

# Analysis of Income, Expenditure and Arrivals of *Krishi Upaj Mandies* of Gwalior and Chambal Division of Madhya Pradesh

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#### ABSTRACTS

In agriculture, marketing of agricultural produce is very important factor to get income for farmers. *Krishi Upaj mandi* or regulated markets are very important in marketing of agricultural produce. In Madhya Pradesh there are 538 regulated markets of which 256 are main wholesale market (*Krishi Upaj Mandi*) and 282 submarket yards. The study was conducted from 2013-14 to 2018-19 by collecting secondary data from all the selected *mandi*. The simple method of percentage and correlation was used for analyzing the primary and secondary data. Mostly the tabulation method was used in summarized data to examine the relationship between total Income and total arrivals and Comparison of Income, Expenditure and Arrivals of all the selected 16 mandies of Chambal division during 2013-14 to 2018-19. Study shows that overall correlation coefficient between total income and total arrivals of *mandi* was moderately positive i.e.0.67 which imply moderately positive relationship (increase in income due to increase in arrivals) between income and arrivals of all the selected 16 mandies during 2013-14 to 2018-19.

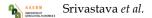
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*Krishi Upaj Mandi* (Regulated market) has played the important role for marketing of agricultural commodities/products, which have to improve the economic status of farmers. The agricultural products are directly and indirectly related with marketing functions. The processes of economic activities are completed with the completion of marketing process. The producer of agricultural commodities/ product collect or have always be think over that which farm product to be sold, (1) in how much quantity to be sold? (2) which time or period to be sold? and (3) what price to be sold? and (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. In Madhya Pradesh, there are 538 regulated markets of which 256 are main wholesale market (*Krishi Upaj Mandi*) and 282 submarket yard; modern approach has been adopted with the establishment of Madhya Pradesh State Agricultural Board December 2000, the chairman of the board is, Agricultural minister of the State. The regulation of mandies was imposed during the year 1972, through passing the Act known as *Krishi Upaj Mandi Adhiniyam*. The development

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of the mandies could not be attained due to lack of proper supervision and implementation the bylaw of *Mandies Adhiniyam*.

The working efficiency of Krishi Upaj Mandi (KUM) or Agricultural Regulated Market (ARM) relates directly to the income of producers, Farmers may fetch higher price for his product which is to be sold in a *mandi*, if working of the *mandi* is efficient. An efficient marketing leads to the optimal process of operating. Process of marketing may be efficient if system and approach, to solve the problems of agricultural marketing are to be conducted and performed properly. In this research paper objectives were to examine the relationship between total Income and total arrivals of all the selected 16 mandies of Chambal division during 2013-14 to 2018-19 and to study the Comparison of Income, Expenditure and Arrivals in mandies of Gwalior and Chambal Division (2013-14 to 2018-19).

### MATERIALS AND METHODS

The scientific approach for fulfillment the objectives of the study which include (i) the study area (ii) selection of the *mandi*, (iii) selection of different *mandi* functionaries, (iv) Collection of the data and, (v) analytical tools applied to achieve the objectives of the study Madhya Pradesh state consists 10 divisions and 52 districts. Out of which 02 divisions namely Gwalior [Gwalior, Datia, Shivpuri, Guna, and Ashok Nagar] and Chambal [Morena, Bhind and Sheopur] divisions comprised 8 districts will be selected purposely for study. Out of 256; Krishi Upaj Mandies in the Madhya-Pradesh, 45 *Krishi Upaj Mandies* and 37 sub *Krishi Upaj Mandies* established in Gwalior and Chambal Divisions. The category wise *mandi* details are as mentioned below (Table 1).

The data was collected through pre-tested, interview schedule from the producers, traders, processors, hammal / weighman / storekeeper and other *mandi* officials. The study was conducted from 2013-14 to 2018-19 by collecting secondary data from all the selected *mandi*. The simple method of percentage and correlation was used for analyzing the primary and secondary data. Mostly the tabulation method was used in summarized data.

 Table 1: Category wise Krishi Upaj Mandi details of Gwalior and Chambal Division

S1. No.	Category	No. of mandies	Name of Mandies (Districts)
1	А	03	Dabra (Gwalior), Guna, Ashoknagar
2	В	06	Laskar (Gwalior), Datia, Kolaras (Shivpuri), Kumbhraj (Guna), Mungawali (Ashoknagar) and Sheopur
3	С	11	Bhitarwar (Gwalior), Sewda (Datia), Shivpuri, Pichore, Karera, Badarwash (Shivpuri), Aron, Binaganj, Maksudangarh (Guna), Morena, Baroda (Sheopur)
4	D	25	Bhander (Datia), Magroni, Pohri, Bairad, Khaniadhana, Rannud, Khataura (Shivpuri), Raghogarh (Guna), Shadhora, Piprai, Chanderi, Esagarh, (Ashoknagar), Ambah, Porsa, Kailaras, Sabalgarh, Joura, Banmorekala (Morena), Vijaypur (Sheopur), Bhind, Mehgaon, Gohad, Mau, Lahar, Aalampur (Bhind)

**Table 2:** Category wise *Krishi Upaj Mandie* details of Gwalior and Chambal Division selected from each district for the present study

Sl. No.	Category	No. of mandies	Name of Mandies (Districts)
1	А	02	Dabra (Gwalior), Ashoknagar
2	В	04	Laskar (Gwalior), Datia, Mungawali (Ashoknagar) and Sheopur
3	С	05	Shivpuri, Karera (Shivpuri), Binaganj (Guna), Morena, Baroda (Sheopur)
4	D	05	Bhander (Datia), Jaura (Morena), Ambah (Morena), Bhind, Lahar (Bhind)
Total		16	

During the study total 313 farmers, 47 traders and 30 *mandi* officials was contacted to collect the information under this project. The *mandi* wise detail lists of the farmers, traders and *mandi* officials is as mentioned in table 3.

<b>Table 3:</b> Number of farmers, traders and <i>mandi</i> officials	
contacted to collect the information for the study	

S1. No.	Name of <i>Mandies</i> (Districts)	No. of Farmers	No. of Traders	No. of <i>Mandi</i> officials
1	Dabra (Gwalior)	20	03	02
2	Ashoknagar	20	05	01
3	Laskar (Gwalior)	40	07	05
4	Datia	20	05	03
5	Mungawali	20	00	00
	(Ashoknagar)			
6	Sheopur	20	01	01
7	Shivpuri	20	00	03
8	Karera (Shivpuri)	15	04	03
9	Binaganj (Guna)	20	03	01
10	Morena	20	02	01
11	Baroda (Sheopur)	09	02	01
12	Bhander (Datia)	19	00	01
13	Jaura (Morena)	15	04	02
14	Ambah (Morena)	15	04	02
15	Bhind	20	04	03
16	Lahar (Bhind)	20	03	02
Tota	1	313	47	30

### **RESULTS AND DISCUSSION**

It is found that the Income of krishi upaj mandies depends mainly on total arrivals of mandi so here we analyse the relationship between total Income and total arrivals of all the selected 16 mandies of Chambal division during 2013-14 to 2018-19. Table 4 shows the relationship between total Income and total arrivals of all the selected mandies. In this table data were analysed by using correlation which measure a statistical relationship between two variables. It is observed from the table that correlation coefficient between total income and total arrivals of Gwalior mandi was moderate positive i.e. 0.51 which shows due to increase in the arrivals of crops total income of mandi was increasing during 2013-14 to 2018-19. In Datiya mandi correlation coefficient between total income and total arrivals was highly positive i.e. 0.93 which imply increase in total income was due to increase in total arrivals of mandi during study period. We can see from the table that in Shivpuri *mandi* correlation coefficient found very low positive i.e. 0.50 which imply increase in total income was due to increase in total arrivals of *mandi* during study period. Again in Guna *mandi* correlation coefficient found very low positive i.e. 0.32 which imply increase in total income was due to increase in total arrivals of *mandi* during study period. But in Ashoknagar correlation coefficient found very lows negative i.e. 0.01 which shows negative relationship between total income and total arrivals of *mandi* it means the arrivals of *mandi* was increasing but income of *mandi* was decreasing.

**Table 4:** Relationship between total Income and totalarrivals of all the 16 mandies of Chambal Division(2013-14 to 2018-19) District

	Year	Total income	Total arrivals	Value of correlation coefficient (r)
Gwalior	2013-14	290730573	594166.30	
	2014-15	220665711	542960.12	
	2015-16	227666932	516846.10	
	2016-17	231985912	642632.60	
	2017-18	246040780	561942.60	
	2018-19	276668675	651196.77	
				0.51
Datiya	2013-14	93195392	261864.40	
	2014-15	99162747	264352.80	
	2015-16	100872548	231492.80	
	2016-17	135069348	297489.50	
	2017-18	172450379	383429.70	
	2018-19	176116223	475578.70	
				0.93
Shivpuri	2013-14	223255606	634235.00	
	2014-15	221519014	577059.75	
	2015-16	206215012	535895.76	
	2016-17	195328609	437784.86	
	2017-18	257094824	582943.47	
	2018-19	220644051	685423.52	
				0.50
Guna	2013-14	314155353	424897.80	
	2014-15	256311858	445698.73	
	2015-16	347803145	373771.58	
	2016-17	307723667	428767.76	
	2017-18	372179522	573685.43	
	2018-19	323860214	580465.17	
				0.32
Ashoknagar	2013-14	238901113	404207.60	

Ashoknagar 2013-14 238901113 404207.60



	2014-15	200587788	421366.90	
	2015-16	223881276	390771.70	
	2016-17	223349918	294437.40	
	2017-18	252650743	420288.30	
	2018-19	200896619	410130.11	
				-0.01
Morena	2013-14	92040575	199153.20	
	2014-15	97411405	217413.60	
	2015-16	126671434	298907.90	
	2016-17	98681891	219760.50	
	2017-18	149734344	309070.70	
	2018-19	116460001	296413.19	
				0.91
Sheopur	2013-14	93216675	246418.50	
	2014-15	94563172	276689.70	
	2015-16	77734464	181778.70	
	2016-17	69025168	146718.64	
	2017-18	95569170	222811.30	
	2018-19	100170384	263928.30	
				0.93
Bhind	2013-14	66474874	151420.10	
	2014-15	71147427	178663.00	
	2015-16	96075048	199666.80	
	2016-17	82162571	193212.55	
	2017-18	133275277	278238.23	
	2018-19	118531472	316453.27	
				0.91
Overall	2013-14	1411970161	2916362.90	
	2014-15	1261369122	2924204.60	
	2015-16	1406919859	2729131.34	
	2016-17	1343327084	2660803.81	
	2017-18	1678995039	3332409.73	
	2018-19	1533347639	3679589.02	
				0.67

In Morena *mandi* correlation coefficient was highly positive i.e. 0.91 which imply highly positive relationship between income and arrivals of mandi during 2013-14 to 2018-19. Again Sheopur mandi and bhind mandi show highly positive correlation coefficient between income and arrivals i.e. 0.93 and 0.91 respectively which imply highly positive relationship (increase in income due to increase in arrivals) between income and arrivals of both the mandi during 2013-14 to 2018-19. It is also observed from the table that overall correlation coefficient between total income and total arrivals of mandi was moderately positive i.e.0.67 which imply moderately positive relationship (increase in income due to increase in arrivals) between income and arrivals of all the selected 16 mandies during 2013-14 to 2018-19.

**Table 5:** Different sources of total Income of selected 16Mandies of Gwalior and Chambal Division (2013-14 to2018-19)

	<i>Mandi</i> shulk	Anugyapti shulk	Other income	Total income
2013-14	1329813274	1195821	80961066	1411970161
	(94.18)	(0.08)	(5.73)	(100.00)
2014-15	1168791233	1211009	91366880	1261369122
	(92.66)	(0.09)	(7.24)	(100.00)
2015-16	1218959167	4040788	183919904	1406919859
	(86.64)	(0.28)	(13.07)	(100.00)
2016-17	1218964166	1717118	122645800	1343327084
	(90.74)	(0.13)	(9.13)	(100.00)
2017-18	1525357315	1511337	152126387	1678995039
	(90.85)	(0.09)	(9.06)	(100.00)
2018-19	1426076220	1031201	106240218	1533347639
	(93.00)	(0.07)	(6.93)	(100.00)

This table 5 explain different sources of income of all selected 16 mandies of Gwalior Chambal division from 2013-14 to 2018-19. We can understand from above table that in 2013-14, 94.18 percent of total income come from mandi shulk which is the main source of income of mandi and 0.08 percent income earned from anugyapti shulk and 5.73 percent from other sources. In 2014-15 92.66 percent came from mandi shulk followed by 7.24 percent from other sources and only 0.09 percent from anugyapti shulk. During 2015-16 only 86.64 percent of total income is earned from mandi shulk followed by 13.07 percent from other source and only 0.29 percent from anugyapti shulk. During 2016-17 to 2018-19 major source of total income was mandi shulk i.e. 90.74 percent, 90.85 percent and 93.00 percent respectively followed by 9.13 percent in 2016-17, 9.06 percent in 2017-18 and 6.93 percent 2001-19 from other sources and 0.13 percent, 0.09 percent and 0.07 percent respectively from anugyapti shulk.

The table 6 shows the pattern of total expenditure of all the mandies under Chambal division during 2013-14 to 2018-19. We can understand from the table during 2013-14 49.24 percent of total expenditure is expended on other expenditure followed by 20.39 percent on establish expenditure, 11.22 percent on board shulk, 7.48 percent on construction, 6.40 percent on surakshit nidhi and 5.26 percent on sanchayit nidhi. Again we can observe from the table that in 2014-15 most of the portion of total

Year	Exp. on Estd.	Exp. on Infra Work	Board Shulk	Surakhit Nid	hi Sanchyit Nid	hi Other Exp.	Total	
	1	2	3	4	5	6	7	
2013-14	262962983	96517710	144656685	82570876	67888794	634999362	1289526410	
	(20.39)	(7.48)	(11.22)	(6.40)	(5.26)	(49.24)	(100.00)	
2014-15	303870246	93410778	125081548	60578410	118555592	599262156	1219198651	
	(24.92)	(7.66)	(10.26)	(4.97)	(9.72)	(49.15)	(100.00)	
2015-16	320966527	76728919	134134804	87861170	69703854	616495153	1305890427	
	(24.58)	(5.88)	(10.27)	(6.73)	(5.34)	(47.21)	(100.00)	
2016-17	338865285	112318131	120526375	158140118	91254156	497103130	1318207195	
	(25.71)	(8.52)	(9.14)	(12.00)	(6.92)	(37.71)	(100.00)	
2017-18	380729127	80755013	177536450	177536870	69725247	688426045	1581908752	
	(24.07)	(5.10)	(11.22)	(11.22)	(4.41)	(43.52)	(100.00)	
2018-19	453531348	72975493	177970874	176704290	48289715	617763537	1547199267	
	(29.31)	(4.72)	(11.50)	(11.42)	(3.12)	(39.93)	(100.00)	

Table 6: Different ways of Expenditure of selected 16 Mandies of Gwalior and Chambal Division (2013-14 to 2018-19)

expenditure was expended on other expenditure i.e. 49.15 percent followed by 24.92 percent on establish expenditure, 10.2 percent on board shulk, 9.72 percent on sanchayit nidhi, 7.66 percent on construction and only 4.97 percent on surakshit nidhi. Same pattern of expenditure is shown in 2015-16 47.21 percent expended on other expenditure, followed by 2.58 percent on establishment, 10.27 percent on board shulk, 6.73 percent on surakshit nidhi, 5.88 percent on construction and only 5.34 percent on sanchayit nidhi. In 2016-17 37.71 percent of total expenditure was spent on other expenses followed by 25.71 percent expended on establishment, 12 percent on surakshit nidhi, 9.14 percent on board shulk, 8.52 percent on construction and only 6.92 percent on sanchayit nidhi. During 2017-18 out of total expenditure 43.52 percent was spent on other expenses followed by 24.07 percent on establishment, 11.22 percent on board shulk, 11.22 percent on surakshit nidhi, 5.10 percent on construction and 4.41 percent on sanchayit nidhi. In 2018-19 out of total expenditure 39.93 percent was spent on other expenditure followed by 29.31 percent spent on establishment, 11.50 percent on board shulk, 11.42 percent on surakshit nidhi 4.72 percent on construction and only 3.12 percent on sanchayit nidhi. We can see from the table that during 2013-14 to 2018-19 most of the part of total expenditure were spent on other expenditure so it is advised to

all *mandi* officials to curtail their expenses on other expenditure.

It is observed that, table 7 is showing the data of total income and total expenditure and difference between them and also showing percentage of expenditure to income and changes in total arrivals of total 16 mandies of Gwalior and Chambal division. The district wise *mandi* details are as mentioned below –

Gwalior District: We can see from the table in 2013-14, 92.91 percent amount of total income expended on different activities of mandi and only 7.09 percent profit has gained which was maximum during 2013-14 to 2018-19. In this year total arrivals of crops in Gwalior mandi was 594166.30 mt with 11.8 percent change from previous year. In 2014-15 it is observed from the table that total expenditure is more than total income so in this year mandi faced loss due to 1.01 percent extra expenditure on different activity which were performed by mandi officials and another reason was decline in arrivals of mandi with -8.62 percent. In 2015-16 only 2.13 profits is gained and 97.87 percent of total income is expended and again with -4.61 percent change in total arrivals of mandi. Again in 2016-17 mandi faced 0.15 percent loss due to over expenditure than total income but in this year 24.34 percent increase in total arrivals happened. But in 2017-18 and 21018-19 profits are gained by Gwalior mandi which are 5.59 percent and 4.37



## **Table 7:** Comparison of Income, Expenditure and Arrivals in mandies of Gwalior and Chambal Division (2013-14 to 2018-19)

	Year	Total income	Total expenditure	Difference	% of expenditure to income	Total arrivals	Changes in arrivals
Gwalior	2013-14	290730573	270119721	20610852	92.91	594166.30	11.18
	2014-15	220665711	222903130	-2237419	101.01	542960.12	-8.62
	2015-16	227666932	222819124	4847808	97.87	516846.10	-4.81
	2016-17	231985912	232332580	-346668	100.15	642632.60	24.34
	2017-18	246040780	232297240	13743540	94.41	561942.60	-12.56
	2018-19	276668675	264581548	12087127	95.63	651196.77	15.88
Datiya	2013-14	93195392	84507098	8688294	90.68	261864.40	-24.20
5	2014-15	99162747	92164194	6998553	92.94	264352.80	0.95
	2015-16	100872548	126477643	-25605095	125.38	231492.80	-12.43
	2016-17	135069348	131243958	3825390	97.17	297489.50	28.51
	2017-18	172450379	161160815	11289564	93.45	383429.70	28.89
	2018-19	176116223	171485705	4630518	97.37	475578.70	24.03
Shivpuri	2013-14	223255606	194362488	28893118	87.06	634235.00	-4.67
r	2014-15	221519014	198956134	22562880	89.81	577059.75	-9.01
	2015-16	206215012	175406511	30808501	85.06	535895.76	-7.13
	2016-17	195328609	172200497	23128112	88.16	437784.86	-18.31
	2017-18	257094824	249439765	7655059	97.02	582943.47	33.16
	2018-19	220644051	215860939	4783112	97.83	685423.52	17.58
Guna	2013-14	314155353	323195142	-9039789	102.88	424897.80	-21.73
Guilu	2014-15	256311858	267716341	-11404483	104.45	445698.73	4.90
	2015-16	347803145	300813193	46989952	86.49	373771.58	-16.14
	2016-17	307723667	324435486	-16711819	105.43	428767.76	14.71
	2017-18	372179522	359900074	12279448	96.70	573685.43	33.80
	2017-10	323860214	327461713	-3601499	101.11	580465.17	1.18
Ashok-nagar		238901113	173294467	65606646	72.54	404207.60	-13.63
ASHOK-Hagai	2013-14	200587788	191826991	8760797	95.63	404207.00	4.25
	2014-15	223881276	197552419	26328857	88.24	421300.90 390771.70	-7.26
	2015-10	223349918	205372876	17977042	91.95	294437.40	-24.65
	2010-17	252650743	234280611	17977042	92.73	420288.30	-24.05 42.74
					105.87		
Morena	2018-19 2013-14	200896619 92040575	212696167	-11799548		410130.11 199153.20	-2.42 -23.77
worena	2013-14 2014-15		81412180 80312766	10628395 17098639	88.45 82.45		-23.77 9.17
		97411405				217413.60	
	2015-16	126671434	115130848	11540586	90.89	298907.90	37.48
	2016-17	98681891	95496866	3185025	96.77	219760.50	-26.48
	2017-18	149734344	126975425	22758919	84.80	309070.70	40.64
21	2018-19	116460001	123543589	-7083588	106.08	296413.19	-4.10
Sheopur	2013-14	93216675	89467804	3748871	95.98	246418.50	-7.85
	2014-15	94563172	95407827	-844655	100.89	276689.70	12.28
	2015-16	77734464	76000073	1734391	97.77	181778.70	-34.30
	2016-17	69025168	66989420	2035748	97.05	146718.64	-19.29
	2017-18	95569170	96419833	-850663	100.89	222811.30	51.86
	2018-19	100170384	100574036	-403652	100.40	263928.30	18.45
Bhind	2013-14	66474874	73167510	-6692636	110.07	151420.10	-20.22
	2014-15	71147427	69911268	1236159	98.26	178663.00	17.99
	2015-16	96075048	91690616	4384432	95.44	199666.80	11.76
	2016-17	82162571	90135512	-7972941	109.70	193212.55	-3.23
	2017-18	133275277	121434989	11840288	91.12	278238.23	44.01
	2018-19	118531472	130995569	-12464097	110.52	316453.27	13.73

percent respectively and with -12.56 percent and 15.88 percent change in arrivals in respective years of Gwalior *mandi*.

**Datiya District:** We can see from the table in 2013-14, 90.68 percent amount of total income expended on different activities of *mandi* and only 9.32 percent profit has gained which was maximum during 2013-14 to 2018-19. In this year total arrivals of crops in Datia district *mandis* was 261864.40 mt with - 24.20 percent change from previous year. In 2015-16, it is observed from the table that total expenditure is more than total income so in this year *mandi* faced loss due to 25.38 percent extra expenditure on different activity which were performed by *mandi* officials and another reason was decline in arrivals of *mandi* with -12.43 per cent.

**Shivpuri District:** It can be observed in the table, the mandies of Shivpuri districts, the total expenditure is less than the total income from the year 2013-14 to 2018-19 and it profit is ranged between from 2.17 to 14.92 percent and it was maximum in 2015-16 and minimum during the year 2018-19 with -4.67 percent and 33.16 percent change in arrivals in respective years of *mandi* of Shivpuri district.

**Guna District:** We can see from the table, the mandies of Guna districts total expenditure is more than the total income during the year 2013-14, 2014-15, 2016-17 and 2018-19 and its losses range between 1.11 per cent to 5.43 per cent. Only the year 2015-16 and 2017-18 *mandi* gains the profit. The per cent change in arrivals in respective years is between -16.14 percent to 33.80 per cent mandies of Guna district.

**Ashoknagar District:** It can be observed in the table, the mandies of Ashoknagar district, the total expenditure is less than the total income from the year 2013-14 to 2018-19 except the year 2018-19 which was loss of 5.87 percent and the profit is ranged between from 4.37 to 27.46 percent and it was maximum in 2013-14 and minimum during the year 2014-15 with percent change in arrivals in the *mandi* of Ashoknagar district is between - 2.42 percent to 42.74 per cent.

**Morena District:** It can be observed in the table, the mandies of Morena district, the total expenditure is less than the total income from the year 2013-14 to 2018-19 except the year 2018-19 which was loss of 6.08 per cent and the profit is ranged between from

3.33 to 17.55 per cent and it was maximum in 2014-15 and minimum during the year 2016-17 with per cent change in arrivals in the *mandi* of Morena district is between – 26.48 per cent to 40.64 per cent.

**Sheopur District:** It can be observed in the table, the mandies of **Sheopur** district, the total expenditure is less than the total income from the year 2013-14 to 2018-19 except the year 2014-15, 1017-18 and 2018-19 which was loss between 0.40 to 0.89 per cent and the profit is ranged between 2.95 to 4.02 per cent and it was maximum in 2013-14 and minimum during the year 2015-16 with per cent change in arrivals in the *mandi* of **Sheopur** district is between – 34.30 per cent to 51.86 per cent

**Bhind District:** It can be observed in the table, the mandies of **Bhind** district, the total expenditure is less than the total income from the year 2013-14 to 2018-19 except the year 2013-14, 2016-17 and 2018-19 which was loss between 09.70 to 10.52 per cent and the profit is ranged between 1.74 to 8.88 per cent and it was maximum in 2017-18 and minimum during the year 2014-15 with per cent change in arrivals in the *mandi* of **Bhind** district is between – 20.22 per cent to 44.01 per cent.

### CONCLUSION

It is also observed from the study that overall correlation coefficient between total income and total arrivals of mandi was moderately positive i.e.0.67 which imply moderately positive relationship (increase in income due to increase in arrivals of mandi) between total income and total arrivals of all the selected 16 mandies of Chambal division of Madhya Pradesh during 2013-14 to 2018-19. The variation in arrivals of all the selected crops was observed due to fluctuation in production and facilities provided by the mandies. There are lots of factors which affect the arrivals of mandi. Study also shows the expenditure pattern of selected mandies. Most of the mandies shows more expenditure over income so this is the main cause of very poor financial condition of Chambal division's mandies. Due to low income and more expenditure mandies were in loss during study periods. So if government, policy maker and mandi officials want to improve financial condition of mandies they should apply measures to improve Mandy's income. According to study we can suggest that -



- *Mandi* officials may increase in *mandi* licence fee of traders to generate the more income of the mandies.
- Proper utilization of unused land of *mandi* area should also increase income.
- MSP is also very important factor to increase arrivals of *mandi* because income is depend on arrivals of *mandi*.
- Grading, Storage facility, rest house for farmers and water and canteen facility for farmers can attract the farmers to bring their produce from large distance for sale through *mandi*.
- Malpractices should be prohibited.
- Proper transportation facility and roads also can help in this regards.

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