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**HISTORICAL PERSPECTIVES ON ASIAN ECONOMIC GROWTH AND
DEVELOPMENT**

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The papers featured in this special issue are based on presentations made at the Harvard-Hitotsubashi-Warwick Conference on “Economic Change Around the Indian Ocean in the Very Long Run”, held at the University of Warwick in Venice, Palazzo Pesaro Papafava, 22-24 July 2008. The conference was originally conceived with countries around the Indian Ocean in mind, but soon expanded to include East Asia, and this wider geographical coverage is reflected in the papers included here. The conference was organised by Stephen Broadberry (Warwick), Kyoji Fukao (Hitotsubashi), Bishnupriya Gupta (Warwick) and Jeffrey Williamson (Harvard), and generously financed by the University of Warwick, Hitotsubashi University and the Economic History Society. A central aim of the organisers was to bring together researchers seeking to break free from the constraints of both the older Eurocentric and the nationalistic anti-colonialist literatures which have dominated much of the economic history of Asian countries. There was also a desire to encourage work which is quantitative and uses economic analysis, and which can be used to shed historical light on the current economic performance of the region.

Interest in the economic history of Asian countries was long the realm of historians with a largely Eurocentric view of Asia’s past, and/or historians with an overly nationalistic view, who understood underdevelopment in Asia as a consequence of (neo)colonial exploitation in some form or another. But general understanding of historical processes of economic development is now much broader amongst economic historians. Research has moved from the general and national level to a better understanding of more specific issues, sometimes at a local level. Such research has fostered a sceptical attitude to the ways in which Asia’s economic history has been understood. It has identified new themes for research and fostered a deeper understanding of the multifaceted processes of economic development. In 2004, the *Australian Economic History Review* (volume 44, issue 3) published a special issue with six surveys of the state of play of economic history of several Asian countries (India,

Japan, China, Korea, Taiwan, and the Philippines), which confirmed this development in economic history research (Van der Eng, 2004). For example, several of these surveys drew attention to the often neglected mutually reinforcing role of the “traditional” and the “modern” sectors of the economy, as well as to the role of social, political and commercial institutions in factor and product markets and in the wider process of development.

Apart from new questions, the new research interest in the economic history of Asian countries is also driven by a more innovative use of available quantitative data. For a long time it was widely believed that the available data were too sparse and/or of too poor quality to be of much use for analytical purposes. But several studies have shown that by assessing and duly accounting for the context in which data were generated, it is after all possible to use such data. The collection of such data now facilitates comparative studies that analyse issues across Asian countries, or compare Asian countries with countries in other continents. For example, Pomeranz (2000) and Van Zanden (2003) have made comparisons between early nineteenth century China and the UK, and between Java and The Netherlands, respectively, while Van der Eng (2006) has quantified and compared the development of rice agriculture in Meiji Japan and colonial Java. Another example is studies that use human height as an indicator of development. This area of research has now entered a stage where such studies can start to probe questions about relative standards of living in different parts of the world. Nevertheless, there remain many other opportunities for comparative research which would help to sharpen discussion.

The three main regions of South Asia, Southeast Asia and East Asia are covered here, with two papers for each region. The general pattern for each region is for the first paper to provide a macroeconomic perspective on economic growth and development, with the second

paper offering a more microeconomic approach that deals with human capital or market integration.

Starting with South Asia, Stephen Broadberry and Bishnupriya Gupta provide an overview of India's productivity performance since 1870 in comparison with the United Kingdom, with a sectoral breakdown for agriculture, industry and services. Although such long run international comparative studies are common amongst the rich developed countries, of Europe and North America, this is the first study involving a country which has remained less developed, despite the fact that European colonial powers often collected sufficient data to make such a comparison feasible.¹ To identify the forces making for the difference between economic success and failure, it is necessary to examine the experience of less developed countries and compare them with the experience of the richer nations.

In 1870, Indian output per worker was around 15 per cent of the UK level, and India fell further behind until the 1970s, before entering a phase of catching-up, which saw a return to 15 per cent of the UK level by 2000. Agriculture has played an important role, with India's labour productivity falling from around 10 per cent of the UK level in 1870 to around 1 per cent by 2000. Since agriculture still accounts for more than two-thirds of employment in India, low productivity in agriculture explains much of India's falling behind until the 1970s and has subsequently acted as a brake on catching-up. In the non-agricultural sector, Broadberry and Gupta identify long run stationarity of comparative India/UK productivity in industry and trend improvement in services. These results shed some light on India's recent emergence as a rapidly growing "tiger economy" but its continued substantial lag behind the west. First, the important role of services in India, in comparison with the central role played by industry in other Asian cases of rapid growth, has long historical roots. And second, it is

¹ Despite rapid growth since the 1980s, India's GDP per capita in 2000 was 1,910 international dollars at 1990 prices, which is less than the UK level in 1840 (Maddison, 2003: 59, 184).

clear that India needs to drastically increase agricultural labour productivity if it is to improve its overall productivity performance and catch-up with the richer nations.

An important theme of Broadberry and Gupta's paper is the important role of education in explaining both India's overall low productivity level and its unusual sectoral distribution. Although the overall level of investment in human capital (and also in physical capital) has been low, India's education provision has historically been unusually biased towards secondary and higher education. This has provided a small number of highly educated workers who have been employed largely in services, resulting in a better Indian performance in services than in the rest of the economy. In agriculture the high concentration of illiterate workers has held back productivity.

The paper by Latika Chaudhary offers a complementary microeconomic perspective on the Indian education system, noting that the regional variation in literacy rates today appears to have important historical roots. In 1991, for example, literacy rates in the western states of Gujarat and Maharashtra were over 60 per cent, compared with just 38 percent in the eastern state of Bihar. In the early twentieth century, literacy rates in Bombay Presidency (roughly the area of modern day Gujarat and Maharashtra) were almost twice as high as in Bihar. Understanding the reasons for the regional variation in literacy in the early twentieth century will thus help to shed light on a major contemporary problem. Chaudhary traces the origins of the regional variation in public spending per head on education back to the centralised fiscal system of the British colonial regime in the mid-nineteenth century, when the allocation of funds paid little attention to underlying differences of economic conditions across provinces. These initial differences were then consolidated during the process of fiscal decentralisation during the late nineteenth century, since past expenditure was often used as a guide to future spending in negotiations between the imperial government and the provinces.

Differences in land revenues also affected the availability of resources for public spending on education, with Temporary Settlement regions such as Bombay generating higher revenues than Permanent Settlement areas such as Bengal, where assessments increasingly bore little relation to actual economic potential. Having demonstrated the importance of unequal public spending on education across states in 1911, Chaudhary then goes on to show how this inequality was transmitted forward in time through its effects on literacy rates in 1921 for the population aged 15 to 20, particularly for males.

This suggestion of a positive role for public educational expenditures was controversial amongst administrators in colonial India just as it is controversial in some developing countries today. The identification problem arises from the confounding effects of rising income and development, which may be expected to lead to an increased demand for education. It is therefore necessary to disentangle the role of demand side factors from public spending to understand whether public spending independently raises literacy, or merely reflects an underlying private demand for education (reverse causality). Using land revenues per capita as an instrument, Chaudhary is able to show that a 10 per cent increase in expenditures translated into a 2.4 per cent increase in the literacy rate for 15-20 year olds.

Turning to Southeast Asia, Pierre van der Eng offers a macro overview of long term economic growth in Indonesia since 1880. Drawing on his earlier work to reconstruct the historical national accounts of Indonesia, van der Eng presents updated estimates of GDP, capital stock and education-adjusted employment to provide an account of Indonesian development within a growth accounting framework. Again, it is worth emphasising that although long term studies such as this are commonly available for the rich countries of Europe and North America, they are still lacking for the great majority of less-developed countries. The recent production of historical national accounts for a number of Asian

countries opens up the possibility of building up a more representative global picture of how economic growth and development can be explained by what Maddison (1988) calls proximate and ultimate factors. The proximate sources of growth are identified by the breakdown of output growth into the parts attributable to the growth of the major inputs of capital, employment and educational attainment, and the unexplained residual element, known as total factor productivity (TFP) growth. The ultimate sources of growth are the factors that explain the evolution of the factor inputs and especially the path of TFP.

Dealing first with the proximate sources of growth, van der Eng shows that in the case of Indonesia since 1880, the growth of the capital stock, employment and educational attainment explain all of the growth of output for most of the period. There were two key periods of significant per capita income growth, when TFP growth was negative (1900-29) and 1975-97. Turning to the ultimate causes of growth, there were four brief periods of significant TFP growth, which van der Eng relates to major economic shocks that triggered changes in economic policy and institutions. The first spurt of TFP growth during 1933-41 followed the shock of the Great Depression, which triggered import-replacing strategies to offset the consequences of falling commodity export earnings. This period came to an end with the Japanese occupation in 1942. The second period of TFP growth during 1951-61 followed shortly after the Japanese occupation and war of independence, which led to a renewed focus on the import replacement strategy, particularly with the falling commodity export earnings after the 1951-52 Korean War boom. This period is seen as coming to an end as the result of an accumulating series of policy errors under President Sukarno. During the third period, 1967-74, Indonesia pulled itself out of economic chaos under new President Soeharto and experienced catch-up growth. And the last period of TFP growth during 2000-08 followed the Asian crisis of 1997-98, which also yielded a regime change and a wide range of economic policy and institutional reforms.

In his examination of market integration in twentieth century Indonesia, Daan Marks looks more closely at one of the ultimate source sources of growth. Drawing on a rich dataset of rice prices on 120 native markets in Java for the period 1920-1940 and on the whole of Indonesia for the period 1949-2006, Marks assesses the extent of rice market integration and explores its relationship to economic growth. Market integration is assessed in a simple way using the coefficient of variation (CV), and in a more advanced way using a Vector Error Correction Model (VECM). The CV shows that price volatility across cities was low during the 1920s and 1930s and increased sharply in the early years of independence, before returning to lower levels during the Soeharto era from the late 1960s. Volatility increased again during the 1990s, although not to anything like the level of the 1950s. The VECM approach confirms and extends these findings, by allowing a distinction between market integration in the long run (measured by co-integration) and integration in the short run (measured by the coefficients of adjustment). During the period 1949-63, Marks finds market integration limited to cities in close proximity or with close trade relations, with co-integration being rejected for many city pairs. For the period 1969-86, by contrast, many more markets are co-integrated, indicating long run market integration, and coefficients of adjustment are high, indicating a high degree of integration in the short run too. For the period 1987-2006, although markets remain integrated in the long run, there is a slight weakening of short run integration, indicated by lower adjustment coefficients.

There is no simple relationship between the degree of market integration identified by Marks and the patterns of TFP growth suggested by van der Eng. One reason for this may be that the degree of market integration reflects not only the operation of free market forces, but also government intervention to stabilise rice prices. This intervention clearly achieved its

primary goal of price stabilisation at times, but may also have had offsetting negative consequences arising from bureaucratic control.

Moving on to East Asia, Kyoji Fukao, Harry Wu and Tangjun Yuan provide a study of output and labour productivity in manufacturing for China, Japan and Korea compared with the United States. It must be emphasised that this kind of careful calibration of comparative productivity levels for a benchmark year before World War II is common for western countries, but still extremely rare for Asian countries. As a result, there is inevitably less certainty about the comparative productivity levels of Asian economies both with respect to each other and with respect to the western world. The current state of knowledge is entirely dependent on time series projection from recent benchmarks, and this needs to be checked against earlier benchmarks.² The approach taken here involves the collection of data on manufacturing value added per worker for each country in 1935, drawn from production census material. For each country, this value added per worker is measured in the local currency, and is converted to a common currency using purchasing power parities (PPPs). This is necessary because the exchange rate cannot be assumed to be a perfect guide to differences in prices between two countries, especially at the level of individual goods and services, or particular sectors. For example, a country with a comparative advantage in agriculture may expect to have relatively cheap food, while a country with a comparative advantage in manufacturing may expect to have relatively cheap industrial goods, although we may expect the effects of trade to moderate such tendencies. In the case of comparisons between developed and less developed countries, moreover, Balassa (1964) and Samuelson (1964) have highlighted the tendency of less developed economies to have a lower overall price level, due to the presence of non-traded goods and services.

² See for example the recent interchanges between Broadberry (2003) and Ward and Devereux (2003; 2004) or between Broadberry and Burhop (2007, 2008) and Ritschl (2008).

The manufacturing PPPs for China, Japan and Korea in 1935 were around half to two-thirds of the prevailing market exchange rates with the US dollar, which suggests that the producer price level was much lower in these countries than in the United States, consistent with the Balassa-Samuelson findings. Using these PPPs to calculate comparative output per hour worked in manufacturing results in the finding that Japanese and Korean manufacturing labour productivity was 24 and 23 percent of the US level, respectively, while Chinese manufacturing labour productivity was just 7 per cent of the US level. Whilst these levels are not jarringly out of line with Maddison's (2003) estimated comparative levels of GDP per capita obtained by projecting backwards from a 1990 benchmark in the cases of China (10 per cent of the US level) and Korea (23 per cent of the US level), the difference is rather more striking in the case of Japan (39 per cent). However, the sectoral breakdown of comparative productivity performance between western nations indicates that there is no simple relationship between comparative productivity levels in manufacturing and the whole economy, and Japan seems also to fit this pattern (Broadberry, 1998). Fortunately in this case, we have a corroborating study by Pilat (1993), who shows that in 1939 Japanese manufacturing labour productivity was 24.8 per cent of the US level, reassuringly close to the 24 per cent found by Fukao *et al.* for 1935.

In the final paper of this collection, Joerg Baten, Debin Ma, Stephen Morgan and Qing Wang focus on human capital. However, they start their paper with the related topic of real wages, addressing the important issue of the Great Divergence of living standards between Asia and Europe. Contrary to the claims of Pomeranz (2000) and other members of the "California School", Baten *et al.* find that already by the eighteenth century, real wages in the main urban centres of China lagged a long way behind those of England and the Netherlands. Measuring human capital by the extent of age-heaping, or the tendency of innumerate people to report their ages in round numbers, Baten *et al.* show that although there was a sustained

decline of human capital during the second half of the nineteenth century, this was followed by a recovery during the early twentieth century. Furthermore, their most striking result is that on this measure, the Chinese level of human capital was among the highest in the world during the late nineteenth century.

During the nineteenth century, China and much of East Asia thus appears to have been characterised by an intriguing combination of low living standards and high levels of human capital. Baten *et al.* seek to explain this combination in terms of long lasting Chinese institutions such as the Civil Service Examination, a unified written character despite regional variation in spoken dialect, a precocious government bureaucracy and a highly commercialised small-holding peasantry. Furthermore, they go on to argue that this large stock of human capital may have facilitated the rapid catching-up that has occurred in parts of East Asia at different times since World War II, once an institutional framework that encouraged growth was put in place.

In all, the papers clearly confirm what the surveys in the 2004 *Australian Economic History Review* demonstrated: research in the economic history of Asian countries has now gone well beyond the constraints of both the older Eurocentric and the nationalistic anti-colonialist literatures that used to dominate. New questions are asked, new data are identified and compiled, new methodologies are employed, and together they inspire further research into aspects of long-term Asian economic growth and development.

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