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**Economic Growth and Inclusive Development:
Is there a need for New Growth Model**

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Economic Growth and Inclusive Development: Is there a need for New Growth Model

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I have chosen to speak on the theme of “New Growth Model for Inclusive Development” in the wake of two biggest challenges faced by developing countries in particular and world in general. These are the challenges of “Employment and Sustainability” which are also closely related to inclusive development.

Some of you are teaching or doing research on various aspects of structural transformation of economy and may be aware of the empirical literature on the process of structural transformation of economies, from low income to high income level. The literature mostly covers period from mid 18th Century pertaining to Industrial growth in England, western Europe, late 19th Century experience of Japan and late 20th Century experience of East Asia. The origin of this literature is traced to 1954 publication of seminal work of Arthur Lewis on “Economic development with Unlimited Supply of labour” in the “*Manchester Journal of Economics and Social Studies*”. Surprisingly, any reference to the work on Structural transformation of economy before that is not seen in common literature. The famous Two Sector Model of Development of Lewis described economic development as a growth process of relocating resources from agriculture to modern industrial sector with higher productivity. The model postulates that agriculture is a subsistence sector with almost zero productivity of labour marked by traditional technology whereas Industrial sector is a modern sector based on better technology and much higher labour productivity than agriculture. This would result in shift of labour from agriculture to non agriculture and higher growth of Industry sector than agriculture. This theory was then widely used by many developing countries to support industrialization.

This theory assigns passive role to agriculture in economic development. Even at that time, this theory was criticised for some of its assumptions like zero productivity of labour in agriculture. In the post Green Revolution period, some assumptions of Lewis model of development have come under serious question. First, the Green Revolution shows that technology can play a significant role in modernising agriculture and in raising productivity of land and labour. Second, Lewis model did not differentiate between cultivator and agriculture labour as he believed agriculture to be only family activity. However, in post Green Revolution period, the world has seen emergence of capitalist agriculture and a very clear class

distinction between cultivators and agriculture labourers. Regarding unlimited supply of labour in agriculture, this assumption holds no more. In fact, in many areas agriculture now suffers due to low availability of labour, even in low income countries like Nepal. These changes have implications for choosing pathways for economic transformation from agrarian economy to industrialised economy.

A few years after the classic work of Arthur Lewis, a new thinking emerged on role of agriculture in economic transformation led by Johnson and Mellor in 1961. According to this school, agriculture plays a central role as a driver of growth, especially in the early stage of industrialisation. This was supported by experience of economic development in much of Asia. Leading development economists of the time like T W Tschulz in 1964 and Hayami and Ruttan in 1971 also recognised leading role of agriculture and its potential to emerge as a modern sector and contribute to overall growth in a significant way.

A little later, economists identified growth linkage and multiplier effect of agriculture growth on non-agriculture sector. Much of this was result of modern agriculture technology which required use of modern industrial inputs like fertilizer, chemical, farm equipment and machinery. I think Lewis and other thinkers of similar leaning at that time did not foresee technological change coming in agriculture like industry and thus enabling agriculture to play a different role in economic development than what was envisaged by Lewis. This also bring to the fore power of technology in determining the nature of economic transformation.

According to the proponents of growth linkages of agriculture, this sector contributes to economic development in multiple ways besides backward linkage through demand for inputs. The other linkage includes supply of new forms of raw material for industry and demand for industrial goods in rural areas. One can further add to this “agriculture – energy linkage” like ethanol and biodiesel from crops if other sources of energy turn costlier and scarce.

It is interesting to point out that both the traditional and modern theories of economic development have a remarkable similarity in terms of conclusions on nature of economic transformation. All development economists arrived at a conclusion, that, as per capita income rises, share of agriculture in GDP and in employment undergoes decline. This transition ultimately leads to equalisation in labour and capital productivity in agriculture with other sectors.

Empirical evidence from industrialised countries, emerging economies and developing economies provide strong evidence of decline in share of agriculture in GDP and employment but the patterns turn out to be different in recent years.

According to Timmer (2009), the share of agriculture in GDP falls much faster than the share of agriculture labour in the overall labour force. As a result, growth in farm income start falling behind income earned in rest of the economy. This has implications for income disparity between agriculture and non-agriculture which can lead to serious political problem. Economists like Bruce Gardner in 2002 observed that faster integration of farm labour into non-farm economy is the long term answer for convergence of farm and non-farm income but such integration takes a long time. According to Gardner, it was not fully achieved even in the USA until the 1980s.

In the recent years, the convergence between share of agriculture in GDP and employment has further slowed down as job opportunities in industrial sector are not keeping pace with growth in non-agricultural GDP. In India, China, Vietnam the two shares are moving parallel rather than converging (see Annexure I). This implies continuation of disparity in per worker income between agriculture and non-agriculture.

Employment is emerging as a most serious challenge of our time in the developing as well as the developed countries. Technological innovations of various kind like robotics, machine learning, automation, AI etc. etc. are favouring capital intensive production to the detriment of deployment of labour. Modern growth is dubbed as “jobless growth” by some experts as more and more machines, frontier technologies and e-commerce are replacing human beings.

I did a study in rural India to compare changes in rural GDP and rural employment during 2004-05 to 2011-12. In this period GDP of manufacturing sector in rural India increased at annual rate of 15.87 per cent. In contrast to this the growth in employment in Industry was meagre 0.67 per cent (Chand et.al. 2017). One may ask why a country doesn't encourage labour intensive production and discourage excessive capital intensity in industry through suitable incentive and policies. The difficulty of doing this follows from efficiency or competitiveness which cannot be ignored in a globalised world. Let me elaborate this by giving example from food processing sector of India. This sector is divided into two categories viz., organised and unorganised. Organised refer to capital intensive modern factories and unorganised includes small and micro enterprises. Data shows that organised food processing sector employs 20% of total labour force used in food processing sector and produces 80% of output. In contrast, unorganised sector employ 80% of work force of the sector for 20% share in output. The net result of this structure of production is that final output of organised sector is much more competitive as compared to unorganised sector. As a result, share of organised sector in total output

of food processing is rising rapidly and that of unorganised sector is shrinking rapidly. You can easily imagine implications for employment.

Given highly capital intensive nature of industry and fast emerging technological breakthroughs favouring labour displacing machines and methods, who will offer jobs to new entrants in labour force and work-force that ought to move out of agriculture for better wages and income?

Serious mismatch between growth rate in output and employment in industry sector is also a source of very wide disparity in income per worker in industry and agriculture. This has further implications for inclusive growth which can be seen from changes in poverty.

Should we think of agriculture centric model of development in initial stages of development in a low income economy and then give big push to industrialisation. Will such model, being more labour intensive, more suitable for future transformation of economies of developing country like India? How that is possible?

At theoretical level, pathway for agriculture led economic transformation may follow from Innovations in agriculture sciences like biotechnology. Advances in plant biotechnology are making it possible to produce customised products to meet health, pharmaceuticals and other needs and products with industrial, economic, pharmaceutical, nutritional and environmental importance. I feel the counter to adverse effect of digital technology on jobs can come from plant biotechnology that leads to development of crops which will serve as factories for the synthesis of valuable metabolites and organic compounds.

The first possibility for deviation from Lewis model was created by green revolution technology that became available to developing countries in mid 1960s. Many developing countries harnessed this technology to usher in their socio economic transformation. The underlying explanation for this is backward and forward linkages created by accelerated growth in agriculture sector (Haggblade et al 2008).

Within India, discernible evidence on this is available from the experience of various states and some evidence is available from national growth rates. First I come to national growth rates which are presented in Annexure II for different period corresponding to different episodes of policies and structural changes in economy. The first wave of growth in India was brought by Green Revolution technology which became available in the country after mid 1960s. the second wave was brought by economic reforms which began in the year 1991-92. The third wave which

involves a sort of revolution in services, and, IT and IT enabled services began around year 2003-04. Growth rates in agriculture, non-agriculture and total economy, corresponding to these episodes of growth, reveal an interesting story. The first phase is taken from 1950-51 to 1966-67 before the onset of green revolution technology in India. In this period, agriculture experienced growth rate of 1.77 per cent while non-agriculture showed annual growth rate of 5.5 per cent. The overall growth of economy was 3.41 per cent. Onset of green revolution brought first wave of accelerating growth rate in agriculture which increased to 3.02% during 1966-67 to 1991-92 from 1.77% in the pre-green revolution period. In the third phase, which began with economic reforms, agriculture growth showed slight deceleration but non-agriculture growth showed high rate of acceleration to 7.01%. The growth rate of economy accelerated to 5.73% despite small deceleration in agriculture sector. This could happen due to favourable effect of policy reforms on manufacturing sector.

The recent phase covering the period from 2003-04 to 2019-20 witnessed acceleration in both, growth rate in agriculture as well as non-agriculture leading to acceleration in growth rate of economy to 6.71%. These growth trend shows that agriculture sector played a very significant role in accelerating growth of economy and in raising per capita income in India. At the same time it resulted in reduction in poverty.

A more clear picture about the role of agriculture in raising per capita income and growth of economy emerges from the state level picture. State wise data on per capita income since 1960-61 and incidence of poverty since 1973-74 are presented in Annexure III and IV.

As already stated, the first wave of growth started with the Green Revolution in the year 1966-67 which was initially adopted at large scale by Punjab, Haryana, Western region of Uttar Pradesh, deltaic regions of Andhra Pradesh and Tamil Nadu and pockets of areas having assured irrigation in other states. These areas experienced accelerated growth in agriculture which in turn had positive effect on growth of state economy and even non farm sector through forward and backward linkages.

The second wave of growth in economy arrived with economic reforms of 1991. Its maximum impact was seen in Maharashtra, Gujarat, Tamil Nadu and Haryana. This growth helped Maharashtra to emerge at the top in per capita income among all major states by mid 1990s.

The third wave of growth originated in services and IT sector. This potential was harnessed much more by Karnataka, Andhra Pradesh, Maharashtra and Haryana

as compared to the other states. This helped Karnataka to emerge as second in terms of per capita income by 2015-16 after Haryana.

These three waves of growth created interesting patterns of development across states. The first pattern represents transformation based on agriculture centric growth model using green revolution technology. This model is found to be inclusive as it helped in reducing poverty greatly. Obviously, if this agriculture led transformation is not followed by industrial growth it will not sustain growth. The typical example of this model is the state of Punjab, which ranked number one in per capita income during green revolution period lasting till 1994-95 and then witnessed gradual slide till recently. However, effect of agri growth on inclusive development is clearly visible in the state from the incidence of poverty which is lowest among all major states.

The second pattern involved agriculture led transformation followed by industrialisation. This model is both inclusive as well as sustainable from growth point of view. The state of Haryana represents this pattern. Even Tamil Nadu and Andhra Pradesh also followed this model but with lesser coverage of improved agriculture technology. This is found to be the best model in the evolution of growth and development. The evidence of this is in emergence of Haryana as top ranking state in PCI in the country after 2003-04. Incidence of poverty in Haryana is half of national average.

The third pattern represents focus on Industry for growth and development. This model gave high growth but not inclusive growth. Maharashtra is a typical example of this followed by Gujarat to some extent. In Maharashtra, most of the growth and economic progress is concentrated in industrial belt in and around Mumbai and Pune. Rest of the state does not reflect the high PCI status of Maharashtra. Despite attaining first rank in per capita income the state has much lower reduction in poverty as compared to Tamil Nadu.

The fourth pattern include services sector and IT sector as driver of growth. Karnataka is a typical example of this followed by Andhra Pradesh and Maharashtra. As in Maharashtra, the impact of growth in services and IT sector is concentrated in and around Bengaluru and Mysuru with no such change visible in rest of Karnataka. Karnataka also show much less reduction in poverty compared to Tamil Nadu and Andhra Pradesh.

The conclusions that follow from these state level growth patterns and their effect on income and poverty are; (i) agriculture led growth is inclusive but not sustainable if it is not followed by industrialisation (2) agriculture led growth

followed by industrialisation results in high per capita income and low poverty on sustained basis (3) industry led growth not preceded by high agriculture growth can raise growth of economy and per capita income but it is not inclusive (4) services led growth benefits limited pockets under its influence.

The above pattern and conclusions have implication for states with low productivity of agriculture namely Bihar, Uttar Pradesh, Jharkhand, Assam, Madhya Pradesh, Chhattisgarh and Odisha. These States should accord top priority to growth of agriculture sector for laying strong foundation for inclusive growth. The second priority should be on industry and third on services sector. If this sequence is not followed than goal of inclusive and sustainable growth and transformation will be very difficult to achieve.

An important reason for high growth in industry and/or services not resulting in inclusive growth is the nature of technology deployed by these two sectors. They rely more on capital intensive technologies which in some cases is even labour displacing.

Next I come to Sustainability. Agriculture is major user of natural resources. Air, water and land are the three pillars of sustainability. According to official sources 80-90 per cent of total water used in India is used in agriculture sector. Global average is 70%. Still 50% area under cultivation is without irrigation. Because of common practice of flood irrigation, water use efficiency in the country is around 30-35%. Water intensive crops are being grown in low rainfall areas and water intensive practices are spreading. As a consequence, groundwater resources are getting depleted in almost all the states in the country. Data from monitoring wells for groundwater level reported by Central Ground Water Board show a big decline in area with groundwater depth below 3 metres and 3-5 metres and a big increase in area with groundwater depth exceeding 10 metres below ground level between 1998 and 2018. Further, these changes are spread over all regions of the country though severity of change differs across regions.

Generally talked strategies of rainwater harvesting in urban areas and recycling of urban water would be of small help in addressing future water demand. The real gain will come from efficient use of water in agriculture, and rain water harvesting and water conservation in agricultural land.

Green house gases emitted from agricultural activities are generally not visible. The emission results from application of organic and inorganic inputs to the soil for crop production, decomposition of biomass and dead plant residues, crop production, plant respiration, livestock rearing, enteric fermentation in ruminants,

manure handling, and burning of crop residues. Agriculture is responsible for about 17 per cent of GHG emission in India which is almost same as its share in GDP. Three-fourth of this is due to methane produced from rice cultivation and livestock and the remaining 26% comes from nitrous oxide emitted from fertiliser. The share of agriculture in total GHG emissions will increase significantly if burning of crop residue, which is now spreading to many states, is taken into account.

It is evident from above that agriculture is central to climate change and clean air, and sustainable use of land and water. Agriculture is both part of the problem and part of the solution to climate change and sustainability. We must seize every opportunity to shift away from inefficient farm practices, towards long-term sustainability, efficiency and resilience. Among all sectors, agriculture offers the best hope for green growth that is environmentally sustainable.

To sum up: I feel the context of economic development has changed, as, employment, sustainability, environment services, poverty, nutrition and health have become the major concerns of our time. In this changed context, agriculture is seen to play much larger and different role, rather than serving to meet requirement for industrialisation, as envisaged in the Lewis Model. Indian states present rich variety of variations and even departure from Lewis model.

A new thinking is emerging globally on prominent role for agriculture in the development agenda. It is now for us to mainstream this new paradigm with emphasis on “Agriculture for Development” instead of “Agriculture in Industrialisation”.

States should not ignore to harness potential of agriculture and jump to industrialisation for their future growth and development. States with low productivity of agriculture should accord top priority to agriculture followed by industry and services for higher and inclusive growth. However, it is must to develop industry and services following agriculture transformation to maintain growth momentum towards high income economy.

Views are personal.

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Annexure I

Share of agriculture in income and employment

Country	Agriculture Share in	1991	2001	2011	2019
Brazil	GDP	6.79	4.80	4.34	4.40
	Employment	19.64	16.42	11.99	9.08
China	GDP	24.03	13.98	9.18	7.14
	Employment	59.7	50.01	34.8	25.33
India	GDP	27.33	21.62	17.19	16.68
	Employment	63.32	59.1	49.26	42.6
Malaysia	GDP	14.36	8.01	11.45	7.26
	Employment	22.49	15.13	11.88	10.28
Vietnam	GDP	40.49	23.24	19.57	13.96
	Employment	70.88	63.99	48.31	37.22

Annexure II

Growth rate in Indian economy and agriculture and non-agriculture sectors 1950 - 51 to 2019-20.

Period	Agri and Allied	Non Agriculture	Total economy
1951 -1967	1.77	5.50	3.41
1967-1992	3.02	5.19	4.24
1992-2004	2.83	7.01	5.73
2004-2020	3.78	7.43	6.71

Annexure III

Per capita NSDP at current prices

Year	Andhra Pradesh	Assam	Bihar	Chhattisgarh	Goa	Gujarat	Haryana	Himachal Pradesh	Jharkhand	Karnataka
1970-71	585	535	402		916	829	877	678		641
1971-72	628	548	415		993	827	960	716		646
1972-73	657	577	479		1048	761	1015	769		664
1973-74	857	648	573		1284	1116	1216	936		907
1974-75	1010	822	683		1506	1037	1299	1048		1000
1975-76	883	783	656		1615	1239	1432	1078		951
1976-77	877	875	690		1791	1404	1642	1029		986
1977-78	1003	933	732		2000	1520	1764	1178		1117
1978-79	1083	1007	773		2119	1554	1889	1295		1142
1979-80	1179	1063	799		2527	1735	1941	1289		1345
1980-81	1380	1284	917		3145	1940	2370	1704		1520
1981-82	1661	1625	1044		3369	2376	2668	1953		1707
1982-83	1740	1803	1145		4026	2457	2980	2032		1855
1983-84	1972	2113	1281		4181	3128	3160	2273		2192
1984-85	2068	2430	1504		5039	3188	3365	2249		2416
1985-86	2258	2612	1601		4660	3221	4004	2649		2495
1986-87	2357	2767	1798		5484	3660	4106	2870		2810
1987-88	2780	3060	1906		5966	3564	4445	3185		3159
1988-89	3476	3204	2253		6865	4908	5714	3934		3620
1989-90	3899	3723	2312		7988	5304	6233	4375		4044
1990-91	4531	4281	2660		8797	5891	7508	4910		4598
1991-92	5393	4683	2868		10693	6243	8775	5691		5889
1992-93	5748	4973	2998		12800	8235	9037	6390		6321
1993-94	7416	5715	3037	6539	16558	9796	11079	7870	5897	7838
1994-95	8732	6493	3372	6983	19317	12640	12879	9451	6455	8960
1995-96	9999	7001	3041	7479	22207	13665	14213	10607	6904	10217
1996-97	11202	7394	4001	8353	26418	16153	16611	11960	7235	11670
1997-98	11650	7966	4014	9218	32647	16585	17530	13488	9581	12832
1998-99	13965	8826	4495	10056	40248	19001	19340	16144	10715	15396
1999-00	15427	12282	5786	11629	42296	18864	23222	20806	11549	17502
2000-01	17195	12803	6415	10744	43735	18392	25583	22795	10345	18344
2001-02	18573	13059	6200	12170	44110	19823	28022	24608	11034	18547
2002-03	19434	14421	6930	13002	48839	22683	30433	26627	11835	19621
2003-04	21931	15487	6852	15515	54577	26922	34085	28333	12951	20901
2004-05	25959	16782	7914	18559	76968	32021	37972	33348	18510	26882
2005-06	28223	18396	8223	20117	84721	37780	42309	36949	18326	31239
2006-07	32961	19737	9967	24800	94882	43395	49261	40393	19789	35981
2007-08	39780	21290	11051	29385	108780	50016	56917	43966	24789	42419
2008-09	44376	24099	13728	34360	135966	55068	67405	49903	25046	48084
2009-10	50515	28383	15457	34366	149164	64097	82037	58402	28223	51364
2010-11	58733	33087	19111	41165	168024	77485	93852	68297	34721	62251
2011-12	69000	41142	21750	55177	259444	87481	106085	87721	41254	90263
2012-13	74687	44599	24487	60849	234354	102826	121669	99730	47360	102319
2013-14	82870	49734	26948	69880	215776	113139	137770	114095	50006	118829
2014-15	93903	52895	28671	72936	289185	127017	147382	123299	57301	130024
2015-16	108002	60817	30404	72991	334576	139254	164963	135512	52754	148108
2016-17	120676	66330	34045	83285	378953	156295	184982	150290	60018	169898
2017-18	138299	75151	36850	89690	411740	176961	210592	165497	67484	186405
2018-19	152286	81034	40715	98254	423716	197457	226409	176459	75421	205697
2019-20	168480	86801	45071	105089	435959	213936	247628	190407	77739	223175

Annexure III
Per capita NSDP at current prices

Year	Kerala	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Tamil Nadu	Telangana	Uttar Pradesh	Uttarakhand	West Bengal
1970-71	594	484	783	478	1070	651	581		486		722
1971-72	592	534	808	473	1121	587	648		497		779
1972-73	662	575	838	575	1244	618	669		603		781
1973-74	811	733	1087	699	1513	869	793		669		935
1974-75	910	840	1360	715	1634	895	826		752		1081
1975-76	954	784	1388	729	1749	885	831		721		1109
1976-77	1009	780	1516	690	2019	1015	944		818		1194
1977-78	1043	929	1666	845	2231	1097	1017		930		1266
1978-79	1121	892	1805	873	2351	1139	1069		935		1298
1979-80	1271	858	2026	847	2611	1030	1280		965		1392
1980-81	1508	1358	2435	1314	2674	1222	1498		1278		1773
1981-82	1576	1437	2673	1443	3119	1392	1776		1338		1930
1982-83	1809	1605	2817	1501	3382	1544	1777		1529		2127
1983-84	2092	1834	3185	1902	3673	1914	2024		1658		2450
1984-85	2296	1822	3375	1846	4123	1849	2341		1784		2771
1985-86	2398	2085	3826	2175	4578	1978	2620		1999		2893
1986-87	2676	2103	3995	2315	4940	2095	2885		2157		3079
1987-88	2937	2649	4638	2308	5719	2310	3374		2360		3658
1988-89	3233	3048	5430	2871	6487	3089	3782		2771		3836
1989-90	3718	3306	6570	3218	7624	3241	4370		3087		4220
1990-91	4200	4049	7439	3077	8318	4191	4983		3590		4673
1991-92	5140	4157	8242	3907	9872	4501	5798		4069		5298
1992-93	5768	4544	10080	4114	11140	5197	6680		4335		5541
1993-94	7983	6584	12183	4896	12710	6182	8955		5066	6896	6756
1994-95	9632	7099	13654	5795	14066	7647	10503		5767	8260	7711
1995-96	11626	7809	16152	6985	15471	8467	11819		6331	8746	9041
1996-97	13280	8819	17844	6548	17353	10102	13269		7476	9334	9857
1997-98	14523	9440	19016	7973	18764	10997	15388		7826	9961	11682
1998-99	16370	10678	20143	8766	21195	12360	17383		8470	10848	13641
1999-00	19461	12384	23011	10622	25631	13619	19432		9749	13516	15888
2000-01	20094	11862	22777	10453	27881	13020	20972		9828	15285	16583
2001-02	21257	12697	24035	11059	28943	14098	20942		9995	16232	17862
2002-03	23484	12303	26015	11688	29309	13128	21830		10648	18636	18777
2003-04	25999	14306	29139	14169	31261	16507	24087		11458	20312	20873
2004-05	32351	15442	36077	17650	33103	18565	30062	24409	12950	24726	22649
2005-06	36958	16631	41965	18846	36199	20275	35243	28987	14221	29441	24720
2006-07	41318	19028	49831	22237	41883	24055	42288	33381	16013	35111	27823
2007-08	46865	20935	57760	27735	49380	26882	47606	39652	17785	42619	31567
2008-09	54560	25278	62234	31416	55315	31279	54137	49114	20422	50657	35487
2009-10	62114	28651	69765	33029	61805	35254	64338	51955	23671	62757	41039
2010-11	69943	32453	84858	39537	69582	44644	78473	66951	26698	73819	47245
2011-12	97912	38497	99597	48499	85577	57192	93112	91121	32002	100314	51543
2012-13	110314	44773	112092	55105	94318	63658	105340	101007	35812	113654	58195
2013-14	123388	51849	125261	61305	103831	69480	116960	112162	40124	126356	65932
2014-15	135537	55678	132836	64233	108970	76429	129494	124104	42267	136099	68876
2015-16	148133	62080	146815	65993	118858	83426	142028	140840	47118	147936	75992
2016-17	166246	74324	163726	79181	128780	91924	156595	159395	52671	161752	82291
2017-18	183252	81973	172663	89353	139835	98188	175276	179358	56861	180613	91401
2018-19	205657	90487	187118	100771	149974	107890	194373	210563	62652	191450	103944
2019-20	221904	103288	202130	110434	155491	115492	213396	233325	65704	202895	113163

Annexure IV

State wise population below poverty (%)

States/UTs	1973-74	1983	1993-94	2004-05	2011-12
Andhra Pradesh	48.86	28.91	22.19	29.6	9.2
Arunachal Pradesh	51.93	40.88	39.35	31.4	34.7
Assam	51.21	40.47	40.86	34.4	32.0
Bihar	61.91	62.22	54.96	54.4	33.7
Chhattisgarh				49.4	39.9
Delhi	49.61	26.22	14.69	13.0	9.9
Goa	44.26	18.9	14.92	24.9	5.1
Gujarat	48.15	32.79	24.21	31.6	16.6
Haryana	35.36	21.37	25.05	24.1	11.2
Himachal Pradesh	26.39	16.4	28.44	22.9	8.1
Jammu & Kashmir	40.83	24.24	25.17	13.1	10.4
Jharkhand				45.3	37.0
Karnataka	54.47	38.24	33.16	33.3	20.9
Kerala	59.79	40.42	25.43	19.6	7.1
Madhya Pradesh	61.78	49.78	42.52	48.6	31.7
Maharashtra	53.24	43.44	36.86	38.2	17.4
Manipur	49.96	37.02	33.78	37.9	36.9
Meghalaya	50.2	38.81	37.92	16.1	11.9
Mizoram	50.32	36	25.66	15.4	20.4
Nagaland	50.81	39.25	37.92	8.8	18.9
Odisha	66.18	65.29	48.56	57.2	32.6
Puducherry	53.82	50.06	37.4	14.2	9.7
Punjab	28.15	16.18	11.77	20.9	8.3
Rajasthan	46.14	34.46	27.41	34.4	14.7
Sikkim	50.86	39.71	41.43	30.9	8.2
Tamil Nadu	54.94	51.66	35.03	29.4	11.3
Tripura	51	40.03	39.01	40.0	14.1
Uttar Pradesh	57.07	47.07	40.85	40.9	29.4
Uttarakhand				32.7	11.3
West Bengal	63.43	54.85	35.66	34.2	20.0
All-India	54.88	44.48	35.97	37.2	21.9

