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INFORMATION ASYMMETRY AND MARKET FAILURE

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Abstract

Agriculture is the main occupation of 80% of India's rural population. Information Asymmetry is one of the crucial factors which are one of the causes of market failure of agricultural production. This study shows that the most significant cause of price fluctuations in crop procurement and its information asymmetry is in the form of a substantial gap in awareness of MSP among farmers all over India. The MSP policy in India is indifferent regarding information and the price of crops. This is the actual problem from which every farmer in India suffers. The majority of farmers in India have information asymmetry regarding MSP, leading to problems with what to produce, when to produce, and how much to produce. That is why the crops' marketable surplus [production – consumption] is very low. Information asymmetries among the buyers or sellers create imperfections in the crop market so they do not get the actual benefit of the Minimum Support Price (MSP), leading to price fluctuations and market failure. Therefore, information failure is one of the major causes of market failure. The government sets minimum support based on ground level, so it is very important to aware farmers about it to make investments in their farms and encourage or inspire them to be friendly with the advanced machinery and technologies to shoot up their farm productivity, which also leads to an increase in a farmer's net income.

Key words: Information asymmetric; Minimum Support Price (MSP); Marketable surplus; Price procurement; Price fluctuation; Market failure.

1. INTRODUCTION

The prices of agricultural crops in India are inherently unstable. This is due to various reasons like- lack of market integration, deficiency in supply, dependency on monsoon, lack of effective marketing, communication gap, ineffective transportation system, information asymmetry, etc. Above all, Information Asymmetry is one of the crucial factors which are one of the causes of market failure of agricultural production.

These are the consequences for fluctuations in the price of the crops. Asymmetric information means that one party has information but the other lacks or it is a condition under which some variables are known like- Prices, Cost of Production, Government Intervention, and the others are unknown like-Mis-information, Uncertainty of adverse selection, Unforeseen circumstances, Artificial Scarcity & Political Influence, etc. These known and unknown variables have a peripheral impact on the market.

The positive impact is the surety of the fixation of price, while the negative impact is the result of unknown variables leading to a reduction in marketable surplus. The farmers of Punjab, Haryana, Himachal Pradesh, and Western U.P. get more profit by selling their products in comparison to farmers of the rest of India due to better information about crop prices. It has been observed that in India the prices of crops are fixed by the government, adversely affecting the demand & supply of agricultural prices due to information asymmetry. Agriculture plays a very important role in the state economy and its contribution to state GDP is 21%. Agriculture is the main occupation of 80% of India's rural population. This study has explained that the most significant cause of price fluctuations is information asymmetry in farmers. In India, though the government fixed the minimum support price for crops, this information is not effectively and timely transmitted to the farmers so that they can take timely actions to mitigate the problem.

2. Agriculture and economy:

The Indian economy is based on agriculture and has been characterized by dependence on nature, low investment, low productivity, mono-cropping with paddy as the dominant crop, inadequate irrigation facilities, and small and marginal holdings. (www.Jharkhand.gov.in). India's production of food grains has been increasing every year and India is among the top producers of several crops, such as wheat, rice, pulses, sugarcane, and cotton. It is the highest producer of milk and the second highest producer of fruits and vegetables.

Tanvi Deshpande (2017) commented that in 2013, India contributed 25% to the world's pulses production, the highest for any country, 22% to rice production, and 13% to wheat production. It also accounted for about 25% of the total quantity of cotton produced, besides being the second-highest exporter of cotton for the past several years.

Stigler (Noble laureate), (1982) has stated 'information is a valuable resource: Knowledge is power. He further stated that 'the accuracy of knowledge had a decisive influence on the behavior of markets and determined how much information people would require with special attention to the prices at which they would buy or sell to get the maximum benefit from transactions. The information gap creates chaos in the economy. Thus, it is really essential to provide information to every stakeholder of the economy.'

3. Minimum Support Price (MSP)

The minimum support price is the rate at which the government buys grains from the farmers to procure crops and 'support' the prices and secure food security. The concept was first begun in 1966 with the green revolution; there is no legal law on it. The Commission for Agricultural Costs and Prices (CACP) set up in 1965 is an expert body that recommends the Minimum support price (MSP) of the notified Kharif and Rabi crops to the Cabinet Committee on Economic Affairs (CCEA). It is a statutory panel under the Ministry of Agriculture & Farmers Welfare.

The objective of the commission is to motivate cultivators and farmers to adopt the latest technology in order to optimize the use of resources and increase productivity. Before submitting a price policy report for any crop, CACP also analyses demand and supply and the implications of MSP on consumers.

4. Benefits of MSP

It ensures that the country's agricultural output responds to the changing needs of its consumer's government hiked the MSP of mustard to expand the sowing of mustard. Higher farm profits will encourage farmers to spend more on inputs, technology etc. MSP benefits farmers from the unexpected price fluctuations occurred by the international price variations.

5. Determinants of MSP and Fixation Method of MSP

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6. Determinants of MSP and Fixation Method of MSP

Governments' important factors determining the MSP are demand & supply conditions for the crop, cost of production of the crop, market price trends, parity of inter-crop price, and terms of trade between agriculture and non-agricultural governments that allow for a minimum margin over the cost of production (50% currently). It also considers the likely impact of MSP on consumers of a particular product. The CACP (commission for agriculture costs and prices) considers all three-factor costs in the determination of MSP. The CACP considers both 'A2 + FL' and C2= to account for the rentals and interest forgone on owned land and fixed capital assets costs respectively, on top of A2 + FL costs while recommending MSP. There are costs that cover all paid-out expenses incurred by farmers on seeds, chemicals, fertilizers, fuel, irrigation, and hired labor, among others (A2). A2+FL= covers actual paid-out costs + imputed value of unpaid family labor. Thus, MSP is the outcome of A2, FL & C2. (Sources: https://cacp.dacnet.nic.in).

The National Commission for Farmers, constituted in 2004 under the chairmanship of agricultural scientist MS Swaminathan, in its report recommended that farmers should be given a minimum support price (MSP) under the C2 +50 percent formulas, i.e., the total cost of the crop (C2) and the profit thereon is 50 percent.

7. Information asymmetry

Asymmetric information, also known as "information failure" i.e., lack of uniformity in information regarding a). Perfect information regarding the Minimum Support Price of crops for buyers and sellers b). Information regarding market control Information regarding trade restrictions, d). Information regarding participation in decision-making, e). Communication gap, f). Lack of awareness among farmers about MSP, g). Information

regarding access to agricultural credit, h). Information regarding access to the agriculture market (mandi) etc. is the economic condition under which one party has more information than the other party they are negotiating with. One party's access to more relevant and up-to-date information can result in imbalances and even exploitation.

8. Components of Information Asymmetry

These are the components of Information Asymmetry which affect market failure are perfect information regarding the Minimum Support Price of crops for buyers and sellers (x1), information on what to produce & how much to produce, so there is an inefficient allocation of resources, information regarding market control, increasing cost of production, information regarding trade restrictions, information regarding participation in decision making, communication gap, Lack of awareness among farmers about MSP, information regarding access to agricultural credit, information regarding access to agriculture market (mandi), etc.

According to the report from (OECD-ICAIR) from 2000 to 2017, farmers lost 45 lakh crores just because of the non-pricing of products. The Shanta Kumar Committee (2015) reports that only 6 percent of the total number of farmers in the country benefitted or MSP could be received. This means that 94% of the farmers are not getting the benefit of MSP due to information asymmetry.

NITI Aayog on the MSP (2016) revealed that only 10 percent of the farmers had the right information about the MSP before the sowing season. Aayog also stated that it is the information at the right time that will reveal the marketable surplus among the farmers. So, the question arises. What causes the asymmetry of information among the farmers regarding the support prices? How would they be given fair prices equally? The answer lies in Information Asymmetries that need a larger redressal mechanism. Therefore, the study has explored whether these information asymmetries are a cause of market failure.

And as per the aforesaid problems, this work is about how information asymmetry (x) regarding support prices leads to the situation of market failure. It is based on the presumption that market failure (Y) is due to market asymmetry (X) i.e., $\{Y=f(X)\}$. Market failures require different sets of interventions as there is no one solution that fits all scenarios of Indian Agriculture.

Das (2020) says "Minimum Support Price (MSP) is a form of market intervention by the Government of India to ensure agricultural producers against any sharp fall in farm prices."According to Aditya (2017) "The minimum support prices are announced by the Government of India at the beginning of the sowing season for certain crops based on the recommendations of the Commission for Agricultural Costs and Prices (CACP)." While Chand (2008) explains that "Minimum Support Price is price fixed by Government of India to protect the producer - farmers - against excessive fall in price during bumper production years." According to Deshpande (2008) "The minimum support prices are a guaranteed price for their (farmers) produce from the Government. In case the market price for the commodity falls below the announced minimum price due to bumper production and a glut in the market,

government agencies purchase the entire quantity offered by the farmers at the announced minimum price." Parikh & Singh (2007) argues that "Another objective of the Minimum Support Price is to mitigate the problem of hunger through the procurement of Food-grains and further sell them at an affordable price via Public Distribution System"

The MSP policy of India is indifferent regarding information and the price of the crops. This is the actual problem by which every farmer of India suffers. For that majority of farmers in India have information asymmetry regarding what to produce, where to produce, when to produce etc. That is why the Marketable surplus (Production – Consumption) of the production of crops is very low due to fear of loss, no proper warehouse facilities, information asymmetry etc. Negi (2018), claimed that around 68% of the farmers, market their produce at the farm gate through village traders. So, the small farmers also do not get benefits from the support prices.

Information Asymmetry affects prices by getting adverse selection [Wilson (2008)][9], moral hazard, and monopolies of knowledge Ledyard, (2008). Whereby the market failure is a situation in agriculture in which there is an inefficient allocation of crops in the free market.
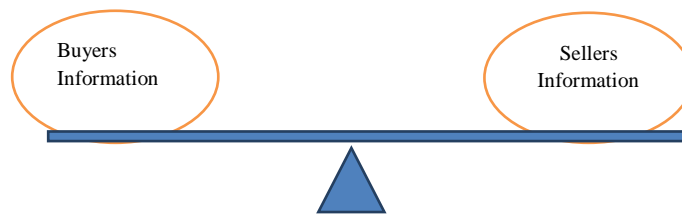
Fig 1- Balance of Power with Perfect Information

Thus, if there are any imbalances of information, then the agriculture market is affected adversely & price fluctuates.

Economic survey (2015-16) points out, "while India easily grows over 70 crops, but only 23 crops come under MSP. That covers about 85% of the crop area". Ashok Gulati (Former chairman of CACP) also points out another interesting fact that even for paddy and

A report by NITI Aayog to measure the efficacy of Minimum Support Prices, found that a low proportion of farmers (10%) was aware of MSPs before the sowing season. 62% of the farmers were informed of MSPs after sowing their crops. The pricing policy of MSPs would be effective only if farmers are aware of it at the time of deciding what crops to grow. The NITI Aayog recommended that the awareness level of farmers regarding MSPs must be increased and the mediums of dissemination of the information asymmetry must be strengthened so that market failure in the form of high price fluctuation may not occur.

(NSSO), 70th round data revealed that all about 20.04 to 23.72 percent of farmers' of rural agricultural households in India are aware of the Minimum support prices. In Jharkhand, only 4.9 of 6% of farmers are aware of Rabi crops, and 13.25% know about Kharif crops.

Union Budget (2020-21) has emphasized development in rural areas and the agriculture sector. This can be take place by promotion of agricultural diversification and the

extension of an agriculture infrastructure fund to APMCs, and integration of additional 1,000 APMC mandis with the (e-NAM) are expected to enhance market efficiency in the agriculture sector, thereby benefitting farmers through better access and higher transparency in mandis in years to come.

9. OBJECTIVES OF THE STUDY

1. To study the awareness of farmers regarding Minimum support price.
2. To study the impact of Information asymmetry among farmers about Minimum support price on market fluctuations of kharif and rabi crops.
3. To study the reasons for demand & supply gap of MSP crops and price fluctuation.
4. To study the impact of access to agriculture-credit delivery system on price fluctuations.
5. To study the impact of access to agriculture-market (mandi) on price fluctuation due to low share of farmers price realisation.

10. HYPOTHESIS

a) There is no significant relationship between information asymmetry on Minimum Supporting Prices of Kharif crops & market fluctuation.
b) There is no significant relationship between information asymmetry on Minimum Supporting Prices of Rabi crops & market fluctuation.

11. RESEARCH QUESTIONS

a) What is the impact of the Minimum Supporting Price on Farmer's decision-making?
b) What is the impact of Minimum Supporting Price on market failure?
c) What is the awareness of Minimum Supporting Price between buyer & seller of kharif and rabi crops?
d) What is the relationship between symmetry in information on agriculture credit between farmers & agencies supplying credit? (demand & supply of credit).
e) What is the relationship between symmetry in supply & demand of crops in agriculture market?
f) What is the relationship between demand and supply gap of MSP crops and Price fluctuations?

12. METHOD OF RESEARCH

The method of the research in this section deals with the establishment of statistical derivation inferences, tabulation, and categories. All required data has been collected through secondary data sources. According to the need of this Study Regression and Multiple Regression test has been performed for examination of Correlation and predictive ability of the dependent variables used in this study.

For the hypothesis testing results of regression test has been used. The study is confined to the 14 Kharif and 6 Rabi crops covered under the Minimum support prices operations of Jharkhand and all results has been depended upon time series data of selected crops from 2010-11to 2020-21.

A) Reference Period

Depending upon the availability of data and the reference period for this study was of 10 years i.e., (2011–2021).

B) Techniques of Data Collection

The study has been completely based on **Secondary data** that has been collected from different governmental departments like, National Sample Survey Organisation(NSSO), National Institution for Transforming India (NITI) Aayog Report, Census data, Internet searches, Libraries, Reports in official gadgets, Journals, Research papers, Magazines, Books, Case studies, Handbook of statistics of Indian Economy, Commission for Agricultural Cost and Prices(CACP), Farmers Portal of Ministry of Agriculture and Farmers Welfare, RBI Reports, Agriculture and Food Products Export Development Authority (APEDA),Situation Assessment Survey of Agricultural Households in India, Comptroller and Auditor General (CAG) report, Economic and Political Weekly (EPW), Website of Directorate of Agriculture of Jharkhand, National Bank for Agriculture and Rural Development (NABARD), Indian Council of Agriculture Research (ICAR), Ministry of Statistics and Programme Implementation (MoSPI) and other Governmental and non-governmental agencies have been considered. This secondary data has been measured the information asymmetry showing price fluctuations of Rabi and Kharif crops respecting to the demand and supply of mandated crops.

C) The Variables

In this study the independent variables are Awareness of MSP between buyers & sellers of crop (X1 i.e., x_1 = access to food processing centres, x_2 = procurement at MSPs, x_3 = means to access to information, x_4 = access to storage facility), Symmetry in information on demand & supply of agricultural -Credit (X2) and Symmetry in demand & supply of agriculture-Market (Mandi) (X3). And the dependent variables will be Price Fluctuation (Y1) and resulting Market Failure (Y) or (Y1 is proxy of Y). And as per the aforesaid problems, the research work is about how information asymmetry (X) and their respective determining independent variables (as X1, X2, X3…………) regarding support prices leads to the situation of Market Failure (Y) i.e., {Y=f (X)}.

13. DATA PROCESSING AND ANALYSIS

The collected data has been classified and tabulated by using different tables, charts, graphs. Overall, the Secondary data has been used to analyse all the objectives mentioned above using time series data for the last 10 years.

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Prices fixed by the government year wise from 2010-11 to 2021-22 of Minimum Support Prices- for Kharif Crops (2010-11 to 2021-22 in Rs. per Quintal) has been shown in Table 1and Minimum Support Prices- for Rabi Crops (2010-11 to 2021-22) in Rs. per Quintal has been shown in Table 2 given below. The promotion of agriculture sector through the extension of an agriculture infrastructure fund to APMCs, and integration of additional 1,000 APMC Mandis with the (e-NAM) are shown in Table-1.

Table-1

Minimum Support Prices- for Kharif Crops (2010-11 to 2021-22 in Rs. per Quintal)

S.N.	Commodity	Variety	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	Paddy	Common	1000	1080	1250	1310	1360	1410
		Grade 'A'	1030	1110	1280	1345	1400	1450
2	Jowar	Hybrid	880	980	1500	1500	1530	1570
		Maldandi	900	1000	1520	1520	1550	1590
3	Bajra		880	980	1175	1250	1250	
4	Maize		880	980	1175	1310	1310	1325
5	Ragi		965	1050	1500	1500	1550	1650
6	Tur (Arhar)		3000	3200	3850	4300	4350	4625^
7	Moong		3170	3500	4400	4500	4600	4850^
8	Urad		2900	3300	4300	4300	4350	4625^
9	Cotton	Medium Staple	2500	2800	3600	3700	3750	3800
		Long-staple	3000	3300	3900	4000	4050	4100
10	Groundnut	-	2300	2700	3700	4000	4000	4030
11	Sunflower Seed	-	2350	2800	3700	3700	3750	3800

12	Soybean	Black	1400	1650	2200	2500	2500	-
		Yellow$$	1440	1690	2240	2560	2560	2600
13	Sesamum	-	2900	3400	4200	4500	4600	4700
14	Niger seed	-	2450	2900	3500	3500	3600	3650

Sources: Ministry of Agriculture and Farmers Welfare, Go. I and CACP.https://pib.gov.in

2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1470	1550	1750	1815	1868	1940
1510	1590	1770	1835	1888	1960
1625	1700	2430	2550	2620	2738
1650	1725	2450	2570	2640	2758
1330	1425	1950	2000	2150	2250
1365	1425	1700	1760	1850	1870
1725	1900	2897	3150	3295	3377
5050^^	5450^	5675	5800	6000	6300
5225^^	5575^	6975	7050	7196	7275
5000^^	5400^	5600	5700	6000	6300
3860	4020	5150	5255	5515	5726
4160	4320	5450	5550	5825	6025
4220*	4450^	4890	5090	5275	5550
3950*	4100*	5388	5650	5885	6015
-	-	-	-	-	-
2775*	3050^	3399	3710	3880	3950
5000^	5300*	6249	6485	6855	7307
3825*	4050*	5877	5940	6695	6930

Sources: Ministry of Agriculture and Farmers Welfare, Go. I and CACP.https://pib.gov.in

Table-2

Minimum Support Prices- for Rabi Crops (2010-11 to 2021-22 in Rs. per Quintal)

S.NO.	Commodity	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	Wheat	1120	1285	1350	1400	1450	1525
2	Barley	780	980	980	1100	1150	1225
3	Gram	2100	2800	3000	3100	3175	3500**
4	Masur (Lentil)	2250	2800	2900	2950	3075	3400**
5	Rapeseed & Mustard	1850	2500	3000	3050	3100	3350
6	Safflower	1800	2500	2800	3000	3050	3300
7	Toria	1780	2425	2970	3020	3020	3290

2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1625	1735	1840	1925	1975	2015
1325	1410	1440	1525	1600	1635
4000^	4400!	4620	4875	5100	5230
3950!	4250*	4475	4800	5100	5500
3700*	4000*	4200	4425	4650	5050
3700*	4100	4945	5215	5327	5441
3560	3900	4190	4425	4650	-

Source: Ministry of Agriculture and Farmers Welfare, Go. I and CACP. https://pib.gov.in

** Including Bonus of Rs. 75 per Quintal
^Including Bonus of Rs. 200 per quintal
^^Including Bonus of Rs. 425 per quintal.

*Including Bonus of Rs. 100 per quintal.

$$Minimum of Support Price of Soyabean yellow is also applicable to black variety during 2015-16 and 2016-17

! Including a Bonus of Rs. 150 per quintal.

From the above table, it is clear that price trends for Kharif and Rabi crops from 2010-11 to 2021-22 have been increasing i.e., in Kharif crops (Table 1) like- Jowar there has been a 211.13 percent increase in prices since the last decade, Ragi 249.9, Cotton 129.04, Bajra 155.5 percent whereas in Rabi crops (Table 2) like Barley 109.6, Gram 149.04, Lentils 144.4 and Safflower 202.2 percent. The table also indicates that there is a slight increment in prices of mandated crops due to inflation, cost increment, and market failure (Price fluctuation & loss to farmers). Indian farmers are going to suffer one of their worst losses, proportionate to their investment and consumption, according to all indications.

The market price of different crops in India is not stable (see table 1&2). This is because either farmers are not aware of MSP of crops for upcoming season, or find it uneconomic; or MSP was announced late etc. This result in agriculture produces falling short of market demand or in excess of it. The result is a rise or a glut in price of agricultural produce. If there was proper information on MSP, (which consider the factor like forthcoming demand) the farmers would supply accordingly. Lack of proper warehousing, lack of market-access, lack of agriculture-credit also leads to farmers who produce in excess for upcoming demands.

The study has answered to the question that lack of information of fixed prices for mandated crops (14 Kharif Crops and 6 Rabi Crops) will lead to price fluctuations and market failure. The impact of Information Asymmetry of Minimum Support Price on market failure can be shown by examining the variables like-Lack of awareness among farmers about MSP, Access to agricultural credit, Access to agriculture market (Mandi) etc.

I) Lack of awareness among farmers about MSP:

i) x_1 = access to food processing centres:

In 2011, number of processing companies was 12, 36,000 and number of registered farmers were 4, 16,303. However, in 2011 processing companies are 17, 48,000 and number of registered farmers are 9, 31,629. It shows that no. of registered farmers in food processing companies has increased but its growth rate is very low. It means less no. of registered farmers means less awareness among farmers.

ii) x_2 = procurement at MSPs:-

From the data it is clearly viewed that percentage distribution of agricultural household reporting major sale of crops to local market and very low sale to government agency i.e., in 2016 there is 70.1 percent sale of paddy crop to local market and only 3.1 percent to government agency. However, in 2021 there is 61.8 percent sale of paddy crop to

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local market and 18.4 percent to government agency. This shows that low awareness among farmers regarding government procurement at MSPs.

iii) x_3 = means to access to information:- **Table 3**

STATE	LEVEL OF AWARENESS		FARMERS LITERACY (AGE 7+)		MEANS TO ACCESS TO INFORMATION	
	RABI	KHARIF	MALE	FEMALE	KISAN CHANNEL	NEWS-PAPER
PUNJAB	52.94	48.93	64	48	175	99.5
CHATTISGARH	37.09	47.20	65	29	35	26.4
DELHI	64.29	41.18	75	45	-	-
ODISHA	9.85	36.23	64	22	28	26.2
HARYANA	32.10	27.80	74	31	67	90.2
U. P	22.43	27.59	60	19	57	76.2
BIHAR	22.84	27.49	62	16	44	47.8
WEST BENGAL	19.29	26.23	73	44	40	62.2
TELANGANA	30.82	25.32	58	31	47	58.2
KERALA	19.29	22.09	94	85	64	22.2
RAJASTHAN	20.90	15.06	52	15	26	31.9
ANDHRA PRADESH	14.35	14.60	48	21	45	38.0
KARNATAKA	14.61	13.97	65	34	32	26.9
JHARKHAND	4.96	13.25	60	18	21	3.7
HIMACHAL PRADESH	10.24	13.24	64	22	71	11.4
M.P	30.47	12.19	59	22	47	43.8
GUJARAT	9.97	12.02	73	38	137	41.2

UTTARAKHAND	9.14	9.81	62	26	74	40.9
J&K	6.03	8.21		31	73	39.9
MAHARASHTRA	8.00	8.19	58	46	57	16.7
T. N	15.12	7.71	74	43	77	50.2
ARUNACHAL PRADESH	7.39	6.49	71	48	20	13.0
TRIPURA	21.50	5.99	64	29	7	21.4
MIZORAM	0.30	4.24	65	32	4	9.5
ASSAM	3.88	4.09	85	71	14	5.4
NAGALAND	1.96	3.87	52	22	6	7.0
CHANDIGARH	6.67	3.13	74	54	91	98
MEGHALAYA	12.52	1.33	59	23	11	20.9
MANIPUR	0.14	0.48	73	21	89	18.6
SIKKIM	0.00	0.00	62	40	1	15.9

In 2011, means to access to information about MSP among farmers through kisan channel was 4% and through newspaper was only 0.2%. However, in 2021 access to information about prices through Kisan Channel increased to 22% and through newspaper to 3.2% only. Information has increased comparatively to previous years but in a very slow pace.

iv) x_4 = access to storage facility:-

Out of 24 districts of Jharkhand, farmers access to storage facility is highest in Ranchi and East Singhbhum i.e., in 2011 there is 25.06 and 25.06 percent farmers access and in 2021 it is down to 20.01 and 20.06 percent due to covid-19, but still in better condition comparison to other districts of Jharkhand. However, lowest storage facility is in Pakuri.e., in 2011 there is 3.2 percent farmers access and in 2021 increased to 4.6 percent only.

II) Access to agricultural credit:

However, the efforts to increase the flow of agriculture credit seems to have yielded better results in the recent period as the total institutional credit to agriculture recorded a growth of around 21% during 2011-12 to 2019-20. In terms of total credit to agriculture the

commercial banks recorded a considerable growth (from around 13% to about 21%), while cooperative banks registered a fall (over 14% to over 10%) during the period.

III) Access to agriculture market (Mandi):

In 2011, agriculture households selling crop in market at farmgate was 15.28 %, 55.14% at village level and 32.22% at block level whereas average price received for the crops was less than selling price. However, in 2020, farmers selling 7.1% at farmgate, 42.6% at village level and 12.33% at block level receiving still a lesser price because of having not right information.

With the help of the data published by CACP, Economic Survey, NITI Aayog Report, ICAR, NABARD, NSSO, etc., the values of rank correlation, regression, Trend & multiple regressions has been examined and tested using appropriate statistical tools. And as per the aforesaid problems, the research work is about how information asymmetry (x) regarding support prices leads to the situation of Market Failure (Y) i.e., {Y=f (X)} which was not explored yet. Market Failures requires different sets of intervention as there are no one-solution-fits in all scenario of Indian Agriculture.

13.1 Market Failure

Market failure is a situation when there is a state of disequilibrium which means quantity of goods or services supplied is not equal to the quantity of goods or services demanded. There are situations and circumstances where the market is not Pareto optimal or Pareto efficient.

13.2 Price Fluctuation due to Market Failure

Market failure is also a result from Imperfect or Asymmetric information among the buyers or sellers. This means that the price of demand or supply does not show all the benefits or opportunity costs of a good. For example- Lack of information on the buyer's side means that buyers are willing to pay a higher or lower price for the product because they do not know its actual benefits. On the other hand, asymmetric information on the seller's side means that they are willing to accept a higher or lower price for the product than the actual opportunity cost of producing it. Therefore, Information failure is one of the major causes of Market failure. RBI in its annual report announced that MSPs in 2020-21for both rabi and kharif crops ensured a minimum return of 50% over the cost of production. There has been an overall rise in the range of 2.1 to 12.7 percent in MSPs announced during 2020-21 over the previous year. A report of the Shanta Kumar committee (2015) comments that only 6 percent of the farmers in the country get the minimum guaranteed price. To increase the income of farmers, they need to get a minimum guarantee for their produce, but the quantity is small, the survey shows. Agriculture cooperation stated that Doordarshan, Radio, and Newspapers are useful sources of information from the point of view of Farmers. 40.2% of farmers get information through the above-mentioned mediums, while 30.1% of farmers get information through Agriculture Production Market Committee existing in their communities. Swaminathan Commission Report, reveals that National Commission for Agriculture was

established in 2005 and stated that only 15 % of the farmers seem to be aware of the minimum guaranteed price of agricultural commodities while the rest of the farmers are unaware of the MSPs fixed by the Government, and so that there is a need to make aware to those farmers.

14. Conclusion and Suggestions:

Information asymmetries among the buyers or sellers create imperfections in the crop market so they do not get the actual benefit of Minimum Support Price (MSP), leading to price fluctuations and market failure. This means that the price of demand or supply does not show all the benefits or opportunity costs of a good. Lack of information on the buyer's side means that buyers are willing to pay a higher or lower price for the product because they do not know its actual benefits. On the other hand, asymmetric information on the seller's side means that they are willing to accept a higher or lower price for the product than the actual opportunity cost of producing it. Therefore, information failure is one of the major causes of market failure. The government sets minimum support based on ground level, so it is very important to aware farmers about it to make investments in their farms and encourage or inspire them to be friendly with the advanced machinery and technologies to shoot up their farm productivity, which also leads to an increase in farmer's net income.

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