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Soham Bachaspati

M.Sc. Scholar, Department of
Agricultural Economics, College
of Agriculture, IGKV, Raipur,
Chhattisgarh, India

Dr. Hulas Pathak

Associate Professor, Department
of Agricultural Economics,
College of Agriculture, IGKV,
Raipur, Chhattisgarh, India

Impact of e-NAM on arrival & prices of major commodities: A case study of Bhatapara APMC in Chhattisgarh

Soham Bachaspati and Dr. Hulas Pathak

Abstract

Honourable Prime Minister of India Mr. Narendra Modi launched the electronic trading portal for National Agriculture Market (e-NAM) on 14th April 2016. The objectives of e-NAM have multi dimensions like to establish a national e-market platform for transparent sale transactions and price discovery initially in regulated markets, to provide liberal licensing of traders/buyers and commission agents by state authorities without any pre-condition of physical presence or possession of shop/premises in the market yard, to create one license for a trader valid across all markets in the state, harmonization of quality standards of agricultural produce and provision for assaying infrastructure in every market to enable informed bidding by buyers etc. Looking to the new intervention in marketing through e-NAM and its impact on price discovery, trade and marketing of agricultural produces in these selected APMCs, so far no study has been conducted in Chhattisgarh about the impact of e-NAM on the farmers hence the present study was taken. Chhattisgarh state was selected purposively for present study. Bhatapara APMC in Baloda Bazar district was selected purposively as it was among the 5 APMCs which was integrated with e-NAM system in the first phase. 50 farmers and 25 traders from Bhatapara APMC were selected randomly and primary data were collected from them. It was seen from the present study that there were 21 commodities notified under regulation and the APMC used to lack any provision of cold storage facility. Paddy was the major commodity arrived in highest quantity in Bhatapara APMC as most of the farmers were paddy cultivators. There was 8.01 percent decrease in paddy arrival post-unification. Highest increase in arrival was noticed in mustard (232.41 percent) followed by red gram (124.70 percent), lentil (67.69 percent), gram (14.60 percent) and wheat (7.76 percent). 14.65 percent increase in price of paddy happened post-unification. Wheat, red gram, gram and lentil had shown decrease in price in proportion of 1.16 percent, 16.46 percent, 33.28 percent and 24.53 percent respectively.

Keywords: e-NAM, prices, major commodities, Bhatapara

1. Introduction

India is an agriculture based country. It is said that every culture is bound to fail tomorrow if agriculture fails today. Along with diversified production, efficient marketing is essential in harnessing the potential of agriculture. In this context direct marketing of farm produce by farmers to consumers was viewed as one efficient alternative and initiatives were taken in this direction in some states. Honourable Prime Minister of India Mr. Narendra Modi launched the electronic trading portal for National Agriculture Market (e-NAM) on 14th April 2016. The objectives of e-NAM have multi dimensions like to establish a national e-market platform for transparent sale transactions and price discovery initially in regulated markets, to provide liberal licensing of traders/buyers and commission agents by state authorities without any pre-condition of physical presence or possession of shop/premises in the market yard, to create one license for a trader valid across all markets in the state, harmonization of quality standards of agricultural produce and provision for assaying infrastructure in every market to enable informed bidding by buyers etc.

In Chhattisgarh, marketing and trading of the agricultural produces is done by the state APMCs. The state consists of total 69 APMCs out of which only 5 APMCs were integrated with e-NAM in the first phase *viz.*, Bhatapara APMC (Baloda Bazaar), Kurud APMC (Dhamtari), Kawardha APMC (Kabirdham), Rajnandgaon (Rajnandgaon) and Nawapara APMC (Raipur). Looking to the new intervention in marketing through e-NAM and its impact on price discovery, trade and marketing of agricultural produces in these selected APMCs, so far no study has been conducted in Chhattisgarh about the impact of e-NAM on the farmers. That is why it is imperative to investigate the impact of e-NAM on income of farmers and traders in the state. Accordingly, this study is being under taken with the some specific objectives.

Correspondence**Soham Bachaspati**

M.Sc. Scholar, Department of
Agricultural Economics, College
of Agriculture, IGKV, Raipur,
Chhattisgarh, India

2. Objectives of the study

1. To study the market profile and assess the status of e-NAM of Bhatapara APMC.
2. To examine the arrival and prices of major commodities before and after e-NAM in Bhatapara APMC.

3. Material & Method

Chhattisgarh state was selected purposively for present study. Bhatapara APMC in Baloda Bazar district was selected purposively as it was among the 5 APMCs which was

integrated with e-NAM system in the first phase. 50 farmers and 25 traders from Bhatapara APMC were selected randomly and primary data were collected from them. Secondary data were collected from review of literatures, various government sources and from the officials of Bhatapara APMC. Specifically designed schedules were prepared separately for farmers, traders and APMC officials to collect data.

4. Results and Discussions

4.1 The general information of Bhatapara APMC

Table 1: General information of Bhatapara APMC

Sl. No	Title	Information
1	City	Bhatapara
2	Full Postal Address	Krishi upaj mandi-Bhatapara
3	Email	bpara.mandi@gmail.com
4	Telephone No. with STD Code	07726-220408, 220409&220415
5	Year of establishment	1964-65
6	Population Served	57000
7	Geographical area served by Market	241 villages
8	Name of Chairman/Administrator	Mr. Sachin Bhutda
9	Name of Secretary	Mr. Ravishanker Tiwari
10	Telephone No. of Secretary	Off.-07726-220408
11	Name of Officer-in-Charge of Market Information	Mr. Murl Manohar Yadav

Source: Market Profile, Bhatapara APMC, Chhattisgarh, 2017

The nearest railway station from Bhatapara APMC is Bhatapara railway station which is 1 Km away from the APMC. The nearest national highway from Bhatapara APMC is NH 130. Bhatapara APMC had 35 permanent staff for supervisory purpose. The daily working period was of 18 hours. Sale in APMC used to start from morning 5.30 AM and ends at night 11 PM. The peak trading hours in the APMC used to be from 8.30 AM to 9.30 AM. The APMC served 241 villages. The nearest places in the hinterland are Surejpora, Khokli, Kholva, Tarenga, Khapradih and the farthest places are Aoureti, Chakrayay, Koni, Kaisla, Lalpur, Mohera, Tildabandha and Rawen. There were 289 Commodity wise processing units in the market area. There was no cold storage infrastructure available in Bhatapara APMC. There were 21 commodities notified under regulation

in Bhatapara APMC viz., paddy, sorghum, bajra, maize, wheat, pigeon pea, green gram, lentil, lak, soybean, groundnut, sesame, linseed, mustard, sunflower etc. General modes of transport adopted for bringing the commodities to the APMC were ox cart, tractor, matador van etc. and same were used to transport the sold commodities to various stations from the APMC. Digital Projector and loudspeakers were available in the APMC to address the public. There were 5 open platforms and 8 covered shades in Bhatapara APMC. The APMC had electricity supply round the clock. The APMC had 16,09,58,264 rupees of income, 10,10,83,992 rupees of expenditure, 5,98,74,272 rupees of surplus and 25,49,08,467 rupees of reserves as on 31st March 2017.

4.2 Market profile of bhatapara APMCs

Table 2: Market Profile of Bhatapara APMCs

Sl. No.	Particulars	Units	Bhatapara APMC
1	District		Baloda Bazar
2	City		Bhatapara
3	Year of establishment		1964
4	Population served		57000
5	Geographical area served by APMC	Village	241
6	No of Staffs		35
7	Name nearest railway station		Bhatapara
8	Distance from railway station	Km	1
9	Nearest national /state highway		NH 130
10	No. of Cold storages available		0
11	No. of commodities notified		21
12	Avg. daily dispatches to outside markets during the season	Qtl	NA
14	Sale begins in APMC	AM	5.30
15	Sale ends in APMC	PM	11.00
16	Peak trading hours	AM	8.30 – 9.30
17	Farmer level grading in practice		No
18	System of weighment		Electronic weighing machine
19	System of payment		Cash
22	Electronic display board		Yes
23	Public address system		Yes
24	Open platform		5
25	Covered platform		8

Source: Market Profile, Krishi Upaj Mandi, Chhattisgarh, 2017

Bhatapara APMC was established in 1964. There was no provision of cold storage facilities in Bhatapara APMC. Bhatapara APMC had 21 commodities notified under regulation. Bhatapara APMC had electronic weighing facility and cash payment was usually used as mode of payment. Bhatapara APMC had no storage facility. Electronic display boards and public address facilities were present in the APMC. Adequate supply of electricity and water was present

in the APMC. The rest house facilities for the farmers were in poor condition and needs urgent attention to improve. The canteen present in all the APMCs was in name sake and need to be improved.

4.3 Yearly arrival information of major commodities in Bhatapara APMC

Table 3: Yearly arrival of major commodities in Bhatapara APMC

SL. No.	Commodity	2014-2015 (Qtl)	2015-2016 (Qtl)	2016-2017 (Qtl)	2017-2018 (Qtl)
1	Paddy	3784791 (92.22)	4204285 (95.38)	4020601 (96.79)	3698449 (95.74)
2	Wheat	40713 (0.99)	36995 (0.84)	22213 (0.53)	23937 (0.62)
3	Red Gram	4579 (0.11)	6897 (0.16)	6782 (0.16)	15239 (0.39)
4	Gram	258937 (6.31)	134455 (3.05)	82155 (1.98)	94146 (2.44)
5	Lentil	10517 (0.26)	16075 (0.36)	11587 (0.28)	19430 (0.50)
6	Soybean	2103 (0.05)	5091 (0.12)	9512 (0.23)	8372 (0.22)
7	Mustard	2566 (0.06)	4186 (0.09)	1015 (0.02)	3374 (0.09)
Total		4104206 (100.00)	4407984 (100.00)	4153865 (100.00)	3862947 (100.00)

Source: Bhatapara APMC

Note: Figures in the bracket indicate the percentage to the total

Year wise (2014 – 2018) arrival of 7 major commodities based on quantum arrivals is presented in Table 3. It can be noted that Paddy was the major commodity arrived in highest quantity in Bhatapara APMC as most of the farmers were paddy cultivators. The quantity arrived for gram is second

highest in Bhatapara APMC as the farmers used to get more MSP in gram which motivated them to cultivate gram.

4.4 Change in arrival of major commodities in Bhatapara APMC Post unification

Table 4: Change in arrival post unification in Bhatapara APMC of major commodities

SL. No.	Commodity	2016-2017 (Qtl)	2017-2018 (Qtl)	Absolute Change (Qtl)	Percentage Change (%)
1	Paddy	4020601 (96.79)	3698449 (95.74)	-322152	-8.01
2	Wheat	22213 (0.53)	23937 (0.62)	1724	7.76
3	Red Gram	6782 (0.16)	15239 (0.39)	8457	124.70
4	Gram	82155 (1.98)	94146 (2.44)	11991	14.60
5	Lentil	11587 (0.28)	19430 (0.50)	7843	67.69
6	Soybean	9512 (0.23)	8372 (0.22)	-1140	-11.98
7	Mustard	1015 (0.02)	3374 (0.09)	2359	232.41
Total		4153865 (100.00)	3862947 (100.00)	-290918	-7.00

Source: Bhatapara APMC

Note: Figures in the bracket indicate the percentage to the total

Absolute change as well as the percentage change in arrival in Bhatapara APMC post unification is presented in table 4. It was observed that there was 8.01 percent decrease in paddy arrival post unification. The main reason being buyers used to physically checking paddy lots arrived for sale for quality parameters. Such provision and facility is not in effect in e-NAM system which discourage the buyers to bid for Paddy which in turn reduce the demand hence decrease in arrival. Highest increase in arrival was noticed in mustard (232.41 percent) followed by red gram (124.70 percent), lentil (67.69

percent), gram (14.60 percent) and wheat (7.76 percent). Decrease of 7.00 percent in total arrivals of above mentioned major commodities was observed post unification. The change in arrival may not entirely be due to implementation of e-NAM but also due to a lost of other reasons such as increase or decrease in production, sale to nearby markets, change in cropping pattern etc.

4.5 Yearly price information of major commodities in Bhatapara APMC

Table 5: Yearly price information of major commodities in Bhatapara APMC

SL. No.	Commodity	2014-2015 (Rs/ Qtl)	2015-2016 (Rs/ Qtl)	2016-2017 (Rs/ Qtl)	2017-2018 (Rs/ Qtl)
1	Paddy	1492	1594	1809	2074
2	Wheat	1429	1550	1639	1620
3	Red Gram	5682	7655	4290	3584
4	Gram	3253	4229	5241	3497
5	Lentil	4289	4641	4227	3190
6	Soybean	2563	3246	2447	2818
7	Mustard	3040	3544	3147	3360

Source: Bhatapara APMC

Year wise (2014 – 2018) price of 7 major commodities based on quantum arrivals is presented in Table 5. Gradual increase

in price in Paddy and wheat observed over the years in Bhatapara APMC.

4.6 Change in price of major commodities in Bhatapara APMC post unification

Table 6: Change in price of major commodities in Bhatapara APMC post unification

SL. No.	Commodity	2016-2017 (Rs)	2017-2018 (Rs)	Absolute Change (Rs)	Percentage Change (%)
1	Paddy	1809	2074	265	14.65
2	Wheat	1639	1620	-19	-1.16
3	Red Gram	4290	3584	-706	-16.46
4	Gram	5241	3497	-1744	-33.28
5	Lentil	4227	3190	-1037	-24.53
6	Soybean	2447	2818	371	15.16
7	Mustard	3147	3360	213	6.77

Source: Bhatapara APMC

Absolute change as well as the percentage change in price of major commodities in Bhatapara APMC post unification is presented in table 6. It was observed that 14.65 percent increase in price of paddy happened post unification. The main reason behind it was enforcement of e-NAM system and decrease in quantity arrival of paddy in Bhatapara APMC. Other major commodities like wheat, red gram, gram and lentil which showed increase in quantity arrival post unification had shown decrease in price in proportion of 1.16 percent, 16.46 percent, 33.28 percent and 24.53 percent respectively. This decrease in price happened due to increase in supply of respective commodities post unification as demand remained more or less same. In case of soybean as the supply decreased after enforcement of e-NAM the price of it had increased by 15.16 percent.

12. In case of soybean as the supply decreased after enforcement of e-NAM the price of it had increased by 15.16 percent.

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5. Summary and Conclusion

The major findings of the present study are as follows

1. There was no provision of cold storage facilities in Bhatapara APMC.
2. Bhatapara APMC had 21 commodities notified under regulation.
3. Bhatapara APMC had no storage facility.
4. Electronic display boards and public address facilities were present in the APMC.
5. Adequate supply of electricity and water was present in the APMC.
6. Paddy was the major commodity arrived in highest quantity in Bhatapara APMC as most of the farmers were paddy cultivators.
7. The quantity arrived for gram is second highest in Bhatapara APMC as the farmers used to get more MSP in gram which motivated them to cultivate gram.
8. There was 8.01 percent decrease in paddy arrival post unification. The main reason being buyers used to physically checking paddy lots arrived for sale for quality parameters. Such provision and facility is not in effect in e-NAM system which discourage the buyers to bid for paddy which in turn reduce the demand hence decrease in arrival.
9. Highest increase in arrival was noticed in mustard (232.41 percent) followed by red gram (124.70 percent), lentil (67.69 percent), gram (14.60 percent) and wheat (7.76 percent). Decrease of 7.00 percent in total arrivals of above mentioned major commodities was observed post unification.
10. 14.65 percent increase in price of paddy happened post unification.
11. Wheat, red gram, gram and lentil had shown decrease in price in proportion of 1.16 percent, 16.46 percent, 33.28 percent and 24.53 percent respectively.