

CHAPTER II

STATUS OF HUMAN DEVELOPMENT

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"Human development, as an approach, is concerned with basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it." - Amartya Sen, Professor of Economics, Harvard University Nobel Laureate in Economics, 1998

"The basic purpose of development is to enlarge people's choices. In principle, these choices can be infinite and can change over time. People often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, secure livelihoods, security against crime and physical violence, satisfying leisure hours, political and cultural freedoms and sense of participation in community activities. The objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives." - Mahub ul Haq (1998), founder of the Human Development Report

Introduction

According to the Human Development Report 2010, the concept of human development has been drawn from the idea of building and expanding capabilities and has been further simplified into expanding people's choices. Human Development was an expansion of people's freedom to live long, healthy and also creative lives; to advance other goals they have reason to value; and to engage in shaping development equitably and sustainably. The concept of human development rests on Amartya Sen's Capability approach. It was actually the application part of the capability approach.

Amartya Sen's Capability approach is a moral framework, it proposes that social arrangements should be primarily evaluated according to the extent of freedom people have to promote or achieve the functioning of their value. Thus, the Capability approach of Amartya Sen can be classified into two parts, one is freedom and the other is the

functioning (beings and doings). The division or classification is just for understanding. Both these attributes and parts should be analysed together. Functioning are intuitive in nature and have intrinsic value and may vary from person to person, that is to say different resources may require different capabilities and have different functioning and ultimately provide satisfaction. In Sen's framework, functionings can be identified through some indicators, like asset index, access to schooling, body mass index, income, self-reported health, times of egg consumption per week, etc. On the other hand, freedom is a real opportunity that 'one' has to accomplish one's value. Freedom is to be taken in the true sense and spirit. Freedom is not only about enhancing the choices, but also about exercising what a person really wants to do.

Human Development Index - Inter-Block Variations

The Human Development Index (HDI) is a statistical tool that is used by economists and policy makers to measure a country's or a region's overall achievement in its social and economic aspects. The social and economic aspects of a country or region are based on the health of people, their level of education attainment and their standard of living. This is the base for the Human Development Report prepared by the United Nations Development Programme (UNDP) for the past couple of decades. The UNDP Human Development Report-2010 continues to adopt the same basic three indicators of education, health and standard of living/income for the calculation of HDI. In the present exercise, HDI has been calculated using the above mentioned parameters.

Dimensions	Indicators
Standard of Living	Access to Cooking Fuel Access to Toilet Facilities Access to Drinking Water Access to Electricity Access to Pucca Houses
Health	Infant Mortality Rate Maternal Mortality Rate Under 5 Mortality Rate
Education	Literacy Rate Gross Enrollment in Primary Gross Enrollment in Secondary

Each of the three parameters are comprised of their respective indices, viz., Standard of Living Index, Health Index and Education Index. For calculating Standard of Living Index, five indicators, viz., access to cooking fuel, access to toilet facilities, access to drinking water, access to electricity and access to pucca houses have been used. For calculating Health Index, three indicators, viz., Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR) and Under Five Mortality Rate (U5MR) have been used. And for calculating Education Index, three indicators, viz., Literacy Rate, Gross Enrolment Rate (GER) for Primary and Secondary Schools have been used.

Viewing the HDI of 13 blocks in Pudukkottai district (see Appendix Tables 2.1 – 2.3), Pudukkottai block stands first with 0.730 HDI value followed by Aranthangi (0.655), Thirumayam (0.596), Annavasal (0.527) blocks and Manamelkudi (0.491). The last five blocks are Gandharvakottai (0.311), Karambakkudi (0.410), Arimalam (0.418), Thiruvarankulam (0.427) and Viralimalai (0.439). Here, it should be kept in mind that these are just inter-block variations and do not reflect the actual status or development levels of the blocks in Pudukkottai district. The actual level of development would be analysed in the forthcoming chapters of this report. In order to understand the inter-block variations, an analysis of the indicators of the HDI is necessary.

Analysing the HDI of blocks in Pudukkottai district, various indicators play significant role in determining the ranks of the blocks. Among the indicators, the maximum variations were found in GER secondary and MMR while the least variations were found in Access to Electricity and U5MR.

Under the Standard of Living parameter, three indicators, viz., Access to Cooking Fuel, Access to Toilet Facility and Access to Pucca Houses show many variations. In terms of Access to Cooking Fuel, Pudukkottai block has the maximum of 49.55 per cent access, followed by Thirumayam (44.33 per cent) and Arimalam (43.95 per cent). The least percentage of Access to Cooking Fuel among blocks was found in Karambakkudi with 7.88 per cent, which is followed by Viralimalai (9.43 per cent). Only three blocks have higher percentage than the district level of 23.78 per cent. In terms of Access to Toilet Facility, Pudukkottai tops with 85.28 per cent, closely followed by Tirumayam 84.44 per cent, while the least is found in Thiruvarankulam with 34.52 per cent, followed by Manamelkudi with 36.60 per cent. Out of the 13 blocks, five blocks namely Annavasal, Ponnamaravathi, Pudukkottai, Thirumayam and Karambakkudi stand above the district level of 56.48 per cent. Considering the Access to Pucca Houses, seven

blocks, viz., Annavasal, Arimalam, Pudukkottai, Thirumayam, Aranthangi, Avudayarkovil and Thiruvarankulam stand above the district level of 76.45 per cent. Annavasal and Thiruvarankulam have more than 90 per cent of Access to Pucca Houses, while Ponnamaravathi has the least Access to Pucca Houses with 39.67 per cent.

Probing the Health parameter, it can be found that MMR exhibits much variation, where Annavasal and Pudukkottai witnessed zero MMR, while four blocks witnessed MMR above 100. Seven blocks, Annavasal, Pudukkottai, Aranthangi, Avudayarkovil, Gandharvakkottai, Karambakkudi and Manamelkudi were below the district level of 50.

Analysing the Education parameter, it can be seen that GER Secondary shows many variations. In terms of GER Secondary, Pudukkottai tops the list followed by Aranthangi and Karambakkudi, while Arimalam has the least GER Secondary followed by Gandharvakkottai. Five blocks, Arimalam, Thirumayam, Avudayarkovil, Gandharavakkottai and Manamelkudi stand below the district level of 95.82 per cent. GER Primary also shows some variations, like Pudukkottai has the highest GER Primary followed by Arimalam, Ponnamaravathi and Thirumayam, while five blocks, Avudaiyarkovil, Karambakkudi, Annavasal and Viralimalai fall below the district level of 101.89 per cent.

Apart from the indicator-wise analysis, it is also essential to analyse the better ranking and poor ranking blocks. In this regard, Pudukkottai block secures the first position in terms of HDI as it performs best in seven indicators, viz., Access to Cooking Fuel (49.55 per cent), Access to Toilet (85.28 per cent), Access to Electricity (93.91 per cent) in the Standard of Living indicators; MMR (0) in Health indicators; and all the Education indicators, i.e., Literacy Rate (84.71 per cent), GER Primary (115.63 per cent) and GER Secondary (275.91 per cent). Aranthangi secures the second position in terms of HDI and is followed by Thirumayam, Avudaiyarkovil and Annavasal blocks in the top five blocks, but the index values of these blocks are much lower than that of Pudukkottai block. This shows that there is significant difference in the performance of these blocks compared to the district headquarters, i.e., Pudukkottai block. In fact Pudukkottai block is the only block in Pudukkottai district to secure a HDI value above 0.700. Aranthangi secures above 0.600 HDI value, Thirumayam and Annavasal secure HDI values above 0.500, while all other blocks secure index values below 0.500 HDI value. This shows the disparity in the performance of blocks in terms of the various indicators.

Table 2.1 Human Development Index

Index	Top Five Blocks	Bottom Five Blocks
HDI	Pudukkottai (0.730)	Gandharvakkottai (0.311)
	Aranthangi (0.655)	Karambakkudi (0.410)
	Thirumayam (0.596)	Arimalam (0.418)
	Annavasal (0.527)	Thiruvarankulam (0.427)
	Manamelkudi (0.491)	Viralimalai (0.439)

Aranthangi is able to secure the second position in terms of HDI as it performs much better than the district level in seven indicators, viz., Access to Drinking Water (96.71 per cent), Access to Electricity (90.30 per cent), Access to Pucca House (78.48 per cent) in the Standard of Living indicators; MMR (30), U5MR (12.70) in Health indicators; and Literacy Rate (81.39 per cent), GER Primary (104.59 per cent) and GER Secondary (165.06 per cent). Thirumayam secures the third position in terms of HDI as it performs best in U5MR (10.52), and better than the district level in all other indicators except MMR (90), Literacy Rate (76.11 per cent), GER Primary (109.57 per cent) and GER Secondary (57.62 per cent). Annavasal secures the fourth position in terms of HDI as it performs best in Access to Pucca House (92.65 per cent) and MMR (0); second best in Access to Electricity (92.39 per cent) and IMR (10.60); and averagely in Access to Drinking Water (91.97 per cent). Manmelkudi secures the fifth position in terms of HDI as it performs the best with 100 per cent coverage in terms of Access to Drinking Water, stands second in Literacy Rate (82.51 per cent) and performs better than the district level in all the three health indicators and GER Primary.

Gandharvakottai stands last in terms of HDI with an index value of 0.311 as it performs poorly, compared to the district level in nine indicators, viz., Access to Cooking Fuel (10.91 per cent), Access to Toilet (51.99 per cent), Access to Drinking Water (89.77 per cent, lowest), Access to Pucca House (69 per cent) in the Standard of Living indicators; IMR (23.90, highest) and U5MR (15.2) in the Health indicators; and Literacy Rate (70.57 per cent, lowest), GER Primary (96.09 per cent) and GER Secondary (48.87 per cent) in the Education indicators. Karambakkudi stands second last in terms of HDI

as it performs poorly, compared to the district level in eight indicators. It is the last in terms of Access to Cooking Fuel (7.38 per cent), second last in terms of IMR (18.40) and U5MR (15.80) and below the district level in terms of Access to Drinking Water (92.22 per cent), Access to Electricity (90.39 per cent), Access to Pucca House (62.96 per cent), Literacy Rate (73.75 per cent) and GER Primary (90.99 per cent). Arimalam stands third last in terms of HDI as it performs poorly, compared to the district level in eight indicators, viz., Access to Toilets (53.86 per cent), Access to Drinking Water (93.33 per cent), Access to Electricity (88.55 per cent), IMR (13.10), MMR (140), Literacy Rate (73.98 per cent) and GER Secondary (42.71, lowest). Thiruvarankulam stands fourth from the bottom in terms of HDI as it performs poorly, compared to the district level in six indicators, viz., Access to Cooking Fuel (13.87 per cent), Access to Toilet (34.52 per cent), Access to Electricity (90.14 per cent), IMR (18.40), MMR (130) and U5MR (15.70). Viralimalai stands fifth from the bottom in terms of HDI as it performs poorly compared to the district level in four indicators, viz., Access to Cooking Fuel (9.43 per cent), Access to Toilet (41.58 per cent), IMR (16.10) and Literacy Rate (71.40 per cent).

Gender Inequality Index — Inter-Block Variations

Along with HDI, simultaneously efforts were also made to arrive at Gender Inequality Index (GII) by the UNDP. GII measures the loss in potential of human development due to inequality between female and male achievements. For measuring GII, three dimensions were considered by the report, viz., Reproductive Health, Empowerment and Labour market. In the present exercise also these measures have been incorporated. Reproductive Health is captured by three indicators, viz., MMR, Share of Institutional Deliveries and Share of Ante Natal Coverage. Empowerment is captured by three indicators for Female and Male separately, viz., Literacy Rates, Share of Juveniles (Children in the age group 0 - 6), Share of Elected Representatives. And the Labour Market has been captured by three indicators for Female and Male separately, viz., Work Participation Rates, Work Participation Rates in Non-agricultural Sector and Wage Rates. HDI presents information on the human development in three dimensions, while GII provides information on gender differentials in achievements.

Dimensions	Indicators
Health	MMR Share of institutional delivery Share of Antenatal coverage
Empowerment	Female literacy rate Male literacy rate Share of female children 0 – 6 years Share of male children 0 – 6 years Share of male elected representatives in RLBs and ULBs Share of female elected representatives in RLBs and ULBs
Labour Market	Female work participation rate Male work participation rate Female work participation rate in non Agri. Sector Male work participation rate in non Agri. sector Female Agri. wage rate Male Agri. wage rate

The top five blocks with GII necessarily indicate the lowest gender inequality. Annavasal ranks first with an index value of 0.006 indicating lowest gender inequality among the blocks in Pudukkottai district (see Appendix Tables 2.4 – 2.6). The top five blocks in terms of GII or gender inequality are Annavasal, Pudukkottai (0.013), Gandharvakkottai (0.025), Manmelkudi (0.028) and Karambakkudi (0.032). These blocks record lower inequality in gender achievements or in other words, achievements of women have been higher in these blocks. Thiruvarankulam with 13th GII rank, stands last with the highest GII value of 0.105. The bottom five blocks in terms of GII are Thiruvarankulam, Arimalam (0.096), Viralimalai (0.087), Kunrandarkovil (0.070) and Ponnamaravathi (0.070). In these blocks, gender gap is very high, so these blocks need attention in terms of women empowerment. These blocks record higher values of GII and reflect higher gender inequality in the district.

Table 2.2 Gender Inequality Index

Index	Top Five Blocks	Bottom Five Blocks
GII	Annavasal (0.006)	Thiruvarankulam(0.105)
	Pudukkottai (0.013)	Arimalam(0.096)
	Gandharvakkottai (0.025)	Viralimalai (0.087)
	Manamelkudi (0.028)	Kunrandarkovil (0.070)
	Karambakkudi (0.032)	Ponnamaravathi (0.070)

As discussed earlier, the GII comprises of indicators in terms of Health, Empowerment and Labour. Analysing these indicators would reveal strengths and weaknesses of the blocks in terms of gender equality. The analysis of GII reveals that, the labour indicators have much significant role in determining block ranks. Here also MMR plays an important role as discussed earlier. Indicators such as, Share of Institutional Deliveries, Share of Female Children, Share of Male Children, Share of Female Elected Representatives in RLBs and ULBs, Share of Male Elected Representatives in RLBs and ULBs and Male WPR have low variations compared to other indicators among the blocks.

The variations among blocks in terms of Female Literacy Rate are higher than Male Literacy Rate. The Female Literacy Rate is higher in Annavasal block with 78.77 per cent, while Pudukkottai block has the lowest Female Literacy Rate among the blocks in Pudukkottai district. Five blocks Annavasal, Aranthangi, Gandharavakkottai, Karambakkudi and Thiruvarankulam have better Female Literacy Rate of 69 per cent.

Like Literacy Rate, the variations among blocks in terms of Female WPR are much higher than in Male WPR. Viralimalai block has the highest Female WPR among the blocks of Pudukkottai district, which is closely followed by Karambakkudi. The least Female WPR is found in Pudukkottai block with 25.85 per cent. Eight blocks, Annavasal, Kundrandarkovil, Ponnamaravathi, Viralimalai, Avudayarkovil, Gandharvakkottai, Karambakkudi and Thiruvarankulam have better Female WPR than the district rate of 35.65. The Female WPR in Non-Agricultural Sector for Pudukkottai block was far better than other blocks in Pudukkottai district with a rate of 20.55 per cent. Arimalam block equals the district level of 20.55. Four blocks Annavasal, Pudukkottai, Thirumayam and Manamelkudi perform better than the district rate. The least performing blocks are

Gandharvakkottai with 8.92 per cent and Avudayakovil with 9.74 per cent. The Male WPR in Non-Agricultural Sector ranges from 17.52 per cent in Gandharvakkottai block to 73.63 per cent in Pudukkottai block. Three blocks Annavasal, Pudukkottai and Manamelkudi have better Male WPR than the district rate of 39.16 per cent.

In terms of the Female Agricultural Wage Rate, which ranges from Rs.100 to Rs.180, Gandharvakkottai block tops the table among the blocks in Pudukkottai district, while Viralimalai, Aranthangi and Thiruvarankulam blocks have the least rate. In terms of Male Agricultural Wage Rate, three blocks Arimalam, Avudayarkovil and Gandharvakkottai have the highest rate of Rs.350, while all the remaining blocks have a rate of Rs.300.

Moving on to the analysis of block rankings, Annavasal block has a GII value of 0.006, which is the lowest among the other blocks in the district. The main reason is that it has zero MMR, highest Female Literacy Rate (78.77 per cent), above district level Female WPR (39.19 per cent), above district level Female WPR in Non-Agricultural Sector (21.31 per cent) and lowest gender gap in Agricultural Wages (Rs.150). Pudukkottai block secures the second position in terms of GII as it has zero MMR, high Share of Ante Natal Coverage (101.25 per cent), high Share of Female Elected Representatives in RLBs and ULBs (40 per cent) and highest Female WPR in Non-Agricultural Sector (51.39 per cent). Gandharvakkottai block secures third rank in terms of GII as it has low MMR (30), high Female Literacy Rate (74.15 per cent), higher Share of Female Children (0-6) years (49.45 per cent) and high Female WPR (41.66 per cent). Manamelkudi block secures fourth position in terms of GII as it records low MMR (40), highest Share of Ante Natal Coverage (106.50 per cent), above district level Female WPR in Non-Agricultural Sector (23.44 per cent) and lowest gender gap in Agricultural Wage Rate (Rs.150). Karambakkudi block secures fifth position in terms of GII as it records low MMR (40), above district level Female Literacy Rate (71.48 per cent) and second highest Female WPR (43.22 per cent).

Thiruvarankulam block is the most gender unequal block among the various blocks in Pudukkottai district. This is due to reason that it has very high MMR (130), low Female Literacy Rate (64.54 per cent) high gender gap in Literacy Rate (about 20 per cent), low Female WPR in Non-Agricultural Sector (15.29 per cent) and high gender gap in Agricultural Wage Rate (Rs.200). Arimalam block stands at the second last position in terms of GII as it has the second highest MMR (140), low Female Literacy Rate (62.74

per cent; 18 per cent gender gap in Literacy Rate), below district level Female WPR (33.95 per cent) and highest gender gap in Agricultural Wage Rate (Rs.230). Viralimalai block stands third from the bottom in terms of GII as it has above district level MMR (80), low Ante Natal Coverage (95.65 per cent), low Female Literacy Rate (64.47 per cent; about 20 per cent gender gap in Literacy Rate) and high gender gap in Agricultural Wage Rate (Rs.200). Kundrandarkoil block stands fourth from the bottom in terms of GII as it has the highest MMR (160), low Ante Natal Coverage (93.95 per cent), low Female Literacy Rate (64.27 per cent; almost 20 per cent gender gap in Literacy Rate), below district level Female WPR (15.89 per cent) and high gender gap in Agricultural Wage Rate (Rs.180). Ponnamaravathi block stands fifth from the bottom in terms of GII as it has high MMR (120), low Female Literacy Rate (66.99 per cent; almost 20 per cent gender gap in Literacy Rate), low Female WPR in Non-Agricultural Sector (16.22 per cent), and high gender gap in Agricultural Wage Rate (Rs.180).

Child Development Index

The development of the children in the society and economy is of great importance, as it determines the future of the society and the economy. Development at the childhood level is considered to be the most important phase of human life and so, the quality of health, well-being, learning and behaviour are more important in this phase of life than in any other phase. This phase comprises of great opportunity, but also of great vulnerability and risk. Proper development initiatives such as adequate health care and education stimulate development and prevent or minimize disabilities and secondary conditions such as diseases and socially unwarranted behaviour. When these are deficient or unsupportive, child development can be seriously and even irreversibly affected. Many research studies have found evidence of fruitful results upon appropriate interventions to address the risk and vulnerability factors. In this direction, the analysis of Child Development Index (CDI) is of crucial importance. The CDI takes into account the Health and Education of children into consideration for its computation. In the Health parameter, Under Five Mortality Rate (U5MR), Child Sex Ratio (0-6 years) and Percentage of Malnourished Children were taken as indicators. In the Education parameter, Primary and Secondary Gross Enrolment Ratios, Children Never Enrolled in Schools and Transition Rates of Primary to Upper-Primary and Upper-Primary to Secondary were taken as indicators.

Dimensions	Indicators
Health	U5MR
	Child Sex Ratio
	Percentage of Malnourished Children
Education	Gross Enrollment Ratio In Primary
	Gross Enrollment Ratio In Secondary
	Children Never Enrolled in Schools
	Transition Rate From Primary to Upper Primary
	Transition Rate From Upper Primary to Secondary

The top five blocks in terms of CDI rankings were Pudukkottai, Thirumayam, Viralimalai, Aranthangi and Annavasal with index values of 0.766, 0.694, 0.675, 0.645 and 0.579 respectively, while the bottom five blocks are Avudaiyarkovil, Gandharvakottai, Karambakkudi, Ponnamaravathi and Arimalam with index values of 0.464, 0.477, 0.497, 0.523 and 0.552 respectively (see Appendix Tables 2.7 and 2.8). The indicator-wise and block-wise variations in the CDI need to be analysed in order to understand the reason for the performance of the blocks.

Table 2.3 Child Development Index

Index	Top Five Blocks	Bottom Five Blocks
CDI	Pudukkottai (0.766)	Avudaiyarkovil (0.464)
	Thirumayam(0.694)	Gandharvakottai (0.477)
	Viralimalai (0.675)	Karambakkudi (0.497)
	Aranthangi (0.645)	Ponnamaravathi (0.523)
	Annavasal (0.579)	Arimalam (0.552)

The analysis of Child Development Index of Pudukkottai district shows that, in the Health parameter Child Sex Ratio and in Education parameter, GER Primary and Secondary significantly impact the ranks of the blocks. The Child Sex Ratio of the blocks ranges from 927 female per 1000 male in Karambakkudi block to 997 female per 1000 male in Manamelkudi block of the district. Seven blocks, Arimalam, Thirumayam, Viralimalai, Avudayarkovil, Gandharvakottai, Manamelkudi and Thiruvarankulam are the blocks with better Child Sex Ratio than the district Child Sex Ratio of 960. Thirumayam block (11.35) perform better in terms of Percentage of Malnourished

Children in Pudukkottai district, which is closely followed by Pudukkottai block with 12.87. Six blocks, Pudukkottai, Thirumayam, Aranthangi, Avudayarkovil, Karambakkudi and Thiruvarankulam perform better than the district level of 24.57 per cent. In terms of GER Primary and Secondary, there are variations as discussed earlier.

Block-wise analysis reveals that Pudukkottai block secures the first position in terms of CDI with the score of 0.766 and it is the only block which gets a score above 0.700. The reason for this is that it has the second lowest Percentage of Malnourished Children (12.87), best GER Primary, best GER Secondary and best Transition Rate from Primary to Upper Primary (99.6 per cent). But, there are certain aspects that need to be addressed like, it has the highest U5MR (18.28) and below district level Child Sex Ratio (957). Thirumayam block secures the second position in terms of CDI as it has the lowest U5MR (10.52), lowest Percentage of Malnourished Children (11.32), high GER Primary (109.57 per cent) and best Transition Rate from Upper Primary to Secondary (99.29 per cent). But, it has very low GER Secondary. Viralimalai block secures the third position in terms of CDI as it has below district level U5MR (12.68), high GER Secondary, lowest Children Never Enrolled in Schools (0.11 per cent) and best Transition Rate from Primary to Upper Primary (99.6 per cent). But, it has above district level Percentage of Malnourished Children (26.92). Aranthangi block secures fourth position in terms of CDI as it has below district level U5MR (12.70) and Percentage of Malnourished Children (21.44), high GER Primary, high GER Secondary and low Children Never Enrolled in Schools (0.19 per cent). But, it has low Child Sex Ratio (953). Annavasal block secures the fifth position in terms of CDI as it has second lowest Children Never Enrolled in Schools (0.13 per cent) and has high Transition Rates. Even though Annavasal block secures the fifth rank in terms of CDI, it does not perform well in indicators like, Child Sex Ratio (951), Percentage of Malnourished Children (28.15) and GER Secondary (94.75 per cent).

Avudaiyarkovil block scores 0.464 in the CDI and stands last among the blocks in Pudukkottai in this aspect. This is due to the reason that it has lowest GER Primary (82.39 per cent) and Transition Rate from Primary to Upper Primary (98.80 per cent) It also performs poorly compared to the district level in terms of U5MR (15.30), GER Secondary and Transition Rate from Upper Primary to Secondary. Gandharvakkottai block stands second from the bottom as it has very high U5MR and Percentage of Malnourished Children. It also has very low GER Primary and Secondary. But, it has better Juvenile Sex Ratio (978) than the district level (960). Karambakkudi block stands

third from the bottom as it has very high U5MR (15.80) and lowest Juvenile Sex Ratio (927). It performs below the district level in terms of GER Primary and both Transition Rates. Ponnamaravathi block stands fourth from the last among the blocks in Pudukkottai in this aspect. This is due to the reason that it has below district level Child Sex Ratio (945), high Percentage of Malnourished Children (28.26) and lowest Transition Rate from Upper Primary to Secondary (97.52 per cent). Arimalam block stands fifth last among the blocks in Pudukkottai in terms of CDI as it has above district level Percentage of Malnourished Children (26.46), lowest GER Secondary, highest Children Never Enrolled in Schools (1.55 per cent) and below district level Transition Rate from Upper Primary to Secondary (98.57 per cent). It is interesting to note that it has the second lowest U5MR (10.70) and performs well in Transition Rate from Primary to Upper Primary (99.5 per cent).

Multidimensional Poverty Index – An Analysis

Multidimensional Poverty Index (MPI) is calculated considering three criteria, Health, Education and Standard of Living. The indicators of Health are taken as IMR, Higher Order Birth Rate and Percentage of Malnourished Children. The indicators of Education are taken as Drop-outs in Primary and Secondary Levels, while the indicators of the Standard of Living are taken as in the case of HDI, i.e., Access to Cooking Fuel, Access to Toilet Facilities, Access to Drinking Water, Access to Electricity and Access to Pucca Houses.

Dimensions	Indicators
Health	IMR, Higher Order Birth Rate Malnourished Children
Education	Drop Out in Primary Drop Out in Secondary
Standard of living	Access to Cooking Fuel Access to Toilet Facilities Access to Drinking Water Access to Pucca Houses Access to Electricity

MPI is used to understand the deprivation of the basic necessities at the household level. Even though a family may have some amount of income, it may be

deprived of certain basic important services such as access to drinking water or toilet facility, which in turn would make the family prone to vulnerable diseases. So, it is necessary to understand the deprivation level of the various blocks in the district through MPI. In terms of MPI in Pudukkottai district, the top five blocks are Thirumayam, Pudukkottai, Arimalam, Kunrandarkoil and Aranthangi with index values of 0.239, 0.317, 0.415, 0.452, and 0.459 respectively, while the bottom five blocks are Gandharvakottai, Viralimalai, Ponnamaravathi, Manamelkudi and Kunrandarkoil with index values of 0.678, 0.645, 0.624, 0.600 and 0.597 respectively (see Appendix Tables 2.9 and 2.10).

Table 2.4 Multidimensional Poverty Index

Index	Top Five Blocks	Bottom Five Blocks
MPI	Thirumayam (0.239)	Gandharvakottai(0.678)
	Pudukkottai (0.317)	Viralimalai(0.645)
	Arimalam (0.415)	Ponnamaravathi(0.624)
	Kunrandarkoil (0.452)	Manamelkudi(0.600)
	Aranthangi (0.459)	Karambakkudi (0.597)

Analysing the variations in the indicators, among the three parameters of MPI Standard of Living has significant influence in determining the ranking of the blocks because indicators in the other two parameters do not exhibit many variations among the blocks. Access to drinking water and Access to Electricity indicators in the Living Standard parameter does not exhibit many variations. The remaining three indicators, Access to Cooking Fuel, Access to Toilet Facilities and Access to Pucca Houses exhibit many variations, which have been discussed earlier in the HDI section.

Coming to the block-wise analysis, Thirumayam block secures the first rank in terms of MPI with the score of 0.239 and it is the only block to score at this level. Thirumayam block performs well in all indicators expect one, viz., dropout Secondary (4.27 per cent; high). It has below district level IMR (11.20), best Higher Order Birth

Rate (7.80), best Percentage of Malnourished Children (11.32), best Dropout Primary (0.34 per cent), second best Access to Cooking Fuel (44.33 per cent), second best Access to Toilet Facilities (84.44 per cent) and above district level Access to Pucca House (79.76 per cent). Pudukkottai block secures the second rank in terms of MPI as it performs best in four indicators, viz., Dropout Primary (0.34 per cent), Access to Cooking Fuel (49.55 per cent) and Access to Toilet Facility (85.28 per cent) and Access to Electricity (93.91 per cent). It also performs well in indicators such as Percentage of Malnourished Children (12.87; second lowest), Access to Pucca House (78.77 per cent; above district level). It needs to concentrate on IMR (15.70) and Higher Order Birth Rate (15.08), which are high. Arimalam block secures the third rank in terms of MPI as it has below district level Higher Order Birth Rate (9.79), second best Dropout Secondary (1.15 per cent), Third Access to Cook Fuel (43.95 per cent) and above district level Access to Pucca House (84.95 per cent). But, it performs below and above the district level in all the other positive and negative indicators respectively. Kundrandarkoil block secures the fourth rank in terms of MPI as it has the best Dropout Primary (0.34 per cent), district level Dropout Secondary (3.25 per cent), above district level Access to Toilet Facilities (52.68 per cent), above district level, Access to Drinking Water (96.76 per cent) and above district level, access to Electricity (94.64 per cent). But, it performs below and above the district level in all the other positive and negative indicators respectively. Aranthangi block secures the fifth rank in terms of MPI as it has the third best Higher Order Birth Rate (9.70), below district level Percentage of Malnourished Children (21.44), below district level Dropout Secondary (2.27 per cent), district level Access to Cooking Fuel (23.63 per cent), above district level Access to Drinking Water (96.71 per cent) and above district level Access to Pucca House (78.48 per cent). But, it performs below and above the district level in all the other positive and negative indicators respectively.

Among the bottom five blocks four blocks score 0.600 and above in terms of the MPI, viz., Gandarvakkottai, Viralimalai, Ponnamaravathi and Manamelkudi. These blocks perform poorly or worse than the district level in all the indicators except one or two indicators. Gandarvakkottai block with the score of 0.678 stands last among the various blocks of Pudukkottai district in terms of MPI. As observed earlier, it performs poorly or worse than the district level in all the indicators except Dropout Secondary (0.73 per cent; best) and access to Electricity (91.74 per cent; above district level). It has the highest IMR (23.90), highest Percentage of Malnourished Children (34.21), above

district level Dropout Primary (0.39 per cent), low Access to Cooking Fuel (10.91 per cent), below district level Access to Toilet Facilities (51.99 per cent), below district level Access to Drinking Water (89.77 per cent) and below district level Access to Pucca House (69 per cent). Viralimalai block stands second last in terms of MPI as it performs worse than the district level in all indicators. It has high IMR (16.10), Higher Order Birth Rate (15.43) and Percentage of Malnourished Children (26.92); it has above district level Dropout Primary (0.38 per cent) and Dropout Secondary (3.7 per cent); and it has second lowest percentage of households with Access to Cooking Fuel (9.43 per cent) and below district level Access to Toilet Facilities (41.58 per cent), Access to Drinking Water (92.83 per cent), Access to Pucca House (72 per cent) and Access to Electricity (90.59 per cent). Ponnamaravathi block stands third from the bottom in terms of MPI as it performs poorer than the district level in all indicators except access to Toilet Facilities (62.75 per cent; above district level) and access to Electricity (91.07 per cent; above district level). It has above district level IMR (12.10), above district level Higher Order Birth Rate (13.59), high Percentage of Malnourished Children (28.26), above district level Dropout Primary (0.40 per cent), high Dropout Secondary (4.66 per cent), below district level Access to Cook Fuel (19.51 per cent), below district level access to Drinking Water (94.53 per cent) and least access to Pucca House (39.67 per cent). Manamelkudi blocks stands fourth from the bottom in terms of MPI as it has the highest Percentage of Malnourished Children (37.18), highest Dropout Primary (0.42 per cent), highest Dropout Secondary (5.16 per cent), below district level Access to Cooking Fuel (20 per cent), low Access to Toilet Facilities (36.60 per cent), below district level Access to Pucca House (71.79 per cent) and below district level Access to Electricity (89.19 per cent). It is interesting to note that the Manamelkudi block has 100 per cent Access to Drinking Water, and below district level IMR (11.50) and Higher Order Birth Rate (9.40). Karambakkudi block stands fifth from the bottom as it has high IMR (18.40), high Higher Order Birth Rate (15.20), lowest Access to Cooking Fuel (7.38 per cent), below district level Access to Drinking Water (92.22 per cent), low Access to Pucca House (62.96 per cent) and just below district level Access to Electricity (90.39 per cent). It performs near district level in all other indicators.

Table 2.5 Indices and Ranks

Blocks	HDI		GII		CDI		MPI	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Annavaasal	0.527	4	0.006	1	0.579	5	0.498	7
Arimalam	0.418	11	0.096	12	0.552	9	0.415	3
Kunrandarkovil	0.459	8	0.070	10	0.556	8	0.452	4
Ponnamaravathi	0.476	7	0.070	9	0.523	10	0.624	11
Pudukkottai	0.730	1	0.013	2	0.766	1	0.317	2
Thirumayam	0.596	3	0.053	6	0.694	2	0.239	1
Viralimalai	0.439	9	0.087	11	0.675	3	0.645	12
Aranthangi	0.655	2	0.066	8	0.645	4	0.459	5
Avudayarkovil	0.486	6	0.056	7	0.464	13	0.483	6
Gandarvakkottai	0.311	13	0.025	3	0.477	12	0.678	13
Karambakkudi	0.410	12	0.032	5	0.496	11	0.597	9
Manamelkudi	0.491	5	0.028	4	0.565	7	0.600	10
Thiruvarankulam	0.427	10	0.105	13	0.573	6	0.525	8

Conclusion

The HDI of various blocks of Pudukkottai district's shows that Pudukkottai block ranks first with 0.730 HDI value followed by Aranthangi with value of 0.655, and Thirumayam (0.596) and Annavaasal (0.527). The remaining blocks are behind in the development sphere, particularly Gandharvakkottai with a HDI value of 0.311. Along with Gandharvakkottai, all the other blocks with HDI values in the range 0.400 – 0.500, need immediate attention in terms of development initiatives. The particular areas (indicators) where attention is required, have been pointed out in the earlier discussion regarding HDI. The GII of the various blocks of Pudukkottai district reveals the variations in terms of gender-wise achievements. Annavaasal block leads the way with lowest GII value of 0.006 followed by Pudukkottai block (0.013). Eight blocks have GII value more than 0.050 indicating more gender inequality in these blocks compared to the other blocks in the district. Thiruvarankulam block has the highest GII value of 0.105 closely followed by Arimalam with 0.096. All these blocks with much gender inequality needs to be sensitized on gender equality. These blocks may not have uniform issues, the indicators where the gender gap is wide have been indicated in the earlier discussion and those particular areas may be targeted in order to achieve gender equality.

The CDI of Pudukkottai district's 13 blocks shows moderate variations among the blocks with regard to child development. As in the case of HDI, Pudukkottai block tops in terms of CDI with 0.766 index value. Thirumayam, Viralimalai and Aranthangi can be categorised in the range 0.600 – 0.700; Annavasal, Thiruvarankulam, Manmelkudi, Arimalam and Ponnamaravathi can be classified in the range 0.500 – 0.600; while, Karambakkudi, Gandharvakkottai and Avudaiyarkovil can be classified in the range 0.400 – 0.500. The blocks in the range 0.400 – 0.600 need immediate attention with regard to child development. The MPI of the various blocks of Pudukkottai district shows the different levels of deprivation in the blocks. Here, Thirumayam and Pudukkottai with lower MPI values of 0.239 & 0.317 respectively indicate lower deprivation in these blocks compared to the other blocks of Pudukkottai district. Five blocks fall in the range 0.400-0.500, while six blocks, viz., Gandharvakkottai (0.678), Viralimalai (0.645), Ponnamaravathi (0.624), Manamelkudi (0.600), Karambakkudi (0.597) and Thiruvarankulam (0.525) fall in the range 0.500 – 0.700. These blocks have higher MPI values indicating higher deprivation.

Overall, the status of human development in the various blocks of Pudukkottai district suggests that Pudukkottai block performs well in all indices followed by Thirumayam and Aranthangi and these two may be considered to perform well to some extent in this regard. Annavasal block seems to be performing near the district level, while the remaining blocks need attention in various areas. There are areas where the better performing blocks also need attention. So, interventions in the necessary areas as indicated in the discussions need to be focused upon in the respective blocks for achieving balanced development in the district.