

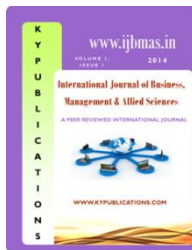


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**HUMAN CAPITAL FORMATION – INTER – DISTRICT VARIATIONS IN
ANDHRA PRADESH**

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ABSTRACT

The issue of human capital formation is crucial in the context of the development of any country and enhancement of the welfare of the people. In this connection, it is worth mentioning about the views of T.W. Schultz regarding the significance of human capital formation. Some decades back, he pointed out that, by some miracle, if a low income country were to acquire, as it were overnight a set of natural resources, equipment, structures, including techniques of production, what they would do with them, given the existing skills and knowledge of the people. According to human development Report 1994, human beings are born with certain potential capabilities. The purpose of development is to create an environment in which all people can expand their capabilities and opportunities can be enlarged for both present and future generations. The real foundation of human development is universalization in acknowledging the life claims of everyone... wealth is important, but to concentrate on it exclusively is wrong for two reasons. First, accumulating wealth is not necessary for the fulfilment of some important human choices... second, human choices extend far beyond economic well-being.

The above analysis clearly indicates the need for human capital formation. As we are all aware HDI is a good indicator of human capital formation. Variations in HDI at different points of time and as between countries or regions will inform about the existing situation, so that appropriate steps can be taken to improve the situation and reduce disparities. In this context, an attempt has been made to study inter-district variations in HDI pertaining to AP in 1991 and 2001. The present study has taken into account education (Literacy rate) health (IMR) and per capita income, to calculate HDI for different districts. At the state level i.e., in AP HDI has improved from 0.298 in 1981 with 10th rank to 0.416 in 1991 with 9th rank. But the value of HDI remained same in 2001 i.e. 0.416 and the rank slipped to 10th rank.

The main objective of the present study is to bring into focus the state of education, health, Per capita income and human development in the districts of Andhra Pradesh, Hyderabad, the state capital is excluded from the analysis. Regarding the methodology for the calculation of index value of each component, the standard formula provided by the UNDP has been used.

INTRODUCTION

The issue of human capital formation is crucial in the context of the development of any country and enhancement of the welfare of the people. In this connection, it is worth mentioning about the views of T.W. Schultz regarding the significance of human capital formation. Some decades back, he pointed out that, by some miracle, if a low income country were to acquire, as it were overnight a set of natural resources, equipment, structures, including techniques of production, what they would do with them, given the existing skills and knowledge of the people¹. According to human development Report 1994, human beings are born with certain potential capabilities. The purpose of development is to create an environment in which all people can expand their capabilities and opportunities can be enlarged for both present and future generations. The real foundation of human development is universalisation in acknowledging the life claims of everyone... wealth is important, but to concentrate on it exclusively is wrong for two reasons. First, accumulating wealth is not necessary for the fulfilment of some important human choices... second, human choices extend far beyond economic well being².

Amartya sen argued that the capability to function is what really matters for status as poor or non-poor person. According to sen, economic growth cannot be sensibly treated as an end in itself. Development has to be more concerned with enhancing the quality of lives, we lead and the freedom we enjoy. In his opinion poverty cannot be properly measured by income or even by utility... What matters is not the things a person has – or the feelings these provide – but what a person is or can be and does or can do. The point is that to make any sense of the concept of human well-being in general and poverty in particular, we need to think beyond availability of commodities and consider their views: to address what Sen calls functioning, that is what a person does with the commodities of given characteristics that they come to possess or control. Freedom of choice or control of one's own life is itself a central aspect of most understandings of well-being. Sen defined 'Capabilities' as the freedom that a person has in terms of the choice of functioning, given his personal features and his command over commodities... Sen's perspective helps explain why development economists have placed so much emphasis on health and education and have referred to countries with high levels of income, but poor health and education standards as cases of 'growth without development'. Real income is essential but to convert the characteristics of commodities into functioning in most important cases, surely requires health and education, as well as income. Over the past two decades, Sen's view has become extremely popular among development economists and social science methodologists.³

Need for human capital formation

India's commitments to planned economic development is a reflection of our society's determination to improve the economic condition of our people. Our ultimate objective is to achieve broad based improvement in the living standard of all our people. The eleventh plan addressed itself to the challenge of making growth both faster and more inclusive. The rapid growth achieved in the past several years demonstrates that we have learnt how to bring about growth, but we have yet to achieve comparable success in inclusiveness. Here lies the role of education and health which lead to human resource development and that will in turn enhances the 'capabilities' of the individuals. This will have impact over 'functioning's'. In this context, we need to also mention about 'demographic dividend' at India's credit. The well-known demographic dividend will manifest in the proportion of population in the working age group of 15-64 years which is expected to increase steadily from 62.9 per cent in 2006 to 68.4 per cent in 2026⁵. Effective steps are needed for exploiting this demographic dividend in the form of investment in education and health besides expansion of employment opportunities.

Inter – District Variations in A. P.

The above analysis clearly indicates the need for human capital formation. As we are all aware HDI is a good indicator of human capital formation. Variations in HDI at different points of time and as between countries or regions will inform about the existing situation, so that appropriate steps can be taken to improve the situation and reduce disparities. In this context, an attempt has been made to study inter-district variations in HDI pertaining to AP in 1991 and 2001. The present study has taken into account education (Literacy rate) health (IMR) and per capita income, to calculate HDI for different districts. At the state level i.e., in AP HDI has improved from 0.298 in 1981 with 10th rank to 0.416 in 1991 with 9th rank. But the value of HDI remained same in 2001 i.e. 0.416 and the rank slipped to 10th rank.

The main objective of the present study is to bring into focus the state of education, health, Per capita income and human development in the districts of Andhra Pradesh, Hyderabad, the state capital is excluded from the analysis. Regarding the methodology for the calculation of index value of each component, the standard formula provided by the UNDP has been used.

Table-1 shows the performance of districts in Literacy. It is reveal that there is a wide variation in the index values of Literacy among the districts both in 1991 and 2001.

Table-2 presents the district-wise IMR in 1991 and 2001. In case of IMR also a large variation can be observed in the values of index.

Table-3 reveals the district-wise per capita income in 1991 and 2001. Even in case of per capita income large variations can be seen in the index values.

Table-4 and Table-5 present HDI and its ranks for districts in AP in 1991 and 2001 respectively. It is revealed from table-4 that there is a wide disparity in HDI over the districts. C.V. was 38.25 in 1991 and which has increased slightly to 40.37 in 2001. It can be seen that in 1991 the highest value of HDI was in Krishna and the lowest value was in Vizianagaram. The values of HDI reveal that there is a shift in the improvement in Telangana districts but Vizianagaram belongs to coastal district which remained the same. Overall picture of the analysis reveals that there is an anonymous inter-district disparity with regard to human capital formation in A.P.

Table-6 reveals following observation.

1. The rank correlation between income and HDI of 1991 (Rank correlation between R1 and R3) is 0.82 and the same for 2001 (Rank correlation between R2 and R4) is 0.94. it implies that the situation has improved in 2001.
2. The districts for which the difference between the HDI rank of 1991 & 2001 is positive figure, it implies that their HDI ranking is better than the per capita income ranking. There were 11 districts which have positive figures in 1991 and 10 districts in 2001. East & West Godavari Districts Krishna, Guntur, Prakasam, Nellore, Cuddapah, Chittoor, Nizamabad, Mahabubnagar and Karimnagar districts HDI ranking is positive in 1991. Whereas in 2001, Srikakulam, VZM, Ananthapur, Cuddapah, Chittoor, Ranga Reddy, Nizamabad, Warangal, Karimnagar and Adilabad districts HDI rankings were improved. This indicates that there is an improvement as far as HDI of back ward districts in A.P.
3. A negative value implies ranking of per capita income is better compared to HDI rank i.e., human development is comparatively low. In 1991 there were 7 such districts namely VZM, VSP, Ananthapur, Ranga Reddy, Medak, Nalgonda and Adilabad. Whereas, in 2001, there were 9 such districts namely VSP, East Godavari, Krishna, Prakasam, Nellore, Kurnool, Mahabubnagar and Khammam. This picture reveals that there is a declining tendency of HDI in coastal district of A.P. It is also revealed that there is an improvement in Telangana districts as far as HDI is concerned. This is the result of special concentration by the Government. There is a stronger ease of Governmental intervention in these districts to improve the health, education and human development situation.
4. Zero value implies the position or ranking in respect of per capita income and human development is the same. This has happened in 4 districts in 1991 and 3 districts in 2001.

The above analysis enunciates that there is a sharp rise in inter-district disparity in human development which implies wide variations in the areas of education, health and income. Therefore, the study indicates that there is great necessity to introduce measures on a priority basis to improve the education,

health and income of the backward districts and vulnerable sections of the society in all districts, to raise the overall level of human development in the state to elevate its rank (10th in 2001) at National level.

Expansion of educational facilities, particularly in rural and backward areas, increasing the coverage of free and compulsory education, introduction and extension of welfare measures, provision of proper housing facilities, protected water, sanitation, strengthening public distribution system, ensuring supply of nutritious food and enhancing employment opportunities etc will go a long way in contributing to human capital formation up to the required levels. Indeed need based, area specific and gender specific programmes both for skill development and employment will enlarge the freedom of choice in the words of Amartya sen. Consequently, HDI will shift in the right direction and the present demographic dividend can be fruitfully exploited. Moreover, reduction of inter-district differences in human development index will bring down inequality in between regions and individuals. This will enable us to achieve the target of inclusive growth, so that there will be trickle down of benefits of growth. It may be concluded by enunciating that short term measures like welfare activities and long term measures like skill development programmes and employment generation need to be implemented simultaneously, so that human capital formation will be at its heights.

Table – 1 District – wise Literacy in Andhra Pradesh

Districts	Literacy Index	Rank	Literacy Index	Rank
Srikakulam	0.2789	17	0.3662	16
Vizianagaram	0.1936	18	0.2213	21
Visakhapatnam	0.6693	9	0.4897	9
East Godavari	0.8079	5	0.7023	6
West Godavari	1.0000	1	1.0000	1
Krishna	0.9907	2	0.8578	2
Guntur	0.7046	8	0.6076	8
Prakasam	0.4504	12	0.4338	11
Nellore	0.7575	7	0.7167	5
Karnool	0.4365	3	0.3131	17
Ananthapur	0.5294	6	0.3926	14
Cuddapah	0.7789	10	0.6505	7
Chittoor	0.8474	13	0.7716	3
Ranga Reddy	0.8189	4	0.7311	4
Nizamabad	0.1932	19	0.2719	19
Medak	0.1189	21	0.2712	20
Mahabubnagar	0.0000	22	0.0000	22
Malgonda	0.3537	15	0.4331	12
Warangal	0.4084	14	0.4532	10
Khammam	0.4588	11	0.4289	13
Karimnagar	0.3189	16	0.3684	15
Adilabad	0.1420	20	0.2807	18

Note: Hyderabad is excluded

Source: Census of India 2001, p52

Table -2: District – wise Infant Mortality Rate in Andhra Pradesh

Districts	Index Value	Rank	Index Value	Rank
Srikakulam	0.3189	20	0.2344	16
Vizianagaram	0.0000	22	0.3438	12
Visakhapatnam	0.3769	19	0.0000	22
East Godavari	0.6522	11	0.1406	19
West Godavari	0.4928	16	0.3281	13
Krishna	1.0000	1	0.0938	20
Guntur	0.8841	3	0.5781	8
Prakasam	0.7681	7	0.2813	15
Nellore	0.7826	6	0.2188	18
Karnool	0.4492	17	0.3125	14
Ananthapur	0.4202	18	0.7656	4
Cuddapah	0.7971	5	1.0000	1
Chittoor	0.5652	15	0.5469	9
Ranga Reddy	0.6231	12	0.8594	3
Nizamabad	0.8405	4	0.7188	7
Medak	0.6811	10	0.9219	2
Mahabubnagar	0.3188	21	0.5000	10
Malgonda	0.5942	13	0.2343	17
Warangal	0.5797	14	0.7344	5
Khammam	0.7536	8	0.4999	11
Karimnagar	0.9275	2	0.7342	6
Adilabad	0.6956	9	0.0625	21

Note: Hyderabad is excluded

Source: 1. 1991 estimated IMR from AP Development – Economic Reforms and Challenges- Ahead (ed) Ch. Hanumantha Rao and Mahendra Dev, 2003 p.317.

2. 2001 Estimated IMR from IIPS based on RCH Data

Table – 3: District – wise per capita Income in A.P.

Districts	PCI Index (1993)	Rank	PCI Index (2001)	Rank
Srikakulam	0.0096	21	0.0082	21
Vizianagaram	0.1350	19	0.0000	22
Visakhapatnam	0.6792	3	0.5641	3
East Godavari	0.5327	9	1.0000	1
West Godavari	0.5660	7	0.5095	5
Krishna	0.6386	4	0.4377	6
Guntur	0.6112	6	0.3874	7
Prakasam	0.4614	14	0.2541	14
Nellore	0.6379	5	0.3858	8
Karnool	0.4447	15	0.1440	17
Ananthapur	0.4900	11	0.2740	12
Cuddapah	0.4757	12	0.2709	13
Chittoor	0.5309	10	0.3163	11
Ranga Reddy	1.0000	1	0.5454	4
Nizamabad	0.2701	18	0.1504	16
Medak	0.8517	2	0.8392	2
Mahabubnagar	0.0000	22	0.0287	20
Malgonda	0.2756	17	0.2305	15
Warangal	0.1178	20	0.1430	18

Dr. B. SAILAJA KUMARI

Khammam	0.5551	8	0.3747	9
Karimnagar	0.4276	16	0.3652	10
Adilabad	0.4633	13	0.0888	19

Note: Hyderabad is Excluded

Source: 1. Census reports of 1991 and 2001. 2. Statistical Abstracts of AP

Table – 4: Human Development Index of AP Districts 1991

Districts	Literacy Index	IMR Index	PCI Index	Value of HDI	HDI Rank
Srikakulam	0.2789	0.3189	0.0096	0.2025	21
Vizianagaram	0.1936	0.0000	0.1350	0.1095	22
Visakhapatnam	0.6693	0.3789	0.6792	0.5751	10
East Godavari	0.8071	0.6522	0.5327	0.6640	7
West Godavari	1.0000	0.4928	0.5660	0.6848	5
Krishna	0.9907	1.0000	0.6386	0.8764	1
Guntur	0.7046	0.8841	0.6112	0.7333	3
Prakasam	0.4504	0.7681	0.4614	0.5600	11
Nellore	0.7575	0.7826	0.6379	0.7260	4
Karnool	0.4365	0.4492	0.4447	0.4435	15
Ananthapur	0.5294	0.4202	0.4900	0.4799	14
Cuddapah	0.7789	0.7971	0.4757	0.6838	6
Chittoor	0.8474	0.5652	0.5309	0.6470	9
Ranga Reddy	0.8189	0.6231	1.0000	0.8140	2
Nizamabad	0.1932	0.8405	0.2701	0.4346	16
Medak	0.1189	0.6711	0.8517	0.5506	13
Mahabubnagar	0.0000	0.3188	0.0000	1.1063	18
Nalgonda	0.3537	0.5942	0.2756	0.4078	19
Warangal	0.4084	0.5797	0.1178	0.3686	20
Khammam	0.4588	0.7536	0.5551	0.6558	8
Karimnagar	0.3189	0.9275	0.4276	0.5580	12
Adilabad	0.1420	0.6956	0.4633	0.4336	17

Table – 5: Human Development Index for AP Districts 2001

Districts	Literacy Index	IMR Index	PCI Index	Value of HDI	HDI Rank
Srikakulam	0.3662	0.2344	0.0082	0.2029	19
Vizianagaram	0.2213	0.3438	0.0000	0.1883	20
Visakhapatnam	0.4897	0.0000	0.5641	0.3512	22
East Godavari	0.7023	0.1406	1.0000	0.6143	4
West Godavari	1.0000	0.3281	0.5095	0.6125	5
Krishna	0.8578	0.0938	0.4377	0.4631	10
Guntur	0.6076	0.5781	0.3874	0.5343	7
Prakasam	0.4338	0.2813	0.2541	0.3231	16
Nellore	0.7167	0.2188	0.3858	0.4404	11
Karnool	0.3131	0.3125	0.1440	0.2565	18
Ananthapur	0.3926	0.7656	0.2740	0.4774	9
Cuddapah	0.6505	1.0000	0.2709	0.6404	3
Chittoor	0.7716	0.5469	0.3163	0.5449	6
Ranga Reddy	0.7311	0.8594	0.5454	0.7119	1
Nizamabad	0.2719	0.7188	0.1504	0.3803	14
Medak	0.2712	0.9219	0.8392	0.6774	2
Mahabubnagar	0.0000	0.5000	0.0287	0.1762	21

Dr. B. SAILAJA KUMARI

Nalgonda	0.4331	0.2343	0.2305	0.2993	17
Warangal	0.4532	0.7344	0.1430	0.4335	13
Khammam	0.4289	0.4999	0.3747	0.1101	12
Karimnagar	0.3684	0.7342	0.3652	0.4892	8
Adilabad	0.2807	0.6250	0.0888	0.3315	15

Table -6 : A Comparative Statement between HDI and PCI Index

Districts	PCI Index	PCI Index	HDI Index	HDI Index	PCI Rank (R ₁)	PCI Rank (R ₂)	HDI Rank (R ₃)	HDI Rank (R ₄)	(R1-R3)	(R2-R4)
	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001
Srikakulam	0.0096	0.0082	0.2025	0.2029	21	21	21	19	0	2
VZM	0.1356	0	0.1095	0.1883	19	22	22	20	-3	2
VSP	0.6792	0.5641	0.5751	0.3512	3	3	10	22	-7	-19
EG	0.5327	1	0.664	0.6143	9	1	7	4	2	-3
Krishna	0.566	0.5095	0.6848	0.6125	7	5	5	5	2	0
WG	0.6386	0.4377	0.8764	0.4631	4	6	1	10	3	-4
Guntur	0.6112	0.3874	0.7333	0.5343	6	7	3	7	3	0
Prakasam	0.4614	0.2541	0.56	0.3231	14	14	11	16	3	-2
Nellore	0.6379	0.3858	0.726	0.4404	5	8	4	11	1	-3
Karnool	0.4447	0.144	0.4435	0.2565	15	17	15	18	0	-1
Ananthapur	0.49	0.274	0.4799	0.4774	11	12	14	9	-3	3
Cuddapah	0.4757	0.2709	0.6838	0.6404	12	13	6	3	6	10
Chittoor	0.5309	0.3163	0.647	0.5449	10	11	9	6	1	5
RR	1	0.5454	0.814	0.7119	1	4	2	1	-1	3
NZM	0.2701	0.1504	0.4346	0.3803	18	16	16	14	2	2
Medak	0.8517	0.8392	0.5506	0.6774	2	2	13	2	-11	0
Mahabubnagar	0	0.0287	0.1063	0.1762	22	20	18	21	4	-1
Nalgonda	0.2756	0.2305	0.4078	0.2993	17	15	19	17	-2	-2
Warangal	0.1178	0.143	0.3686	0.4335	20	18	20	13	0	5
Khammam	0.5551	0.3747	0.6558	0.1101	8	9	8	12	0	-3
Karimnagar	0.4276	0.3652	0.558	0.4892	16	10	12	8	4	2
Adilabad	0.4633	0.0888	0.4336	0.3315	13	19	17	15	-4	4

Note; Rank Correlation between R1 & R3 is 0.82, R2 & R4 is 0.94.

Table – 7: Values of HDI, Literacy, IMR & PCI among the Districts during 1991 & 2001

	Mean		SD		CV	
	1991	2001	1991	2001	1991	2001
HDI	0.5325	0.4209	0.2307	0.1699	38.25	40.37
Literacy	0.5116	0.4892	0.2901	0.2341	56.70	47.85
IMR	0.6146	0.4715	0.2317	0.2239	37.70	47.48
PCI	0.4625	0.3326	0.2450	0.2476	52.97	74.44

Foot Notes:

1. T.W. Schultz 'Reflection on investment in Man', The Journal of Political Economy, Supplement Oct, 1962 pp2-3
2. Michael P. Tadaro and Stephen C. Smith, Economic Development, Eighth edition, Pearson Publication, 2006 p.55
3. Ibid pp.51-54.

4. Government of India 'Eleventh Five Year Plan' 2007-2012, Vol-1, Foreword.
5. Government of India Economic Survey 2006-2007 table 10.7 p215.

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 6. Michael P. Todaro and Stephen C. Smith "Economic Development", 2006.
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