Chapter 1

Income Growth, Income Gaps and the Ranking of Nations

Three main features emerge from our quantitative evidence:

a) Economic growth was extraordinarily fast from 1820-1992, World population increased five-fold, per capita product eight-fold, world GDP forty-fold, and b) The rise in per capita income differed widely between countries and regions, so intercountry and interregional spreads became very much wider;

c) The momentum of growth varied significantly. The best performance was in the post-war golden age 1950-1973 when per capita income improved dramatically in all regions, the second best was 1870-1913, the third best 1973-92.

The Post-1820 Acceleration in Long-Term Perspective

Growth performance since 1820 has been dramatically superior to that in earlier history. Table 1-1 gives a very rough summary picture of the situation over the past five centuries.

Before our present “capitalist” epoch[1], economies were predominantly agrarian, and economic advance was largely extensive. In response to demographic pressure, economic activity was successful over the long term in sustaining living standards, but technology was virtually stagnant and evidence of advances in economic well-being is very meagre.

There were some stirrings of economic growth after 1500 when the European “discovery” of the Americas and Australasia opened up new horizons, and different parts of the world became increasingly interactive, but over three centuries performance was extremely modest. From 1500 to 1820, the average growth of world per capita income was probably only a thirtieth of that achieved since 1820. There were some advances in technology, living standards and productivity in Western Europe and its offshoots, and more limited progress in the European periphery. But the rest of the world was economically stagnant, and by 1820 the West had established a substantial leadership margin[2].

The Hierarchy of Regions

For analytical convenience, I have divided the world into seven groups of countries, ranking them in order of their developmental promise as it might have been assessed by a well informed observer at the beginning of the capitalist epoch. My hierarchy is very similar to that in Adam Smith's *Inquiry into the Nature and Causes of the Wealth of Nations*. This was published in 1776 but his criteria for ranking nations were close to mine.

The main considerations I had in mind in allocating countries to these regions were: (a) their initial level (or assumed range) of per capita income in 1820; (b) their initial resource endowment in relation to population; (c) institutional or societal characteristics likely to influence economic performance.

The intra-regional congruence of countries and the regional groupings themselves may legitimately be challenged by some readers, but the basic evidence for the 56 sample countries is presented transparently, and it is quite easy for the reader to construct alternative groupings.
Table 1-2 shows the performance of the seven different regions since 1820. They are ranked in order of their initial levels of per capita income. This ranking has not changed much over the very long run. The most prosperous have retained their privileged position, and the poorest have remained relatively poor.

Per Capita GDP Performance

Per capita growth since 1820 has been fastest in countries which were already the most prosperous in the initial year, with a 13-fold increase in Western Europe and a 17-fold increase in the Western Offshoots. The next fastest growth — a ten-fold increase — occurred in Southern Europe, which was the third most prosperous region in 1820. The fourth ranking region in 1820 was Eastern Europe. It had the fourth fastest per capita growth up to the 1980s, but with the large drop since the collapse of communism it ranks fifth in long-run per capita income gains. Latin America, the fifth most prosperous region in 1820 had a seven-fold increase in real income by 1992. Asia which had sixth rank in income in 1820, had the same ranking in 1992 with a six-fold increase in real product. Africa had the lowest per capita level in 1820. It was in the same position in 1992 with very modest gains to show. After 17 decades, its average per capita income in 1992 was about the same as Western Europe had achieved in 1820! However, it is clear from Figure 1-1 that the regional growth paths have not been regular and have criss-crossed over time. Western Europe lost ground to the Western offshoots, most of which it has now recouped. Southern Europe fell behind both Eastern Europe and Latin America, but has now forged well ahead of both. Asia fell below Africa but is now far ahead.

The overall long run pattern of income spreads has been strikingly divergent. The interregional spread was less than 3:1 in 1820 and grew steadily larger at each successive benchmark. In 1870, it was 5:1, 1913 9:1, 1950 11:1, 1973 12:1, 1992 16:1 (See Table G-3). If we turn from regional spreads to look at the range between individual countries, the long-term divergence is even more marked. In 1820 the intercountry range (i.e. the distance between the lead country and the worst performer) was over 3:1, in 1870 7:1, in 1913 11:1, in 1950 35:1, in 1973 40:1, in 1992 72:1 (see Table 1-3).

Although the global long-term picture is one of divergence, there has been a substantial degree of catch-up since 1950. In that year, the US economy had a commanding lead over the Western and Southern European economies. Its per capita GDP was 1.7 times as big as the West European average in 1950 and four times the average for Southern Europe. By 1992, these gaps were substantially narrowed. For Western Europe the spread was 1.2:1; in Southern Europe 2:1. In Asia too, after 130 years when growth was feeble and gaps widened greatly, there was a sharp narrowing after 1950. The average spread between US and Asian incomes dropped from 11:1 in 1950 to 4:1 in 1992.

Within Asia, there have been some striking success stories. Japanese per capita income is now in third place, very close to the USA and Switzerland. Between 1820 and 1992 it rose nearly 28-fold — the world record. Since 1950, The most rapid growth in our Asian sample has been in South Korea, Taiwan and Thailand. All three countries are now within the South European range. There are other (non-sample) Asian countries which have also reached relatively high income levels — Bahrain, Hong Kong, Israel, Qatar, Saudi Arabia, Singapore and the United Arab Emirates — see Table F-4.

Thus there is clear evidence within Asia that substantial catch-up is achievable, and that falling behind in per capita incomes is not inexorable. In other areas, the picture is less encouraging. In Africa, the income gaps *vis-à-vis* the USA rose in 9 of the 10 sample countries from 1950 to 1992, they rose in 4 of the 7 East European countries and 4 of the 7 Latin American countries. In the 7 countries in these three areas where there was some catch-up on the USA, the margin of advance was generally small.

Figure 1-2 gives binary comparisons (on an annual basis where possible) of the per capita income gaps between the USA (the lead country of the twentieth century) and 12 other countries in the period since 1820. It is clear that the pace of growth and patterns of divergence and convergence have changed substantially over time.

Changes in the Share of Consumption

It should be remembered that changes in per capita GDP are not the same as changes in per capita private consumption.

Over time, there have been substantial increases in the proportion of expenditure going to investment, and to government consumption. Table 1-5 gives some idea of the situation in 1992, when private consumption was well below 60 per cent of GDP in Western Europe, Eastern Europe and Asia, and below three-quarters elsewhere.

Around 1820, the share of private consumption was around 84 per cent in France and 88 per cent in the UK. If the price movement had been the same for consumption and for GDP, this would mean that French private consumption levels in 1992 were about ten-and-a-half times as high as in 1820, compared with a per capita GDP about fourteen-and-a-half times as high. For the UK it would mean a rise in per capita consumption of six-and-a-half times compared with the nine-fold rise in per capita GDP. For the world as a whole, the average level of private consumption in 1992 was probably around five-and-a-half times higher than in 1820 compared with the eight-fold increase in per capita GDP.

The increase in the non-consumption share is a reflection of the effort required to sustain growth. A good deal of collective consumption goes to improve human capital (health and education), and a substantial savings effort was needed to finance the massive increase in physical capital.

Productivity Levels

The ranking of countries in per capita GDP is not necessarily the same as their standing in terms of productivity. In 1992, for example, Japanese per capita income was nearly 15 per cent higher than that in the Netherlands, but labour productivity was little more than two-thirds of Dutch levels.
Table 1-6 shows the difference between per capita GDP and labour productivity levels for some of the advanced capitalist countries whose performance characteristics are best documented. France and the Netherlands have attained virtually the same labour productivity levels as the USA, even though they have lower inputs of physical capital, human capital, and natural resources. This means that their level of total factor productivity is even better relative to the USA than their labour productivity. It is clear from this kind of confrontation that one cannot judge the economic performance of nations only by the yardstick of per capita GDP — a point to which we return in Chapter 2.

Demographic Experience in the Major Regions

In demographic terms, the most rapid long-term growth has been in places which were relatively empty in 1820 and attracted large-scale immigration from Europe. Thus the "Western Offshoots" increased their population 27-fold and Latin America 23-fold. The other relatively empty region, Africa, increased its population ninefold. Demographic expansion was below the long-term world average in Western and Southern Europe and Asia.

Population growth in Western Europe has been modest over the long run. In the nineteenth and twentieth centuries there was a gradual but substantial increase in life expectation from about 37 to 77 years. The long decline of mortality was matched by gradual reductions in fertility, and there was significant migration to the Western Offshoots and Latin America. Since 1973, the widespread availability of contraceptive techniques and changing attitudes to family size have reduced population growth to historically low levels. In Eastern Europe there have also been drops in fertility, increased emigration, and in some cases higher death rates because of worsening economic conditions. In Bulgaria and Hungary there were declines in population, a phenomenon with little historical precedent in the modern era, except in Ireland.

In the nineteenth century, population growth was very fast in the Western Offshoots because of unusually high fertility and immigration.

In Latin America, population growth was rapid by world standards from 1820 to 1950, because of rapid immigration and high fertility. The transition to lower fertility was slow when death rates began to fall. Population increase accelerated substantially to an average of 2.8 per cent a year in 1950-73. After 1973 it slowed somewhat, but was still very much faster than in Europe or North America.

Asian countries had an overall population growth rate similar to that of Europe in 1820-1950. When economic progress accelerated after 1950, mortality fell and population grew at an average rate of 2.3 per cent a year to 1973. Thereafter voluntaristic controls on fertility increased and population growth rates declined.

In Africa, evidence on long-term demographic trends is poor. Until the 1950s, fertility and mortality were probably a good deal higher than in Europe. Since then, cheap modern methods of disease control have reduced death rates quite sharply, and by 1992, life expectation was about 55 years. However, fertility remains very high and population growth accelerated to an average of 3 per cent a year in 1973-92, i.e. ten times the European rate.

The Size Ranking of Countries and Regions

There have been substantial changes in the relative size of different regions. They were most dramatic in "Western Offshoots" and Latin America. In 1820, they each represented 2 per cent of world output; in 1992, the first group accounted for 22.7 per cent and Latin America 7.9 per cent. The Asian share dropped from 58.3 per cent in 1820 to 19.3 per cent in 1950, then rose sharply to 36.7 per cent in 1992. The West European share was 19.1 per cent in 1820, peaked at 27 per cent in 1870-1913 and has since fallen back to 18.9 per cent — about the same level as in 1820. The African share fell from 4.7 per cent in 1820 to 3 per cent in 1992.

Table 1-8 shows the relative standing of the 10 biggest countries in 1820 and 1992. The composition of the group was similar in the two years, except that Austria and Spain have dropped out; Brazil and Italy have entered.

China was by far the biggest economy in 1820 with well over a quarter of world output, and had dropped to second place in 1992. India dropped from second to fifth place, Russia from fifth to ninth. The USA moved up from ninth place in 1820 to first place in 1992. Japan moved from sixth to third place. Germany moved from tenth to fourth place.

The share of the top 10 countries fell slightly from 70.5 to 66.8 per cent of world GDP. In terms of population they dropped a good deal more, from 71.7 to 54.9 per cent. As a group they experienced faster per capita growth than the rest of the world, and slower demographic growth.

Notes

1.Simon Kuznets (1966) put the turning point for “modern economic growth” at 1750, but in the light of recent evidence suggesting that growth in the eighteenth century was slower than previously thought (Crafts, 1985), I prefer to use 1820 as a starting point. Recent evidence has also falsified the earlier view, espoused most strongly by Rostow (1960) and Gerschenkron (1962), that there was a long drawn-out sequence of staggered “takeoffs” in West European countries throughout the nineteenth century. It now seems clear that growth was generally much faster after 1820 than it was in the “protocapitalist” period from 1500 to 1820, when Western Europe was slowly pulling ahead of the rest of the world.

2. Paul Bairoch (1981) published estimates showing a much narrower gap between his “developed” and “third world” groups at the beginning of the nineteenth century, but it is not clear how he derived his estimate for the “third” world. See Maddison (1983) for a comment.