

# Balance Between Agriculture and Industry in Economic Development

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## INTRODUCTION

Historically and traditionally, development has been identified with economic growth. The most frequently used indicator of economic growth is the change that takes place in a country's per capita GDP. And the economist, who has used the best and largest quantitative data extending over many years and many countries is Prof. Simon Kuznets. I am deeply indebted to his writings. For later years than those covered in his classic work on the "Economic Growth of Nations", I have used the latest data from the World Bank Reports on Development.

Prof. Kuznets had shown conclusively that there is a positive relationship between the growth of the GDP and in terms of shares, that of the industrial sector, while it is negative in the case of the agricultural sector and somewhat mixed though positive in the case of the agricultural sector and somewhat mixed, though positive, in the case of the tertiary sector. The quickest way of demonstrating the truth of the formulation was by a cross-section analysis of the GDP at factor cost for as many developed and developing countries as possible and look at the shares of the three sectors in one particular year, which was also linked with a Census year with its availability of occupational distribution of the labour force engaged the production of the GDP. Accordingly, he selected 1958 (or about 1958) for some 57 countries which he grouped in increasing order of per capita product in 1958 converted to U.S. dollars by relevant exchange rates. He also grouped them together into eight groups of six countries each (except for one group which included 15 countries), using their average per capita GDP, and the percentage of sectoral shares in increasing order of their 1958 GDP. Given below are relevant extracts from this table:

Table 1  
Groups of countries in increasing order of 1958 per capita GDP

	I	II	III	IV	V	VI	VII	VIII
	6	6	6	15	6	6	6	6
1. GDP per capita ( )	51	83	138	221	360	540	864	1382
2. Share of Agriculture	53.6	44.6	37.9	32.3	22.5	17.4	11.8	9.2
3. Share of Industry	18.5	22.4	24.6	29.4	35.2	39.5	52.9	50.2
3A. Share of Industry, (excluding Transport and communication)	13.3	16.5	18.8	23.5	28.7	32.5	43.6	42.4
4. Share of Services	27.9	33.0	37.5	38.3	42.3	43.1	35.3	40.6
4A. Share of Services including Transport and communication	33.1	38.9	43.3	44.2	48.8	50.1	44.6	38.4

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Kuznet's table shows a strong positive relationship between the growth of the per capita GDP and the sectoral share of industry and; conversely, a declining sectoral share of agriculture, the difference in percentage points between the highest group coverage of per capita GDP of 1382 dollars and the lowest of 52 dollars being plus 31.7 points in the case of the Industrial Sector and minus 44.4 points in the case of the agricultural sector.

Agriculture has lost its percentage not only to Industry, but also to Services, though by a smaller measure. Kuznet's has included in the industrial sectors the sub-sector, Transport and Communication, which is mainly a producer of Services and should, therefore, in my view, be excluded from the share of the industrial sector and added to that of the Services sector. I have, therefore, included in the table items 3A and 4A to indicate the resulting revised shares of the two sectors. According to these revised figures, while the share of Industry still shows the same strong positive connection with the growth of the GDP, the magnitude is less, the difference between its share in the highest and lowest group average per capita GDP coming down to 30.1 percentage points as compared to 31.7 points in Kuznet's table. My revised version of Kuznet's table gives a share of 13.3 percent to Industry in the lowest per capita GDP group which is more realistic. The intriguing thing in the table, both in the original and as revised, is in regard to the behaviour of the share of Services. Kuznet's table shows a fall in the share of Services sector from 43.1 percent in the sixth group of 540 dollars average per capita GDP to 35.3 percent in the next higher group of 864 dollars of per capita GDP and then a rise to 40.6 percent in the highest per capita group of 1382 dollars; while the figures as revised show a continuing fall from the VI group of 540 dollars of 50.1 percent to 44.6 percent in the seventh group of 864 dollars and then to 38.4 percent in the highest group of 1352 dollars per capita GDP. It shows that after a certain limit, the Services sector does not show an increase in its share of the GDP growth while the industrial sector shows a steady growth. But, in recent years, this trend has been reversed; the industrial sector shows a decline while the Services sector shows a steady rate of growth, as can be seen from Table 1 in the Appendix to this paper.

Here I give for six industrialised countries their anatomy of employment change between the years 1975-80 from the latest UNIDO Report (1986) on 'Industry and Development'. Thus while there was an increase in employment of 13.365 million in the United States, Services accounted for 12.752 million or of 93.5 percent while the industrial sector showed an increase of only 0.677 million. In the case of the Federal Republic of Germany, the total increase was 505 thousands, while the Services sector increased by 1.011 million, the industrial sector declined by 237 thousands. In the case of France, the corresponding figures were, total increase of 152 thousands, with the Service sector increasing by 1.079 millions and the industry sector declining by 593 thousands. In the case of Italy, the total increase was 423 thousands, Services increasing by 590 thousands and industry declining by 14 thousands. In the case of Japan, the total increase was 2.656 millions, the Services sector and the industry sector declining by 288 thousands increasing by 3.192 million while agriculture declined by 981 thousands. In the case of the

United Kingdom, the total increase was 85 thousands, with Services increasing by 432 thousands, and industry declining by 325 thousands. This rapidly ascending order of the Services sector is a new feature of the technological revolution now taking place in the industrially developed countries. There is a great deal of quality difference in the share of the Service sector in the economic growth that is taking place in the industrially developed countries and in the industrially developing countries. In fact, the role of the Services sector in economic development has always intrigued me and I wish some younger economist could take up the subject for a detailed study.

#### THE ROLE OF INDUSTRY IN ECONOMIC GROWTH

To revert to the role of industry in economic growth, there is no doubt that in the case of its developed countries, industry played the most important role in the earlier years, with services taking its place in recent years and the share of agriculture continuing to decline till it reached in some countries the ridiculously low level of 2 percent of the GDP. The newly industrialising countries have also shown a similar trend of increase in the sectoral share of industry and decline in the share of the agricultural sector and some increase in the Services sector. This is seen from Table 2 in the Appendix which shows the GDP in 1984 and the share of Industry, Agriculture and Services for 23 countries, both developed and developing. But the intriguing fact that emerges from these tables is that some of the middle income countries like Poland, Yugoslavia, South Korea, Mexico, and Argentina with a per capita GDP ranging round 2000 dollars show a high share of 40 percent of the GDP for the industrial sector, while even low income countries like Indonesia with a per capita GDP of 540 dollars shows an industrial sector share of 40 percent, while a very low income countries like Tanzania shows an industry sector share of 31 percent.

The table does not reveal any consistent and continuous link between the GDP and the share of the industry sector or even the Service Sector, the only consistent and continuous trend shown being that of the declining share of agriculture with increasing amount of the GDP. There can be no doubt that nature of industry is not the same between the developed and the developing countries, the former representing the use of advanced technology and the latter using backward technology, including historically inherited traditional technologies. Thus economic growth involve not only an increased role in sectoral shares for the industrial sector but also the use of modern or advanced technology in its operation. In fact, technology is an all-embracing factor in economic growth and covers not only Industry but also Agriculture and Services. And it seems that advance in the technology used rather than a mere percentage increase in the sectoral share of the industrial sector is the key to rapid economic growth. In fact, in recent years, the use of better technology and higher investment in agriculture in some of the developing countries is becoming a notable feature of their economic growth as in the case of India. To quote from the World Bank Report of 1986:

"The past several decades of development have demonstrated that growth in agricultural production and productivity in developing countries can match or surpass the growth in industrial countries. The record has shown that agriculture can be a dynamic sector in developing countries and constitute greatly to growth in real incomes, employment, and foreign exchange earnings and to the alleviation of poverty."

Thus agriculture is still a dynamic sector in economic growth, but this does not mean that it can take the place of industry in maximising the growth of the GDP. In fact, it is the role of better technology and supporting investment for its use that has made the difference to the agricultural sector and the same would be even more true for the industry and Services sectors. In other words, the emphasis in planning for rapid economic growth must now shift from sectoral attention to that of the methods used in production, supporting investments, and appropriate but modern technology.

So far I have been dealing with economic growth identifying it with development and using the GDP as the measure of development, and sectoral growths as the means for maximising the GDP. But development means much more than mere economic growth or increase of the GDP. Development deals with human beings and economic growth has to be linked with productive employment. Development should also take into account not only the positive aspects of economic growth in terms of maximising incomes and employment, but also in terms of its negative effects on the stock and continuity of natural resources, and the quality of the environment. In the last analysis, development implies a continuing improvement in the quality of life and the extension of this improvement in quality to the lives of all the people in the country concerned. Indeed, with the growing interdependence of the countries of the world not only in economic terms but also in social, cultural and ethical terms, what we should mean by development is sustainable development for the continuing improvement of the quality of life to global dimensions and covering the entire human race.

The alarming feature of economic growth in the developing countries is not the change in their sectoral shares in the GDP which is following the classical pattern of a rising share for industry and a falling share for agriculture, but the employment linkage with the changing sectoral shares and the level of productivity per worker accompanying the change. I have given in Table 3, 4, and 5 of the Appendix comparative figures of the percentage sectoral shares of the GDP and the percentage share of the labour force in the years 1960 and 1980. Table 3 gives the relevant figures for industry, Table 4 for Agriculture and Table 5 for Services. The figures have been compiled from the World Bank's Development Reports for 1979, 1983 and 1986. I have taken as the initial year 1960, not only because of availability of comparative data, but also because it corresponds with the census year which contains the figures of occupational distribution of the labour force; and I have stopped with 1980 as it is the latest year (also a census year) for which occupational data is available.

Table 3 in the Appendix, which gives the figures in the descending order of the percentage of the labour force engaged in industry, includes their corresponding shares in the GDP and the figures of the GDP to which they relate. The change in the link between the sectoral share of Industry the GDP and the labour force has also to take into account the changes which have taken place in the share of the Services sector over this period of 20 years', and to which I shall turn later.

For seven industrially developed countries, namely, U.S.A., Federal Republic of Germany, France, Canada, The Netherlands, Denmark and the United Kingdom, whose per capita GDP ranged between 9110 dollars and 13450 dollars in 1981, we find that their industry sectoral share range between 32 and 46 percent, while their industry share in the labour force ranged from 29 to 44 percent in the census year 1980. But all of them showed a decline of varying dimensions ranging from 4 percentage points to 11 percentage points in their sectoral industry shares of the GDP and a decline of varying dimensions ranging from 4 to 10 percent of their share in the labour force. But in all cases, there was a positive link between the decline in this sectoral GDP and its sectoral labour force share. The only exception was Japan, which showed an increase in both its industry sectoral shares in both GDP and the labour force, former from 42 to 43 percent and the latter from 30 to 34 percent. It is also remarkable that the percentage figures for the sectoral share of Industry in both the per capita GDP and the labour force are round about an equal figure.

When we come to the developing countries, we find in varying dimensions a rise in the share of the labour force in industry accompanying the rise in its share of the GDP. Among the countries with a per capita GDP between 2250 dollars (Mexico) and 1700 dollars (South Kenya), we find a rise in the industry share of the labour force ranging from 9 to 27 percent in the case of South Kenya, from 12 to 19 percent in the case of Malaysia, the corresponding share in per capita GDP being from 19 to 39 and 18 to 36 percent. Argentina has retained its industry sectoral share in per capita GDP at 38 percent, while there is a slight decline from 36 to 34 percent in the share of the labour force. Yugoslavia, while showing a slight decline from 45 to 43 percent in the Industry share of its GDP, its industry labour force has shown a significant rise in its percentage from 23 to 33. On the other hand, Pakistan with a per capita GDP of only 350 dollars in 1981 records an increase of ten percentage points in its industrial GDP share as against a fall in its labour force share from 18 to 16 percents. Even among the low income countries with per capita GDP ranging from 870 dollar (Nigeria) to 140 dollars (Bangladesh), that is immense variation. All of them shows a percentage rise in their industry share of both the GDP and the labour force; the comparative rise in industry labour force is low in the case of India, Nigeria, Zaire, Indonesia, Kenya, Tanzania and Bangladesh; while the comparative growth in their industry's GDP share shows startling variations, with Indonesia showing a rise to 42 percent from 14 percent and Nigeria from 11 to 37 percent. In the case of India, acclaimed for its industrial progress among the developing countries, the rise is from 20 to only 26 percent. It is clear from the table that the type of

technology used has a great deal to do with the growth of the industrial sector in the developing countries in respect of changes both in the shares in the GDP and the labour force.

#### THE SHARE OF AGRICULTURE

Table 4 in the Appendix amongst the 23 countries, listed therein in descending order of the share of Agriculture in their labour force; begins from Tanzania with 86 percent to only 2 percent for the United Kingdom. While all of them show a decline in the share of Agriculture in their GDP during the period, the magnitude of the decline shows a great deal of variation and so does the decline of the share in the labour force. Of the 13 countries which had an Agriculture share of more than 50 percent of their labour force in 1960, only four showed a marked decline to below 50 percent in this share in 1980 South Korea from 66 to 36 percent Yugoslavia from 64 to 32 percent, Malaysia from 63 to 42 percent and Mexico from 55 to 37 percent, India's agricultural sector share in the labour force has come down from 73 to only 70 percent in the labour force, though its GDP share has come down from 50 to 37 percent or by 13 percentage points as compared to a fall of only 3 percentage points in its GDP share.

I shall refer you to Table 5 in the Appendix which lists 23 countries in a descending order of the share of their service sectors in their labour force in 1960 together with their share of GDP, and also the corresponding figures for 1980. This table clearly bears out the thesis I have been emphasising, namely, the increase that has taken place between these two years in both shares in the GDP and in the labour force of the Services sector. This has taken place particularly in the industrially developed countries, among which the United States had reached the high figure of 66 percent for the Service sector in the labour force and 63 percent share in the GDP. The less developed countries have also recorded a rise, though in absolute term their Service sector is much smaller; the lowest share in its rise is in the case of India, from 16 to 18 percent in the labour force and from 30 to 37 percent in the GDP.

The three tables seem to show that economic growth is taking place in most of the developing countries along with the lines of the early experience of the developed countries, though with much smaller GDP and a slower growth of the industrial sector. But this similarity should give no cause for complacency. The major problem confronting the most populated developing countries, including mine, is that of the large lag between the fall in the share of the labour force and that of the GDP of the Agricultural Sector. This leads to a variety of undesirable consequences, such as fall in the productivity of the labour force engaged in agriculture in spite of the fairly wide application of modern technology, under employment and unemployment in the rural areas, exodus of the rural poor to urban settlements with increasing incidence of slums and urban deterioration, and an increasing dichotomy between the rural and the urban areas in their access to the basic elements that underline the quality of life. Even in the case of the less populous countries, in some of which the share of industry is reaching high proportion, productivity as reflected by per capita GDP is low, there is increasing dependence even for food and other agricultural products, and an increasing

dichotomy between rural and urban areas in their access to even the basic services connected with the quality of life. The growth of the Industry Sector share does not by itself either bring about a significant increase in economic growth nor does the fall in the GDP share of Agricultural Sector reflect a surplus of food or other agricultural products. The increase in the Services sector is also not a matter for satisfaction in so far as it does not mean a corresponding increase in educational, cultural and health facilities which are so important in constituting the quality of life. Employment - and productive employment at that - remains the keynote of both economic growth and human development, and these does not appear to be much of a rational nexus between changes in sectoral employment with the historically accepted sectoral pattern for economic development.

#### TRADE AND DEVELOPMENT

As regards the link between trade and development, I do not think that a solution lies in the export-oriented production of food and agricultural raw materials. Apart from the fact that, in the food area, developed countries like the United States, Canada and Australia are dominating the world market, it should not be forgotten that developing countries do not have genuine food surpluses which they can export (I include India in this category). Nor are they in a position to offer their food exports to developed countries at competitive prices. Incidentally, I am not one of those who decry the policy of developed countries to protect their domestic agriculture, as I can appreciate the necessity to do so in their aesthetic, social and ecological interests. What the developing countries should do is to increase their food supplies primarily for the purpose of providing for their own population a balanced and adequate nutritional diet. I must also refer to the increasing difficulties which developing countries have in exporting raw materials, because of the advance of technology, leading to the emergence of synthetic substitutes for industrial raw materials, a concrete example being the substitution of cotton by synthetic fibres. Export oriented agricultural development in foods and raw materials is no solution nor export oriented industrial development with backward technology and semi-skilled or unskilled labour. Agricultural exports may help if they are in new avenues such as vegetables, flowers and processed foods; and similarly industrial production for exports may help if they cater to the changing tastes of the paying markets and are based on competitive technology and skilled labour. Both these ways of export-oriented growth have their own limitations for most of the developing countries. In any case, these constraints cannot be overcome without massive humane-oriented international action on the part of the industrially developed countries.

#### DEMOGRAPHIC ASSOCIATION WITH AGRICULTURE AND INDUSTRY

I must now say a word about the demographic association with agriculture and industry. The recent population explosion in the developing countries is only a corollary of the development that is taking place including improvement in health services and their effect in promoting a decline in mortality. The same thing took place in the earlier stages of the development of the now industrially developed countries, which

have now managed to achieve a balance between their economic growth and their population because of their development. The same thing will happen in the case of the developing countries as well, provided they are able to have an accelerated rate of economic growth. This is dependent not only on their resources and economic policies but also on what the developed countries do to help them by implementing the new international economic order. Meanwhile the transitional problems of demography and development are creating great difficulties in the developing countries by both excessive dependence on agriculture and a massive exodus of the rural poor to urban areas, adding to their slums and unemployment. India is a conspicuous illustration of this transitional crisis of rural underemployment and unemployment and slum-laden urbanisation and unemployment. At the same time, I certainly agree that the governments of developing countries should follow a more positive population policy by expanding access to population control techniques, and providing motivation for population restriction by better health care, education, particularly of women, reduction in infant mortality, and economic incentives for adopting the small family norm.

There can also be no denying the fact that land and natural resources are limited in volume even when they are renewable; and there is certainly a specific limit to the area of cultivable land that a country has. The increase in direct employment that agriculture can give is limited, and one cannot deny the need for shifting a part of the labour force away from agriculture. How this is to be done in terms of an industrialisation that is both capital intensive and energy intensive and does not have the required employment magnitude, as in the case of India, is a question to which an answer has still to be found.

#### ECOLOGICAL BALANCE: THIRD VARIABLE OF ECONOMIC DEVELOPMENT

On the top of all this is the negative effect that modern economic growth and industrialisation is having on environment and the ecological balances. Quite apart from a nuclear war or even preparations to wage it making nonsense out of all our discussion on development, there is now increasing knowledge of the effect of modern industrialisation on the sustainability of development, including even the ecological imbalance created by the attempts at modernising our agriculture. Deforestation, denudations, desertification, recurring floods, loss of top soils, degeneration of land, noise and air pollutions, disposal of wastes and effluents damaging the quality of our water resources and marine wealth, - all these and other environmental damage, both domestic and imported, are a growing constraint on the developing countries which have to cross the barrier of poverty, and enter on a course of economic growth, abolition of under-employment and unemployment, increase in the production of goods and service that determine the quality of life, and bringing about equality of access and equitable distribution of the dividends of development. We in India have just enacted legislation for the protection of environment which is bound to increase the costs of industrialisation; but it cannot be helped, as life and health are more important than an industrialisation that seeks to bring about an appropriate balance between agriculture and industry in our development or even the modernisation of our agricultural growth that brings about ecological imbalance



and threatens the very foundation of an enduring and productive agricultural existence. And yet, thanks to the advance in transport, communication, and audiovisual media, the world can no longer live in isolated compartments. National curtains, whether iron or bamboo or other varieties, have become out of date; and both Soviet Russian and Communist China are going in for an encouragement of tourist traffic with its promise of foreign exchange earnings and disregard for its adverse demonstration effects on consumer behaviour among the domestic population. Elitism and consumerism, with increasing wants and new and newer wants, are growing in the developing countries, and the industrialisation that is promoted tends to concentrate on this profitable market, to the neglect of the wage goods and mass consumption sector, which is justified in economic terms by their lack of purchasing power and effective demand for countries. For countries with small populations, there may be a possibility of elitism trickling downwards both in terms of demand and of production, through I am not sure how this would promote the quality of life or generate an egalitarian social order. But for large population countries like India or China, consumerism of an elitist character can only accentuate, as in the case of India, or create as in the case of China, social tensions and class conflicts that can end up in civil war and destruction of national integrities. This danger is greater for a country like India, which has a parliamentary democracy, adult franchise, periodic elections, multi-parties competing for vote banks through the use of populist rhetoric. We cannot isolate ourselves from the developed world which has built its economy on the basis of unlimited wants aided, if not also generated, by purposive advertisement which have acquired a significant role in their business economics. Nor can we escape the onward march of science and technology that is being increasingly geared either to profit making in the private sector or the politics of power and agrandisement on the part of national governments. Nor can we escape the lure of modern consumer gadgets even if we can make them available only for a tiny section of our population. We need capital from abroad even for a healthy development of our economy; and our domestic savings are not adequate for the purpose. We also need to import technology from abroad, partly because of our failing to exploit the scientific and technological potential that exist in our country. Our previous revenue surpluses have now turned into bulging deficits, partly resulting from the consequences of inflation and partly from the fall-out on our defence requirements of the super power conflicts that are now entering so rapidly into our neighbouring regions and oceans.

There has been a lot of rhetoric about the new international economic order, but it has not gone beyond talking, holding conferences and passing resolutions in U.N. bodies. Import of capital has to be paid for, and, mostly at market rates: and our long standing record of credit-rating and avoidance of the debt trap may soon come to an end with our planned efforts to speed up development. Imported technology carries with it, its own unwelcome conditions and gives no chance for its indigenisation and subsequent domestic development. Our balance of payments is getting out of gear. Export - induced investments and operations may themselves induce more inputs, creating a vicious circle of imports chasing exports, even assuming that our export drive, shorn of incentives at the expense of public revenues and domestic requirements, will take off

the ground and not fall a victim to the lure of a profitable elitist domestic market.

#### CONCLUSION

In the midst of all these problems, I wonder what special importance can be attached to the question of balance between agriculture and industry in development. I am not denying the linkages, forward and backward, between industry and agriculture in economic development. Agriculture in its producer aspect meets the needs of industry in respect of both food for its workers and raw materials for its products. Agriculture, as producer-consumer, provides a market for the industrial production of agricultural inputs like fertilisers, tractors and tillers, and steel and cement for building dams, reservoirs, and canals, also for lining the canals, with the plastic industry now stepping in as a substitute, and also for the new system of sprinkler irrigation. Agriculture as consumer needs the basic mass and, hopeful, also the conventional consumption goods required by its population that are produced by Industry. The vast numbers of our agricultural population constitute an immense potential market undisturbed by quotas and tariffs; but to realise this potential into an actual mass market, agricultural incomes will have to increase, not only of small cultivators, and medium and big farmers but also for the labourers they hire in cultivation; and this means higher prices for agricultural produce and higher wages for agricultural workers. It also means high investment, both public and private, not only to make land more productive but also for post-harvest operations such as storage, inland transport, and marketing. Increase of the purchasing power of the rural masses must also include the marginal cultivators who are under-employed and the rural non-agricultural workers who have lost their markets to the products of modern urban industrialisation and now swell the ranks of the rural unemployed. All this means increased resource mobilisation on the one hand and higher cost of living for the urban population and non-agricultural workers in the rural region on the other. Unless industrial employment is taken into the rural areas and there is decentralisation in the industrial development process, there can be no substantial decline in the percentage of the labour force now employed in agriculture and other traditional rural occupations; and if this is not done, there can be no reduction in the existing disparity between the per capita income in the rural sector and that in the urban sector or in the per capita product of rural and urban economic activity.

The balance one needs between Industry and Agriculture in development must necessarily involve both a dispersal of industrial activity and its decentralisation, along with markets additional to or even exclusive of local markets and dependence on local materials. Also, a third variable has to be brought into the development process besides Industry and Agriculture namely, the environment. For sustained and sustainable development, one needs a balance not only between agriculture and industry in terms of mutual exchange and markets but also in terms of the economic processes involved in both agriculture and industry not adversely affecting the environment and disturbing, if not actually destroying, the ecological balance. And this balance between agriculture, industry and environment need not, indeed, should not, be confined within national

boundaries but must cross them, increase international trade, and permit the harnessing of comparative advantages in costs and supply of natural resources. Natural resources are not evenly distributed by national boundaries; nor is the environment and the help it can give, and the harm it can do, confined within national frontiers. The environment is both local and world wide; and only a global altitude and its implementation in policies and programmes can protect the environment and ensure human harmony with Nature to the mutual advantage of both in terms of sustenance and further development. The balance between agriculture and industry has to be global and equitable in its operations not only across national boundaries but also within them.

The balance between economic growth, which includes all the three sectors of the GDP, and the environment which covers them all, has not only to be implemented across national frontiers but also within them. Development cannot be left without a qualifying adjective which will take it out of the short period and from purely personal or group selfish interests into the broader field of the long period and a harmonisation of the personal and the social interest; and it must deal with the quality of life rather than merely with material goods and needs. Science must be combined with spirituality.

AppendixTable 1

Country	% Share of Services in GDP, 1984	Per Capita GNP, 1984 (in US \$)
1. Canada	72	13,280
2. Denmark	70	11,170
3. U.S.A.	66	15,350
4. Netherlands	64	9,520
5. France	62	9,760
6. U.K.	62	8,570
7. New Zeland	60	7,730
8. Japan	56	10,630
9. Bragil	52	1,720
10. Mexico	52	2,040
11. Federal Republic of Germany	52	11,130
12. Argentina	50	2,230
13. Kenya	48	310
14. Pakistan	47	380
15. South Korea	47	2,110
16. Malaysia	44	1,980
17. Nigeria	43	730
18. Yugoslavia	40	2,120
19. Bangladesh	39	130
20. India	38	260
21. Indonesia	34	540
22. Poland	33	2,100

Appendix  
Table 2

Country	Per Capita GDP in 1984	Percentage Share in GDP of		
		Industry	Agriculture	Services
1. U.S.A.	15,390	32	2	66
2. Canada	13,280	24	3	72
3. Denmark	11,170	25	5	70
4. Federal Republic of Germany	11,130	46	2	52
5. Japan	10,630	41	3	56
6. France	9,760	34	4	42
7. Netherlands	9,520	32	4	64
8. U.K.	8,570	36	2	62
9. New Zealand	7,730	32	9	60
10. Argentina	2,230	39	12	50
11. Yugoslavia	2,120	46	15	40
12. South Korea	2,110	40	14	47
13. Poland	2,100	52	15	33
14. Mexico	2,040	40	9	52
15. Malaysia	1,980	35	21	44
16. Brazil	1,720	35	13	52
17. Nigeria	730	30	27	43
18. Indonesia	540	40	26	34
19. Pakistan	380	29	24	47
20. Kenya	310	21	31	48
21. India	260	27	35	38
22. Tanzania	210	31	33	
23. Bangladesh	130	12	48	39

AppendixTable 3

Country	% Share of Labour Force in Industry		% Share of Industry in GDP		Per Capita Income (in US \$)	
	1960	1980	1960	1981	1960	1981
1. Federal Republic of Germany	48	44	53	46	13,450	
2. U.K.	48	38	43	33	9,110	
3. Netherlands	42	32	44	33	11,790	
4. France	39	35	39	35	12,190	
5. Denmark	37	32	39	32	13,120	
6. U.S.A.	36	31	38	34	12,820	
7. Argentina	36	24	38	38	2,560	
8. Canada	35	29	34	32	11,400	
9. Japan	30	34	42	43	10,080	
10. Yugoslavia	23	33	45	43	2,790	
11. Mexico	20	29	29	37	2,250	
12. Pakistan	18	16	16	266	350	
13. Brazil	15	27	35	34	2,220	
14. Malaysia	12	19	18	36	1,840	
15. India	11	13	20	26	260	
16. Nigeria	10	12	11	37	870	
17. Zaire	9	13	27	24	210	
18. Southern Korea	9	27	19	39	1,700	
19. Indonesia	8	13	14	42	530	
20. Kenya	5	7	18	21	420	
21. Tanzania	4	5	11	15	280	
22. Bangladesh	3	6	8	14	140	

AppendixTable 4

Country	% Share of Labour Force in Agriculture		% Share of Agriculture in GDP		Per Capita income (in US \$)	
	1960	1980	1960	1980	1960	1981
1. Tanzania	89	86	57	52		280
2. Bangladesh	87	75	61	54		140
3. Kenya	86	81	38	32		420
4. Zaire	83	72	30	32		210
5. Indonesia	75	57	54	24		530
6. India	73	70	50	37		260
7. Nigeria	71	68	63	23		870
8. South Korea	66	36	40	17		1,700
9. Yugoslavia	64	32	24	12		2,790
10. Malaysia	63	42	37	23		1,840
11. Pakistan	61	55	46	30		350
12. Mexico	55	37	16	8		2,250
13. Brazil	52	31	16	13		2,220
14. Japan	33	11	13	4		10,080
15. France	22	9	10	4		12,190
16. Argentina	20	13	17	9		2,560
17. Denmark	18	7	14	4		13,120
18. Federal Republic of Germany	14	6	6	2		13,450
19. Canada	13	5	6	4		11,400
20. Netherlands	11	6	9	4		11,790
21. Australia	10	7	12	5		11,080
22. U.S.A.	7	4	4	3		12,820
23. U.K.	4	3	4	2		9,110

AppendixTable 5

Country	% Share of Labour Force in Services		% Share of Services in GDP		Per Capita Income (in US \$)	
	1960	1980	1960	1981	1960	1981
1. U.S.A.	57	66	58	63	12,820	
2. Canada	52	66	60	64	11,400	
3. United Kingdom	48	56	53	65	9,110	
4. Netherlands	47	49	47	63	11,790	
5. Denmark	45	58	47	64	13,120	
6. Argentina	44	59	45	53	2,560	
7. France	39	53	51	61	12,190	
8. Federal Republic of Germany	38	50	41	49	13,450	
9. Japan	37	49	45	53	10,080	
10. Brazil	33	46	49	53	2,220	
11. Mexico	25	39	55	55	2,250	
12. Malaysia	25	34	45	41	1,840	
13. South Korea	25	37	41	44	1,700	
14. Pakistan	21	23	38	44	350	
15. Nigeria	19	27	26	40	870	
16. Indonesia	17	30	32	34	530	
17. India	16	18	30	37	260	
18. Yugoslavia	13	36	31	45	2,790	
19. Bangladesh	10	15	31	32	140	
20. Kenya	9	12	44	47	420	
21. Zaire	8	12	43	44	210	
22. Tanzania	7	11	32	33	280	