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PERFORMANCE OF MANUFACTURING SECTOR IN SOUTH INDIA- AN ANALYSIS

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Introduction

The structure of the Indian economy has undergone a remarkable change after the introduction of the New Economic Policy of 1991. It is being transformed from an agriculture-based economy to a manufacturing-based economy. Balanced regional development has always been one of the major objectives of the national policy in India. However, economic liberalisation reduced the role of the central government in curbing regional imbalances through controls and regulations and enhanced inter-state competition. One of the main components of the economic reform packages has been the deregulation and relicensing in the manufacturing sector. The impact of economic reforms in India on the performance of the manufacturing sector of the states has become an important area of research. These impacts have been under scrutiny both at the economy level as well as at more disaggregated levels, such as at sectoral and regional levels. The question of whether and whom the economic reforms have benefitted, is being repeatedly raised in various academic fora. The contribution of reforms to the sustainable and persistent growth of the manufacturing sector in various states/Union Territories (UTs), however, remains questionable. Thus, it would be appropriate to examine the contribution of reforms towards the better performance of the Indian manufacturing sector.

Need for the study

Transforming India's Manufacturing Sector and Industrialisation has historically been one of the biggest drivers of Economic Growth ever since the Industrial Revolution in the 18th century. Manufacturing is not only the backbone of the economy, but also the muscle behind national security. Therefore, a robust manufacturing sector is sine qua non for any major country. Jamshetji Tata, the great Indian visionary was first of his kind, to introduce the idea of manufacturing in India. He set up the first Indian manufacturing base and started the manufacturing age of India India followed a path of planned self-reliant development after her Independence in 1947 like most countries in the developing world. India's postindependence development plans emphasized industrialization as a very important instrument for sustained growth. Indian manufacturing can be categorised in to five groups.

In India's central-planning era, the Mahalanobis (1955) model of development called for the public sector to be the prime mover of the economy through strong involvement in investment and employment generation. Investments in factories, mining, and power generation expanded greatly in the Second Plan (and thereafter); the mining and power sectors grew relative to the total economy; and within the industrial sector, there was a major shift away from consumer goods toward output of capital goods. Within the broad industrial sector, public activity was growing relative to private activity. By the Third Plan, the proportion of public investments in factories, power generation, and mining exceeded 70 percent. For a variety of reasons, lack of industrial demand, especially for investment goods, was widely accepted to be the principal reason for the relative stagnation since the 1960s. Reportedly, controls led to widespread inefficiency in resource use, as reflected in poor total factor productivity growth, or rise in incremental capital output ratios in the 1970s The Indian Government had undertaken policy reforms since 1980, but the most radical reforms have occurred since 1991, after the severe economic crisis in fiscal year 1990-91. India's manufacturing sector underwent a transformation from a protected environment to one of open trade and global competition but this transformation have failed to make a dent on industrial productivity as Total Factor Productivity growth rate decelerated in post-reform period. The Indian growth story has been unique. Unlike the transformation stories of many of the other developed economies, India's growth story was dominated



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by the service sector. In contrast manufacturing has been less robust. Thus, the reforms in the manufacturing sector failed to bring any improvement in the performance of aggregate Indian manufacturing sector. Manufacturing has linkages with the all other sectors of the economy. The progress of manufacturing still sets the tone for the overall business cycle and the health of this sector is very much at the core of India's socio-economic fabric. Manufacturing relies on three fundamental pillars: Factors, Standards and Costs.

Methodology:

For the project work I have choose manufacturing sector for the study in Manufacturing sector 2 digit level data have collected. The data have been collected from the various annual survey of industries from 2012-23. The data have been collected with reference period 2012-13 to 2022-23 from annual survey of industries, other sources like from internet and other government official websites. The study is based on secondary data. collected from various Government publications like reports of Ministry of Skill Development and Entrepreneurship, Indian Brand Equity Foundation (IBEF), Economic Survey etc. The data have been calculated for the south India states Andhra Pradesh, Telangana, Karnataka, Tamil Nadu and Kerala states considered for the study. The main variables are number of factories, number of factories in operation, fixed capital, working capital, gross value added, Net value added, net profit, number of persons engaged. With the help of MS Excel I have been calculated percentages, average, standard deviation, Coefficient of variation and growth rates etc.

Objectives of the study :

1. To review the manufacturing sector progress in India
2. To know the performance of manufacturing sector in India from 2012-1013 to 2022-2023 for all south India states.
3. To give some policy suggestions to strengthen the manufacturing sector in India based on the results.

Section - II

This Section explores the manufacturing sector analysis in south Indian states with respect to fixed capital, gross value added, working capital, number of factories, net profit, net value added and number of persons engaged are considered for the study. Data has taken for the time series from 2012-23 has drawn from annual survey of industries various issues. By using this data average, standard deviation, coefficient of variation growth rate along with t value to know the significant level are calculated and presented in the tables. The entire analysis carried with the help of Microsoft excel. Even regression analysis to know the performance level I have used MS excel. And the information has provided in tabular form along with original data. Total eight tables are constructed for the analysis. The analysis is carried out for the all south Indian states for selected variables for the study.

The detail analysis furnished here under the tables

Table -1 presents information about number of factors in India, The South India region selected for the study, in this region Andhra Pradesh , Telangana , Karnataka Kerala , and Tamil Nadu states selected for the study. regarding number of factories the information was shown in table from the period 2012-2013 to 2022-2023 in during this period. number of factories highest recorded in Andhra Pradesh state with average number of factories 16342. during the study period. The coefficient of variation was observed for Karnataka state with 7. At the same time Karnataka state have 2.07 growth rate and statistically significant at 5 percent level. In terms of growth rate the selected states for the study are Karnataka, Andhra Pradesh, Tamil Nadu and Kerala have 2.07, 0.85, 0.73 and 0.38 respectively and statistically significant at 5 percent level.



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Table- 1 No of Factories

Year	A. P	% SIND	% IND	TEL	% SI	% IND	KAR	% SIND	% IND	KER	% SI	% IND	TAMIL	% SIND	% IND	SI	% IND	INDIA
2012-13	15358	18.12	6.91	13656	16.11	6.15	11753	13.87	5.29	7129	8.41	3.21	36869	43.50	16.60	84765	38.16	222120
2013-14	15719	18.18	7.00	14110	16.32	6.28	12107	14.01	5.39	7132	8.25	3.18	37378	43.24	16.64	86446	38.49	224576
2014-15	16012	18.23	6.95	14068	16.01	6.10	12566	14.30	5.45	7320	8.33	3.18	37878	43.12	16.44	87844	38.12	230435
2015-16	16129	18.19	6.93	14548	16.40	6.25	12955	14.61	5.57	7509	8.47	3.23	37549	42.34	16.14	88689	38.12	232650
2016-17	16245	18.14	6.92	15028	16.78	6.40	13344	14.90	5.68	7697	8.60	3.28	37220	41.57	15.85	89534	38.12	234865
2017-18	16296	18.00	6.86	15263	16.86	6.42	13518	14.93	5.69	7649	8.45	3.22	37787	41.75	15.90	90513	38.08	237684
2018-19	16739	18.29	6.91	15167	16.57	6.26	13789	15.07	5.69	7696	8.41	3.17	38131	41.66	15.73	91522	37.76	242395
2019-20	16924	18.20	6.87	15271	16.42	6.20	14169	15.24	5.75	7796	8.38	3.16	38837	41.76	15.76	92997	37.73	246504
2020-21	16937	18.06	6.76	15342	16.36	6.13	14235	15.18	5.68	7886	8.41	3.15	39393	42.00	15.73	93793	37.45	250454
2021-22	16925	18.46	6.77	13251	14.45	5.30	14302	15.60	5.72	7712	8.41	3.08	39512	43.09	15.81	91702	36.68	249987
2022-23	16483	18.05	6.51	13063	14.31	5.16	14510	15.89	5.73	7592	8.31	3.00	39666	43.44	15.66	91314	36.04	253334
Total	179767	18.17		158767	16.05		147248	14.89		83118	8.40		420220	42.48		989119		2625004
Average	16342	18.17		14433	16.05		13386	14.89		7556	8.40		38202	42.48		89920		238637
stdev	522.73	18.82		850.81	30.64		936.94	33.74		256.97	9.25		990.45	35.67		2777.08		10720.33
CV	3.20			5.89			7.00			3.40			2.59					4.49
X VALUE	139.17			-9.04			276.7			62.79			277.75					3209.1
GROWTH RATE	0.85*			-0.06			2.07*			0.83*			0.73*					1.34*
T VALUE	5.64			-0.11			14.67			4.15			7.60					24.943

Table – 2 Factories in Operation

Year	A. P	% SIND	% IND	TEL	% SI	% IND	KAR	% SIND	% IND	KER	% SI	% IND	TAMIL	% SIND	% IND	SI	% IND	INDIA
2012-13	12503	29.80	6.98	11371	27.10	6.35	11753	28.01	43.95	6333.00	15.09	3.54	26739	63.72	14.93	41960	23.43	179102
2013-14	12941	31.32	6.97	12171	29.46	6.55	10062	24.35	35.19	6143	14.87	3.31	28597	69.21	15.40	41317	22.25	185690
2014-15	12905	29.63	6.81	14068	32.30	7.43	10143	23.29	34.88	6440	14.79	3.40	29081	66.77	15.35	43556	22.99	189468
2015-16	12995	29.92	6.77	13397	30.85	6.98	10446	24.05	34.42	6594	15.18	3.44	30348	69.88	15.81	43431	22.63	191924
2016-17	13084	30.21	6.73	12725	29.38	6.55	10748	24.82	34.00	6748	15.58	3.47	31614	73.00	16.26	43305	22.28	194380
2017-18	13308	31.00	6.80	11987	27.92	6.13	10787	25.13	33.69	6848	15.95	3.50	32014	74.57	16.37	42930	21.95	195584
2018-19	13156	30.31	6.67	12129	27.95	6.15	10969	25.27	34.12	7148	16.47	3.63	32148	74.07	16.31	43402	22.02	197145
2019-20	13504	31.79	6.80	10635	25.03	5.35	11042	25.99	35.09	7301	17.19	3.68	31469	74.08	15.84	42482	21.39	198628
2020-21	12544	30.24	6.26	11013	26.55	5.50	10948	26.40	34.70	6971	16.81	3.48	31546	76.06	15.74	41476	20.70	200395
2021-22	12507	30.50	6.24	10368	25.29	5.17	11276	27.50	35.68	6852	16.71	3.42	31606	77.08	15.76	41003	20.44	200576
2022-23	12247	29.73	5.93	10700	25.98	5.18	11391	27.65	36.14	6852	16.64	3.32	31517	76.52	15.26	41190	19.94	206523
Total	141694			130564			119565	25.65		74230			336679					2139415
Average	12881			11869			10870	25.65		6748			30607					194492
stdev	387.64			1192			514.28	51.09		346.99			1738					7669
CV	3.01			10.04			4.73	199.13		5.14			5.68					3.94
X VALUE	-27.35			235.01			62.50			80.35			419.07					2232.755
GROWTH RATE	-0.21			-1.98*			0.58			1.19*			1.37*					1.15*
T VALUE	-0.72			-2.59			1.32			3.60			3.99					11.14316

Table -2 shows information about number of factors operation in India, The South India region selected for the study, in this region Andhra Pradesh , Telangana , Karnataka Kerala , and Tamil Nadu states selected for the study. regarding number of factories the information was shown in table from the period 2012-2013 to 2022-2023 in during this period. number of factories operation highest recorded in **Andhra Pradesh** state with average number of factories **12881**. during the study period. The coefficient of variation was observed for **Telangana state with 10.04**. At the same time Telangana state have -1.98 growth rate and statistically significant at 5 percent level. In terms of growth rate the selected states for the study are **Telangana, Tamil Nadu and Kerala** have **1.98 , 1.37 and 1.19** respectively and statistically significant at 5 percent level.



Table -3 shows information about number of factors operation in India, The South India region selected for the study, in this region Andhra Pradesh , Telangana , Karnataka Kerala , and Tamil Nadu states selected for the study. regarding number of factories the information was shown in table from the period 2012-2013 to 2022-2023 in during this period. Fixed capital highest recorded in **Telangana** state with average number of factories **8282635**.during the study period. The coefficient of variation was observed for **Tamil Nadu state with 1514**. At the same time Kerala state have 9.26. growth rate and statistically significant at 5 percent level. In terms of growth rate the selected states for the study are **Kerala, Telangana ,Tamil Nadu , Karnataka and Andhra Pradesh** have **9.26,7.99,5.61,5.23 and 4.25** respectively and statistically significant at 5 percent level.

Table – 3 Fixed Capital

Year	A. P	% SIND	% IN D	TEL	% SI	% IN D	KAR	% SIND	% IND	KER	% SI	% IN D	TAMIL	% SIND	% IND	SI	% IND	INDIA
2012-13	13081848	600	600	5847297	268	666	14515109	666	86	1870369	86	859	1872423 3	53	3531463 2	16	218026 0	13081848
2013-14	14862643	626	626	5694436	240	705	16731050	705	99	2342965	99	114 1	2708164 8	68	3963110 5	17	237371 9	14862643
2014-15	18632079	753	753	5739296	232	683	16902324	683	119	2934983	119	894	2213163 4	50	4420869 1	18	247445 5	18632079
2015-16	18632079	658	658	6335634	224	618	17512219	618	132	3741669	132	889	2518788 1	54	4622160 9	16	283242 1	18632079
2016-17	18632079	584	584	6931972	217	568	18122114	568	143	4548354	143	885	2824412 8	59	4823452 8	15	319038 6	18632079
2017-18	18444500	561	561	8101026	247	579	19018695	579	132	4346595	132	839	2755418 9	55	4991082 4	15	328588 9	18444500
2018-19	18875049	545	545	9955058	287	598	20712231	598	138	4795992	138	816	2827662 8	52	5433833 8	16	346607 0	18875049
2019-20	20654656	567	567	9690004 1053933	266	618	22492822	618	154	5621182	154	844	3072521 8	53	5845867 2	16	364135 2	20654656
2020-21	21241079	575	575	1071927 3	285	600	22169880	600	159	5866345	159	816	3015029 1	50	5981664 5	16	369438 6	21241079
2021-22	22111956	593	593	1155565 6	288	668	24882311	668	147	5469294	147	825	3075956 8	49	6318284 5	17	372635 4	22111956
2022-23	22523108	546	546	1155565 5	280	610	25137548	610	134	5519625	134	792	3264485 0	50	6473594 4	16	412179 5	22523108
Total	20769107 6			9110898 7			21819630 3			4705737 3			2967714	50				20769107 6
Average	18881007			8282635			19836028			4277943			269792	50				18881007
stdev	2873563			2264212			3498708			1388031			4085829	42				2873563
CV	15			27			18			32			1514	84				15
X VALUE	802897			661574			1037011			395930			1086163					802897
GROWTH RATE	4.25*			7.99*			5.23*			9.26*			402.59*					4.25*
T VALUE	7.40			11.78			16.08			8.76			5.61					7.40



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Table – 4 Working Capital

Year	A.P	% SIND	% IND	TEL	% SI	% IND	KAR	% SIND	% IND	KER	% SI	% IND	TAMIL	% SIND	% IND	SI	% IND	INDIA
2012-13	1983315	39	315	-3154614	-63	-500	4875141	97	773	1335250	26	212	5070648	804	101	5039896	799	630411
2013-14	2222432	18	335	3831375	32	578	5384211	45	812	588205	5	89	4836720	730	40	12026953	1815	662686
2014-15	568138	6	89	2797879	32	437	4573729	52	714	852357	10	133	6713313	1048	76	8793151	1372	640840
2015-16	1283281	12	197	3166678	29	486	5237309	49	803	1060381	10	163	7370730	1131	69	10748779	1649	651962
2016-17	1998423	16	301	3535477	28	533	5900889	46	890	1268404	10	191	8028146	1211	63	12704404	1916	663083
2017-18	1433683	11	223	4580255	34	711	5544690	41	861	1944115	14	302	11232301	1744	83	13504487	2097	644119
2018-19	3980924	24	492	5225241	31	646	6144195	36	760	1563296	9	193	10453794	1293	62	16914949	2092	808665
2019-20	2290232	12	259	6800001	37	770	7419978	40	840	1874983	10	212	11354231	1285	62	18386479	2082	883301
2020-21	6021818	27	543	6545632	29	590	8063814	36	727	1587703	7	143	11369307	1025	51	22219992	2003	1109091
2021-22	2270971	10	168	7145486	31	528	11504515	50	850	1884867	8	139	16344886	1208	72	22807047	1686	1353086
2022-23	5715757	21	358	8322429	30	522	11482236	42	720	1983121	7	124	19901696	1247	72	27504790	1724	1595589
Total	519614			756584			1043840			180284			1809245					145054
Average	47238			68780			94895			16389			164477					13187
Stdev	1775133			3101886			2485931			471985			4643762					333878
CV	3757.88			4509.84			2619.68			2879.81			2823.35					2531.93
X VALUE	356489.18			825830.25			659959.91			114146.71			1314077.61					87277.32
GROWTH RATE	754.67*			1200.68*			695.47*			696.47*			798.94*					661.86*
T VALUE	2.68			5.64			5.57			4.03			8.16					5.219198

Table -4 About information about number of factors operation in India, The South India region selected for the study, in this region Andhra Pradesh , Telangana , Karnataka Kerala , and Tamil Nadu states selected for the study. regarding number of factories the information was shown in table from the period 2012-2013 to 2022-2023 in during this period. Working capital highest recorded in **Tamil Nadu** state with average number of factories **164477** during the study period. The coefficient of variation was observed for **Telangana state with 4509.84**. At the same time Telangana state have 1200.68. growth rate and statistically significant at 5 percent level. In terms of growth rate the selected states for the study are **Telangana ,Tamil Nadu ,Andhra Pradesh Kerala and Karnataka** have **1200.68, 798.94.,754.67,696.47 and 695.47** respectively and statistically significant at 5 percent level.

Table -5 About information about number of factors operation in India, The South India region selected for the study, in this region Andhra Pradesh , Telangana , Karnataka Kerala , and Tamil Nadu states selected for the study. regarding number of factories the information was shown in table from the period 2012-2013 to 2022-2023 in during this period. Gross value added highest recorded in **Tamil Nadu** state with average number of factories **187481**. during the study period. The coefficient of variation was observed for **Andhra Pradesh state with 3186**. At the same time Andhra Pradesh state have 881. growth rate and statistically significant at 5 percent level. In terms of growth rate the selected states for the study are **,Andhra Pradesh, Karnataka, Telangana, Kerala and Tamil Nadu**,have**188,809,738, 597,and 577** respectively and statistically significant at 5 percent level.

Table -6 About information about number of factors operation in India, The South India region selected for the study, in this region Andhra Pradesh , Telangana , Karnataka Kerala , and Tamil Nadu states selected for the study. regarding number of factories the information was shown in table from the period 2012-2013 to 2022-2023 in during this period. Net value added highest recorded in **Tamil Nadu** state with average number of factories **59388** during the study period. The coefficient of variation was observed for **Andhra Pradesh state with 3310**. At the same time Andhra Pradesh state have 899 growth rate and statistically significant at 5 percent level. In terms of growth rate the selected states for the study are **Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, and Kerala** have **899,763,714,575 and 568** respectively and statistically significant at 5 percent level.



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Table – 5 Gross value added

Year	A. P	% SIND	% IND	TEL	% SI	% IND	KAR	% SIND	% IND	KER	% SI	% IND	TAMIL	% SIND	% IND	SI	IND	SIIND
2012-13	3131951	22	311	3325627	23	330	6391217	45	635	1335966	9	133	10881581	77	1080	1007280	14185841	1408
2013-14	2041258	21	192	3501653	35	329	2836541	29	266	1526293	15	143	10676358	108	1002	1065112	9906747	930
2014-15	3502059	23	301	3393860	22	291	7181476	46	617	1421515	9	122	10999010	71	944	1164703	15499854	1331
2015-16	1759153	11	139	3806968	24	301	8455318	53	668	1828852	12	144	12651711	80	999	1266376	15851289	1252
2016-17	3540646	18	259	4220076	21	308	9729160	49	711	2236188	11	163	14304411	73	1046	1368050	19727116	1442
2017-18	4622072	21	315	4716697	22	322	10218358	47	697	2183551	10	149	16408288	75	1119	1466970	21741797	1482
2018-19	4900685	21	91	5745571	24	107	10576056	45	197	2337876	10	43	16828594	71	313	5380119	23560501	438
2019-20	5169997	22	348	5753156	24	387	10640880	45	716	2252678	9	152	16397597	69	1104	1485745	23817815	1603
2020-21	7111041	26	440	6474000	24	400	11348262	42	702	2251864	8	139	15969291	59	987	1617148	27186154	1681
2021-22	8020473	24	392	7150044	21	349	15516144	46	758	2709773	8	132	19425720	58	949	2047912	33397383	1631
2022-23	9069415	26	413	7401933	21	337	15472045	44	704	3476372	10	158	22685189	64	1033	2197056	35420798	1612
Total	824492			672903			1406550			316034			2062290				199732.4	
Average	74954			61173			127868			28730			187481				18157.49	
stdev	2388073			1529905			3707806			618235			3795778				1237595	
CV	3186			2501			2900			2152			2025				6815.89	
X VALUE	660117			451213			1034918			171603			1081294				142620.2	
GROWTH RATE	881*			738*			809*			597*			577*				785.46*	
T VALUE	7			14			7			7			9				1.24083	

Table – 6 Net value added

Year	A. P	% SIND	% IND	TEL	% SI	% IND	KAR	% SIND	% IND	KER	% SI	% IND	TAMIL	% SIND	% IND	INDIA	% IND	SIINDIA
2012-13	2382242	20	280	2810175	24	330	5347936	46	628	1171460	10	138	9136446	78	1072	851949	11712885	1375
2013-14	1862780	16	208	3012612	26	336	5533356	47	618	1345969	11	150	8721268	74	974	895342	11755691	1313
2014-15	2808114	22	288	2883168	23	296	5699577	45	584	1197535	10	123	8786379	70	901	975162	12589295	1291
2015-16	2709568	19	255	2810175	20	265	6988096	50	659	1594701	11	150	10287493	73	970	1060540	14103509	1330
2016-17	2611022	16	228	3551504	22	310	8276614	50	722	1991866	12	174	11788606	72	1029	1145919	16432035	1434
2017-18	3536269	20	288	3948741	22	321	8721906	48	709	1887210	10	153	13701555	76	1114	1229674	18095240	1472
2018-19	3112374	17	244	4854721	26	380	8847531	47	693	1979664	11	155	14079958	75	1103	1276466	18795393	1472
2019-20	6798994	30	561	4923196	22	406	8792509	39	725	1864044	8	154	13229990	59	1091	1212647	22379834	1846
2020-21	5618052	25	421	5564698	25	417	9540643	42	714	1878544	8	141	12951354	57	970	1335789	22602907	1692
2021-22	6442397	23	368	6252794	22	358	13284806	47	760	2290758	8	131	16054663	57	918	1748325	28271673	1617
2022-23	7413989	24	394	6446517	21	343	13412324	44	713	3045827	10	162	19285895	64	1026	1880411	30319683	1612
Total	673999			586047			1219302			276893			1753263			170946.5		
Average	61273			53277			110846			25172			159388			15540.59		
stdev	2027888			1396379			1007			53553			3288164			325634.7		
CV	3310			2621			1			2128			2063			2095.38		
X VALUE	550793			406512			791188			142914			915928			91553.5		
GROWTH RATE	899*			763*			714*			568*			575*			589.13*		
T VALUE	6			11			9			6			7			7.744534		



Table – 7 Net profits

Year	A. P	% SIND	% IND	TEL	% SI	% IND	KAR	% SIND	% IND	KER	% SI	% IND	TAMIL	% SIND	% IND	INDIA	% IND	SIINDIA
2012-13	911001	18	205	1280699	25	288	2448768	48	551	457551	9	103	3903597	77	879	444263	5098898	1148
2013-14	21294	0	5	1455466	33	331	2364283	54	538	575134	13	131	2752985	62	626	439566	4416803	1005
2014-15	903455	20	196	1322356	29	287	2076173	45	451	292171	6	63	2156186	47	468	460283	4594623	998
2015-16	637135	11	127	1445392	25	289	3037849	53	608	645533	11	129	3080290	53	616	499818	5766524	1154
2016-17	370814	5	69	1568428	23	291	3999524	58	742	998895	14	185	4004393	58	742	539353	6938403	1286
2017-18	1210394	16	210	1753455	23	304	3986029	51	692	829708	11	144	5366734	69	931	576242	7780517	1350
2018-19	556281	8	100	2344645	32	421	3714381	51	667	729262	10	131	4962048	68	892	556523	7345461	1320
2019-20	958493	13	204	2309620	32	492	3330276	46	709	594488	8	127	3809276	53	811	469473	7193688	1532
2020-21	2620881	25	427	2837673	27	462	4346520	41	708	671298	6	109	4405258	42	717	614058	10477089	1706
2021-22	3278574	22	345	3273088	22	344	7351546	49	773	1003936	7	106	6261346	42	659	950714	14907803	1568
2022-23	3809939	25	390	3045787	20	312	6551409	43	671	1668643	11	171	8118663	54	832	976346	15076610	1544
Total	346358			276890			595583			151695			738060			88759		
Average	31487			25172			54144			13790			67096			8069		
stdev	1256841			736319			1674648			366041			1696123			191590		
CV	3992			2925			3093			2654			2528			2374		
X VALUE	304584			210423			432482			77603			402469			46571		
GROWTH RATE	967*			836*			799*			563*			600*			577*		
T VALUE	4			9			5			3			4			4		

Table – 8 No. of persons engaged

Year	A. P	% SIND	% IND	TEL	% SI	% IND	KAR	% SIND	% IND	KER	% SI	% IND	TAMIL	% SIND	% IND	INDIA	% IND	SIINDIA
2012-13	503615	21	4	701110	29	5	862203	35	7	380498	16	3	1965020	80	15	12950025	2447441	19
2013-14	522057	20	4	747062	29	6	927392	36	7	351662	14	3	2046553	80	15	13538114	2548188	19
2014-15	528417	20	4	692301	27	5	974022	38	7	384058	15	3	2127703	83	15	13881386	2578813	19
2015-16	546217	21	4	708457	27	5	1019522	39	7	351813	13	2	2267993	86	16	14396288	2626024	18
2016-17	564017	21	4	724612	27	5	1065021	40	7	319568	12	2	2408282	90	16	14911189	2673234	18
2017-18	597292	22	4	794520	29	5	1065346	38	7	310326	11	2	2523483	91	16	15614619	2767500	18
2018-19	633142	22	4	780204	27	5	1076026	38	7	349971	12	2	2554345	90	16	16280211	2839359	17
2019-20	663574	23	4	787105	27	5	1081116	38	7	341411	12	2	2663069	93	16	16624291	2873222	17
2020-21	654708	24	4	790098	29	5	996680	36	6	314152	11	2	2488428	90	15	16089700	2755653	17
2021-22	672708	23	4	837235	29	5	1079730	37	6	311082	11	2	2625109	90	15	17215350	2900770	17
2022-23	695020	22	4	911083	29	5	1216426	39	7	313589	10	2	2774849	88	15	18494962	3136133	17
Total	63184			82826			110584			28508			252259			1681360		
Average	5744			7530			10053			2592			22933			152851		
Stdev	68628			65561			93472			27286			266996			1692895		
CV	1195			871			930			1053			1164			1108		
X VALUE	20385			17426			23479			-6336			76198			498942		
GROWTH RATE	355*			231*			234*			-244*			332*			326*		
T VALUE	17			6			5			-4			9			14		

Table -7 About information about number of factors operation in India, The South India region selected for the study, in this region Andhra Pradesh , Telangana , Karnataka Kerala , and Tamil Nadu states selected for the study. regarding number of factories the information was shown in table from the period 2012-2013 to 2022-2023 in during this period. Net profits highest recorded in **Tamil Nadu** state with average number of factories **67096** during the study period. The coefficient of variation was observed for **Andhra Pradesh state with 3992**. At the same time Andhra Pradesh state have 967 growth rate and statistically significant at 5 percent level. In terms of growth rate the selected states for the study are **Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, and Kerala** have **967,836,799,600 and 563** respectively and statistically significant at 5 percent level.

Table -8 About information about number of factors operation in India, The South India region selected for the study, in this region Andhra Pradesh , Telangana , Karnataka Kerala , and Tamil Nadu states selected for the study. regarding



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number of factories the information was shown in table from the period 2012-2013 to 2022-2023 in during this period. Number of persons engaged highest recorded in **Tamil Nadu** state with average number of factories **22933** during the study period. The coefficient of variation was observed for **Andhra Pradesh state with 1195**. At the same time Andhra Pradesh state have 355 growth rate and statistically significant at 5 percent level. In terms of growth rate the selected states for the study are **Andhra Pradesh, Tamil Nadu, Kerala, Karnataka and Telangana** have **355,332,-244,234 and 231** respectively and statistically significant at 5 percent level.

SUMMARY

1.The Performance number of factories highest growth recorded in Karnataka state 2.07

The highest coefficient variation Karnataka 7.00 during the study period.

2. The Performance number of factories in operation highest growth recorded in Telangana state 1.98 The highest coefficient variation Telangana 10.04 during the study period.

3. The fixed capital highest growth recorded in Kerala state 9.26 The highest coefficient variation Tamil Nadu 1514 during the study period.

4. The Performance working capital growth recorded in Telangana state 1200.68 The highest coefficient variation Telangana 4509.84 during the study period.

5. The gross value added growth recorded in Andhra Pradesh state 881 The highest coefficient variation Andhra Pradesh 3186 during the study period.

6. . The Performance Net value added recorded in Andhra Pradesh state 899 The highest coefficient variation Andhra Pradesh 3310 during the study period.

7. The net profits growth recorded in Andhra Pradesh state 967 The highest coefficient variation Andhra Pradesh 3992 during the study period.

8. The Performance number of persons engaged growth recorded in Andhra Pradesh state 1195 The highest coefficient variation Andhra Pradesh 355 during the study period

Policy suggestions

1. Manufacturing sector is the one of the main fillers for any economic development. Hence manufacturing sector should be strengthened in India.

Some major initiatives taken by the Government of India

Details of some of the major initiatives /schemes are as follows:

1. **Make in India initiative:** 'Make in India' is an initiative which was launched on 25th September 2014 to facilitate investment, foster innovation, build best in class infrastructure and make India a hub for manufacturing, design and innovation. It was one of the unique single, vocal for local initiative that promoted India's manufacturing domain to the world. 'Make in India' initiative is not the state/district/city/area specific initiative, rather it is being implemented all over the country.



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2. **Industrial Corridor Development Programme:** In order to accelerate growth in manufacturing, Government of India (GoI) has adopted the strategy of developing Industrial Corridors in partnership with State Governments. The objective of this programme is to develop Greenfield Industrial regions/areas/nodes with sustainable infrastructure & make available Plug and Play Infrastructure at the plot level. As part of National Industrial Corridor Program, 11 Industrial Corridors are being developed in 4 phases.
3. **Ease of Doing Business:** The objective is to improve Ease of Doing Business and Ease of Living by Simplifying, Rationalizing, Digitizing and Decriminalizing Government to Business and Citizen Interfaces across Ministries/States/UTs. The key focus areas of the initiative are simplification of procedures, rationalization of legal provisions, digitization of government processes, and decriminalization of minor, technical or procedural defaults.
4. **National Single Window System:** The setting up of National Single Window System (NSWS) was announced in the Budget 2020-21 with the objective to provide “end to end” facilitation and support to investors, including pre-investment advisory, provide information related to land banks and facilitate clearances at Centre and State level. Envisioned as a one-stop shop for investor related approvals and services in the country, the National Single Window System (NSWS) was soft-launched on 22nd September, 2021 by Hon’ble Commerce & Industry Minister. Large number of States/UTs Single Window Systems have been linked with the NSWS Portal thereby providing access to approvals of these States/UTs to be applied through NSWS.
5. **PM Gati Shakti National Master Plan (NMP):** PM Gati Shakti National Master Plan (NMP), a GIS based platform with portals of various Ministries/Departments of Government, was launched in October, 2021. It is a transformative approach to facilitate data-based decisions related to integrated planning of multimodal infrastructure, thereby reducing logistics cost. Empowered Group of Secretaries (EGoS) and Network Planning Group (NPG) have been created as institutional arrangement. About 2000 data layers of various Central Ministries/Departments/State Governments have so far been uploaded on the NMP.

For enhanced capital expenditure by states for infrastructure development, the Ministry of Finance, Department of Expenditure through the “Scheme for Special Assistance to States for Capital Investment for 2022-23” on 6th April 2022 has made a additional provision of Rs. 1,00,000 crore for disbursement among the states as long term loans at a zero interest rate. Out of this, under Part II of the scheme Rs 5,000 crore are specifically provided for PM GatiShakti related expenditure.

6. **National Logistics Policy:** National Logistics Policy (NLP) was launched on 17th September 2022, that aims to lower the cost of logistics and lead it to par with other developed countries. It is a comprehensive effort to address cost inefficiency by laying down an overarching interdisciplinary, cross-sectoral, and multi-jurisdictional framework for developing entire logistics ecosystem. This would boost economic growth, provide employment opportunities, and make Indian products more competitive in the global market.
7. **Production Linked Incentive scheme:** Keeping in view India’s vision of becoming ‘Atmanirbhar’, Production Linked Incentive (PLI) Schemes for 14 key sectors have been announced with an outlay of Rs. 1.97 lakh crore to enhance India’s Manufacturing capabilities and Exports. These schemes have potential for creation of high production, economic growth, exports and significant employment over the next five years and more.
8. **Indian Footwear and Leather Development Programme (IFLDP):** The Central Government has approved the Central Sector Scheme ‘Indian Footwear and Leather Development Programme (IFLDP)’ in January, 2022 with an allocation of Rs.1700 crore till 31.03.2026 or till further review, whichever is earlier. The expenditure of last three years made under previous scheme of Indian Footwear, Leather and Accessories Development Programme (IFLADP) is as under:



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