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Growth and development of regulated markets in Gujarat

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Abstract

The agricultural marketing is important component for inclusive agriculture development to deliver agricultural products directly from the farmers to the consumers. In India, agricultural marketing is being promoted through agricultural price monitoring committee (APMC Act). Gujarat is one of the leading states that have implemented this APMC Act since 2003 (Economic survey of India, 2012).

Marketing and trade, as an activity comes at latter part of the value chain for any commodity and yet it is the most important determinant for all other activities. In this line, creation and development of a network of regulated markets across the county has been the most important strategy of the Government of India since independence to ensure remunerative price to farmers and reasonable price for consumers by creating conducive market environment for fair play of demand and supply forces. In this connection, the present study on growth and development of regulated markets in Gujarat was undertaken. The study was undertaken using secondary sources. The necessary national and state wise data on growth and development, were compiled from various issues of annual reports of State Agricultural Marketing Board, AGMARKNET, eNAM and other publications of Government. Compound growth rate and simple tabular method was used to study growth and development. This results clearly demonstrates that the trend in growth and development of regulated markets in the state is not uniform but always almost positive.

Keywords: Regulated markets, growth and development, compound growth

Introduction

Agriculture plays a critical role in India's story. Ranking second in the world farm output, the agricultural sector is the backbone of Indian economy contributing notably to the country's Gross Domestic Product (GDP). As on February 2018, it was estimated that over 58 per cent of rural Indians depended on agriculture for their livelihood. As an economic sector, it employs the largest number of people and this sector contributes around 17-18 per cent to the country's GDP. The agricultural situation in India has undergone a rapid change from last two decades. Agricultural production, in general has achieved reasonable growth rate. But the growth rate has not only to be maintained, but accelerated. The efforts are already under way through evolving location specific technologies. On one side, farmers are affected by prices of agricultural inputs and output, and on the other side, consumers also expect the reasonable prices. For achieving this conflicting objective, marketing system for agricultural commodities has to play a very crucial role. Marketing is as critical to better performance of agriculture as farming itself. Therefore, market reforms and marketing system improvement ought to be an integral part of policy and strategy for agricultural development (Acharya and Agarwal, 2016).

Methodology

For the study of growth of regulated markets in Gujarat, necessary secondary data were compiled for the period from pre-independence to 2017-18, while for the district wise growth, data were compiled from 2000-01 to 2017-18. For the development of regulated markets in state, data were compiled from 2000-01 to 2017-18. Secondary data used for the study were collected from various published sources. For the meaningful interpretation of the data compound annual growth rate and tabular analysis was used extensively. Growth in the regulated markets was estimated using the exponential growth function of the form:

$$Y_t = ab^t e^{rt}$$

The compound growth rate (r) in percentage was then computed from the relationship, $\text{Log } Y = \text{Log } a + t \text{Log } b$, $r = (\text{Antilog of } \log b - 1) * 100$.

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Results and Discussion

The compound growth rate in number of regulated markets for the Gujarat was worked out from the year 1939 to 2018 and the results are presented in Table 1. It is revealed from the table that there is about 32 per cent of compound growth in the number of regulated in Gujarat from the period of pre-independence to the year 2018. It can be observed that number of regulated market rose from 140 in 1980 to 398 in 2000, indicates rise of 184 per cent during the two decade. From the year 2005 onwards the state has almost around 400 regulated markets which indicate stagnant growth in number of regulated markets. This table clearly demonstrates that the trend of market growth of regulated markets in the state is not uniform but always almost positive.

Table 1: Growth in number of regulated markets in Gujarat

Sr. No.	Year	Numbers of regulated markets
1	1939	1
2	1945	4
3	1950	18
4	1955	40
5	1960	73
6	1965	93
7	1970	116
8	1975	123
9	1980	140
10	1985	152
11	1990	164
12	1995	237
13	2000	398
14	2005	404
15	2010	414
16	2015	400
17	2017	400
18	2018	400
	CAGR (%)	31.73*

* indicates significant at 1 per cent level of probability

Source: Data collected and compiled from Gujarat State Agricultural Marketing Board, (GSAMB) (2018), Annual reports of regulated markets and other secondary sources

Year wise compound growth rate in number of regulated markets in Gujarat from the year 1995-96 to 2017-18 was worked out and presented in Table 2. The table indicates the

growth of 0.085 per cent in the number of regulated markets including sub-yards in Gujarat during last 23 years.

Table 2: Yearly growth in number of regulated markets in Gujarat

Sr. No.	Years	Number of regulated markets (including sub-yards)
1	1995-96	386
2	1996-97	390
3	1997-98	397
4	1998-99	397
5	1999-00	397
6	2000-01	398
7	2001-02	397
8	2002-03	400
9	2003-04	403
10	2004-05	404
11	2005-06	400
12	2006-07	401
13	2007-08	400
14	2008-09	401
15	2009-10	399
16	2010-11	401
17	2011-12	400
18	2012-13	400
19	2013-14	401
20	2014-15	399
21	2015-16	400
22	2016-17	400
23	2017-18	400
	CGR (%)	0.085

Source: Data collected and compiled from GSAMB (2018), Annual reports of regulated markets and other secondary sources.

From the year 2000-01 the numbers of APMCs were increased and indicating 0.66 per cent of compound annual growth rate as shown in Table 3. Table further reveals that, 226 taluka were covered under 191 market committees during the year 2000-01 which rose by 11 per cent and reached to 251 taluka under 224 agricultural produce market committee in the year 2017-18. It indicates the compound growth of 0.78 per cent annually. There is positive growth rate in the number of principal markets but the number of sub-market has declined.

Table 3: Growth of No. of markets and taluka covered under regulated markets in Gujarat

Sr. No.	Year	No. of APMC	No. of taluka covered	Principal market	Sub-market	Total
1	2000-01	191	226	169	229	398
2	2001-02	199	226	172	225	397
3	2002-03	201	226	180	220	400
4	2003-04	202	225	181	222	403
5	2004-05	201	225	189	215	404
6	2005-06	204	225	193	207	400
7	2006-07	209	225	198	203	401
8	2007-08	207	225	181	222	403
9	2008-09	207	225	196	204	400
10	2009-10	207	225	196	213	409
11	2010 - 11	207	226	195	206	401
12	2011-12	205	226	199	201	400
13	2012-13	205	249	199	201	400
14	2013-14	209	249	200	201	401
15	2014-15	212	249	209	190	399
16	2015-16	218	251	212	188	400
17	2016-17	224	251	218	182	400
18	2017-18	224	251	224	176	400
	CAGR (%)	0.66*	0.78*	1.35*	-1.28*	0.002

Note: * indicates significant at 1 per cent level of probability

Source: Compiled from GSAMB (2018), Anon., (2015) and AGMARKNET portal, Government of India and other secondary sources.

As shown in Table 4, there is no growth in Kutch region. It is found that there were almost stable number of regulated markets in Saurashtra region from the year 2007 to the year 2017. In North Gujarat region, Mehsana, Banaskantha and Patan districts indicate positive growth in number of regulated markets and increased by 3.69, 1.22 and 0.36 per cent, respectively. Sabarkantha district showed negative growth by reducing number of regulated markets from 14 in 2007 to the 13 in following years and for last four years, there are only seven regulated markets in the district. In the Central region of Gujarat. Chhota Udepur and Mahisagar came in to existence in 2013 as separate districts, and both showed satisfactory growth (5.62%), whereas, Dahod and Narmad also found to be growing in terms of number of regulated markets. Rest showed negative growth. It can be concluded that progress and status of number of regulated markets in Central region of Gujarat state is pleasing. In South region, only Tapi showed positive growth (2.84%). Decrease in number of regulated market is observed in the two districts Surat and Valsad and thus growth rate is negative by -5.16 and -1.97 per cent, respectively. Dang and Navasari districts have constant number of regulated markets throughout the period showed no growth.

Development of regulated markets in Gujarat

Growth in income from market fee, license fee, other income and total income of regulated markets of Gujarat from the year 2000-2001 to 2017-2018 is worked out and presented in Table 5. The income from market fee determines to a very great extent not only the pace of development of market yards, but also the efficiency of enforcement of regulatory provisions. It is revealed from table that income from market fee has grown annually by 4.89 per cent. Apart from these, there are other sources of income like interest on investment, loans and grants received, rent on properties, weigh men fees, income from deposits, income from miscellaneous charges like license transfer fee, late fee, registration fee, dispute fee etc. The growth in other income for the given period is positive and manifest 4.05 per cent. Total income have increased with the compound annual growth of around 5 per cent. Positive growth in income indicates development of regulated markets as increasing income contributes to infrastructural development and overall performance of APMCs. Khunt *et al.* (2009) ^[5] observed the similar results and concluded that share of market fee and other income in total income of the regulated market was considerably higher than the license fee.

Table 4: District wise growth in No. of regulated markets in Gujarat

Sr. No.	State/Districts	Number of regulated markets												CAGR (%)
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
	GUJARAT	207	207	207	205	205	205	206	209	212	218	224	0.65	
Kutch Region														
1	Kutch	8	8	8	8	8	8	8	8	8	8	8	8	0.00
	Total	8	8	8	8	8	8	8	8	8	8	8	8	0.00
Saurashtra Region														
1	Surendranagar	10	10	9	9	9	9	9	8	8	8	8	-2.33	
2	Rajkot	9	9	9	10	10	10	10	8	9	9	9	-0.40	
3	Jamnagar	9	9	9	9	9	9	9	6	6	6	6	-5.03	
4	Porbandar	3	3	3	2	2	2	2	2	2	2	3	-2.55	
5	Junagadh	13	13	13	13	13	13	13	9	9	9	9	-4.57	
6	Amreli	11	11	11	11	11	11	11	10	10	11	11	-0.43	
7	Bhavnagar	9	9	9	11	11	11	11	9	9	10	8	-0.52	
	Total	64	64	63	65	65	65	65	52	53	55	54	-2.18*	
8	DevbhumiDwarka	-	-	-	-	-	-	-	3	3	3	3	-	
9	Morbi	-	-	-	-	-	-	-	3	3	3	3	-	
10	Gir-Somnath	-	-	-	-	-	-	-	4	5	5	5	-	
11	Botad	-	-	-	-	-	-	-	2	2	4	4	-	
North Gujarat Region														
1	Banaskantha	12	12	12	12	12	12	12	12	13	13	14	1.22	
2	Patan	8	8	8	7	7	7	8	8	8	8	8	0.36	
3	Mehsana	8	8	8	8	8	8	8	10	10	11	11	3.69	
4	Sabarkantha	14	14	14	13	13	13	13	7	7	7	7	-8.32	
5	Gandhinagar	4	4	4	4	4	4	4	4	4	4	4	0.00	
	Total	46	46	46	44	44	44	45	41	42	43	44	-0.80**	
6	Arvalli	-	-	-	-	-	-	-	6	6	6	6	-	

Table 4: Contd....

Sr. No.	State/Districts	Number of regulated markets												CAGR (%)
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
	GUJARAT	207	207	207	205	205	205	206	209	212	218	224	0.65	
Central Gujarat Region														
1	Ahmedabad	11	11	11	8	8	8	8	8	8	9	9	-2.48	
2	Anand	8	8	8	8	8	8	8	8	8	8	8	0.00	
3	Kheda	9	9	9	10	10	10	10	8	8	8	9	-1.15	
4	PanchMahals	9	9	9	10	10	10	10	7	7	7	7	-3.33	
5	Dahod	5	5	5	6	6	6	6	7	7	7	7	4.03	
6	Vadodara	12	12	12	12	12	12	12	8	8	8	8	-5.03	
7	Narmada	4	4	4	4	4	4	4	4	4	4	5	1.02	
8	Bharuch	7	7	8	7	7	7	7	7	7	7	7	-0.36	

	Total	65	65	66	65	65	65	65	57	57	58	60	-1.41*
9	ChhotaUdepur	-	-	-	-	-	-	-	5	5	5	6	-
10	Mahisagar	-	-	-	-	-	-	-	5	5	5	6	-
South Gujarat Region													
1	Surat	13	13	13	8	8	8	8	8	8	8	8	-5.16
2	Dang	1	1	1	1	1	1	1	1	1	1	1	0.00
3	Navsari	4	4	4	4	4	4	4	4	4	4	4	0.00
4	Valsad	6	6	6	5	5	5	5	5	5	5	5	-1.97
	Total	24	24	24	18	18	18	18	18	18	18	18	-3.09**
5	Tapi	-	-	-	5	5	5	5	5	5	5	7	-

** , * indicates significant at 1 per cent and 5 per cent level of probability, respectively.

Source: Compiled from Government of Gujarat (2018), Anon., (2013, 2015) and AGMARKNET portal, Government of India and other secondary sources

Table 5: Growth in the income of regulated markets of Gujarat (₹in lakh)

Sr. No.	Year	Market fees	License fees	Other income	Total income
1	2000-01	7871.26	152.73	4566.32	12590.31
2	2001-02	9192.41	154.65	4458.07	13805.13
3	2002-03	8654.74	145.59	4447.83	13068.31
4	2003-04	6336.50	114.87	2329.92	8781.28
5	2004-05	10346.94	137.85	4472.95	14957.75
6	2005-06	11625.25	135.65	4728.62	16489.52
7	2006-07	13103.58	135.98	5176.37	18415.92
8	2007-08	13880.43	125.44	5246.07	19251.94
9	2008-09	15799.87	120.74	6051.93	21972.54
10	2009-10	15587.50	96.93	6775.15	22459.58
11	2010-11	18341.33	98.83	7043.38	25483.54
12	2011-12	16299.71	73.04	6700.56	23073.31
13	2012-13	16454.03	93.22	6063.65	22610.92
14	2013-14	17152.01	65.96	6429.39	23647.36
15	2014-15	19029.71	70.42	6804.13	25904.25
16	2015-16	15802.43	62.86	7672.27	23537.56
17	2016-17	13199.37	44.01	6109.77	19353.16
18	2017-18	15937.75	38.51	7137.67	23113.94
	CAGR (%)	4.89*	-7.15*	4.05*	4.57*

Note: Rupees (Prices) were deflated using CPI of base year 2011-12

* indicates significant at 1 per cent level of probability

Source: Data collected and compiled from GSAMB and Niyantrit Bazar Sangh, Gandhinagar.

It can be observed from the table 6 that the revenues, expenditure, surplus and reserve of the regulated markets have annual growth of 4.54, 3.82, 7.67 and 3.04 per cent, respectively. Total revenue of the markets have increased continuously throughout the given period as revealed in the table. The revenue of the markets chiefly comes from market fees, license fees, interest received, rent received and other miscellaneous sources where market fee constitute, a major source of income to the market committees. Except in the year of 2003-04 and 2016-17, continuous increase in the total revenue earned can be observed. Total expenditure of regulated markets of Gujarat for the given period also grown annually by 3.82 per cent. Total surplus indicates the excess

of income over expenditure during the stated period. The compound annual growth rate is very impressive i.e. 7.67 per cent in case of surplus of regulated markets of Gujarat. It indicates that there is continuous rise in leftover revenue over the expenditures incurred in the markets. Total reserve fund is increasing year by year and has touched more than ₹800 crore from the year 2014-15 onwards as shown in the table. It is evident from these figures that there is remarkable development of regulated markets of Gujarat. As highlighted by Dey (2014) ^[4], the investment in marketing infrastructure may be increased with the internal funding and other corpus fund provided by marketing board and Ministry of Agriculture.

Table 6: Financial growth in the regulated markets of Gujarat (₹in lakh)

Sr. No.	Year	Total revenue	Total Expenditure	Total surplus	Total reserve
1	2000-01	12590.31	10362.30	2470.13	48580.47
2	2001-02	13805.13	11835.35	1969.78	48833.66
3	2002-03	13248.17	12435.39	812.78	49837.61
4	2003-04	8817.31	6677.28	2355.11	50107.14
5	2004-05	14957.75	12678.47	2279.28	50961.45
6	2005-06	16489.52	13877.30	2612.22	53411.85
7	2006-07	18415.92	15014.86	3401.07	69069.79
8	2007-08	19251.94	15657.99	3593.94	55595.38
9	2008-09	21972.54	15339.19	6634.29	58504.12
10	2009-10	22459.58	15905.52	6554.06	61891.20
11	2010-11	25483.54	22185.99	8327.24	65820.79
12	2011-12	23073.31	16309.10	6764.21	68455.07

13	2012-13	22610.92	16095.40	6068.71	74495.80
14	2013-14	23647.36	16912.45	6862.27	65726.57
15	2014-15	25904.25	18395.22	5823.25	80328.68
16	2015-16	23537.56	20036.02	3501.23	78329.38
17	2016-17	19353.16	15118.29	4201.76	68963.33
18	2017-18	23113.94	18841.54	4326.18	75968.43
CAGR (%)		4.54*	3.82*	7.67*	3.04*

Note: Rupees (Prices) were deflated using CPI of base year 2011-12

* indicates significant at 1 per cent level of probability

Source: Data collected and compiled from GSAMB and Niyantrit Bazar Sangh, Gandhinagar.

Gujarat state is the major producer of tobacco, groundnut and cotton in India. Other major produced agricultural crops are rice, wheat, jowar, bajra, maize, tur, gram, sugar cane and dates. Major fruit crops produced in the state are banana, mango, citrus and sapota, while onion, garlic, potato, brinjal, tomato, okra and cucurbits are the major vegetables produced in Gujarat state. Compound annual growth rate in total arrivals and total sales of commodities in regulated markets of Gujarat was worked out for the period of 2000-01 to 2017-18 and presented in Table 7. It is revealed from the table that there is 4.68 per cent growth in the quantity of total arrivals of

commodities in regulated markets of Gujarat. The compound annual growth rate in total deflated values of marketed commodities in regulated market was also calculated and presented in the given table. The table indicates that there is 3.87 per cent growth in the value of total sales of agricultural commodities in the regulated markets of Gujarat.

Compound annual growth rate in arrivals of different categories of commodities in regulated markets of Gujarat for the period of last ten years i.e. 2008-09 to 2017-18 is calculated and result is depicted in Table 8.

Table 7: Growth in total arrival and sales in regulated markets of Gujarat

Sr. No.	Year	Total Arrival (lakh qtls.)	Total Sales (₹ in Crore)
1	2000-01	701.18	16346.19
2	2001-02	856.98	14514.79
3	2002-03	725.62	13816.90
4	2003-04	507.64	10869.26
5	2004-05	1386.65	15407.99
6	2005-06	1258.97	17055.54
7	2006-07	1152.53	18854.15
8	2007-08	1144.85	18991.80
9	2008-09	1687.52	22859.15
10	2009-10	2076.77	22832.47
11	2010-11	2964.73	23872.03
12	2011-12	1205.47	23604.39
13	2012-13	1141.64	23104.70
14	2013-14	1137.23	29755.02
15	2014-15	1501.90	28554.00
16	2015-16	1671.13	22217.44
17	2016-17	1659.72	20065.56
18	2017-18	1321.58	22307.42
CAGR (%)		4.68*	3.87*

Note: Rupees (Prices) were deflated using CPI of base year 2011-12

* indicates significant at 1 per cent level of probability

Source: Data collected and compiled from GSAMB (2011) and Niyantrit Bazar Sangh, Gandhinagar (2018).

The categories are identifies as fiber, cereals, pulses, oilseeds, spices, fruits, vegetables and other commodities. It is revealed from the table that except oilseeds and vegetables, all other categories of commodities showed negative annual growth rate in their market arrivals. From the categorized commodities, highest and positive annual growth is recorded in oilseeds with 13.26 per cent, followed by vegetables with 6.05 per cent. Oilseeds are typically seen as the primary cash crop in Gujarat. The diverse agro-ecological conditions in the state of Gujarat are favourable for growing oilseeds. A wide range of oilseed crops is grown in different agro-climatic regions of the state. Among the oilseeds, groundnut is the

most important crop produced in the state. The state is the largest producer of groundnut and castor and the second largest producer of sesame in the country. The state has increased the oilseeds production mainly through increase in yield since a long time as stated by Swain (2013) [6]. This can be the probable reason for growing market arrivals of oilseeds in the regulated markets of Gujarat.

Financial assistance received by regulated markets of Gujarat is presented in Table 9. As indicated in table, number of APMCs received financial assistance is varying from 6 to 113 during the given period of time with the compound annual growth rate of 27 per cent.

Table 8: Growth in arrivals of different categories of commodities in regulated markets of Gujarat

Sr. No.	Year	Categories of commodities (Arrivals in lakh quintal)								Total arrivals
		Fiber	Cereals	Pulses	Oilseeds	Spices	Fruits	Vegetables	Other commodities	
1	2008-09	343.91	467.74	174.11	114.29	113.40	146.73	307.20	20.14	1687.52
2	2009-10	389.25	638.33	232.69	130.05	134.87	191.52	333.77	26.29	2076.77
3	2010-11	577.94	1160.76	211.28	198.98	289.36	98.70	385.79	41.92	2964.73

4	2011-12	137.41	301.65	33.68	196.91	66.83	55.45	404.28	9.26	1205.47
5	2012-13	147.61	262.84	25.93	184.48	52.17	57.78	391.22	19.61	1141.64
6	2013-14	153.62	258.69	26.18	250.53	28.91	59.97	352.94	6.39	1137.23
7	2014-15	251.18	321.26	38.00	269.71	73.22	58.92	481.80	7.81	1501.90
8	2015-16	144.52	314.17	26.53	202.82	64.54	65.50	838.28	14.77	1671.13
9	2016-17	119.25	329.22	80.86	579.97	82.61	30.69	415.64	21.48	1659.72
10	2017-18	119.21	260.64	45.49	301.62	73.31	43.65	471.02	6.67	1321.61
	CAGR (%)	-12.96***	-9.38**	-16.36*	13.26**	-8.79	-14.35***	6.05**	-10.45	-3.56

Note: ***, **, * indicates significant at 1, 5 and 10 per cent level of probability

Source: Data collected and compiled from Gujarat State Agricultural Board (2011), Niyantrit Bazar Sangh, Gandhinagar (2018) and other secondary sources

During the year 2010-11, 113 APMCs received financial assistance which is highest. Loan received by APMCs showed negative growth rate (-2.19%). During the year 2000-01, the amount of loan received was ₹18.92 lakh, which first increased and then started declining and reached to ₹12.00

lakh in the year 2012-13. Table also indicates the remarkable growth of other financial aid received by the APMCs which is more than 98 per cent. Thus, it is evident from the table that APMCs of Gujarat state has availed the schemes and received notable quantum of fund outlay.

Table 9: Growth in financial assistance received by regulated markets of Gujarat

Sr. No.	Year	No. of APMCs	Loan received (₹ in Lakh)	Other Financial aid (₹ in Lakh)	Total Financial aid (₹ in Lakh)
1	2000-01	8	18.92	5.71	24.63
2	2001-02	6	24.08	3.65	27.73
3	2002-03	8	33.00	4.00	37.00
4	2003-04	8	31.80	2.00	33.80
5	2004-05	6	12.00	4.00	16.00
6	2005-06	15	61.55	1504.00	1565.55
7	2006-07	16	50.00	665.60	715.60
8	2007-08	13	17.00	795.36	812.36
9	2008-09	68	22.00	2565.00	2587.00
10	2009-10	66	30.00	2620.00	2650.00
11	2010-11	113	0.00	3290.00	3290.00
12	2011-12	87	0.00	3953.89	3953.89
13	2012-13	33	12.00	740.70	752.70
14	2013-14	NA	NA	NA	NA
15	2014-15	NA	NA	NA	8305.66
16	2015-16	NA	NA	NA	7006.77
17	2016-17	NA	NA	NA	7649.55
18	2017-18	NA	NA	NA	7356.84
	CAGR (%)	27.00*	-2.19	98.52*	50.33

Note: NA- Not available, * indicates significant at 1 per cent level of probability

Source: Data compiled from GSAMB (2011) and Niyantrit Bazar Sangh, Gandhinagar (2018).

Comparative status of regulated markets reporting at AGMARKNET and live on e-NAM is depicted in Table 10 which shows the status of 14 states. It is apparent from the table that Maharashtra is the first and Gujarat is the second leading state with 379 and 305 markets reporting at AGMARKNET portal, respectively. As shown in table, there are 2477 markets reporting at AGMARKNET portal, out of which 12.31 per cent belongs to Gujarat state. From the above

discussion it can be concluded that Gujarat stands in a very resilient position compare to other states of the country in regard to number of markets reporting at AGMARKNET portal. As revealed, from 40 markets live on e-NAM it reached to 79 markets reporting at AGMARKNET. According to Bisen and Kumar (2018) [3] Andhra Pradesh, Gujarat, Maharashtra and Telangana were among the early adopters of e-NAM in India.

Table 10: Comparative status of regulated markets on AGMARKNET and live on e-NAM

Sr. No.	Name of States	No. of markets reporting at Agmarknet	Markets live on e-NAM (2017)	Markets live on e-NAM (March 2019)	% increase in markets live on e-NAM
1	Maharashtra	379	45 (11.87)	60 (15.83)	3.96
2	Gujarat	305	40 (13.11)	79 (25.90)	12.79
3	Madhya Pradesh	293	58 (19.80)	58 (20)	0.00
4	Uttar Pradesh	257	100 (38.91)	100 (38.91)	0.00
5	Tamil Nadu	201	15 (7.46)	23 (11.44)	3.98
6	Andhra Pradesh	195	22 (11.28)	22 (11.28)	0.00
7	Chhattisgarh	189	14 (7.41)	14 (7.41)	0.00
8	Telangana	167	44 (26.35)	47 (28.14)	1.80
9	Rajasthan	156	25 (16.03)	25 (16.03)	0.00
10	Haryana	135	54 (40.00)	54 (40.00)	0.00
11	Odisha	106	10 (9.43)	10 (9.43)	0.00
12	Himachal Pradesh	41	19 (46.34)	19 (46.34)	0.00
13	Jharkhand	28	19 (67.86)	19 (67.86)	0.00

14	Uttarakhand	25	5 (20)	16 (64.00)	44.00
	Total	2477	470	546	3.07

Note: Figures in parentheses indicate per cent share to the total markets registered on AGMARKNET

Source: Compiled from AGMARKNET and e-NAM portal, as on 2018.

Overall development of regulated markets in Gujarat state is highlighted in Table 11. There were only 124 market committees in the year 1975-76 which increased and reached to 218 APMCs in year 2015-16. The total number of regulated markets increased by 166.67 percent over a period of time. There were only 124 taluka covered under regulated market in year 1975-76, which reached to 251 taluka. Data of number of traders is available up to year 2005-06. Total number of traders were 107865 in 1975-76 which increased by 5.51 per cent in year 2005-06. In case of cooperative societies, it increased by 10.13 per cent. Similarly, total arrivals also increased to more than 300 per cent. Total arrivals found to be increasing by 462.52(11.79%), 605.24(46.29%), 1258.97(204.29%) and 1671.13(303.91%)

lakh quintals during the reporting decades. The findings of the table are in similar line with the results obtained by Khunt *et al.* (2009) [5]. It can be observed from the table that there is notable per cent change in number of market committees and quantity of arrivals in 2005-06 over 1995-96. The findings are validated by Behra (2015) [2]. He studied status of Status of agricultural development in Gujarat and India since 2000. He quoted that Gujarat has been among the fastest growing states even in the past. Despite poor rainfall, it has made strides in agriculture. Improved market access through agricultural produce marketing committee was one of the major policy and programs of vibrant Gujarat. These policy performances are making Gujarat successful in agriculture and role model for the other states.

Table 11: Overall development of regulated markets in Gujarat

Sr. No.	Particular	1975-76	1985-86	1995-96	2005-06	2015-16	2017-18
1	Total No. of market committees	124	149 (20.16)	168 (35.48)	204 (64.52)	218 (75.81)	224 (80.65)
2	Total No. of regulated market	150	313 (108.67)	396 (164.00)	400 (166.67)	400 (166.67)	400 (166.67)
3	Taluka covered	124	230 (85.48)	230 (85.48)	225 (81.45)	251 (102.42)	251 (102.42)
Number of license holders							
4	a) Traders	107865	110931 (2.84)	139019 (28.88)	113806 (5.51)	NA	NA
	b) Coop. Societies	2260	2179 (-3.58)	2210 (-2.21)	3037 (34.38)	2489 (10.13)	2156 (-0.18)
5	Total arrivals (Lakh qtl)	413.74	462.52 (11.79)	605.24 (46.29)	1258.97 (204.29)	1671.13 (303.91)	1321.58 (219.42)

Note: Figures in parentheses show the percent change over the year 1975-76, NA- Not available

Source: Compiled from reports of GSAMB and other secondary sources.

Conclusion

In nutshell, growth of regulated agricultural markets in Gujarat was found positive. Number of regulated market in the Gujarat is unevenly distributed at district and region level and the growth of market in all the districts is not uniform. It can be concluded that total income of regulated market is growing positively compared to total expenditure and contributing in the development of regulated markets through increasing surplus fund and their total reserve. Positive growth in the arrivals and sales value of commodities signifies the importance of regulated markets in marketing of agricultural produces. With the finding of the study, it can be concluded that there is noteworthy growth and development of regulated markets in Gujarat.

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