

PATTERNS OF FIXED INVESTMENT IN SMALL SCALE INDUSTRIAL UNITS OF PUNJAB: AN EMPIRICAL STUDY

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Abstract: The present study dwells on examining the patterns of fixed investment for small scale industrial units of Punjab. For the purpose, distribution of fixed investment made in these industries for the period ranging between 2005-06 and 2013-14 has been examined. The results of the analysis depicted that highest mean has been recorded in Ludhiana (2665.17), while lowest average score in terms of fixed investment made in the units of this district has been recorded in Tarn Taran district (16.92). The study exhibited that compound annual growth rate of the investment made in units of small scale industries in Punjab during the relevant period has been recorded highest in the units of Nawanshahr district. While, among the various small scale industrial units in the state, E1 (1427.70) recorded highest mean score signifying that between 2005-06 and 2013-14, highest amount of fixed investment has been made in this industry. Further, it has been observed that investment in the units of E3 has increased at highest rate of Compound annual growth rate (CAGR) of 98.55 percent, from Rs. 714.7 crore 2005-06 to Rs. 2218.66 crore in 2013-14. The analysis also revealed that highest expected rise for investment is expected to arise in the units of Nawanshahr district, where the fixed investment made is expected to increase from Rs. 46.73 crore (year=2013-14) to Rs.110.24 crore (year=2020-21). While the investment to be made in Ferozepur district is expected to decline significantly by the year 2020-21. The least increase in the expected fixed investment has been witnessed in E29 where it has been projected to increase from Rs. 11.48 crore of investment made in 2013-14 to Rs. 11.69 crore amount of investment only. Among different types of small scale industries, it has been revealed that investment in nearly all the industries fixed investment is expected to increase by the year 2020-21 except in E27 where the investment is predicted to diminish from Rs.123.15 crore made in 2013-14 to Rs.93.52 crore expected to be made in the year 2020-21.

Key Words: Fixed Investment, Prospects, Small scale industries.

Section I-Introduction:

Industrialization has been major focus of the developing countries. It is considered as a strong weapon to fight against poverty resulted from lower levels of employment. Small and medium enterprises which form substantial part of the industrial base have contributed a major share to the GDP of our country (Acs and Varga, 2005). Investment constitutes an important infuser for growth and development of these industries. Thereby, boosting investment for the setting up of more and more of these industries and maintaining good

health of the existing industries has been main impetus. To boost investment in industries, efforts are made by central and state governments to a great extent by offering a number of incentives. The incentives are majorly based on defined limits of fixed investments made in the industries. For instance, in 2013, a scheme named 'Earn your Incentive Policy' was started by the government of Punjab state, through which the small and medium enterprises were offered incentives equaling to 50 percent on the capital investment made between Rs. 1 crore and Rs. 10 crores. Then, in the year 2015, value added tax (VAT) and Central Sales Tax (CST) incentives were also provided to the small scale industrial units of Punjab. This scheme was promised for the investment made in the industries between Rs. 1 crore and 10 crores. This shows the consideration being given to the extent of investment made in the small scale industries for boosting the development of these industries and thereby providing benefits of the development of these industries to the industrialists by way of incentives.

Section II-Objectives of the Study:

The present study covered small scale industrial units of Punjab. The main objective of the study is to examine the prospects of small scale industrial units of Punjab based upon the amount of fixed investment made in these industries covering period 2005-06 to 2013-14.

Section III-Data Base, Sample Size and Research Methodology:

The study aims at determination of distribution of fixed investment made in the small scale industries of Punjab for the period spanning from 2005-06 to 2013-14. A comprehensive study for examining the patterns of fixed investment made in units of different districts (n=22) of the state and in various types of industries (n=34) in the state has been made. For the purpose, mean, standard deviation, coefficient of variation, Compound Annual Growth Rate (hereafter CAGR), t-test and trend Coefficients are used to make analysis and reach conclusions. A number of abbreviations have been used for denoting various types of small scale industries where E1 denotes Food products, E2 denotes Tobacco Products, E3 Denotes Textiles, E4 denotes Hosiery & Garments, E5 denotes Leather & Leather Products, E6 denotes Wood products, E7 denotes Paper & Paper Products, E8 denotes Printing, E9 denotes Coal, Coke & Petroleum Products, E10 denotes Chemical & Chemical Products, E11 denotes Rubber & Plastic Products, E12 denotes Non-metallic Mineral Products, E13 denotes Basic Metal Products, E14 denotes Metal Products, E15 denotes Machinery & Equipment N.E.C., E16 denotes Office Accounting & Computer Machinery, E17 denotes Electrical Mach. & Apparatus N.E.C., E18 denotes Radio, Television and Communication Equipment, E19 denotes Medical, Precision & Watches, E20 denotes Motor Vehicles, Trailers & Parts, E21 denotes Other Transport Equipment, E22 denotes Furniture, E23 denotes recycling, E24 denotes Elec., Gas, Steam & Hot Water Supply, E25 denotes Collection, Purification & Distribution of Water, E26 denotes Maintenance & Repair of Motor Vehicles NIC 1998, E27 denotes Maintenance & Repair of Household Goods, E28 denotes Cold Storage, E29 denotes Post & Telecomm. NIC 1998, E30 denotes Computer & related Activities, E31 denotes Other Business Activities, E32 denotes Health & Social Works, E33 denotes Recreational & Social Activities, E34 denotes Other Service Activities. For the given objective, required secondary data was collected from sources Directorate of Industries, and from the Statistical abstracts of Punjab for the period

ranging from 2003-04 to 2013-14. The paper is organized into five sections. Section I outlines the introduction about the small scale industrial units of Punjab and about the fixed investment variable used for assessing the prospects of these industries. Section II states the main objectives of the present study. Section III explains the research methodology of the study including sources of data, size of sample and different statistical tools utilized for carrying out analysis of the variable under study. Section IV outlines the empirical results obtained from the analysis of variable under study. Section V exhibit the findings and conclusions based on the results of the analysis.

Section IV-Empirical Results:

Table 4.1 depicted district wise distribution of fixed investment in the small scale industries of Punjab for the period ranging from 2005-06 to 2013-14. The highest mean has been recorded in Ludhiana(2665.17), followed by Jalandhar(903.89), Amritsar(637.60), S.A.S. Nagar (627.96), Patiala (579.34), Sangrur (403.20), Fatehgarh Sahib (326.88), Gurdaspur (257.88), Ferozepur(217.20), Bathinda(202.46), Moga(199.06), Fazilka(183.20), Hoshiarpur (176.64), Kapurthala (130.56), Ropar (124.10), Muktsar (104.49), Faridkot (88.62), Barnala (73.10), Mansa (53.05) and Nawanshahr(49.41). During the same period, lowest average score in terms of fixed investment made in the units of this district has been recorded in Tarn Taran district (16.92). Coefficient of variation which is used to describe the dispersion of the variable over the respective period has been recorded highest in S.A.S. Nagar (68.04 percent) followed by Ludhiana(61.57 percent), Fazilka(57.81 percent) Ropar(46.90 percent), Nawanshahr(46.73 percent), Jalandhar (44.84 percent), Tarn Taran(38 percent), Ferozepur(31.61 percent), Mansa(31.57 percent), Fatehgarh Sahib(30.60 percent), Gurdaspur(30.12 percent), Kapurthala(27.23 percent), Moga(22.99 percent), Sangrur(22.02 percent), Barnala(20.36 percent), Hoshiarpur (18.50 percent) and Bathinda(16.27 percent). On the other hand, relatively lower variation in the data has been found in Patiala (15.74 percent) followed by Amritsar (12.92 percent) and Muktsar (9.88 percent). Faridkot (9.54 percent) recorded the lowest coefficient of variation in the data related to fixed investment among other small scale industrial units in various districts of Punjab. Thus, maximum variation is found in the data of S.A.S. Nagar and the least degree of dispersion is found in Faridkot district indicating that the data is more stable. Table 4.1 exhibited compounded annual growth rate of the investment made for the units of small scale industries in Punjab during the relevant period. It revealed that the fixed investment has been recorded highest in the units of Nawanshahr where it has increased from Rs. 31.54 crore made in 2005-06 to 48.61 crore in 2013-14 at the highest rate of CAGR of 23.54 percent which came out to be significant (t-value=2.23 at five percent level) and with lowest growth rate in investment in the units of Faridkot district where the investment has increased to Rs. 125.94 crore in 2020-21 from Rs. 105.91 crore made in 2005-06 at CAGR of only 3.22 percent(t-value=7.51). Alternatively, Ferozepur where fixed investment made in units of the district has declined significantly over the years from 297.12 crore in 2005-06 to 105.51 crore in 2013-14 as is indicated by its negative CAGR of -24.74 percent (t-value -2.60). Trend equation in Table 4.1 shows that the fixed investment that is expected to be made in 2020-21 in various units of small scale industries of Punjab. It has been revealed that highest rise is expected to occur in Nawanshahr where it is

expected to increase from Rs. 46.73 crore made in 2013-14 to Rs.110.24 crore expected to be made in 2020-21. This is expected to



TABLE 4.1: FIXED INVESTMENT IN SMALL SCALE INDUSTRIAL UNITS OF PUNJAB- DISTRICT WISE (Rs. CRORE)

District Year	Amritsar	Barnala	Bathinda	Faridkot	Fatehgarh Sahib	Fazilka	Ferozepur	Gurdaspur	Hoshiarpur	Jalandhar	Kapurthala
2005-06	694.74	Nil	171.86	79.18	241.25	Nil	297.12	169.96	140.02	520.15	100.66
2006-07	695.32	58.46	169.96	82.28	234.44	Nil	223.6	169.25	139.61	548.31	96.89
2007-08	685.44	59.46	172.76	82.25	244.48	Nil	228.44	186.41	143.98	590.08	98.25
2008-09	712.68	62.39	181.28	84.37	250.99	Nil	233.44	193.28	157.59	527.97	104.3
2009-10	718.64	64.97	189.66	87.51	289.24	Nil	242.41	275.52	177.95	765.52	116.74
2010-11	537.85	70.58	211.95	88.83	339.25	Nil	255.43	305.36	195.82	1004.22	137.64
2011-12	508.31	80.14	223.69	89.5	384.28	0	268.59	326.86	198.66	1225.01	157.46
2012-13	557.6	92.84	245.71	97.75	463.64	177.83	100.27	338.88	210.64	1401.13	171.94
2013-14	627.83	95.99	255.24	105.91	494.38	188.56	105.51	355.41	225.52	1552.62	191.14
Mean	637.60	73.10	202.46	88.62	326.88	183.20	217.20	257.88	176.64	903.89	130.56
Std. dev.	82.35	14.88	32.95	8.46	100.03	105.90	68.65	77.67	32.68	405.26	35.55
CV	12.92	20.36	16.27	9.54	30.60	57.81	31.61	30.12	18.50	44.84	27.23
CAGR	-3.19	8.09	5.76	3.22	10.74	6.03	-24.74	-0.42	-0.29	5.41	-3.75
t Value	-2.33	9.70	10.12	7.51	8.95	1.75	-2.60	9.17	13.45	8.71	8.85
Trend Coefficients											
a	738.43	46.93	144.68	74.26	154.55	167.10	303.38	120.91	118.09	201.02	68.99
b	-20.17	5.81	11.56	2.87	34.47	10.73	-17.24	27.39	11.71	140.57	12.31
Predictions											
2020-21	375.46	151.51	352.67	125.94	774.94	360.24	-6.87	614.00	328.89	2731.35	290.64

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District Year	Ludhiana	Mansa	Moga	Muktsar	Nawanshahr	Patiala	Pathankot	Roop Nagar	S.A.S. Nagar	Sangrur	Tarn Taran
2005-06	1265.18	53.65	145.76	96.36	31.54	508.54	Nil	276.84	Nil	312.98	Nil
2006-07	1327.95	48.38	151.08	96.7	33.53	514.9	Nil	97.3	527.16	272.55	15.27
2007-08	1399.89	43.1	161.71	97.07	33.64	492.38	Nil	98.42	610.49	340.39	15.26
2008-09	1443.42	43.36	168.94	99.51	33.63	508.95	Nil	98.77	681.62	368.29	17.48

2009-10	1753.96	43.49	193	99.64	38.22	537.17	Nil	97.65	815.02	390.94	17.49
2010-11	2730.61	41.11	215.66	100.71	85.58	578.98	Nil	101.43	46.03	437.92	9.28
2011-12	3787.79	41.69	234.04	107.69	91.37	636.74	Nil	102.48	47.4	470.65	10.17
2012-13	4709.69	75.67	251.26	117.7	48.59	694	Nil	116.34	1067.12	499.88	20.57
2013-14	5568.07	87.02	270.08	125.05	48.61	742.42	Nil	127.65	1228.87	535.21	29.8
Mean	2665.17	53.05	199.06	104.49	49.41	579.34	0.00	124.10	627.96	403.20	16.92
Std. dev.	1641.02	16.75	45.76	10.32	23.09	91.17	0.00	58.21	427.28	88.78	6.43
CV	61.57	31.57	22.99	9.88	46.73	15.74	0.00	46.90	68.04	22.02	38.00
CAGR	22.86	5.40	8.65	3.13	23.54	5.22	0.00	-4.01	-2.53	8.31	4.77
t Value	8.90	1.61	21.08	5.34	2.23	6.39	0.00	-0.93	-0.12	10.11	0.79
Trend Coefficients											
a	-119.81	35.53	116.63	87.81	26.00	426.71	0	168.169	385.635	244.77	11.65
b	557.00	3.51	16.49	3.34	4.68	30.53	0	-8.814	53.835	31.68	1.16
Predictions											
2020-21	9906.12	98.62	413.39	147.88	110.24	976.18	0.00	9.52	1354.67	815.01	32.53

Source: Directorate of Industries and Commerce, Punjab

be followed by Fazilka(Rs.360.24 crore), Ludhiana(Rs.9906.12 crore), Barnala(Rs.151.51 crore), Fatehgarh Sahib (Rs.774.94 crore), Moga(Rs.413.39 crore), Sangrur(Rs.815.01 crore), Hoshiarpur(Rs.328.89 crore), Bathinda(Rs.352.67 crore), Faridkot(Rs.125.94 crore), Muktsar(Rs.147.88 crore), S.A.S. Nagar(Rs.1354.67 crore). Thus, least increase in investment is expected to be made in Tarn Taran in 2020-21, where it has been predicted that it will increase from Rs. 29.8 crore made in 2013-14 to Rs. 32.53 crore in 2020-21. On the other hand, investment to be made in Ferozepur district is expected to decline significantly by the year 2020-21. Table 4.2 highlights fixed investment made in the units of various small scale industries in Punjab from the period 2005-06 to 2013-14. E1 (1427.70) recorded highest mean score signifying that highest investment has been made in this industry of Punjab for the respective period. This was followed by E3 (1384.67), E14 (790.38), E13 (765.62), E15 (721.97), E21 (418.47), E11 (297.48), E10 (295.10), E4 (231.46), E9 (227.79), E7 (167.81), E22 (166.78), E20 (157.34), E28 (155.13), E12 (155.11), E17 (149.03), E6 (121.15), E27 (115.52), E5 (110.91), E8 (71.85), E26 (69.34), E30 (38.29), E31 (30.22), E18 (20.28), E19 (18.39), E34 (14.82), E23 (12.81), with E16 (6.00), E24 (5.65), E2 (2.39), E29 (1.67), E32 (1.12), E33 (1.05), E25 (0.26) having the lower mean scores, signifying that less amount fixed investment has been made in the units of these industries during the relevant period. Coefficient of variation which is used to depict dispersion of the variable from the mean is found highest in E9 (276.94 percent) followed by E29 (220.39 percent), E24 (207.13 percent), E33 (141.73 percent), E34 (107.42 percent), E16 (73.18 percent), E21 (60.89 percent), E26 (60.72 percent), E30 (59.81 percent), E4 (53.99 percent), E15 (50.69 percent), E14(49.11 percent), E8 (47.85 percent), E7 (42.33 percent), E23 (41.40 percent), E31 (40.76 percent), E17 (40.22 percent), E20 (36.29 percent), E13 (35.30 percent), E12 (35.29 percent), E3 (35.03 percent), E11 (34.35 percent), E19 (33.82 percent), E6 (28.72 percent), E5 (24.06 percent), E1 (23.89 percent), E10 (23.16 percent), E22 (23.04 percent), E32 (11.76 percent). On the other hand, a less amount of variation has been found in E2 (10.43 percent), E18 (10.19 percent), E27 (8.37 percent), E28 (2.15 percent). Table 4.2 revealed that fixed investment in the units of E3 has increased from Rs. 714.7 crore 2005-06 to Rs. 2218.66 crore 2013-14 at the highest rate of CAGR of 98.55 percent indicating growth of investment at a higher pace in this industry, Moreover, it has been found to be significant at five percent level (t-value=11.47). On the other hand, lowest growth rate has been found in E28 where investment has grown at CAGR of 0.32 percent

Table 4.2: FIXED INVESTMENT IN SMALL SCALE INDUSTRIAL UNITS OF PUNJAB - INDUSTRY WISE (Rs. CRORE)

Industry Year	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11
2005-06	1125.96	2.2	714.7	135.19	97.84	90.23	113.07	41.95	18.35	229.76	204.4
2006-07	1106.86	2.21	1049.28	137.98	100.25	89.99	122.28	43.78	16.54	227.91	206.43
2007-08	1202.83	2.3	1076.85	148.82	88.21	94.55	121.18	44.77	16.36	234.7	220.85
2008-09	1257.88	2.22	1129.22	156.09	79.5	99.42	120.58	42.51	16.36	259.07	234.36
2009-10	1416.66	2.21	1251.74	160.3	82.99	107	134.67	52.28	16.36	268.48	246.44
2010-11	1198.25	2.72	1364.05	192.22	122.49	120.83	155.05	81.51	17.13	310.99	295.03
2011-12	1671.97	2.72	1665.83	280.51	137.27	135.52	184.16	94.11	19.05	337.51	363.34
2012-13	1809.84	2.72	1991.72	406.69	144.64	170.74	233.03	121.62	1910	366.88	428.2
2013-14	2059.02	2.21	2218.66	465.36	145	182.09	326.28	124.11	19.92	420.56	478.25
Mean	1427.70	2.39	1384.67	231.46	110.91	121.15	167.81	71.85	227.79	295.10	297.48
Std. dev.	341.03	0.25	485.10	124.97	26.68	34.80	71.04	34.38	630.83	68.36	102.18
CV	23.89	10.43	35.03	53.99	24.06	28.72	42.33	47.85	276.94	23.16	34.35
CAGR	7.79	1.99	98.55	17.47	6.88	9.86	12.87	17.24	28.24	8.25	12.03
t VALUE	5.80	1.66	11.47	6.55	3.05	8.96	6.05	7.35	1.28	11.52	9.63
a	867.71	2.15	530.01	29.27	72.33	61.73	55.68	13.53	-246.62	175.30	121.95
b	112.00	0.05	170.93	40.44	7.72	11.88	22.43	11.66	94.88	23.96	35.11
PREDICTIONS											
2020-21	2883.66	3.01	3606.79	757.17	211.20	275.64	459.33	223.48	1461.23	606.59	753.86

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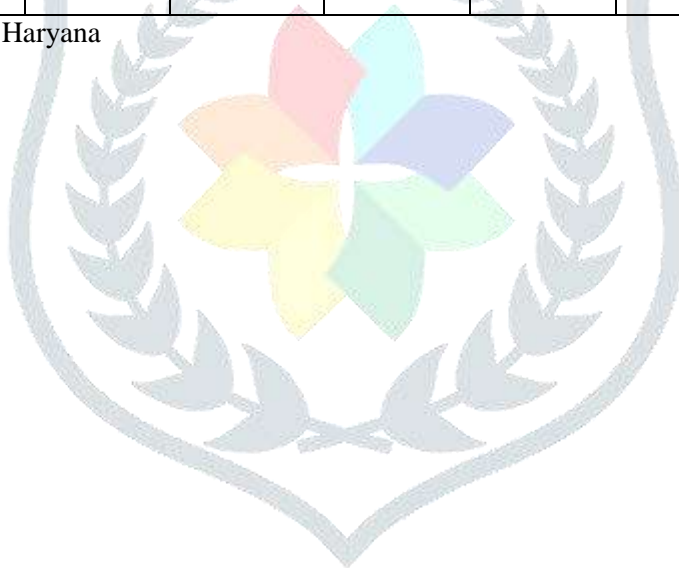
Industry Year	E12	E13	E14	E15	E16	E17	E18	E19	E20	E21	E22
2005-06	112.36	520.14	409.93	371.64	2.31	92.63	17.51	11.69	108.59	183.48	134.32
2006-07	113.84	526.23	422.56	401.36	2.29	92.09	19.2	11.94	108.54	201.18	119.67
2007-08	122.57	548.81	478.88	429.42	2.29	94.47	18.99	12.28	107.84	210.94	140.3
2008-09	124.18	558.47	482.57	436.13	2.29	106.82	19.11	11.53	104.62	219.58	137.78
2009-10	130.21	652.15	672.13	534.62	2.33	134.15	19.83	22.91	136.15	328.96	164.95
2010-11	143.91	800.64	866.68	842.59	10.05	166.83	20.29	23.08	173.95	421.96	167.92
2011-12	162.59	945.35	1096.44	998.53	10.81	178.49	20.4	23.56	199.57	606.23	196.5
2012-13	210.65	1123.12	1267.94	1163.19	10.81	224.49	23.45	23.63	223.46	749.68	204.17
2013-14	275.66	1215.66	1416.33	1320.23	10.81	251.34	23.75	24.85	253.37	844.26	235.42
Mean	155.11	765.62	790.38	721.97	6.00	149.03	20.28	18.39	157.34	418.47	166.78
Std. dev.	54.73	270.24	388.13	365.98	4.39	59.95	2.07	6.22	57.11	254.79	38.43
CV	35.29	35.30	49.11	50.69	73.18	40.22	10.19	33.82	36.29	60.89	23.04
CAGR	10.79	12.60	19.12	19.34	29.29	15.00	3.43	12.49	12.93	23.81	8.18
t VALUE	6.10	9.59	12.44	10.04	4.73	11.81	6.69	5.05	7.63	11.17	8.69
a	68.16	298.29	108.64	86.59	-1.03	44.03	16.81	8.23	59.29	-21.66	100.08
b	17.39	93.47	136.35	127.08	1.41	21.00	0.70	2.03	19.61	88.03	13.34
PREDICTIONS											
2020-21	381.18	1980.69	2562.92	2373.94	24.28	422.06	29.32	44.77	412.29	1562.81	340.22

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Industry Year	E23	E24	E25	E26	E27	E28	E29	E30	E31	E32	E33	E34
2005-06	9.49	1.47	NIL	39.26	129.17	150.42	0.29	14.21	20.48	1.18	0.1	1.47
2006-07	8.66	0.01	NIL	43.43	121.31	150.38	0.29	17.02	19.76	1.04	0.23	18.41
2007-08	7.76	0.01	NIL	35.83	119.92	155.09	0.29	20.79	20.51	1.05	0.66	3.61
2008-09	7.76	1.82	NIL	38.64	119.21	157.67	0.29	21.96	20.76	1.04	0.66	2.16
2009-10	8.16	1.83	NIL	38.04	110.32	158.66	0.84	30.35	23.55	1.19	0.66	3.6

2010-11	17.93	1.83	NIL	60.62	101.75	159.68	0.29	45.32	30.43	1.43	1.09	10.16
2011-12	18.05	3.54	0.04	98.56	100.74	155.14	1	50.55	40.36	1.04	0.76	14.59
2012-13	18.71	36.7	0.17	130.05	114.1	155.97	0.29	68.64	43.55	1.05	0.37	48.79
2013-14	18.78	3.68	0.57	139.65	123.15	153.13	11.48	75.8	52.6	1.05	4.96	30.63
Mean	12.81	5.65	0.26	69.34	115.52	155.13	1.67	38.29	30.22	1.12	1.05	14.82
Std. dev.	5.30	11.71	0.28	42.10	9.67	3.34	3.69	22.90	12.32	0.13	1.49	15.92
CV	41.40	207.13	106.24	60.72	8.37	2.15	220.39	59.81	40.76	11.76	141.73	107.42
CAGR	13.44	94.90	277.49	19.80	-1.46	0.32	33.18	24.99	14.03	-0.23	34.60	38.20
t VALUE	3.81	2.38	19.41	4.99	-1.41	1.19	2.17	18.96	7.37	-0.15	3.06	2.76
a	4.64	-4.84	-0.27	1.94	123.98	152.65	-2.18	-2.05	9.45	1.13	-0.65	-4.99
b	1.64	2.10	0.27	13.48	-1.69	0.50	0.77	8.07	4.15	0.00	0.34	3.96
PREDICTIONS												
2020-21	34.14	32.96	4.50	244.60	93.52	161.56	11.69	143.18	84.23	1.09	5.49	66.33

Source: Directorate of Industries and Commerce, Haryana



only (t value=1.19). On the other hand, investment during these years declined in E27 and E32 from Rs. 129.17 crore and Rs.1.18 crore in 2005-06 to Rs.123.15 crore and Rs.1.05 crore in 2013-14, at negative CAGR of -1.46 percent and -0.23 percent (t-value = -1.41 and -0.15) respectively. From the point of view of trend equation depicted in the table 4.2, it has been revealed that investment in nearly all the industries is expected to increase by 2020-21 except E27 where the investment is predicted to diminish from Rs.123.15 crore made in 2013-14 to Rs.93.52 crore expected to be made in the year 2020-21. It has been projected that fixed investment is expected to increase significantly in E9 from Rs. 19.92 crore made in 2013-14 to Rs.1461.23 crore expected to be made in 2020-21. This is likely to be followed by E24, E25, E16, E34, E30, E21, E23, E14, E19, E8, E15, E26, E17, E13, E20, E4, E3, E31, E11, E6, E5, E22, E10, E7, E1, E12, E2, E18, E33, E22, E28, E32 and E29 where the investment is expected to increase to Rs.32.96 crore, Rs.4.5 crore, Rs.24.28 crore, Rs.66.33 crore, Rs.143.18 crore, Rs.1562.81 crore, Rs.34.14 crore, Rs.2562.92 crore, Rs.44.77 crore, Rs.223.48 crore, Rs.2373.94 crore, Rs.244.60 crore, Rs.422.06 crore, Rs.1980.69 crore, Rs.412.29 crore, Rs.757.17 crore, Rs.3606.79 crore, Rs.84.23 crore, Rs.753.86 crore, Rs.275.64 crore, Rs.211.20 crore, Rs.340.22 crore, Rs.606.59 crore, Rs.459.33 crore, Rs.2883.66 crore, Rs.381.18 crore, Rs.3.01 crore, Rs.29.32 crore, Rs.5.49 crore, Rs.340.22 crore, Rs.161.56 crore, Rs.1.09 crore and Rs.11.69 crore in 2020-21 respectively. Thus, the least increase in the fixed investment to be made in various small scale industrial units of Punjab has been witnessed in E29 where it has been projected to increase from Rs. 11.48 crore of investment made in 2013-14 to Rs. 11.69 crore amount of investment expected to be made in 2020-21.

Section V- Findings & Conclusions:

The present study is based on fixed investment made in the small scale industries. The following are the findings and conclusions based on the analysis made for the specified objective:

1. The results of the analysis depicted that regarding district wise distribution of fixed investment in the small scale industries of Punjab for the period ranging from 2005-06 to 2013-14, highest mean has been recorded in Ludhiana(2665.17), followed by Jalandhar(903.89), Amritsar(637.60), S.A.S.Nagar(627.96), Patiala(579.34), Sangrur(403.20), Fatehgarh Sahib(326.88), Gurdaspur (257.88), Ferozepur(217.20), Bathinda(202.46), Moga(199.06), Fazilka(183.20), Hoshiarpur(176.64), Kapurthala(130.56), Ropar(124.10), Muktsar(104.49), Faridkot(88.62), Barnala(73.10), Mansa(53.05) and Nawanshahr(49.41). During the same period, lowest average score in terms of fixed investment made in the units of the district has been recorded in Tarn Taran district (16.92).
2. Results exhibited that compounded annual growth rate of the investment made in units of small scale industries in Punjab during the relevant period has been recorded at peak in the units of Nawanshahr. The amount of fixed investment made in this district increased at the CAGR of 23.54 percent which came out to be significant.
3. Further, the analysis showed that lowest growth rate of investment has been found in the units of Faridkot district where the investment increased to Rs. 125.94 crore in 2020-21 from Rs. 105.91 crore made in 2005-06 at CAGR of only 3.22 percent.

4. The expected change in investment to be made in the year 2020-21 according to trend equation revealed that highest rise is expected to occur for the units of Nawanshahr district, where it is expected to increase from Rs. 46.73 crore made in 2013-14 to Rs.110.24 crore.
5. It is observed that least increase in investment is expected to be made for Tarn Taran units, where it has been predicted that it will increase from Rs. 29.8 crore made in 2013-14 to Rs. 32.53 crores only in the year 2020-21. On the other hand, investment to be made in Ferozepur district is expected to decline significantly by the year 2020-21.
6. Results indicates that E1 (1427.70) recorded highest mean score signifying that highest amount of fixed investment has been made in this industry during the period under study.
7. Results unveiled that the fixed investment in the units of E3 has increased from Rs. 714.7 crores to Rs. 2218.66 crores from the period 2005-06 to 2013-14 at the highest rate of CAGR of 98.55 percent. On the other hand, lowest growth rate has been found in E28 where the investment has grown at CAGR of 0.32 percent only (t value=1.19).
8. Further, the investment made between 2005-06 to 2013-14 declined in units E27 and E32 from Rs.129.17 crore and Rs.1.18 crore in 2005-06 to Rs.123.15 crore and Rs.1.05 crore in 2013-14, at negative CAGR of -1.46 percent and -0.23 percent respectively.
9. From the point of view of trend equation depicted in the table 4.2, it has been revealed that investment in nearly all the industries is expected to increase by 2020-21 except E27 where the investment is predicted to decrease from Rs.123.15 crores made in 2013-14 to Rs.93.52 crores expected to be made in the year 2020-21. Whereas, the least increase in the expected fixed investment has been witnessed in E29 where it has been projected to increase from Rs. 11.48 crores of investment made in 2013-14 to Rs. 11.69 crores amount of investment only.

References

- Acs, Zoltan, J. and Varga, Attila. (2005). Entrepreneurship, agglomeration and technical change, *Small Business Economics*, Vol. 24, pp.323–334.
- Chaudhury, Saumitra. (2000). State Government Finances, *Money and Finance, ICRA Bulletin*, Vol.2, No.1.
- Garg, Ishu and Walia, Suraj. (2011). Micro, Small & Medium enterprises (MSMES) in Post Reform India: Status & Performance. *International Journal of Latest Trends in Engineering and Technology (IJLTET)*, Vol.1, No.3, pp. 134-141.
- Kalirajan, Kaliappa. And Balasubrahmanya, M.H.(2009). An Analysis of the Performance of Manufacturing Industries in Karnataka State, *The Indian Economic Journal*, Vol. 56(4), pp.95-111.
- Kniivila, Matleena. (2007). Industrial development and economic growth: Implications for poverty reduction and income inequality. *Industrial Development for the 21st Century: Sustainable Development Perspectives*. United Nations: Department of Economic and Social Affairs (DESA).

- Singh, Lakhwinder. and Singh, Sukhpal. (2008). Deceleration of Economic Growth in Punjab: Evidence, Explanation and a way-out, Economic and Political Weekly, Vol. 37 No. 6.

Reports

- Directorate of Industries and Commerce, Punjab
- Statistical Abstract of Punjab

