiency and price forecasting, especially in developed countries. However, relatively very studies exist on commodity market efficiency in underdeveloped and agriculturally dominant countries like India. The researches papers are were accessed from authoritative sources.

Jena, Pratap Kumar, and Phanindra Goyari (2016) used the Dynamic Condition Correlation Model (CCD) to study the relationship between Indian stock prices, bonds, and commodities. This study uses second-hand data on daily returns for the three alternative asset classes from June 10, 2005 to June 30, 2011

Kapil, Sheeba, and Kanwal Nayan Kapil (2010) provide arguments and insights on why the Indian commodity market needs commodity consultants to participate. Discuss various issues related to the use of Indian courses. The summary needs to incorporate the activities into the Indian commodity market and discuss the major operational and policy issues in the development of Indian company's commodity markets.

Ftiti, Z., Kablan, S. and Guesmi, K. (2016) analyzed the relationship between commodity prices and credit in the private sector of developing countries' export goods, especially in three developing countries.

Retrieval Number: D8109118419/2019©BEIESP
DOI:10.35940/ijrte.D8109.118419
Journal Website: www.ijrte.org

8053

Published By:
Blue Eyes Intelligence Engineering
& Sciences Publication

Sub-Saharan Africa, in the case of African countries, expanded the results of non-positivist research, addressed this issue, supplemented methodological literature, and examined this relationship through wavelet analysis. This frequency method is appropriate because it takes into account the heterogeneity of the investor and the characteristic time variable of the relationship studied. In addition, it explains the relationship between delays and delays between the series being tested. Second, for the middle and short term, interaction is of high importance only during awakening. With respect to the relationship between delays and delays, our results also indicate that commodity markets cause fluctuations in credit markets.

Han, L., et al. (2017) Use Google's keyword count as a direct and current proxy for investors to investigate how futures futures for commodity futures are concerned. Investors are concerned about the impact of market efficiency. Even after controlling for important macroeconomic variables, the interaction between raw material futures markets and attention and benefits is also true. The results show that on the one hand improving attention, on the one hand improving the efficiency of information, reducing the possibility of arbitrage, on the other hand reduce market efficiency and promote the stock's preservation.

Rombouts, A. (2017) helps to restore this trust. Regulators have developed a set of rules designed to provide better protection for depositors and investors based on the demand and quality of supply of investment products. Find logic, necessary complementarities and potential changes from a regulatory perspective. The conclusion is that the measures taken are still far from reaching maturity and are therefore far from reaching their goals. The only way to achieve this goal is to increase pressure among member countries to achieve greater integration and efficiency. Take measures.

Erb, C.B., and Harvey, C.R. (2016) found misconceptions about investing in commodity futures. The poor return was mainly due to poor financial performance, which was similar to dividend yield or bond returns. Three misunderstandings led to this disappointment: (1) commodities are a collection of commodity prices, (2) commodity prices provide inflation hedges, and (3) commodity markets. .

Monga et al (2016) conducted basic nursing research to understand the available investment options, relevant factors, and the positive and negative aspects of various forms of investment, thus helping to raise investor awareness. The data comes from 300 respondents who used self-developed questionnaires to choose conveniently during the interview. The results show that jewelry investment is the preferred investment form. However, gold coins, gold bars, ETFs, etc. are also very slow. Respondents often look for options that guarantee higher profits and avoid unnecessary rushes.

Periyasamy, S (2016) analyzed the impact of the investor awareness program and its impact on potential investors in India. The study is analytical. The information needed for the study is of major nature. Use random sampling methods to collect raw data using carefully constructed questionnaires. The study analyzes the changes in the investment attitude of project participants to the stock exchange.

Chen, YL and Chang, YK (2015) analyzed the impact of hedging trading positions (producers, traders, commodity processors or users) and speculators (ie, the operators of commodity groups). , business consultants or hedge funds) and change dealers in the process of shaping futures market energy, metals and agricultural prices. Hederzy is not very willing to stimulate information, so their negotiations delayed the formation of prices. However, because speculators correct price mistakes, the position of speculators has a positive effect on price efficiency. The study also provides evidence that stock traders and futures market speculators have a similar role to ensure liquidity and arbitrage between markets. The results emphasize the role of producers, hedge funds, and business entities in shaping the price of commodity futures contracts, which is beneficial to academics, experts, and regulators.

The goal of Mellios et al. (2016) will deal with the use of commodity futures contracts as a means of hedging for the duration of the period, particularly changes in commodity prices and market prices. random. We propose several decomposition methods that allow investors to assess the sensitivity of optimal demand to state variables and determine the role of each risky asset. Empirical evidence shows that comfort results have a strong impact on speculative and hedging positions, and that the interaction between variable risk bonuses over time determines the size and nature of these items.

III. OBJECTIVES OF THE STUDY

A. To study the development of commodity futures market in India.

b) To analyze the influence of demographic factors on commodity trading

c) To analyze the current scenario of commodity futures market in India

A sample of 219 traders are taken from Andhra Pradesh State covering two major cities (Visakhapatnam and Guntur) for this study. Chi square test is administered to establish the influence of demographic variables on commodity trading practices.

IV. ANALYSIS AND DISCUSSION

TABLE 4.1 Years of participation in the commodities trading and gender wise classification

Years of Participation	Gender		Total
	Male	Female	
Less than one year	20	1	21
Two to Three years	109	15	124
Three to Four Years	38	4	42
Five and above Years	26	6	32
Total	193	26	219

The Results of Chi-Square Test for table 6.1.1

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
2.689	3	0.442	0.005

The sample respondents were grouped gender wise classification in Table 8.1. Chi-square test was applied on the information found in Table 8.1. Since the calculated value of chi-square (2.689) is greater than the asymptotic significance (2-sided) (0.442) at 0.005 of level of significance 3 degrees of freedom. The Null hypothesis is rejected. So, there is a significant relationship between gender wise classification and years of participation in this commodities trading.

TABLE 4.2 Years of participation in the commodities trading and age wise classification

Years of Participation	Age (in Years)					Total
	Less than 25	26-35	36-50	51-60	Above 60	
Less than one year	8	8	3	2	0	21
Two to Three years	8	87	27	1	1	124
Three to Four Years	1	23	18	0	0	42
Five and above Years	0	5	10	10	7	32
Total	17	123	58	13	8	219

The Results of Chi-Square Test for table 4.3

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
128.013	12	0.000	0.005

Table 8.2 shows the age wise classification of sample respondents. Chi-square test was applied on the information found in Table 8.2. Since the calculated value of chi-square (128.013) at 0.005 level of significance with 12 degrees of freedom. The Null hypothesis is rejected. So, there is significant relationship between age wise classification and years of participation in this commodities trading.

TABLE 4.4
Years of participation in the commodities trading and educational qualification wise classification

Years of Participation	Educational Qualification				Total
	Under Graduate	Graduate	Post Graduate	Others	
Less than one year	5	12	2	2	21
Two to Three years	30	51	30	13	124
Three to Four Years	9	18	9	6	42
Five and above Years	3	14	6	9	32
Total	47	95	47	30	219

The Influence of Demographic Factors on Commodity Trading In India

The Results of Chi-Square Test for table 4.5

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
11.739	9	0.228	0.005

Table 8.3 provides the data regarding educational qualification grouping of the sample respondents. Chi-square test was applied on the information found in Table 8.3. Since the calculated value of chi-square (11.739) is greater than the asymptotic significance 2- sided (0.228) at 0.005 level of significant with 9 degree of freedom. The Null hypothesis is rejected. So, there is significant relationship between educational qualification and years of participation in this commodities trading.

TABLE 4.6
Years of participation in the commodities trading and monthly income wise classification

Years of Participation	Monthly Income				Total
	Rs10,000 to Rs25,000	Rs25,001 to Rs50,000	Rs50,001 to Rs75,000	Rs75,001 to Rs1,00,000	
Less than one year	11	5	4	1	21
Two to Three years	31	74	18	1	124
Three to Four Years	4	29	7	2	42
Five and above Years	7	8	13	4	32
Total	53	116	42	8	219

The Results of Chi-Square Test for table 4.7

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
40.971	9	0.000	0.005

Income wise classification of the sample respondents is exhibited in table 8.4. Chi-square test was applied on the information found in table 8.4. Since the calculated value of chi-square (40.971) is greater than the asymptotic significance 2- sided (0.000) at 0.005 level of significant with 9 degree of freedom. The Null hypothesis is rejected. So, there is significant relationship between Income wise classification and years of participation in this commodities trading

TABLE 4.8
Years of participation in the commodities trading and profession/ occupation wise classification

Years of Participation	Profession/ Occupation					Total
	Professional	Salaried Class	Business/ Self-employed	Students & others (specify)	Retired	
Less than one year	9	3	5	4	0	21
Two to Three years	66	22	31	5	0	124
Three to Four Years	22	5	14	0	1	42
Five and above Years	2	4	19	1	6	32
Total	99	34	69	10	7	219

The Results of Chi-Square Test for table 4.9

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
64.688	12	0.000	0.005

The sample respondents were grouped profession wise classification in table 8.5. Chi-square test was applied on the information found in table 8.5. Since the calculated value of chi-square (64.688) is higher than the asymptotic significance 2-sided (0.000) at 0.005 level of significant with a degree of freedom. The Null hypothesis is rejected. So, there is a significant relationship between profession wise classification of respondents and years of participation in this commodities trading

TABLE 4.10
Experience of respondents and gender wise classification

Experience	Gender		Total
	Male	Female	
Enough	76	13	89
Not Enough	117	13	130
Total	193	26	219

The Results of Chi-Square Test for table 4.11

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
1.072	1	0.301	0.005

Table 8.6 shows the gender wise classification of sample respondents. Chi-square test was applied on the information found in Table 8.6. Since the calculated value (1.072) is greater than the asymptotic significance (0.301) at 0.005 level of significance with 1 degree of freedom. The Null hypothesis is rejected. So, there is a significant relationship between experiences of the respondents and gender wise classification of sample respondents.

TABLE 4.12
Experience of respondents and age wise classification

Age (in Years)	Experience		Total
	Enough	Not Enough	
Less than 25	4	13	17
26-35	41	82	123
36-50	28	30	58
51-60	10	3	13
Above 60	6	2	8
Total	89	130	219

The Results of Chi-Square Test for table 4.13

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
17.196	4	0.002	0.005

Table 8.7 provides the data regarding age wise grouping of the sample respondents. Chi-square test was applied on the information found in Table 8.7. Since the Calculated value of chi-square (17.196) is greater than the asymptotic significance 2-sided (0.002) at 0.005 level of Significance with 4 degree of freedom. The Null hypothesis is rejected. So, there is a significant relationship between experiences of the respondents and age wise classification of the respondents.

TABLE 4.14
Experience of respondents and educational level wise classification

Educational Level	Experience		Total
	Enough	Not Enough	
Under Graduate	15	32	47
Graduate	32	63	95
Post Graduate	26	21	47
Others	16	14	30
Total	89	130	219

The Results of Chi-Square Test for table 4.15

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
9.590	3	0.022	0.005

Educational qualification wise classification of the respondents is exhibited in Table 8.8. Chi-square test was applied on the information found in Table 8.8. Since the Calculated value of chi-square (9.590) is higher than Asymptotic Significance (2-sided) (0.022) at 0.005 Level of significance with 3 degree of freedom. The Null hypothesis is rejected. So, there is a significant relationship between educational qualification wise classification and experiences of the respondents in this commodities trading.

The Influence of Demographic Factors on Commodity Trading In India

TABLE 4.16
Experience of respondents and monthly income wise classification

Monthly Income	Experience		Total
	Enough	Not Enough	
Rs10,000 to Rs25,000	18	35	53
Rs25,001 to Rs50,000	47	69	116
Rs50,001 to Rs75,000	20	22	42
Rs75,001 to Rs1,00,000	4	4	8
Total	89	130	219

The Results of Chi-Square Test for table 4.17

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
2.119	3	0.548	0.005

Table 8.9 exhibits the income wise grouping of sample respondents. Chi-square test was applied on the information found in Table 8.9. Since the Calculated value of chi-square (2.119) is greater than the Asymptotic Significance (2-sided) (0.548) at 0.005 Level of significance with 3 degree of freedom. The Null hypothesis is rejected. So, there is significant relationship between income wise classification of the respondents and experiences of the respondents in this commodities trading.

TABLE 4.18
Experience of respondents and monthly profession/ occupation wise classification

Profession/ Occupation	Experience		Total
	Enough	Not Enough	
Professional	40	59	99
Salaried Class	10	24	34
Business/ Self-employed	32	37	69
Students & others (specify)	2	8	10
Retired	5	2	7
Total	89	130	219

The Results of Chi-Square Test for table 4.19

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
7.237	4	0.124	0.005

Table 8.10 shows the profession wise classification of sample respondents. Chi-square test was applied on the information found in Table 8.10. Since the Calculated value of chi-square (7.237) is greater than the Asymptotic Significance (2-sided) (0.124) at 0.005 Level of Significance with 4 degree of freedom. The Null hypothesis is rejected. So, there is significant relationship between experiences of the respondents and profession wise classification of sample respondents.

TABLE 4.20
Understand about operations of commodities market and gender wise classification

Gender	Operations of Commodities market		Total
	Understand	Not Understand	
Male	192	1	193
Female	26	0	26
Total	218	1	219

The Results of Chi-Square Test for table 4.21

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
0.135	1	0.713	0.005

Gender wise classification of sample respondents is exhibited in Table 8.11. Chi-square test was applied on the information found in Table 8.11. Since the Calculated value of chi-square (0.135) is lower than the Asymptotic Significance (2-sided) (0.713) at 0.005 Level of significance with 1 degree of freedom. The Null hypothesis is accepted. So, there is no significant relationship between understand about operations of commodities market and gender wise classification of sample respondents.

TABLE 4.22
Understand about operations of commodities market and age wise classification.

Age (in Years)	Operations of Commodities market		Total
	Understand	Not Understand	
Less than 25	17	0	17
26-35	123	0	123
36-50	58	0	58
51-60	12	1	13
Above 60	8	0	8
Total	218	1	219

The Results of Chi-Square Test for table 4.23

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
15.919	4	0.003	0.005

Table 8.12 provides the data regarding age wise grouping of the sample respondents. Chi-square test was applied on the information found in table 8.12. Since the Calculated value of chi- square (15.919) is greater than the Asymptotic Significance (2-sided) (0.003) at 0.005Level of significance with 4 degree of freedom. The Null hypothesis is rejected. So, there is significant relationship between age wise classification of sample respondents and understands about operations of commodities market.

TABLE 4.24
Understand about operations of commodities market and educational level wise classification

Educational Level	Operations of Commodities market		Total
	Understand	Not Understand	
Under Graduate	47	0	47
Graduate	94	1	95
Post Graduate	47	0	47
Others	30	0	30
Total	218	1	219

The Results of Chi-Square Test for table 4.25

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
1.311	3	0.726	0.005

The sample respondents were grouped educational qualification wise classification the information found in Table 8.13. Since the Calculated value of chi-square (1.311) is greater than the Asymptotic Significance (2-sided) (0.726) at 0.005Level of significance with 3 degree of freedom. The Null hypothesis is rejected. So, there is a significant relationship between educational qualification wise classification and understand about operations of commodities market.

Table 4.26
Understand about operations of commodities market and monthly income wise classification

Monthly Income	Operations of Commodities market		Total
	Understand	Not Understand	
Rs10,000 to Rs25,000	52	1	53
Rs25,001 to Rs50,000	116	0	116
Rs50,001 to Rs75,000	42	0	42
Rs75,001 to Rs1,00,000	8	0	8
Total	218	1	219

The Results of Chi-Square Test for table 4.27

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
3.146	3	0.370	0.005

Table 8.14 shows the income wise classification of sample respondents. Chi-square test was applied on the information found in table 8.14. Since the Calculated value of chi-square (3.146) is greater than the Asymptotic Significance (2-sided) (0.370) at 0.005Level of significance with 3 degree of freedom. The Null hypothesis is rejected. So there is significant relationship between understand about operations of commodities market and income wise classification of sample respondents.

The Influence of Demographic Factors on Commodity Trading In India

TABLE 4.28
Understand about operations of commodities market and monthly profession/ occupation wise classification

Profession/ Occupation	Operations of Commodities market		Total
	Understand	Not Understand	
Professional	99	0	99
Salaried Class	34	0	34
Business/ Self-employed	68	1	69
Students & others (specify)	10	0	10
Retired	7	0	7
Total	218	1	219

The Results of Chi-Square Test for table 4.29

Calculated Value	Degree of Freedom	Asymptotic Significance (2-sided)	Level of Significance
2.184	4	0.702	0.005

Table 8.15 exhibits the profession wise grouping of sample respondents. Chi-square test was applied on the information found in table 8.15. Since the Calculate value of chi-square (2.184) is greater than the Asymptotic Significance (2-sided) (0.702) at 0.005Level of significance with 4 degrees of freedom. The Null hypothesis is rejected. So, there is a significant relationship between profession wise classification of sample respondents and understand about operations of commodities market.

V. FINDINGS AND CONCLUSION

This analysis is carried out using chi-square test to illustrate the important relationships among respondents on commodity trading, such as gender, age, and education, experience, satisfaction, and motivation. The results of this analysis are summarized. Like

1. There is a significant relationship among the years of participation in the commodity trading by gender, the qualifications, and the educational advantages wise divisions of sample respondents.

2. There is a significant relationship among the years of participation in this commodities tradingincome wise, professional wise classification of sample respondents.

3. There is a significant relationship among respondents' experience and gender, age, education, distribution of respondents in the sample.

4. There are significant relationships in the experience of the respondents and the monthly and professional benefits wise classification of sample respondents.

5. There is no significant relationship among understanding of market operations, commodity market and gender equality, adult male, monthly salary, monthly salary, non-salary, unethical classification of the sample of respondents.

6. There is an important relationship among satisfaction with return rates and gender, level of wisdom, level of employment, monthly salary, profession wise classification of respondents.

REFERENCE

1. Jena, Pratap Kumar and PhannidraGoyari. "Real Relationship Between Commodities, Stocks and Credit Cards in India: DCC Model Analysis". IUP Journal of Applied Finance 22, no. 1 (2016): 37.
2. Capil, Sheba and KanvalNyanKapil. "Merchandise Trade Advisor (ctas) for the Indian Commodity Market." International Journal of the Five (2010): 124-137.
3. Ftiti, Z., Kablan, S. &Guesmi, K. (2016). What can we learn about commodities and credit cycles? Evidence from African exporting countries. Energy Economics, 60, 313-324.
4. Han, L., Li, Z., & Yin, L. (2017). Impact of investor attention on future commodity markets. Newspapers on futures market.
5. Bring Bush (2017). Investor protection and information is an important pillar of agenda and post-crisis rule control - the way forward. Sector and economic outlook, 56 (1), 29-60.
6. Erb, c. B, and Harvey, CIM (2016). Misleading confusion about future investment in raw materials. Data from financial analyst 72 (4), 26-35.
7. Monga, O.P.,Dawra, S., Monga, A. & Bansal, A.A.K. (2016). Investor Perspectives on Gold Investing: Some Reflections. International Journal of Engineering Engineering Business and Enterprise (IJEBEA), 17 (1), 05-09
8. Periyasamy, S. (2016). Impact of investor information programs on potential investors on the Stock Exchange of India. International Journal of Research, Information, and Governance Research 6 (2), 21-23. 9.
9. Chen, Y. & Chang, Y. K. (2015). Investor structure and information efficiency of future commodity prices. Review of International Monetary Fund, 42, 358-367.
10. Mellios, C., Six, P. & Lai, A.N. (2016). Dynamic expectations and curbs of future commodity markets with stochastic comfort income. European Data on Operational Data 250 (2): 493-504.
11. Iqbal, S., Hussain, N., Latif, M & Aslam, S. (2013). Types of Investors and Irregularities in Financial Markets: Comparisons of individual and foreign investors, and their role in decision-making in investment. Journal of Scientific Research 17 (11), 1591-1596