Development History

Nicholas F R Crafts

Department of Economic History
London School of Economics   2000

1. Introduction

This paper discusses some aspects of the changing relationship between the study of economic history and development economics. Forty years ago the subjects seemed to be quite closely linked in the sense that senior figures straddled both areas, the development history of the advanced countries was frequently studied with a view to deriving lessons for development policy and economic historians made big generalizations as to what these were. In the 1990s, things appear to have been very different. There is much less overlap between the fields of development and history, historians have largely retreated from the brash claims of the early postwar generation and less-developed countries have their own well-documented recent history from which to draw lessons. This state of affairs is clearly reflected in the most recent edition of Meier (1995) where the historical perspective on development is still derived largely from Gerschenkron and Rostow.

This suggests the following questions that the paper addresses:

1) Did anything of lasting value come from the generalizations of the early postwar pioneers ?

2) Have more recent practitioners of economic history any big messages for development economics ?

3) Has development economics much to gain from resuming a closer relationship with economic history ?

The paper is organized as follows. Section 2 explores what remains of some of the outstanding claims made in the 1950s through the early 1960s and draws some contrasts with the New Economic History of the later 1960s and 1970s. Section 3 returns to the economic history of the first industrial nation to underline some of the reasons why this older work fell into disrepute. Section 4 looks at the central thrust of more recent overviews of the historical process of growth and suggests that they provide an important dimension that cannot be captured by the growth regressions industry. Section 5 extends this by arguing that insights from several of the big picture economic history books and appropriate historical comparisons have quite a lot to offer analysts of both the miracle and the crisis in East Asia. Section 6 suggests that an important trend in cliometrics may be toward focusing more on living standards and less on production and suggests that this is an area where development economists and economic historians can interact fruitfully. Section 7 sums up with brief answers to the three questions posed here.

2. The Legacy of Two Old Generations of Economic Historians

The early postwar generation of senior economic historians produced some very high profile generalizations about the historical experience of economic development which seemed to have wide policy implications and impinged heavily on the consciousness of most economists. Shortly thereafter the early cliometricians took centre stage and a neo-classical economic history that was rather suspicious of those earlier assertions came to the fore. Given that this was firmly grounded in orthodox mainstream economics this was less likely to produce startling claims that would make development economists sit up and take notice, although it was still noteworthy for continuing, at least on occasions, to treat institutions and technological change as endogenous. This section offers a retrospective on what we learned from the contributions of these two generations of work.

a) The Demographic Transition

Although there were predecessors, the classic statement of the theory of the demographic transition is in Notestein (1953) which was a dominant paradigm in both development economics and economic history through till about the early 1970s. The approach was that of a stage theory of development in which societies pass from a low population growth phase in which both birth and death rates are high through a phase of rapid population growth in which modernization causes mortality and then, after a lag, fertility to decline to a mature phase in which both birth and death rates are low and population growth is once again modest. Widely interpreted to imply that 'development is the best contraceptive', this vision, based on impressions of historical European experience, contained both good news and bad news. While eventually economic development would solve the population problem because modernization changes the economics of childbearing, in the short term it would inevitably exacerbate demographic pressure.

Progress in medical science and public health programs made mortality much less dependent on economic growth and much lower than past experience might have suggested (Preston, 1975) but challenged the detail of projections based on European economic history rather than the basic premise of transition theory. Much more fundamental problems and different policy implications emerged from historical study of fertility especially in terms of the results from the European Fertility Project (Coale and Watkins, 1986) and of careful formulations of the microtheory of household contraceptive choice (Easterlin, 1978).

Among the results of this research were that changing costs of contraception or changing tastes might influence desired family size as well as the more obvious income and female wage variables, that European fertility decline occurred almost simultaneously in countries at very different stages of

economic development, that pre-decline fertility was quite variable and well below the biological maximum and that the cultural setting influenced the spread of birth control. A clear implication was that family planning programs had much greater potential to influence fertility, even at low levels of development, than the proponents of transition theory would have imagined (Knodel and van de Walle, 1979).

Clearly, the prediction that demographic transition will accompany economic development is not invalidated by this or more recent historical experience but what has disappeared is any pretence that the precise point at which fertility will fall is predictable (Kirk, 1996). Thus, Bongaarts and Watkins (1996) find that for today's developing countries fertility seems generally unresponsive when the Human Development Index (HDI) is below 0.4 but past 0.6 nearly all countries are in transition which seems also to have been the case in the European fertility transition using the estimates of HDI in Crafts (1997). In nineteenth century Europe, however, France is a huge outlier with the onset of substantial family limitation by the 1820s when HDI must have been well below 0.3.

Many historians are happy to emphasize the importance of culture in fertility outcomes. At the same time, even they recognize that the present state of knowledge is distinctly unsatisfactory in that it is quite unclear either what are the decisive aspects of culture or to what extent this might operate through influence on the diffusion of birth control (contraceptive costs) or through changing ideas on the acceptability of small or childless families (tastes) (Alter, 1992). It should also be remembered that more narrowly economic factors related to the costs of children like women's employment opportunities and schooling provision seem to have impacted on fertility during the decline (Anderson, 1998; Crafts, 1984a).

Much more historical research remains to be done to reach an adequate understanding of the European fertility decline. It is clear that the view embodied in the original theory of the demographic transition was far too simplistic and was seriously misleading for policymakers. More sophisticated description has come from the European Fertility Project but at present there is no convincing general analysis on which development economists can draw.

b) Growth Accounting

Growth accounting was an idea that came to fruition in the early 1950s. It was essentially a tool of historical description emanating from the historical national income research program at NBER under Kuznets' leadership and the early messages from it were all based on a long run view of American economic growth. The big and startling claim that arose was that over eight decades a very high proportion, perhaps ninety per cent, of per capita output growth came from the residual (Abramovitz, 1956). Similar results were reported by Solow

(1957) who linked the result to growth theory and by Kendrick (1961) who supplied the original magnum opus on American productivity trends. An international program of research was developed under the leadership of Abramovitz and Kuznets to produce similar long run studies of other industrialized countries including France, Japan and the UK. An overview of these and other studies is in Maddison (1987).

The technique of growth accounting, subsequently much refined and re-interpreted, has proved to be of lasting value. In the 1990s it has experienced a notable resurgence in the context of the debate on the sources of rapid growth in East Asia (Collins and Bosworth, 1996; Hsieh, 1997;Young, 1995, 1998) and has been re-connected with modern growth theory (Barro, 1998). As more research has been done, the original assertion of the overwhelming importance of the residual has not proved to be either generalizable or even particularly robust. Partly, this results from better measurement of factor inputs and especially from the explicit acknowledgement of the role of human capital.

Table 1. Growth Accounting: Comparisons of Sources of Growth (% per year).

	Capital (%)	Labor (%)	TFP (%)	Output
USA				
1800-55	1.4 (35%)	2.4 (60%)	0.2 (5%)	4.0
1855-90	2.0 (50%)	1.6 (40%)	0.4 (10%)	4.0
1890-1905	1.6 (42%)	1.3 (34%)	0.9 (24%)	3.8
UK				
1780-1831	0.6 (35%)	0.8 (47%)	0.3 (18%)	1.7
1831-73	0.9 (38%)	0.7 (29%)	0.8 (33%)	2.4
1873-1913	0.8 (42%)	0.6 (32%)	0.5 (26%)	1.9
1913-50				
France	0.6 (55%)	-0.2 (-19%)	0.7 (64%)	1.1
Japan	1.2 (55%)	0.3 (13%)	0.7 (32%)	2.2
UK	0.8 (62%)	0.1 (7%)	0.4 (31%)	1.3
USA	0.9 (32%)	0.6 (21%)	1.3 (47%)	2.8
West Germany	0.6 (46%)	0.4 (31%)	0.3 (23%)	1.3
1950-73				
France	1.6 (32%)	0.3 (6%)	3.1 (62%)	5.0
Japan	3.1 (34%)	2.5 (27%)	3.6 (39%)	9.2
UK	1.6 (53%)	0.2 (7%)	1.2 (40%)	3.0
USA	1.0 (26%)	1.3 (33%)	1.6 (41%)	3.9
West Germany	2.2 (37%)	0.5 (8%)	3.3 (55%)	6.0
1973-92				
France	1.3 (57%)	0.4 (17%)	0.6 (26%)	2.3
Japan	2.0 (53%)	0.8 (21%)	1.0 (26%)	3.8
UK	0.9 (56%)	0.0 (0%)	0.7 (44%)	1.6
USA	0.9 (38%)	1.3 (54%)	0.2 (8%)	2.4
West Germany	0.9 (39%)	-0.1 (-4%)	1.5 (65%)	2.3
1978-95				
China	3.1 (41%)	2.7 (36%)	1.7 (23%)	7.5
1960-94				
Hong Kong	2.8 (38%)	2.1 (29%)	2.4 (33%)	7.3
Indonesia	2.9 (52%)	1.9 (34%)	0.8 (14%)	5.6
Korea	4.3 (52%)	2.5 (30%)	1.5 (18%)	8.3
Malaysia	3.4 (50%)	2.5 (37%)	0.9 (13%)	6.8
Philippines	2.1 (55%)	2.1 (55%)	-0.4 (-10%)	3.8
Singapore	4.4 (54%)	2.2 (27%)	1.5 (19%)	8.1

Taiwan	4.1 (48%)	2.4 (28%)	2.0 (24%)	8.5
Thailand	3.7 (49%)	2.0 (27%)	1.8 (24%)	7.5
1960-94				
South Asia	1.8 (43%)	1.6 (38%)	0.8 (19%)	4.2
Latin America	1.8 (43%)	2.2 (52%)	0.2 (5%)	4.2
Africa	1.7 (59%)	1.8 (62%)	-0.6 (-21%)	2.9
Middle East	2.5 (56%)	2.3 (51%)	-0.3 (-7%)	4.5

Sources:
Pre WWI UK from Crafts (1995) and Matthews et al. (1982); estimates refer to Britain prior to 1856.
Pre WWI USA from Abramovitz (1993).
G7 countries 1913-50 from Maddison (1991), 1950-92 from Maddison (1996).
East Asia derived from Collins and Bosworth (1996) except for Hong Kong which is based on Young (1995) and China based on Maddison (1998) both with factor shares adjusted to match Collins and Bosworth's assumptions.
South Asia, Latin America, Africa, Middle East from Collins and Bosworth (1996).

It also appears that the measured contribution varies substantially from country to country and period to period, even where estimates are constructed using similar weights and procedures, as Table 1 reports. This seems to reflect several factors which have become better known as time has passed since the pioneering work of the 1950s. These include varying contributions of scale economies and improvements in the efficiency of resource allocation which may lead TFP growth to exaggerate technological change. Conversely, conventional TFP growth may understate the contribution of technological change either where there is endogenous innovation or where there is capital-deepening and labor-saving bias combined with inelastic factor substitution. In various epochs, the factor saving bias of technological change has differed greatly (Abramovitz, 1993).

Technological change has greater impacts on overall TFP growth when it assumes 'yeast' rather than 'mushroom' like attributes as will be the case with general purpose technologies with lots of spillovers. American TFP growth seems to have been yeasty in the 1920s but mushroomy in the 1960s (David and Wright, 1999; Harberger, 1998). Beyond this we have also learnt that economies vary substantially in their TFP growth capabilities for reasons that even mainstream economists now admit are not readily compatible with traditional neo-classical economics (Prescott, 1998). Finally, the pace of underlying technological progress has been higher on average in the twentieth than in the nineteenth century.

While the simple generalization with which we started has been lost, the wealth of knowledge gained in growth accounting research has resulted in the availability of a useful diagnostic tool for use in evaluating growth outcomes, albeit one which is quite data demanding. In particular, when standardized factor weights are imposed across groups of countries, growth accounting has considerable value for benchmarking performance, as recent work on East Asia underlines (see section 5).

c) The Kuznets Curve

Kuznets was one of the most important founding fathers of the study of modern economic growth. He was more circumspect than others of his generation but produced a claim which continues to spark empirical investigation even now. This was his suggestion based on early empirical work that during the process of economic development income distribution might follow an inverted U-shape, first becoming more and then less unequal (Kuznets, 1955).

This claim is still fiercely contested by development economists whose results seem highly sensitive to statistical methodology and the dataset employed. Two of the most recent studies using data from recent decades still reach diametrically opposing views on the validity of the Kuznets Curve in recent development experience (Jha, 1996; Deininger and Squire, 1998). Long run analysis by economic historians produces mixed results. Early modern Western Europe may have experienced a Kuznets Curve upswing based on the urbanization mechanism that Kuznets himself invoked (Van Zanden, 1995). For two centuries till the mid-1970s, American experience probably bears out Kuznets' conjecture but the British experience after 1688 does not clearly show the upswing. In both countries, however, inequality has risen sharply in the last 25 years (Lindert, 1997). In the globalization period before 1914, mass migration seems to have created rising inequality in receiving regions like the United States but the opposite in sending regions like Italy and Sweden (Williamson, 1997). At best, it seems that the evidence for Kuznets' generalization is mixed.

Indeed, the value of the historical studies in response to the Kuznets' conjecture is that, although it is not supported, we have learnt where research should be directed and we can discard the misleading but apparently powerful inference of an inevitable trade-off between development and inequality. Instead, there appear to be a number of potentially powerful forces acting on pre-tax income inequality, some of which are amenable to policy and many of which have varied in their impact in different epochs. These include demographic change, human capital formation, biases in technological change and Engel effects. This suggests that seeking to estimate Kuznets Curves to project future income distributions or as a guide to policy formation is a misplaced, mechanistic exercise.

d) Rostow's Stages and Gerschenkron's Backwardness

The highest profile contribution of the early years was Rostow's stage theory of economic growth and, in particular, his notion of 'the take-off into self-sustained growth', first set out in an article (Rostow, 1956) and then in a short book (Rostow, 1960). The idea was of a linear progression to an advanced economy through five stages of which take-off was the third following 'the traditional society' and 'pre-conditions for take-off'. The paradigm case was Britain and other countries were portrayed as following in Britain's footsteps. The take-off required a doubling of the productive investment rate, the development of one or more leading sectors with substantial backward and forward linkage effects and an appropriate institutional framework which delivers an industrial revolution in two to three decades. The preceding pre-conditions stage sees investment in social overhead capital, the development of an institutional and legal infrastructure that facilitates investment and innovation and a dynamic agriculture that releases factors of production and feeds a growing non-agricultural labor force.

The publication of Rostow's work generated a torrent of comment in the short term and added impetus to longer term empirical research which examined the quantitative support for his hypotheses. The main lines of opposition soon became clear and are well-captured in a conference volume that appeared shortly after the book (Rostow, 1963). At the theoretical level, these include objections to a failure to explain how economies move from one stage to the next or to set out necessary and sufficient conditions to be in a stage, suggestions that take-off could (and did) occur absent at least some of the pre-conditions, and arguments that the experiences of a pioneer industrializer and a follower country were bound to be different. Perhaps, even more damning were the empirical investigations that failed to identify a take-off in the economic history of countries like France (Marczewski (1963), or found that Britain appeared to be an outlier and that investment rose by far less than during European industrialization than Rostow supposed (Crafts, 1984b), or dismissed the role of railways as a leading sector in American economic growth (Fogel, 1964).

In part, the abandonment of Rostow was due to the enormous influence of the alternative approach put forward by Gerschenkron (1962). Gerschenkron was in the forefront of those who doubted the idea of preconditions for take-off and he put forward the alternative proposition of substitutes for prerequisites. Thus, institutional innovation could circumvent the establishment of market-based relationships, the state could substitute for the private capital market, monopoly profits could generate the savings to finance investment, the banking system could supply entrepreneurship, external trade could replace domestic agriculture in sustaining domestic industry etc., etc..

The power of Gerschenkron's vision, however, lay in his suggestion that the patterns of substitution for alleged prerequisites could be understood as responses to economic backwardness at the start of industrialization. For example, retained profits and private investors would dominate in well-advanced countries, bank finance and entrepreneurship would be important in conditions of moderate backwardness but in extreme backwardness the state would be the key to industrial investment (Sylla, 1991). There were also clear similarities to the 'big push' view of industrialization in backward economies popular in the 1940s and to recent research on the developmental state in East Asian industrialization (Amsden, 1989; Wade, 1990).

A crude summary version of Gerschenkron's ideas provided the basis for some statistical tests of 'the backwardness hypothesis'; in particular focusing on his suggestion that backwardness offered greater opportunities for fast growth once a successful institutional response had been created and that this growth would tend to be based on industry rather than agriculture and on investment and the output of producers' goods rather than consumer goods. Statistical investigation of these hypotheses found mixed results rather than clear cut support (Trebilcock, 1981; Crafts, 1984). In particular, the notion that backwardness was associated with a great decisive spurt in industrial output growth seems to be rejected by the available data when subjected to time series analysis (Crafts et al., 1990).

Probably the most researched aspect of Gerschenkron's account of backwardness in European industrialization is that of the role of banking. Here too serious doubts have been raised, notably in the context of the claims made about the impact of universal banking early in industrialization in the pivotal case of Germany (Fohlin, 1998). More generally, the picture that emerges in terms of investment banking is more subtle and nuanced than Gerschenkron suggested but his claims seem to have some validity. It seems clear that attention needs to be paid to the entire range of institutional arrangements and their legal underpinnings in analyzing impacts of finance on development overall (Sylla, 1991). This resonates with recent work on the role of financial institutions in economic development.

The literature of European economic history rapidly dropped the Rostovian schema and re-grouped around the idea that there were different paths of development to the modern world. Although, the spirit of Gerschenkron's approach may still be useful in thinking about economic development (Sylla and Toniolo, 1991), the general conclusion has been that there is no typology for the study of nineteenth century European industrialization (O'Brien, 1986). The empirical rejection of the stylized facts in these grand theories has relied heavily on the results of empirical investigations, originally spearheaded by Kuznets, in the historical national income accounting tradition. This still flourishes and, compiled and evaluated by Maddison (1982) (1995), has made a major contribution to empirical growth economics.

Although, unsatisfactory as descriptive generalizations, the work of Rostow and, especially, Gerschenkron contains insights that may appeal more to mainstream economists today than in the 1960s and 1970s. Thus, particularly in the context of new economic geography, Rostovian linkage effects are back in vogue now in models that feature imperfect competition, pecuniary externalities and increasing returns to scale, for example to analyze patterns of industrialization (Puga, 1998). Similarly, the idea of the potential importance of co-ordination problems in development and state intervention to escape a bad equilibrium has been formalized in models with increasing returns and non-tradability of some inputs (Ciccone and Matsuyama, 1996; Rodrik, 1996a), thus rehabilitating to some extent the notion of the big push favoured by Gerschenkron.

The literature of asymmetric information and transactions costs can be used to capture and to sharpen up Gerschenkron's insights on the boundaries of the firm, the role of the state, and the type of finance likely to be appropriate under conditions of backwardness. Thus, a powerful state can play an important role in promoting and directing investment where capital markets are immature but needs a commitment technology to guard against rent-seeking behaviour (Lee, 1992), bank finance has strong advantages in monitoring firms in the early stages of industrialization but the supply of bank credit depends crucially on the quality of the legal system (Levine, 1998), external finance will not be forthcoming when outside investors have few rights and contract enforcement is weak (La Porta et al., 1997), and the development of business groups is a way of reducing hold-up problems (Khanna, 1999).

Both transactions costs and incomplete contracts arguments indicate more hierarchy and less reliance on markets where legal systems are weak, markets are thin and asset-specificity is intensified. It also seems clear, however, that as development progresses a shift towards more orthodox market-based arrangements and financial liberalization will be attractive in particular to improve productivity performance and allocative efficiency. The need to make such a transition and the difficulties to which it may give rise have unfortunately not been much discussed.

The possibility that Gerschenkron can be construed in terms of modern microeconomics does not, however, mean that his underlying view of the role of the state in the development process is acceptable. On the contrary, it appears to lay far too much emphasis on the role of capital and far too little on the importance of productivity improvement and to be too sanguine about the dangers of government as opposed to market failure. Nevertheless, a clear message that derives from Gerschenkron and does still appear to be valid is that economies that develop from backwardness will probably go through the early stages of development with institutional configurations that look quite

different from those of, say, the United States and that optimal arrangements will alter as development progresses.

e) New Economic History

The onset of the cliometric revolution in economic history is conventionally marked by the first of the annual Cliometrics meetings at Purdue in 1960. The early work of the cliometric school was dominated not so much by econometric wizardry but by the application of mainstream neo-classical economics, notably price theory, to expose weaknesses in the logic of the stories told by traditional historians. Over several decades, this has matured into a solid corpus of detailed studies, gradually encompassing more sophisticated econometrics and the microeconomics of agency problems, transactions costs etc., that is available as a storehouse of knowledge to be drawn on by the economics profession.

This type of work tends to produce far less by way of startling generalizations to grab the development economist's attention. Partly, this is because much new economic history entails the application of standard techniques of applied economics so that there is less novelty in the findings. Partly, it is because much of the effort devoted to quantification of the past has actually involved discovering that the old generalizations are at best half-truths. Partly, this is because, as McCloskey put it in his survey of early work in the field, "the conclusions have often been variations on the theme 'The Market, God Bless It, Works' (1978, p. 21). A prominent example of this work was the success of new economic history in debunking the notion of entrepreneurial failure in the late Victorian British economy by demonstrating that controversial choices of technique were justified on profit-maximizing criteria at British relative factor costs (McCloskey and Sandberg, 1971) and that returns on foreign investment amply justified the use of a large fraction of British savings abroad rather than at home (Edelstein, 1976).

In terms of economic growth, the big message that emerged was that the impact of even the most profound technological breakthroughs on overall growth is modest, especially at first. This came strongly from the pioneering studies of Fogel (1964) and Fishlow (1965) on the impact of railroads on American economic growth where the social savings as a proportion of GDP were estimated to be the equivalent of only a couple of years' growth. This was partly because water was a good substitute for rail transport in many cases and partly because railroads were never that large relative to the total capital stock of the economy. This lesson about the impact of invention on the economy seems robust and has been revived recently in the context of late twentieth century computer technology in a study that is reminiscent of the Fogel/Fishlow era (Sichel, 1997).

It should be recognized that the new economic history of those early years was heavily dependent on the assumptions embodied in the neo-classical economics of the day. Some of this orthodoxy has subsequently been challenged and, as analytical techniques have improved, in particular to embrace imperfect competition and increasing returns into the mainstream, old certainties have been superceded. Thus, the new industrial economics, the new international economics, the new economic geography and the new growth economics all potentially call for some re-thinking of early cliometric results.

For example, Fogel's estimate of the social saving from railroads is a essentially a conventional cost-benefit analysis of a (large) transport project based on a fixed trip matrix to obtain an upper bound measure which regards the transport benefits as an acceptable estimate of overall economic benefits and disregards linkage effects. Given perfect competition and constant returns to scale together with an exogenous growth model, this would be correct. Work in the new economic geography both undermines these assumptions and has progressed to the point at which CGE modelling can embody different set-ups including imperfect competition, agglomeration effects and changes in the number of producers in the transport-using sector. In a calibrated model, Venables and Gasiorek (1998) find that for freight traffic the ratio of benefits to those captured by orthodox cost-benefit analysis may be in the range 1.4 to 1.65. Similarly, Baldwin (1989) in a review of the European Single Market notes that incorporating endogenous growth into the analysis potentially adds significant growth rate effects to the static cost-benefit result. None of this, however, would allow the reinstatement of the myth of the indispensability of the railroads.

More generally, the key weakness of new economic history, despite brave attempts and in common with its predecessors, has been the inadequacy of its analytical tools in addressing the central themes of long run economic history, namely, endogenous institutional and technological change. An ability to develop powerful lessons in these areas might be just what development economists would most like from economic history since these issues lie at the heart of long run economic divergence.

Cliometricians have made distinguished contributions to the history of technology, for example Mokyr (1990) and Rosenberg (1982) and, in general, analysis of technological change is one of the highlights of research in economic history. Moreover, this work has shown a subtle appreciation of the economics of technology diffusion and transfer (David, 1991; Nelson and Wright, 1992) and the impact of factor endowments on choice of technique (James and Skinner, 1985) and learning processes (Allen, 1983; David, 1975) that has been highly influential in the economics of technology.

Nevertheless, the unease of cliometrics when faced with questions of the determinants of technological change was readily exposed by the Habbakuk debate on the role of factor endowments in American and British nineteenth century technology, as the overview in David (1975) so clearly reveals. Moreover, while recognition of the consequences of factor-saving bias in technological change is a strong theme in cliometric history, explanation of the time-varying nature of these biases remains in its infancy. Cliometricians have been successful in debunking crude Kondratieff cycle formulations of fluctuations in the pace of technological change (Solomou, 1987) but unsuccessful in accounting for the timing of the Industrial Revolution.

The early phase of cliometric history was also notable for pioneering attempts to endogenize institutional change along Coasian lines and as a response to changing relative prices. The boldest essay was that of North and Thomas (1973). The senior author has subsequently become one of that book's most perceptive critics. North now stresses that institutional change is a more complicated process than early cliometrics acknowledged because we cannot rely on the implementation properties of efficient markets and we must pay heed to informal constraints and the likelihood of path dependent outcomes.

3. The First Industrial Revolution

In the 1950s, economic history written with development economists in mind often took the British industrial revolution as a reference point. Subsequently, and especially in the last 20 years, there has been a good deal of quantitative reassessment of this experience which has undermined many of the early claims. The main development has been that estimates of economic growth and TFP growth for the years 1780-1830 are now much lower (Crafts and Harley, 1992) as are investment rates (Feinstein, 1988a).

Table 2. Aspects of the First Industrial Revolution.

	1780	1820	1870	1913
GDP/Person ($1990 int.)	1787	2099	3263	5032
GDP Growth Rate	1.0	1.9	2.4	1.4
TFP Growth Rate	0.05	0.40	0.75	0.45
Agricultural Employment Share	45	35	22.7	11.8
Investment/GDP	6.0	8.3	8.7	8.7
R & D Expenditure/GDP				0.02
Adult Literacy	50	54	76	96
Primary School Enrolment		36	76	100
Secondary School Enrolment			1.7	5.6
Crude Birth Rate (per 1000)	34.9	40.2	35.2	24.1
Life Expectancy at Birth	34.7	39.2	41.3	53.4
Average Direct Tax Rate	2.4	3.9	1.4	1.7
Gini Coefficient for Income	48.7	51.9	47.1	48.2

Sources:
Crafts (1998) where fuller details are given and, for Gini coefficient which is for nearest available year, Williamson (1985), as corrected by Feinstein (1988a). Units are in percentages except where stated. Estimates refer to Britain through 1820 and UK thereafter and both growth and investment rates are period averages.

One implication of this work is that Rostow's notion of the take-off seems to be completely discredited. GDP growth exhibited a steady acceleration over perhaps half a century and peaked at less than 3 per cent per year while there is no sign of the rapid doubling of the investment rate postulated by Rostow. The notion of leading sectors has also fared badly with a strong emphasis in the recent literature on the small initial size of cotton textiles relative to GDP or even industrial output. Weighting of index numbers to reflect this point properly has also been fundamental to reduced estimates of industrial output growth.

Table 2 also reports the rapid de-agriculturalization of the British labor force with the proportion employed in agriculture already in 1870 at levels not reached in continental Europe till after World War II. This can only be explained in an open economy context and CGE modelling suggests that it probably reflects a combination of technological prowess in leading industrial exports together with the pressure of population growth on a domestic agriculture with an inelastic supply of land (Harley and Crafts, 1998). In any

event, it makes the British development trajectory an unusual one that was not followed elsewhere and is another reason to discard Rostow's linear model.

The Kuznets Curve also seems a doubtful characterization of the British industrialization experience and any changes in overall income inequality were probably small. The data are quite weak, however, and some modest rise and decline in inequality may have happened. Williamson's (1985) claim to have shown that sectorally unbalanced technological progress and associated shifts in the supply and demand for skilled and unskilled labor during the nineteenth century generated a Kuznets Curve in an economy where human capital formation was slow to respond to the new environment has not survived Feinstein's (1988b) critique.

Research on the English experience has been a key element in the undermining of the traditional view of the demographic transition. Remarkable progress has been made in using the evidence of samples of baptisms and burials in Anglican parish registers through inverse projection techniques to develop estimates of English population and vital rates back to 1541, originally in Wrigley and Schofield (1981) and now revised slightly in Wrigley et al. (1997). These estimates have radically revised English population history and have generated a new conventional wisdom, although they are still the subject of considerable critical comment in the historical demography world (Razzell, 1998). This account of English demographic history stresses that pre-industrial fertility was regulated by nuptiality and quite variable in a weakly homeostatic Malthusian system characterized by preventive checks.
During the Industrial Revolution fertility rose sharply as marriage behaviour changed and this accounted for most of the additional population growth through about 1821 while the general spread of family limitation did not begin until the 1870s when Britain was already a highly developed economy, a delay that contrasts with France and is still not really understood. The rate of natural increase peaked at about 1.5 per cent per year, modest compared with recent developing countries, which partly accounts for Britain's ability to develop without major increases in the rate of investment. The enhanced growth potential of the economy as technological progress accelerated enabled the economy to cope with population pressure that would have undermined living standards and invoked preventive checks in earlier centuries.

Even so, the British industrial revolution also does not appear to be a case where growth is dominated by the residual which may seem paradoxical given the common interpretation of this episode as a period where for the first time modern technological change came into its own. This is partly explained by the point made earlier that even major technological breakthroughs do not have big initial impacts on GDP as a whole - for example, it has been estimated that the social savings attributable to James Watt's steam engine were around 0.2% of GDP in 1800 (von Tunzelmann, 1978, p. 157). It is partly also explained by the unevenness of technological change which had little impact in

many service sectors and by the fact that full exploitation of new technologies depended on learning by doing and by using and thus took time. At a deeper level, it has been suggested that from an endogenous innovation perspective this was still an economy which by later standards had a lot of limitations, including weak science and technology, small markets, and many attractive rent-seeking opportunities for the talented (Crafts, 1995).

Indeed, a World Bank economist given a basic description of the late eighteenth century British economy without knowing to which country it applied might well conclude that here was a case of very poor development prospects. Table 2 shows weak investment in formal schooling and in physical capital despite very low direct taxes. The economy was engaged in a very expensive war and was becoming increasingly protectionist with a ballooning national debt. The outstanding British plus-points were in fact probably non-quantifiable and related to the constitutional underpinnings of property rights (North and Weingast, 1989) and to a comparative advantage in microinventions based on expertise and institutions that fostered relatively rapid technological diffusion and learning (Mokyr, 1993).

Ongoing research has created a picture of the British industrial revolution that differs substantially from that which gave rise to the development history of the 1950s. If there is a lesson to be derived, it may be that, in many respects, the British experience is not a role model for the developing world today.

4.Third Generation Economic History in a World of Growth Regressions

In the last ten years or so, the generalizations about economic growth used by development economists have frequently been taken from growth regressions. To an extent, this enterprise has stemmed from the work of Maddison (1982) (1995) in compiling long run data on economic growth but the majority of the vast growth regressions literature has used the Summers and Heston postwar data set (1988) and the subsequent updates. Both sources offer PPP adjusted estimates of real output per worker or per person in past years and so have been used to investigate issues of convergence and divergence as well as the sources of growth.

While growth economists have used growth regressions in attempts to discriminate between competing claims in growth theory, development economists have used them to project future growth (Barro, 1997), to evaluate growth performance across countries (World Bank, 1993), to bolster generalizations relating to the role of factor accumulation and initial backwardness in growth (Levine and Renelt, 1992), and to support claims such as openness is good for TFP growth (Edwards, 1998) or corruption is bad for growth (Mauro, 1995). In this sense, growth regressions can be seen as the natural successors to the work of Kuznets or Rostow in the 1950s. An

overview of the whole enterprise and some discussion of the technical econometric problems that are involved can be found in Barro (1997).

The growth regressions literature has quickly passed through two stages. In the early days, the emphasis in terms of right hand side variables was in terms of measures of accumulation and initial income levels as determinants of growth with a strong emphasis on human capital. The implication of these models taken literally was that the transition economies of Eastern Europe could expect rapid growth because they had high school enrolments and a massive initial productivity gap. Mankiw et al. (1992) argued that the evidence was largely consistent with an Augmented-Solow model as a good approximation to growth experience. Barro and Martin (1991) saw the future of Eastern Europe as a kind of neo-classical transition process in which conditional convergence to the steady state would proceed at 2 per cent per year. These claims do indeed look odd set against the long run historical record which, as has been stressed more recently, is one of 'divergence big time' (Pritchett, 1997).

The next round of growth regression models pays much more attention to institutional quality as a right hand side variable and are characterized by innovative attempts to measure this stimulated by the well-known paper of Knack and Keefer (1995). This paper, quickly followed by many others, used ICRG data from country risk guides published for international investors, to assess the quality of property rights, the enforceability of contracts etc and showed that these measures appeared to have a strong impact on growth performance. The underlying argument is of the importance of the appropriability of returns and freedom from hold-up problems for investment and managerial effort in cost reduction. The relationship to economic history is in a way quite close and North (1990) is cited as the explicit motivation for their research. The implications for the growth prospects of some of the former communist countries from this line of argument may be much less optimistic, given the weaknesses of their institutional arrangements (EBRD, 1997, ch. 6). The most recent developments in this literature are characterized by pioneering attempts to explain the quality of institutions and policies. Thus, the regressions in Easterly and Levine (1997) and Rodrik (1998) bring in contextual variables related to social conflict and ethnic division.

By now, this literature can be seen as converging with an important strand in the next generation of work in economic history which has sought to bring institutional change back to the forefront of generalizing about the historical experience of growth. The two seminal references in this context are Abramovitz (1986) and North (1990). These historians can be seen by implication as, respectively, probing more deeply into the relationship between backwardness and growth and into the capability of the state to transform a backward economy than did Gerschenkron. Abramovitz and North can both also be seen as elaborating a much broader version of the endogenous

innovation approach to economic growth developed by Grossman and Helpman (1991) and Aghion and Howitt (1998) but quite far away from the neo-classical views in Mankiw et al. (1992). In these terms, the point to note is the fundamental importance of solving agency and appropriation problems in creating an environment conducive to innovation and productivity improvement.

The famous discussion of catch-up growth in Abramovitz (1986) stressed two points in particular. Firstly, that catch-up involves reducing a technological gap not merely a factor intensity gap and that this requires technological congruence of the followers with the leaders. Second, that catch-up requires 'social capability'. By this, was meant the ability effectively to assimilate advanced countries' technology which Abramovitz admitted was hard to pin down precisely or to quantify but required not only adequate levels of human capital but also appropriate institutions, openness and a political system that does not block reform or impede innovative activity. The combination of technological gap and social capability defines a country's potentiality for productivity advance by way of catch-up while factors such as macroeconomic conditions and facilities for the international diffusion of knowledge influence the realization of potential (1986, p. 390).

Catch-up is far from automatic and a Golden Age of catch-up is rare but occurs when all these factors come together in a favourable conjuncture as in most of Western Europe after World War II, but not after World War I. Policy choices played a significant role here with many countries achieving 'social contracts' between capital and labor conducive to high investment and wage moderation based on the creation of commitment technologies and monitoring devices (Eichengreen, 1996). Here, and in the incentives that it gave to trade liberalization, lay the importance of the Marshall Plan rather than in the amounts of investment or technical assistance involved (Eichengreen and Uzan, 1992).

Although in that case there was a very clear and unusually strong inverse correlation between initial income level and subsequent growth, there are still outliers including Britain which grew slowly even allowing for its small initial productivity gap. Here too social capability probably did play a role, perhaps through the industrial relations system - which politicians were unable/unwilling to reform - and its adverse (hold-up) implications for TFP growth (Bean and Crafts, 1996). This would not be captured by standard growth regressions and underlines the need for historical case studies to identify key aspects of social capability rather than hoping simply to find a proxy variable to use in cross-sections.

North (1990) also emphasized the crucial importance of institutions for growth echoing a theme that runs through several decades of his work. Well-defined, enforceable property rights that reduce transactions costs in the form of exposure to opportunistic hold-up, and thus underpin productive investment

and innovation, lie at the heart of North's view of the growth process. Strong but limited government is required, i.e., government is needed to promote the rule of law but must be credible in renouncing opportunistic behaviour, yet for autocrats with short time horizons looting makes more sense than nurturing long termism in the business world.

What is less clear is how these desirable attributes are achieved. North pointed out that not only is there no natural selection process that ensures the replacement of inefficient with efficient institutions but that network externalities, informal constraints and the vested interests which surround existing arrangements tend to make institutional change a slow, incremental process and give it a path dependent character. A central message is that creating social capability is very difficult - indeed, the policy advice that seems most naturally to follow from this is 'get a new history!'. An inability to explain when it is politically feasible to reform institutional and policy frameworks also characterizes the development economics literature on the political economy of reform, although some progress has been made in understanding status quo bias and wars of attrition (Rodrik, 1996b).

North, like Abramovitz, does not try to quantify his ideas on the relationship between institutional quality and economic growth and would probably regard the attempts using ICRG in the growth regressions literature as brave but limited. Indeed, an interesting question is just what this variable captures - for example, is it failure of the legal system to enforce contracts which hobbles the financial system (Levine, 1998) or do the effects run through the impact of corruption as a tax on foreign direct investment as in Wei (1997)? If the corruption 'tax' is perceived as the key problem, then a more subtle view suggests that the damage will differ depending, for example, on whether it corresponds to lump-sum taxation by a powerful government or over-fishing by roving bandits (Bardhan, 1997), a distinction which echoes well-known themes in new institutional economic history. Here too it seems likely that ICRG type growth regressions need to be supplemented by historical case studies.

In sum, the coming together of the growth regressions industry and some of the major themes in recent overviews of the growth process by economic historians is encouraging and may provide an opportunity for fruitful interaction with development economists in exploring aspects of growth that are excluded from the Augmented Solow view of the world.

5. The East Asian Miracle and Crisis.

Until recently the remarkable growth performance of many East Asian economies has been widely praised. The recent crises were not generally foreseen and have triggered off a period of reassessment of East Asian development. This experience provides a good opportunity to reflect on the difference that an historical perspective drawing on insights informed by the

big ideas in economic history, and some of the relevant cliometric research results, can make.

The assessment in World Bank (1993) provides a good starting point as an early 1990s mainstream development economics view of East Asia. High performing East Asian economies were seen as benefiting from excellent TFP growth linked to their outwardly orientated policies and the unusual success of these economies was attributed to governmental success in solving co-ordination problems while adopting policy frameworks that contained rent-seeking and were generally market friendly. Rapid deepening of financial markets was taken to be a big stimulus to investment and growth while industrial and directed credit policies were not seen as damaging. The World Bank evaluation of the growth record was backed up by first generation growth regressions in which dummy variables suggested that high performing East Asian economies had outperformed the world sample by about 1.7 per cent per year, compared with underperformance of 1.3 and 1.0 per cent signalled by the Latin American and African dummies, respectively (1993, p. 54).

Second generation growth regressions include measures of institutional quality and, particularly if estimates for the 1990s are used, leading East Asian countries score well on these variables as well. Growth projections based on an equation of this type including a 'rule of law' variable with a big coefficient were presented by Barro (1997, p. 44) and they suggested further high growth in many East Asian countries with South Korea right at the top of the world list.

The miracle years were already the subject of some reassessment prior to the crises as economists turned to the standard economic history methodology of growth accounting (Collins and Bosworth, 1996; Young, 1995). The messages were somewhat different from those coming from growth regressions, since the impact of the Asian demographic transition (Bloom and Williamson, 1997) and initially low capital to output ratios (Fukuda, 1999) had not been reflected in regressions that used investment shares and population growth as right hand side variables. When put in an historical context, the clear message of benchmarking through growth accounting, which appears robust to arguments about the data and factor-saving bias in technological change, is that East Asian TFP growth is far from outstanding, although, obviously, it compares well with Africa or Latin America.

Taking columns 1 and 2 of Table 1 together, it is clear that East Asian growth has relied much more on the contribution of rapid factor accumulation, of both capital and labour, than did Europe's fast growth of its Golden Age. Conversely, East Asian TFP growth has been less strong than in the European countries which experienced rapid catch-up growth in the early postwar decades. Indeed, the Tigers have also fallen well short of what Japan achieved in this aspect of growth. Moreover, normalizing for the opportunities for catching-up presented by the initial productivity gaps and levels of

education the Tigers' TFP growth appears in a much less favourable light and seems rather disappointing (Crafts, 1999).

At least for the more successful Asian economies, this should not detract from their unusually successful efforts to accumulate human capital and to improve and to develop imported technology (Dahlman, 1994). This suggests that the Tigers' disappointing TFP growth had its roots in other weaknesses in the Gerschenkronian developmental state model. A danger, noted but understated in World Bank (1993), is that this spawns government policies which serve the interests of special interest groups and actually inhibit economic growth by inducing misallocation of resources, for example, through industrial policy.

Although there is no consensus in the literature on the overall effects of these policies, increasingly, econometric analysis is tending to find that selective interventions on balance retarded rather than stimulated growth in both Korea and Taiwan. An analysis of industrial productivity growth across sectors in Korea during 1963-83 found that tax and financial incentives did not enhance productivity growth while non-tariff barriers to trade reduced both capital accumulation and TFP growth (Lee, 1995). Similar results apply to 1980s Taiwan (Smith, 1995).

Faltering Japanese productivity growth in the last 20 years reinforces the point that catch-up growth is not automatic as the neo-classical model would have us believe but depends on social capability and can be eroded by poor policy choices. It also underlines the need for transition after the first phase of a Gerschenkronian escape from backwardness. The distinctive Japanese institutional arrangements that emerged from the wartime experience, addressed transactions costs problems effectively, mobilized support for the drive to modernization, and delivered the Golden Age are now increasingly seen as in need of serious reform (Ito, 1996). and yet this is proving extremely difficult politically to implement. Readers of Abramovitz and North would not be unduly surprised by this outcome.

In part, poor Japanese TFP performance reflects excessive and wasteful investment and thus weaknesses in the financial system and in corporate governance (Ide, 1996). Beyond this, however, policy errors have also played a part. As elsewhere in east Asia, industrial policies appear to have diverted resources away from high growth sectors towards declining industries and did not have a positive effect on TFP growth during 1960-1990 (Beason and Weinstein, 1996). The Japanese economy has also been subjected to excessive regulation, which has been costly in terms of productivity, and has continued to have high hidden unemployment in non-tradables. The scope for TFP gains from deregulation in Japan appears to be about 6 times as large as in the United States (Blondal and Pilat, 1997). Slow growth in the 1990s has been exacerbated by a flawed financial liberalization in the 1980s leading to a

banking crisis with severe implications for the finance of investment (Bayoumi, 1999).

Understandably, the developmental states in East Asia have been aware of the need for reform if full catch-up of the leading OECD economies is to be achieved in due course. Since the mid-1980s, a major thrust of this reform effort has embraced financial liberalization which theory does suggest would be appropriate in principle. The financial sector policies of a developmental state had tended to place little weight on proper auditing, accounting, credit rating, capital adequacy, disclosure requirements or experienced and independent regulators (Park, 1994). With financial liberalization, prudential regulation and supervision assumed much greater importance and failure to adapt quickly could potentially lead to severe problems of moral hazard which have indeed emerged (World Bank, 1998). Thus, the current crisis in countries like South Korea can also be seen as illustrative of the difficulties of transition in a Gerschenkronian style development. In addition, the insight that a student of North might want to add is that it might be expected that a transition to more orthodox financial arrangements would be fraught with difficulty given the political clout of the interest groups associated with the original system.

An obvious lesson from economic history is that the record shows many examples of financial crises leading to severe downturns occurring in basically sound and strong economies with high growth potential but exposed to macroeconomic shocks where the banking system was inadequately regulated. The classic example is surely the United States in the nineteenth and early twentieth century, most notoriously in the Great Depression of the 1930s (Grossman, 1993; Mishkin, 1991). In each case, however, resolution of the crisis permitted the resumption of strong growth.

In sum, a well-informed economic historian would surely have wanted to qualify the World Bank (1993) report on the sources of the "East Asian Miracle", would emphasize that in development from backwardness the capacity for effective institutional reform on a continuing basis is central to sustaining strong catch-up growth but would not think that financial crisis per se necessarily indicated weak long term growth potential or an insuperable obstacle to the resumption of fast growth, given an effective policy response to the problems exposed in the financial system.

6. Living Standards

Both development economists and economic historians have become increasingly concerned to develop measures of living standards that are more comprehensive than real wages or real GDP per head. Partly, this is because attention has increasingly turned to the lives that people lead rather than the incomes that they enjoy and partly because in most circumstances a substantial element of well-being is derived not on the basis of personal

command over resources but depends on provision by the state - this tends to be true of health and education in many countries and is universally the case for civil and political rights (Dasgupta and Weale, 1992).

Studies of industrialization, in particular, have underlined to economic historians the possibility that there may be circumstances where material prosperity increases while other aspects of living standards such as life expectancy deteriorate (Engerman, 1997). It has long been recognized that industrialization in nineteenth century conditions, at least for most workers, implied that there was a trade-off between higher wages and a worse environment (Williamson, 1990). Moreover, research in historical demography has emphasized that over the last century or so changes in life expectancy have been largely independent of those in real incomes (Preston, 1975). Although traditionally economic historians have spent much of their effort in seeking to quantify real wages, increasingly this is seen as only part of what is required.

Since the late 1970s one of the most substantial research efforts in cliometrics has been devoted to investigation of human heights in the past. This has involved laborious compilation of data especially from military records and the development of appropriate statistical methods to deal with the truncated distributions that these often report (Wachter and Trussell, 1982). The potential value of height in the context of measuring living standards is that it is known to reflect nutritional status and to be sensitive to aspects that are not captured by real wages such as work effort and the disease environment to which a person is exposed (Steckel, 1995). Its role is as a diagnostic rather than a measure of welfare per se.

Declines in heights during the nineteenth century have been reported for several countries. In both the American and British cases, it has been suggested that the heights data indicate that economic growth and rising real wages are to some extent misleading indicators of changes in living standards. Having said this, it is not yet clear what exactly the diagnostic is picking up and thus what are the welfare implications. It could be costs of urbanization in terms of exposure of workers adverse urban disease environments (Floud et al. 1990) or increased inequality of incomes, as regression results obtained in Steckel (1983) might imply, or a reduction in food consumption in response to a rise in its relative price as argued by Komlos (1995).

Economic historians have begun to embrace the Human Development Index (HDI); in the words of Floud and Harris "there is a strong case for using ... the HDI to investigate the level of human welfare in the past" (1997, p. 114) while Costa and Steckel regard HDI as "a retrospective index of welfare...relevant for understanding the past ...the HDI measures how far an economy has come along the path to modern living standards" (1997, pp.73-74). Historical estimates of HDI or close approximations to it are possible back to the early

nineteenth century in some countries and estimates have started to appear, some of which are reported in Table 3.

Table 3. The Human Development Index, 1870 and 1973.

	GDP/Head ($1990int)	Life Expectancy	Literacy (%)	Enrolment (%)	HDI
1870					
France	1858	42.0	69	40.7	0.400
Germany	1913	36.2	80	41.6	0.397
Italy	1467	28.0	32	16.3	0.187
UK	3263	41.3	76	35.4	0.496
USA	2457	44.0	75	43.8	0.466
1973					
France	12940	72.4	97	66.7	0.881
Germany	13152	70.6	99	66.6	0.876
Italy	10409	72.1	94	58.4	0.862
UK	11992	72.0	99	66.7	0.883
USA	16607	71.3	99	83.1	0.900
China	1186	63.2	27	64.2	0.407
India	853	50.3	34	28.1	0.289
Sri Lanka	1733	65.0	77	49.0	0.547

Source:
Crafts (1997, Tables 1, 4 and 5).

The HDI is defined as follows:

Life Expectancy (L) $= (e_0 - 25)/(85 - 25)$
Schooling (S) $= 0.67LIT + 0.33ENROL$
Income (I) $= (Y_{adj} - 200)/(5385 - 200)$

Each of these components has a value between 0 and 1 as does HDI $= (L + S + I)/3$.

Adjusted income is measured by the following formula which heavily discounts income above the threshold level, $y^* = 5120$ ($1990int)

$$Y_{adj} = y^* + 2[(y - y^*)^{1/2}] \qquad\qquad \text{for } y^* < y < 2y^*$$

$$Y_{adj} = y^* + 2[(y - y^*)^{1/2}] + 3[(y - 2y^*)^{1/3}] \qquad \text{for } 2y^* < y < 3y^*$$

and so on. $5385 is an approximate maximum for this formula.

The HDI is described and refined in successive issues of the *Human Development Report.* Its focus is the escape from poverty and this is seen as depending on public services as well as private incomes. HDI is a composite of three basic components: longevity, knowledge and income. Human development is seen as a process of expanding people's choices; income is assumed to impact on this primarily at low levels of material well-being and, above a threshold level, it is considered to make a sharply diminishing contribution eventually tailing off to nothing. Longevity, measured by life expectancy at birth (e_0), and knowledge, measured by a weighted average of literacy (LIT) and school enrolment (ENROL), are regarded as central to the enhancement of capabilities but not closely correlate with or strictly dependent on private income. The components are combined in a single index by measuring them in terms of the distance travelled between the minimum and maximum values ever observed and averaging these scores into one index. The precise formula is noted in Table 3.

Nevertheless, the HDI has obvious weaknesses as a measure of economic welfare which may not yet be fully appreciated by economic historians. In common with heights, the approach runs into difficulties with weighting. It is possible in this case to calculate the implicit set of weights that it embodies but when this is done their justification is obscure, they vary dramatically at different income levels and are quite sensitive to the choice of extreme values. The very low weight given to income above an arbitrary threshold level is particularly hard for many commentators to accept (Gormely, 1995). Moreover, if the basic rationale of the index stems from a concern with capabilities and with the impact of social arrangements, then the coverage of HDI might well be regarded as too narrow.

Despite these reservations about HDI, it may be valuable in historical research. Certainly, comparing today's developing countries with their European predecessors on the basis of HDI gives a quite different impression from that which is obtained using historical national accounts, as is reflected in the estimates for India and Italy in Table 3. Since it is generally agreed that the

majority of improvements in mortality experience have resulted from 'exogenous' factors such as advances in science and public health programmes, it is also likely that growth of living standards since 1870 as measured by real national income per head is a substantial underestimate. To confirm this, however, we would need a way to value the exogenous change in life expectancy in terms of income and the HDI methodology does not provide a way to carry this out.

Usher (1980, ch. 7) provides a detailed rationale and methodology for making imputations to growth rates for environmental changes, i.e., for variables that contribute to welfare, are not counted directly or indirectly as part of income and if the average amount enjoyed is changing over time. He takes pollution, crime, life expectancy and leisure to be potentially important examples. All are clearly relevant to a long run view of living standards and probably should eventually be addressed by economic historians but only the last two have been quantified thus far and then only very crudely. The main point that they make is simply that imputations along these lines tend to be rather large and suggest that conventional GDP growth rates may substantially understate the rate of improvement of average living standards in the last century (Crafts, 1997).

The results contained in Table 3 also contain an important message for development economists as well. It is clear that any index of living standards giving a substantial weight to life expectancy will make the developing countries of the recent past look much better in welfare comparisons with the leading countries of 1870 than does a judgement based simply on real GDP/head. This might produce one of two basic reactions: either to say that this shows how important it is not to judge progress in development by GDP alone or to say that this underlines how important it is to pay more serious attention to the index number problems of measuring changes in living standards.

In fact both reactions are probably valid. If so, they map out an important area in which future collaboration between economic historians and development economists should be fruitful, especially since historical research has produced cases of bias in both directions in using growth of real GDP/person growth to measure growth of average living standards.

7. Conclusions

In the light of this extended review of the literature, what might be the answers to the questions posed in the introduction ?

The early postwar pioneers in economic history still have something to offer development economists. In general, however, this is in terms of useful insights rather than generalizations that are still defensible. Notions like take-

off, demographic transition theory and the Kuznets Curve have been largely discredited. On the other hand, Gerschenkron on development from conditions of economic backwardness still deserves to be read and might usefully be revisited from the perspective of modern microeconomics.

Three big messages stand out from recent work in economic history. First, the attempt to force patterns of economic growth and development into the framework of the Augmented-Solow neo-classical growth model are seriously misconceived. Second, institutions matter for economic growth but different countries can be expected to diverge significantly and persistently in terms of institutional arrangements. Third, it is important to distinguish between growth in real wages or GDP/person and growth of living standards and in different stages of growth and/or different epochs the relationship between them has varied greatly.

These messages all suggest that economic historians and development economists have more to gain from continued and closer interaction than might have seemed to be the case 25 years ago in the heyday of revisionist new economic history. The example of the analysis of recent East Asian economic development has been used in the paper to illustrate that a bit more history and a bit less interpretation based on growth regressions might be helpful .

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