

Study of Arrival and Price Behavior of Major Cereals in Rewa District in Kymore Plateau and Satpura Hills zone of Madhya Pradesh

DEEPSHIKHA SINGH

*Young Professional - I, ICAR – ATARI Zone -IX, JNKVV Campus Jabalpur (M.P.).
E-mail: dpshikha03158@gmail.com*

Abstract: Indian agriculture is a subsistence occupation since long period of time now in 21 centuries getting commercialized as way of life styles. Indian farmers have come to produce for the market rather than for domestic consumption. The commercial revolution has, therefore, started sweepingness in the agriculture sector of the economy. Price serves as an instrument for measuring the speed at which an economic system works the price prevailing in market is called the market price, which changes with the nature of commodity many times within a day or week or month. Price of farm products decrease sharply with increase in arrivals (supply) just after harvesting of the produce and increases with decreases in arrival during slack period. It is a well-known fact that Indian agriculture is characterized by wide variations in output of major crops which subsequently lead to wider fluctuations in market arrivals. The extent of fluctuations in market arrivals largely contributes to the price variability of major crops in order to devise the appropriate to the price variability of major crops. In present study an attempt has been made to study the arrivals and price behaviour for the arrivals and price behaviour for the period from 2007-08 to 2017-18 in the Karahiya Krishi upaj mandi karahiya of Rewa in Madhya Pradesh. The paddy and wheat crops will be selected for the intent study. As these crops has remarkable position in the said Krishi Upaj Mandi. Arrival of wheat is around fourfold of paddy arrival. In year 2017, wheat arrival found more as compare to other years. From 2007 to 2017 tremendous increment can see in wheat arrival. Relative change found 10.34 in wheat arrival. Paddy arrival was much higher as compare to wheat. Arrival of wheat is found higher in month of June. In June month, wheat arrival found more as compare to other months. Model price of wheat higher found in January on wheat arrival. Arrival and prices in cereals crop in Rewa krishi upaj mandi. Highest and positive correlation found in lentil arrival and price during the study under consideration. Wheat arrival and price also shows positive correlation.

Keywords: Arrivals, Prices, Cereal, market, KUM, time series data, Relative change.

INTRODUCTION

Indian agriculture as a subsistence occupation since long period of time now in 21st century getting commercialized as way of life style. Indian farmers have come to produce for the market rather than for domestic consumption. The commercial revolution has, therefore, started sweepingness in the agriculture sector of the economy. Price serves as an instrument for measuring the speed at which an economic system works. The price prevailing in the market

is called the market price, which changes with the nature of commodity many times within a day or week or month. Price of farm products decrease sharply with increase in arrivals (supply) just after harvesting of the produce and increases with decreases in arrival during slack period. It is a well-known fact that Indian agriculture is characterized by wide variations in output of major crops which subsequently lead to wider fluctuation in market arrivals. The extent of fluctuation in market arrivals largely

contribute to the price variability of major crops. In order to devise the appropriate ways and means for not only reducing the degree of fluctuations. The prices of agriculture product is not only decrease but also increasing the quantity of market arrivals therefore, there is need to have a perfect understanding about the behaviour of prices of different agricultural products and the responsiveness of market arrivals to price movements over a period of time. The empirical knowledge of the relationship between prices and market arrivals of different agricultural products for assessing the degree of responsiveness of market arrivals to price movement is respectively required over a period of time. Krishi Upaj Mandi (Regulated market) has played the important role for marketing of agricultural commodities products, which have to improve the economic status of farmers. The agricultural products are directly and indirectly related with marketing functions. The processes of economics activities are completed with the completion of marketing process. The producer of agricultural commodities product collection has always be thinking over that which farm product to be sold, (1) in how much quantity to be sold? (2) Which time or period to be sold? (3) What price to be sold? (4) Which market is to be sold? The answer of this question can be solved if the producer has well acquaintance with the proper functioning/working of the regulated market.

METHODOLOGY

The study conducted in the area of Krishi upaj mandi karahiya rewa district Madhya Pradesh, as this krishi upaj mandi occupies an important place in the state paddy, wheat, Gram, lentil, soybean, mustard, Flax, black gram, green gram, barley, til and other cereals, pulses and oil seeds are the main product which arrived in the mandi. The secondary data were related to market monthly arrivals and prices were collected from the year 2007-17. The base year of the study were considered as 2007-08 and the current was taken 2016-17 the time series data of area, production and productivity of paddy, wheat, were collected from the krishi upaj mandi board Rewa M.P., Agricultural Statistics office

Rewa M.P. and krishi upaj mandi, karahiya rewa M.P. The collected data were tabulated in the view of the cited objectives and were interpreted by Absolute change. Relative change. Average (mean). Standard deviation, coefficient of variation, Regression analysis was used for establishment of the relationship between the arrival and prices of major farm product of krishi upaj mandi Rewa.

RESULT AND DISCUSSION

Year wise trend of arrivals and prices of selected cereals

The table 1 presenting the wheat and paddy arrival details in Rewa upaj mandi. From the table anyone can see that wheat arrival was much higher as compare to paddy. Arrival of wheat is around fourfold of paddy arrival. In year 2017, wheat arrival found more as compare to other years. From 2007 to 2017 tremendous increment can see in wheat arrival. Relative change found 10.34 in wheat arrival. Model price of wheat has registered around 6 percent growth during the study under investigation. In paddy, highest arrival found in 2014. The improvement of arrival of paddy can identify from growth rate. In term of prices, 15 percent improvement can see in paddy model prices.

Month wise trend of arrivals and prices of selected cereals

The table 1.1 presenting the wheat and paddy arrival details in Rewa upaj mandi. From the table anyone can see that monthwise picture is different compare to year wise arrival trend. Paddy arrival was much higher as compare to wheat. Arrival of wheat is found higher in month of June. In June month, wheat arrival found more as compare to other months. Model price of wheat higher found in January on wheat arrival. Less variability found in model price 3.40. Higher variability found in wheat arrival 71.78. Model price of paddy registered 7.68 percent growth during the study under investigation. Figure 5.7 and 5.8, shows the month wise trend of arrival and price of wheat and paddy.

Table 1.1: Year wise trend of arrival & price in wheat and paddy

Year	Arrival		Annual Price of Wheat			Arrival		Annual Price of Paddy		
	Total	Monthly Avenge	Model	Min	Max	Total	Monthly Avenge	Model	Min	Max
2007	57391.2	4782.6	1150	1450	2000	13800	1150	1450	2000	1670
2008	88812	7401	1280	1450	1600	15360	1280	1450	1600	1900
2009	84216	7018	1100	1530	1700	13200	1100	1530	1700	1980
2010	94167.6	7847.3	1270	1550	1900	15240	1270	1550	1900	1890
2011	104676	8723	970	1450	1500	12000	1000	1450	1500	1860
2012	108900	9075	1250	1530	1600	16800	1400	1530	1600	1960
2013	117672	9806	1400	1530	1680	16800	1400	1530	1680	1930
2014	342720	28560	1450	1600	1600	17400	1450	1600	1600	2150
2015	419211.6	34934.3	1460	1570	1600	17520	1460	1570	1600	2170
2016	445192.8	37099.4	1125	1600	1970	13500	1125	1600	1970	2050
2017	593714.4	49476.2	1050	1600	1900	12600	1050	1600	1900	1990
Average	223333.9	18611.16	1227.73	1532.73	1731.82	14929.09	1244.09	1532.73	1731.82	1959.09
SD	189482.0	15790.17	164.00	59.85	176.68	2010.28	167.52	59.85	176.68	138.96
CV(%)	84.84	84.84	13.36	3.90	10.20	13.47	13.47	3.90	10.20	7.09
Trend Value (b)	51111		6.19			78.54		15		
Absolute change	536323.2	44693.6	-100	150	-100	-1200	-100	150	-100	320
Relative change	10.345	10.345	0.913	1.103	0.950	0.913	0.913	1.103	0.950	1.192

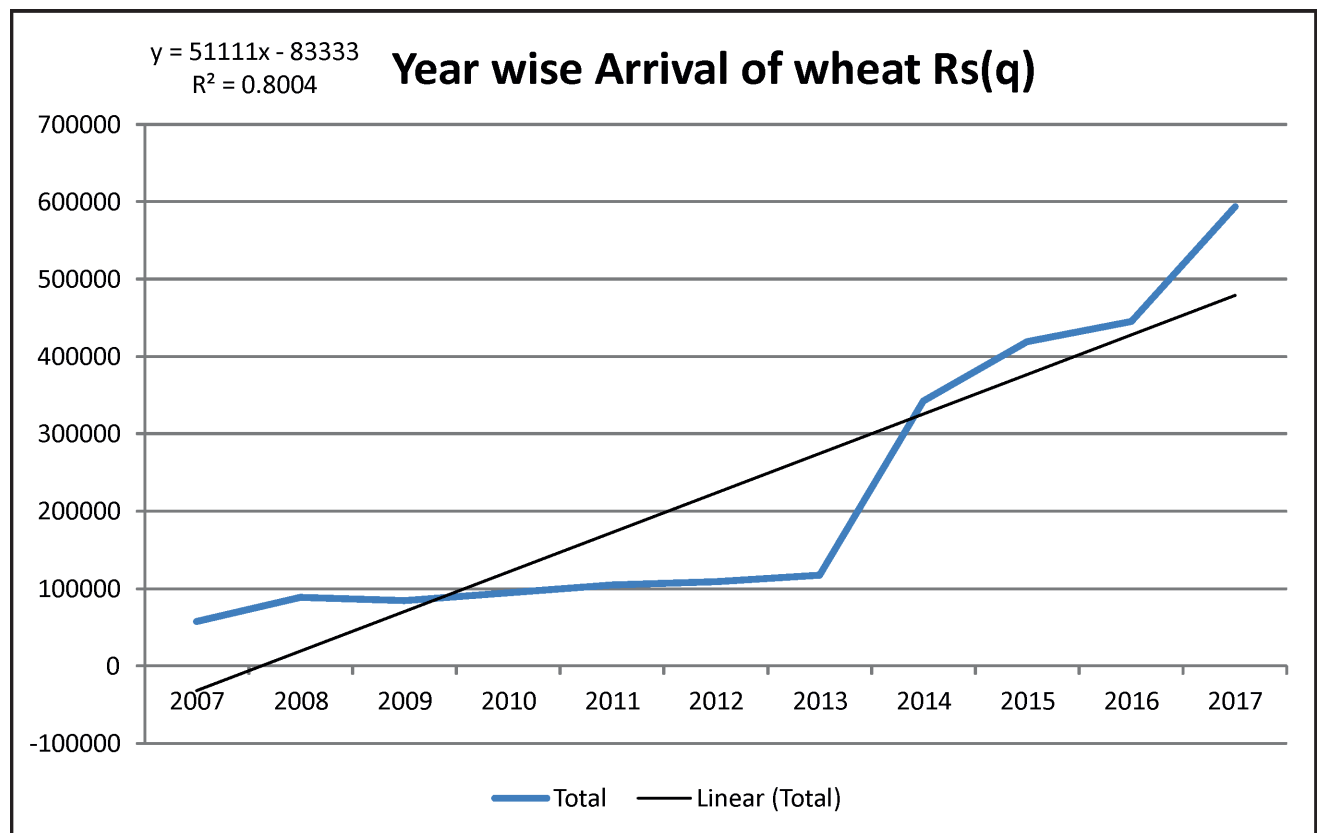


Figure 1.1: Year-wise trend of arrivals and price of Wheat

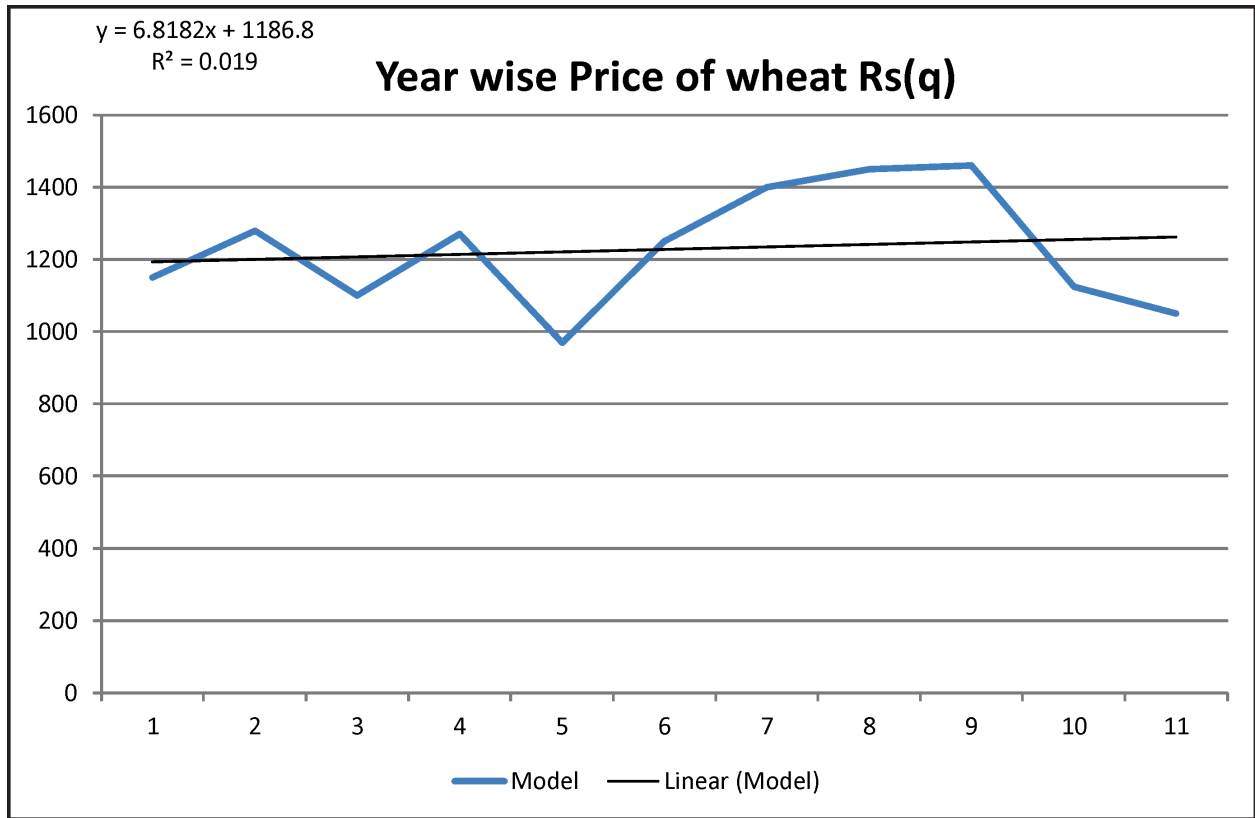
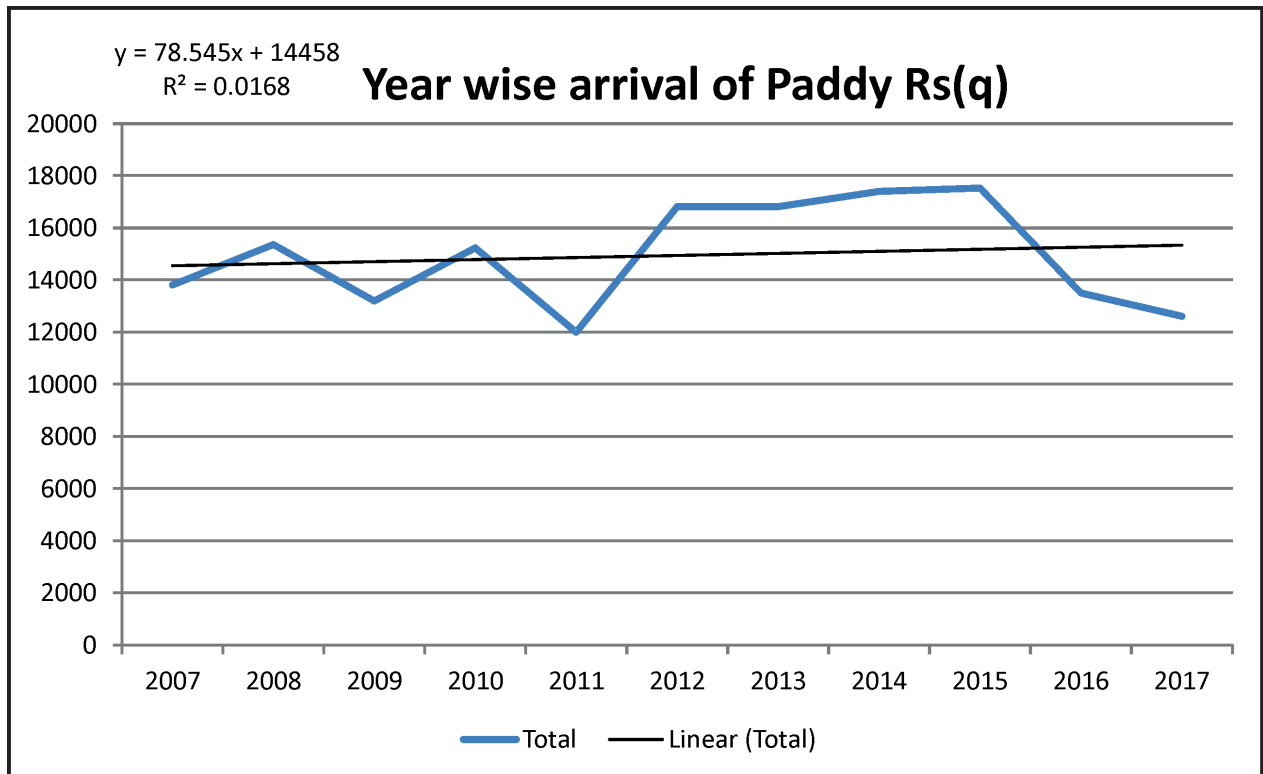


Figure 1.1: Year-wise trend of arrivals and price of Paddy



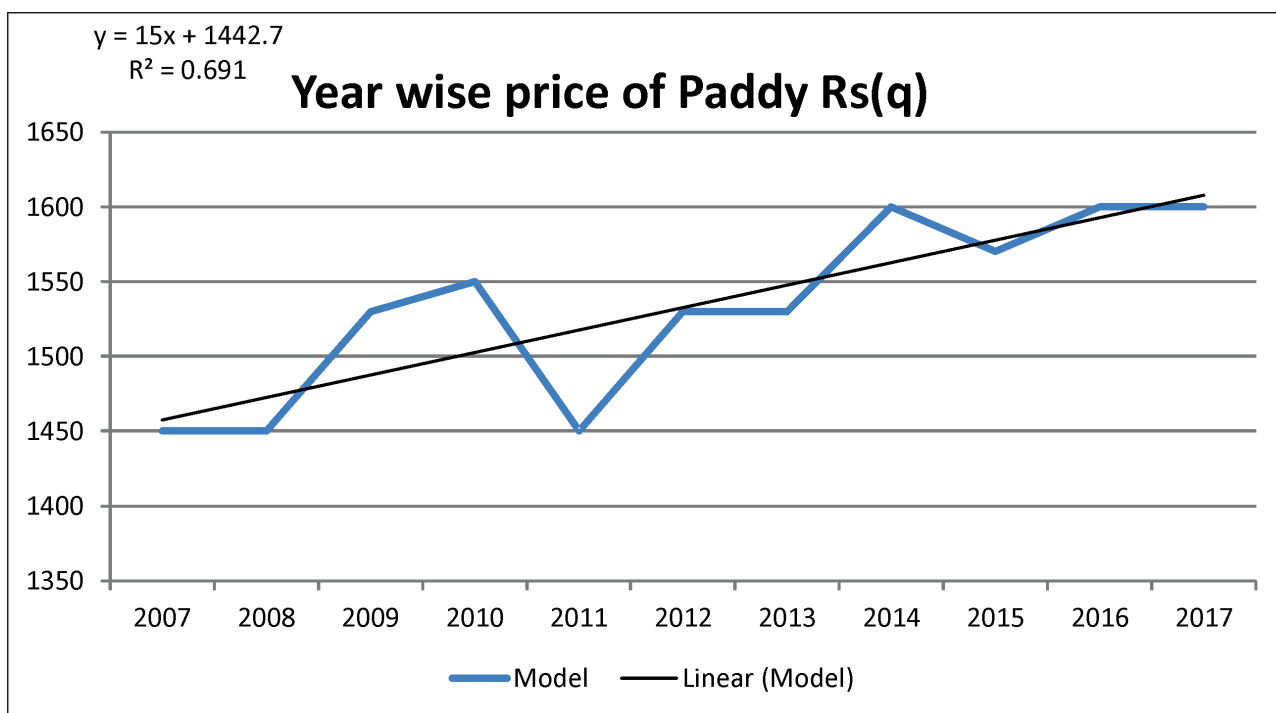


Table 1.2: Month wise trend of arrival & price in wheat and paddy

Months	Arrival Rs(q)	Modal prices (Rs. /q)	Monthly	Arrival Rs(q)	Modal prices (Rs. /q)	Monthly
	<i>Wheat</i>			<i>Paddy</i>		
February	22103.3	888	108	57680	1617	98
March	30717.6	845	103	133122.7	1637	99
April	50136.2	783	95	190336.9	1582	96
Ma y	55795.4		95	250635.5	1610	97
June	38204.3	776	95	97912.6	1577	95
July	18436.7	770	94	48795	1652	100
August	9695.7	801	97	48578.2	1706	103
September	13155.4	792	96	57988	1739	105
October	14095.3	860	105	69204	1741	105
November	5651.7	826	100	65020	1706	103
December	11148	853	104	65033	1653	100
January	10247.4	888	108	53686.1	1622	98
Total	279387	9082	1200	1137992	19842	1199
Average	23282.25	825.64	100.00	94832.67	1653.50	99.92
SD	16734.81	43.82	5.34	64663.23	57.16	3.40
CV(%)	71.88	5.31	5.34	68.19	3.46	3.40
Trend Value (b)	3182	2961		8954	7.909	

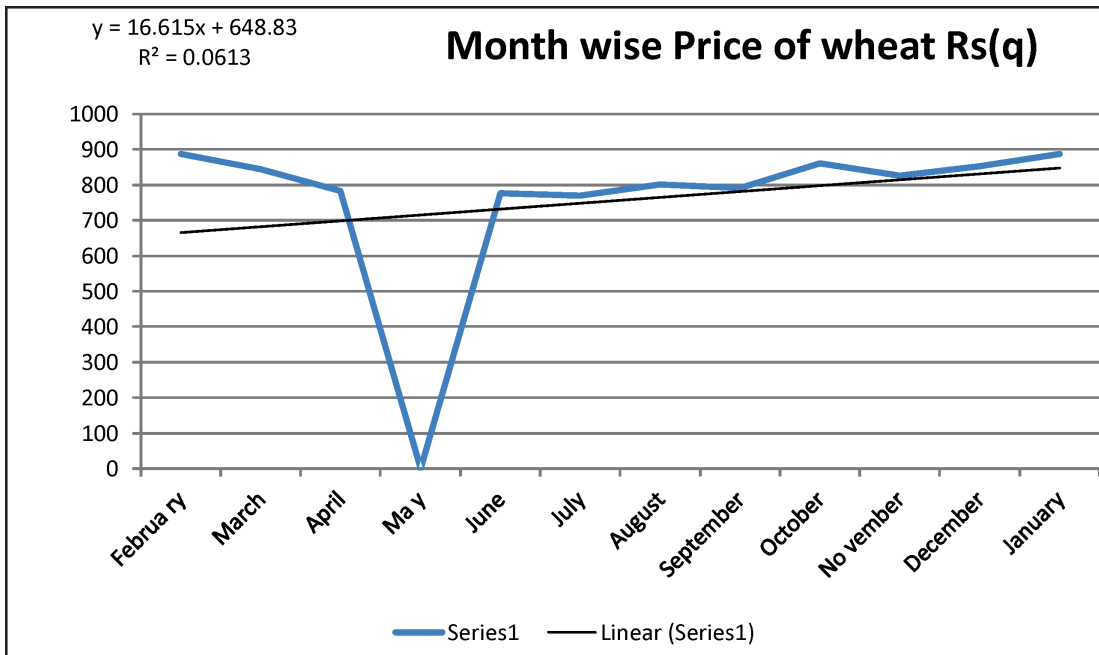
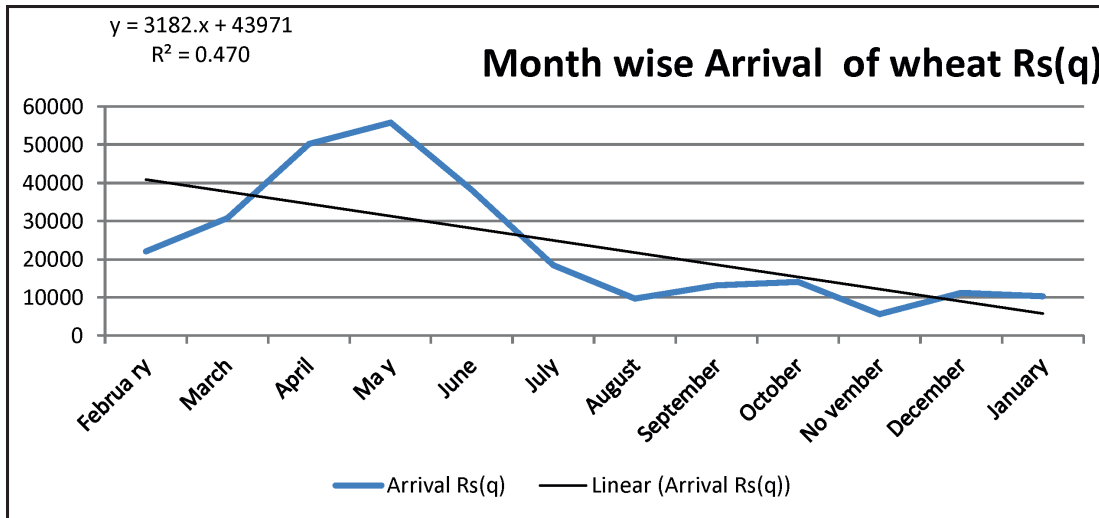
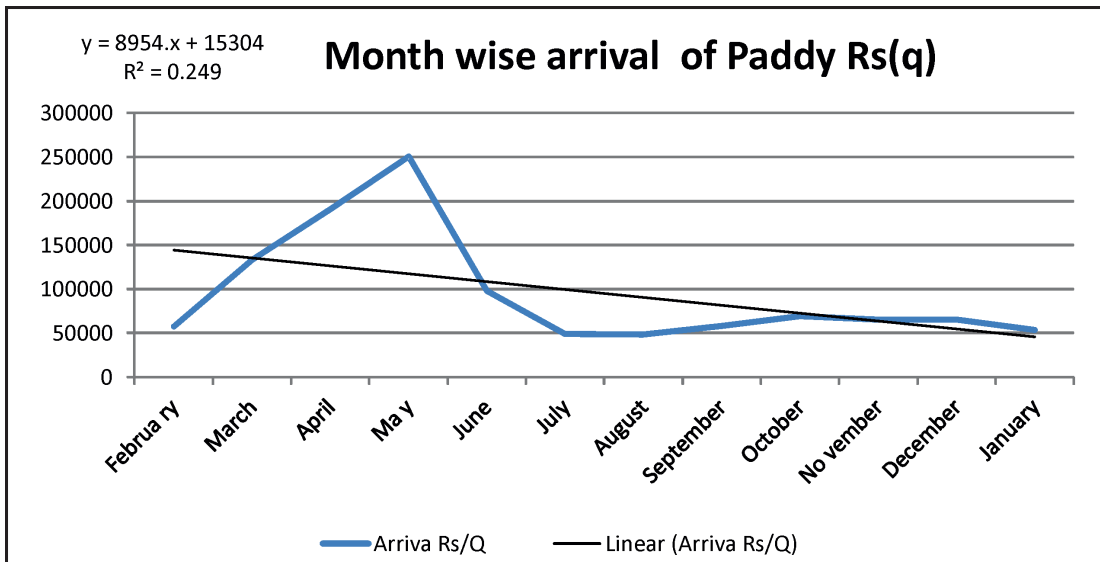


Figure 1.2: Month-wise trend of arrivals and price of Wheat



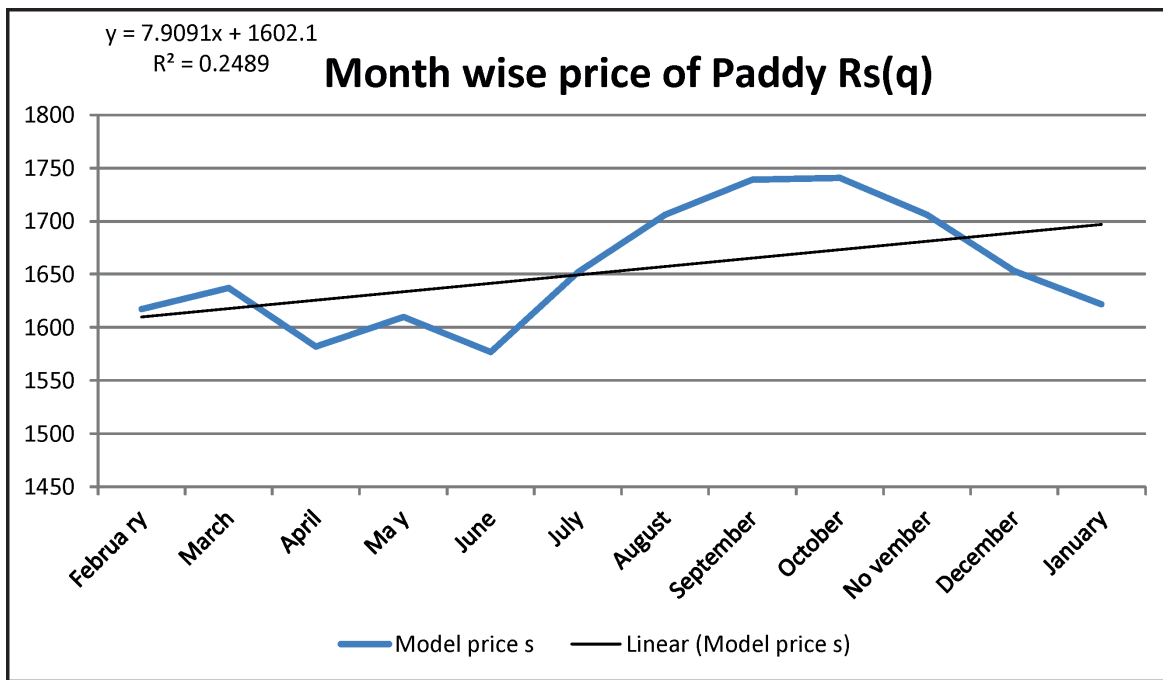


Figure 1.2: Month-wise trend of arrivals and price of Paddy

Table 1.3: Relationship between year wise arrival and prices in cereal, crops

Year	Wheat		Paddy	
	Arrival	Price	Arrival	Price
2007	4782.6	1150	1150	1450
2008	7401	1280	1280	1450
2009	7018	1100	1100	1530
2010	7847.3	1270	1270	1550
2011	8723	970	1000	1450
2012	9075	1250	1400	1530
2013	9806	1400	1400	1530
2014	28560	1450	1450	1600
2015	34934.3	1460	1460	1570
2016	37099.4	1125	1125	1600
2017	49476.2	1050	1050	1600
Correlation (r)	0.037		0.258	

To measure the degree of linear association we shall use Karl Pearson’s correlation coefficients. Correlation coefficient measures the degree of closeness of the linear association between any two variables. from table 1.3 is showing the result between arrival and prices in cereal crops crop in Rewa krishi upaj mandi. Highest and positive correlation found in both crops Paddy and Wheat arrival and price during the study under consideration. arrival

and price also shows positive correlation. under investigation.

Table 1.4: Relationship between month wise arrival and prices in cereals crops (Wheat, Paddy)

Month	Wheat		Paddy	
	Arrival	Price	Arrival	Price
February	22103	888	57680	1617
March	30718	845	133123	1637
April	50136	783	190337	1582
Ma y	55795	744	250636	1610
June	38204	776	97913	1577
July	18437	770	48795	1652
August	9695.7	801	48578	1706
September	13155	792	57988	1739
October	14095	860	69204	1741
November	5651.7	826	65020	1706
December	11148	853	65033	1653
January	10247	888	53686	1622
Correlation (r)	-0.565		-0.520	

From the above table 1.4, it is clearly visible, that except the arrival is having positive correlation during the study investigation. Wheat and Paddy was having less strong association between price and arrival.

CONCLUSION

The following conclusions are made through the findings of the study. Arrival of wheat is around

fourfold of paddy arrival. In year 2017, wheat arrival found more as compare to other years. From 2007 to 2017 tremendous increment can see in wheat arrival. Relative change found 10.34 in wheat arrival. Paddy arrival was much higher as compare to wheat. Arrival of wheat is found higher in month of June. In June month, wheat arrival found more as compare to other months. Model price of wheat higher found in January on wheat arrival. Arrival and prices in cereals crop in Rewa krishi upaj mandi. Highest and positive correlation found in lentil arrival and price during the study under consideration. Wheat arrival and price also shows positive correlation.

REFERENCES

- Salunkhe, A. A. (2010). Price behaviour and price forecasting of selected crop of Akola District. Unpub. M.Sc. (Agri.) Thesis submitted to Dr. P.D.K.V, Akola.
- Sharanappa, B. Siddappa, B. (2014). An analysis of paddy marketing through APMC's in Raichur Dist. *Review of Research Journal*; 3(4): 564.
- Thakare, H.P., Daundkar, K.S., Rathod, Savita R. and Bondar, Uttam S. (2017). Changes and trends in arrival and prices of agricultural commodities in APMC Kolhapur market. *Internat. Res. J. Agric. Eco. & Stat.*, 8 (1): 26-30
- Areef M, Radha Y, Rajeswari S. Price volatility and seasonal analysis of tomato, Onion and Potato. *Indian Journal of Economics and Development*. 2020;16(4): 625-630.
- Bhatia JK, Bishnoi DK, Dhingra A, Nimbrayan PK. Arrival and price behaviour of major mustard markets in Haryana. *Indian Journal of Extension Education*. 2022; 58(2):177-180.
- Gadakh AS, Hile RB, Phadte PV, Gophane GR. Seasonality and volatility in arrivals and prices of maize in major market of Western Maharashtra. *The Pharma Innovation*. 2023;12(1):2997-2999.
- George GP, Kuruvila A. Price behaviour of coconut and coconut products in markets of Kerala: An economic analysis. *Indian Journal of Economics and Development*. 2023;19(1):45-57.
- Kamble AT, Perke DS, Kumari SS. Economic analysis of arrivals and prices of pomegranate in Solapur district of Maharashtra. *Economic Affairs*. 2021; 66(4):659-663.
- Meena MD, Lal G, Meena SS. Market arrivals and price behavior of coriander seeds in Rajasthan, India. *International Journal of Seed Spices*. 2020;10(1):27-38.
- Moghe P, Zirmire J. A study on arrivals and prices of major agricultural commodities at largest apmc in Vidarbha Region. *International Journal of Agriculture and Environmental Research*. 2023;9(2): 178-191.
- Reddy GR, Reddy MC, Sneha KS, Gita BM, Ramesh D. Economic analysis of prices and arrivals of turmeric in Duggirala market of Andhra Pradesh. *International Journal of Economic Plants*. 2021;8(1):19-24.
- Saha N, Kar A, Jha GK, Venkatesh P, Kumar P. Market arrival and price behaviour analysis of potato in four major markets in India. *Economic Affairs*. 2020; 65(4): 529-533.