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Globalisation, Industrial Revolutions in India and China and Labour Markets in Advanced Countries: Implications for National and International Economic Policy

by

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Summary

This paper examines the impact on labour markets in advanced countries (ACs) of the integration of the two giant fast-growing countries, China and India, with the liberalised global economy. The integration is taking place under “current globalisation,” which consists of free trade, free capital movements and domestic labour market flexibility (instead of free international movement of labour). The first part reviews economic theory as well as several generations of empirical work on the effects of the fast expansion of exports from developing countries (DCs) on AC labour markets. Taking into account the positive, the negative, the direct and the indirect effects, the most up-to-date empirical research suggests that globalisation has a small overall effect on output and employment in the US, that is just as likely to be favourable as being unfavourable, depending on the time period and the countries considered.

The paper highlights the pioneering contribution of Freeman (2005), which suggests that even if trade with the South has not previously disadvantaged North workers, the doubling of the global labour force with India and China’s recent integration with the international economy may have profoundly unfavourable repercussions for AC workers. Two major points of constructive criticism of the Freeman thesis have been emphasised here: (a) the lack of analysis of the relevant demand side variables and (b) inadequate recognition of the inherent economic strength and dynamism of the US economy and its innovative large corporations. These should enable the U.S to maintain its technological leadership.

In relation to policy, the underlying question examined here is whether India and China’s industrial revolutions, which are a social imperative for these countries, can be sustained and made compatible with full employment and rising real wages for workers in the North. It is concluded that current globalisation cannot meet these twin objectives and that coordination and cooperation between nation states under alternative globalisation are much the better way, if not the only way of realising these goals. The reasons why this should be so are explained in the last part of the paper.

1. Introduction: the Context

One heartening feature of the evolution of the world economy during the last two to three decades has been the outstanding economic success of China and India – two of the world’s most populous and hitherto extremely poor countries. Starting out with the world’s largest absolute numbers of people living in poverty, in narrow economic terms the two countries have achieved impressive growth. Graph-1 provides a broad-brush statistical profile of GDP growth over the last four decades for China, India, and all medium and low-income countries, that is for developing countries (DCs), and for the world economy as a whole.

China has undoubtedly been the fastest growing country in the world over the last quarter of a century, achieving historically unprecedented, almost double-digit, growth rates since 1980. Similarly, although not as fast as China, India’s economic growth has nevertheless also been one of the highest in the world since 1980, its per capita growth rate tripling between 1950-1980 and 1980-2005 (Kelkar, 2005). India was among the ten fastest growing countries in the world over each of the two decades 1980-1990 and 1990-2000. This record is not matched by any country other than China. Indeed, the acceleration of growth in India and China in the last quarter century is particularly remarkable, as it has taken place at a time of deceleration in world economic growth. Fast economic growth has led to large-scale income poverty reductions in both countries, although the extent in the Indian case since 1990 is still debated. There have also been huge improvements in human development indicators. For recent contributions to this debate see, for example, Abhijit Sen (2005) and Sirinivasan (2003). There have also been huge improvements in human development indicators (UNDP, 2005, Box 1.3).

The rapid economic expansion of these two giants has given rise to serious concerns in advanced nations (“the North”) regarding both the short and the long-term implications for their people. Since the end of the “golden age” of fast economic growth in ACs in the mid-1970s, most advanced economies have been suffering from serious labour market difficulties. Specifically, workers and trade unions blame competition from low-wage economies such as China and India for their problems, namely:

- Deindustrialization: while India and China have been expanding their industry at a very fast rate and are undergoing industrial revolutions, the absolute numbers employed in manufacturing as well as the share of manufacturing in employment in ACs has been falling.
- There has been increasing income inequality in many ACs, particularly the UK and the US. This has often been ascribed to stagnant or falling real wages of the unskilled workers in the North as a result of competition from the low-wage countries of the South, which, moreover, are alleged not to obey international labour standards.
- There have been high rates of unemployment particularly in the European Union (EU), which are also popularly attributed to competition from the South.

In the post-World War II period, the economics profession, as well as the traditional liberal establishment in the US have favoured free trade and taken a broadly benign view of the effects of competition from poor countries on economic welfare in the North.¹ However, more recently, the methodology for examining this issue has provoked passionate controversy. Krugman (2000) and Leamer (2000), two of the world's leading trade economists, have accused each other of not understanding the elements of trade theory in their respective methodological approaches to these issues. The legendary Paul Samuelson emerged from retirement to argue that while trade may generate gains for many workers it may do actual harm to others, and, in practice, the winners may not compensate the losers (either because they cannot or they do not wish to).²

An essential objective of this paper is to examine the implications for economic welfare in the South as well as the North of integrating India and China's labour markets with

¹ See for instance the correspondence between Paul Samuelson and Howard Ellis in relation to the publication of the famous Stolper-Samuelson paper in the American Economic Review. Samuelson reports that Ellis in his capacity as president of the American Economic Association, he rejected the paper on the grounds that it would undermine the case for free trade. The paper was ultimately published in the new journal "*The Review of Economic Studies*". See Samuelson (2005).

² Economic theory has long suggested, following seminal papers by Kaldor (1939) and Hicks (1939), that as long as the winners can compensate the losers (either directly or through lump-sum transfers and taxes by the government) the economic measure in question may still be regarded as constrained Pareto optimal

those of the rest of the world under current rules of globalisation. It is therefore important to describe precisely what these rules are and to outline their significance. Globalisation means all things to all people, but for analytical clarity the emphasis here is on free movement of capital, goods and services between countries, but excluding free flows of labour. This is despite the fact that the efficiency advantages of the latter are likely to be greater than, for example, that of free movement of goods or capital. This is for the simple reason that in the real world the price of labour is much more distorted compared with distortions in the price of capital or of goods (Rodrik, 2000). ACs as well as the international financial institutions (IFIs), which are the principal architects of globalisation, suggest fully-flexible labour markets within each country rather than the free movement of labour between countries as another essential component of current globalisation. In order to facilitate debate with these institutions the same definition of globalisation has been adopted here.

Globalisation has occurred at different speeds in different countries and has often been an uneven but cumulative process. Nevertheless, in most advanced economies, globalisation in the above sense of near free trade with very low tariff barriers and almost free capital movements was achieved by the first half of the 1980s and in many DCs by the early to mid-1990s. Multinational corporations are one of the main actors in this globalisation drama. A relatively small number of these companies have a disproportionate share in world trade and world production and, together with large financial corporations, are deeply involved in international short- and long-term capital flows (See further, Epstein (2005), Dunning (2004)).

It will be instructive to review briefly the experience of the inter-war period in relation to the evolution of economic globalisation. The post-World War I liberal international economic regime that operated between major industrial countries came to an end in the 1930s as a result of the high unemployment associated with the great depression. Thus John Hicks observed:

The main thing which caused so much liberal opinion in England to lose faith in Free Trade was the helplessness of the older liberalism in the face of massive unemployment, and the possibility of using import restriction as an element in an active programme fighting unemployment. One is, of course, obliged to associate this line of thought with the name of Keynes.

It was this, almost alone, which led Keynes to abandon his early belief in Free Trade.” (Hicks (1959), quoted in Bhagwati (1994)).

Orthodox economists often regard globalisation as a technology-driven inexorable process, particularly with respect to financial globalisation. This is partly because once (say) finance is deregulated, it becomes very difficult to re-regulate. What, however, the experience of the 1930s suggests is that the present globalisation of free trade and free capital movements is simply one way of organising the world economy and will only be sustainable if it meets the needs of the people North and South. Re-regulation could take new forms and also use the new technology itself to achieve this.

Thus while the thesis that liberalisation and globalisation are entirely technology-driven is far from being convincing, as will be seen below, the ICT revolution nevertheless plays a critical role in the present workings of the world economy. It is central to competitiveness and the economic growth of corporations as well as of countries. It has played a particularly important role in India’s economic evolution over the last two decades, raising the possibility whether India can leapfrog stages of development. It has arguably been responsible for the continuing strong performance of the US economy in terms of output or productivity growth during the last decade (see further Section VI).

To sum up, the present study addresses three analytical and policy questions, as follows:

- The extent to which China’s and India’s economic impact on the rest of the world is likely to be different from that of preceding rapid industrialisers (post-World War II Japan and Korea and Taiwan). A priori, a difference may arise due to the huge size of the two economies, as well as from their large absolute numbers of highly skilled workers.
- How to ensure that China’s and India’s present industrial revolutions are sustained as it will be argued that they are a social imperative for these countries. They should not be brought to a premature halt by the deficiencies of current globalisation. The latter include, for example, the manifest lack of

international coordination of economic activity and volatility of international and national financial markets.

- Is the current globalisation efficient from the perspective of labour both in the North and the South? Is there a constellation of policies and institutions that could lead to higher wages and higher levels of employment instead of a trade-off between the two, as is often the case under current globalisation.

These are complex issues, but of great immediacy for economic policy analysis, and inevitably subsume many themes and sub-themes. Those that will be commented on in the course of the development of the argument of this paper include, among others, the question of revaluing the Chinese currency, the various channels through which globalisation may have an impact on economic welfare, issues concerning the jobless growth, the formal and informal sectors, the volatility of international capital markets in emerging countries, premature de-industrialization in China, India and other DCs, and the changing role of services in structural change and economic development, and last but not least the ICT revolution and its implications for economic growth and distribution.

Having set out the context and objectives of this study, it will be useful at this point to describe the organization of the rest of the paper.

Section II outlines the main characteristics of India's and China's overall economic performance over the last two decades in a long-term historical and comparative perspective (see graph 1 and table 1).

Section III analyses some of the structural problems the two countries are encountering in continuing and sustaining their respective industrial revolutions (see Tables 2, 3, and 4). It notes that neither country's post-1980 acceleration in economic growth can be explained in terms of orthodox economic analysis.

Section IV discusses the labour market difficulties in ACs that are normally attributed to integration of developing countries with the world economy and the consequent competition from low-wage DCs. The section documents these difficulties and reviews

alternative theoretical approaches as well as three generations of empirical work to ascertain the extent if any to which the labour market deficits of the North can be attributed to low-wage competition from the South.

Section V outlines Professor Freeman's (2005) important thesis that integration of the new globalizers, India and China, with the liberalised world economy is of a rather difficult kind than the integration experiences of the past. The difference arises apparently from the sheer size of the two economies and the high educational level of at least a part of their labour force. Freeman suggests that entry of India and China into the global economy poses a serious threat to the economic wellbeing of the US citizens both in the short- and long-terms.

Section VI, while being broadly sympathetic to some of Freeman's study, provides a constructive critique of two important aspects of his argument.

Section VII will examine the current financial imbalances in the world economy, and propose how these might best be resolved at least cost both to ACs and DCs. It also outlines the institutional changes to current globalisation that may be required to best bring about the resolution of these imbalances.

Section VIII provides a conclusion and discusses the policy implications for advanced as well as developing countries and multilateral institutions.

In summary, this is essentially an issues paper, the purpose of which is to identify and examine systematically the main empirical and policy issues in relation to China's and India's industrial revolutions and their impact on the labour markets in the US and other ACs. The main contributions of the paper are as follows. Firstly, it pulls together material from a wide variety of literatures – micro- as well as macroeconomic. The latter include theories of economic growth, of labour markets, of capital movements, international trade, and economic development. Microeconomic theories that underpin the analysis include theories of the firm and of finance. Secondly, it identifies and reviews several generations of empirical research on the impact of North-South trade on the economic wellbeing of the North's workers. Thirdly, it provides a critical analysis of a pioneering and already increasingly influential work by Freeman on the

implications of the doubling of the world labour force. Fourthly, it suggests how the industrial revolutions in India and China can be sustained while maintaining full employment with rising real wages in advanced countries. It outlines the main institutional changes and the contours of alternative globalisation for achieving these aims.

Above all, this paper will have served its purpose if it helps to bring greater clarity and coherence to the consideration of the issues at stake.

II. India and China and the World Economy

China and India have both made remarkable progress since about 1980, when each embarked on economic reform, though under wholly different circumstances. In China, the end of the 1970s marked the emergence of a pragmatic, outward-oriented economic and political regime under the aegis of the communist party. It was closely associated with the rise within the party of Deng Xiao Ping and his open door policy. Over the following 20 years, China's economic growth averaged nearly 10 per cent, taking into account a recent upward revision of China's GDP statistics (See further, IMF, 2006, Box 1.6, page 37)³.

In India, the 1980s marked a different kind of turning point as the country began to undertake deregulation of internal investment activity and regional decentralization of economic decision-making.⁴ This policy shift helped raise the rate of growth from the so-called "Hindu rate" of 1.5 per cent annual growth of GDP per capita to about 4 per cent.⁵ This acceleration in economic growth continued into the 1990s and the data

³ Maddison (2005) makes a strong case for using purchasing power parity to measure GDP of countries including China. This is the method used in Table 1. The figures underlying graphs are however measured in constant US dollars at relevant exchange rates.

⁴ There is a large technical literature on turning points in the Indian economy. The consensus view is that the big turning point in Indian GDP growth occurred in the 1980s, a full ten years before any significant external liberalisation was introduced by Dr. Manmohan Singh in the wake of the 1991 economic crisis. For references to this literature and for recent contributions, see Dasgupta and Singh (2005, 2006) and Kohli (2006).

⁵ This expression refers to the slow but not dangerously low rate of economic growth achieved by the Indian economy under the so-called Nehru-Mahalanobis highly dirigiste import substitution model pursued during the period 1950-1990. Dasgupta and Singh (2005, 2006) and Singh (1990) have argued that the Hindu rate of growth does not reflect the true economic capacity of the country as it included the period 1965 to 1975 when the country suffered extraordinary external and internal shocks, including three

suggests that it has increased further during the new century and, for the last three years, the annual GDP growth rate has averaged nearly 8 per cent – a rate never achieved before in India.

There are two important points to note about India's and China's overall economic development (described in long-term comparative historical perspective in Table 1) that relate to the world economy. First, China has emerged as the second largest economy in the world after the US, having overtaken Japan. While the Indian economy is not quite as large, serious students of the subject suggest that India is likely to grow faster than China over the next twenty to thirty years and to have overtaken it by 2050 (Rodrik and Subrahmanian, 2004). This claim is based on a number of assumptions, one of the more important of which is that India is thought to have a higher level of "institutional development" than China. This accords with the current thinking in the literature on economic development, that its most important "deep" determinant is a country's institutions, i.e., the existence of democracy and the rule of law. These are said to provide the best protection for private property and therefore, within this paradigm, the best prospects for economic growth.⁶ However, it is important to note that in Table 1 the projected figures for 2030 do not reflect this prospect of India overtaking China but, rather, are based on the assumption that growth rates between 2000 and 2030 will be the same for both countries, but it will be considerably greater than that of other developing and developed countries.

The second point is that, notwithstanding this projected fast economic growth, even in the year 2030 China's GDP per capita in terms of constant purchasing power parity will still be a fourth of that of the US, and the corresponding figure for India will be less than one seventh. In considering the future evolution of the world economy, this point deserves proper consideration.

wars, suspension of foreign aid following each war, a maxi-devaluation, major drought and the oil price rise.

⁶ On the general point concerning the role of institutions in economic development, there is a large and growing literature. The main contributions include Rodrik (2004), Bosworth and Collins (2004), Acemoglu (2005). On the specific case of India and its allegedly superior institutions see Rodrik and Subrahmanian (2004), Kelkar (2004). See also Dasgupta and Singh (2005) for a somewhat different perspective on this issue.

Table 2 provides interesting information comparing India's and China's catch-up in terms of GDP per capita over the last twenty years with that of Japan and South Korea which achieved accelerated growth in earlier periods following the Second World War. The figures reveal that fast growth in China and India is not dissimilar to that in South Korea and Japan during their fast growth phases. The significance of China's and India's catch up is its much greater impact on the world economy in view of the sheer size of these countries' populations and GDP. The two countries jointly constitute about 20 per cent of the world's output and could therefore comprise in principle a new engine of world economic growth. The two countries already provide a sizable share of world demand for consumer goods as well as commodities and capital goods.⁷

These transformations in the Chinese and Indian economies are reflected in widespread progress on a number of fronts. Both countries have greatly increased their share of world exports of manufactures, though at a much faster pace for China than India (Table 3). In absolute terms there are more engineering and science students graduating from each of these two countries than from either the US or the European Union. There have also been important structural changes in both economies, though subject to qualifications discussed below. Table 4 further indicates that, on various fronts, at least in the short-term and up to now, China has achieved relatively more than India.

Since the beginning of China's open door policy in 1979, the country has broadly followed a strategy of export-led growth. As a consequence, the Chinese economy has experienced fast integration with the world economy. The Chinese share of world manufacturing exports rose from less than 1 per cent in 1981-1985 to 6.2 per cent in 2001-2003. Whalley (2006) reports that the growth of total exports in recent years has been of the order of 30 to 40 per cent and that, if these growth rates continue, by 2010 China will account for a massive 50 per cent of world trade. Starting from a tiny share of world trade (imports plus exports) in the 1980s, China today is the third largest trading economy after the US and Germany. Table 3 also indicates that, in 2003, the Indian share of total world merchandise trade (imports plus exports) was only 0.7 per cent compared with 5.8 per cent for China.

⁷ However, India's per capita income even in purchasing parity terms is considerably lower than that in advanced countries. Nevertheless, there are 100 million Indians who currently have per capita incomes greater than US \$5,000 a year, thus constituting a massive middle class market for domestic and, more importantly, imported consumer goods.

Furthermore, China now accounts for about 60 per cent of FDI inflows from OECD to non-OECD countries. As Table 3 suggests, China's stock of inward FDI amounted to US \$501.5 billion in 2003, which was 15 times larger than that of India's. Similarly, in China in 2003 FDI accounted for 12.4 per cent of a much higher level of capital formation than was the case in India, where FDI's share was only 4 per cent of a lower level of investment.

Combined with the policy of keeping large-scale foreign currency reserves as an insurance against the disruptive financial crises of the kind experienced in the late 1990s by Asian countries, China strategy of export-led growth has been highly successful in narrow economic terms but there are questions about its sustainability. These largely arise from China's trade surplus with the US (discussed later).

India's economic growth, on the other hand, has been more geared to the domestic market, and hence its export sector is currently of less concern to other countries. India's economic growth is therefore in principle more sustainable and less subject to retaliatory measures.

These issues of China's and India's growth strategies, their compatibility with other national economic interests and policy implications both internally and externally will be discussed in detail in later sections.

III. Sustainability of China's and India's Industrial Revolutions

In considering the sustainability of China's and India's industrial revolutions, it is useful to start with the observation that both countries' accelerated economic growth since 1980 provides in different ways serious challenges to received economic analysis.

In the case of China, contrary to what current theory of development suggests, there are no well-defined property rights either in agriculture or industry; the markets for most products are highly segmented and imperfect; the capital market can best be described as being embryonic; the labour market is still subject to considerable government planning and although there is some fluidity in the market for unskilled industrial labour there are still wide-spread restrictions on internal migration. From the perspective of

orthodox economic analysis, these imperfections impede resource flows and lead to misallocations. Nevertheless, notwithstanding these deficiencies, the Chinese economy has achieved extraordinary growth for twenty years.⁸

The Chinese claim that they are pursuing a strategy of socialist economic development with Chinese characteristics. This has meant a relatively slow transition from a planned command economy to a market economy where prices are determined by the forces of supply and demand. It is useful to note that the Chinese have been following an industrial policy on the pattern of South Korea and Japan by creating capabilities in the form of large industrial firms able to compete in world markets (Nolan, 2004). In a recent paper, Brandt, Rawski and Sutton (forthcoming, p.1) regard the main achievement of China's industrial revolution so far to be "the emergence of mechanisms for extending industrial capability." The authors identify the latter as being the capacity to export an ever-widening range of products. This, they believe, will sustain China's industrial revolution.

China, of course, has also been the recipient of major multinational investment. This is despite the fact that the country does not run a liberal investment regime, but imposes various kinds of restrictions including for example joint ventures with Chinese firms in order to draw maximum benefit from such investments.⁹ To explain the Chinese performance, non-orthodox economists suggest the following kinds of factors: extraordinarily high rates of investment, an ability to marry the market with the plan, an incentive system reflecting planning priorities, and China's advantage in using the command economy to build world class industrial, scientific and educational infrastructure, both soft and hard. (See, for example, Qian et al (2000), Taube (2005), Oppen (2005)).

The changes introduced by Deng Xiao Ping's historic shift of China's ideological direction from a command economy to a socialist commodity economy facilitated inflows of investment by the Chinese diaspora in South East and East Asia. It is arguable that these ideological and associated policy changes contributed to the Chinese

⁸ For an early contribution, see Singh (1996). For more recent work see text below.

⁹ See, for example, Singh (2004), Lall (2004), UNCTAD (2005).

diaspora effectively becoming an early and important part of what may be regarded as the new Chinese capitalist class.

In short, there is general consensus that whatever the causes of accelerated economic growth, there are no reasons to doubt that in terms of domestic capabilities the Chinese industrial revolution will continue. The Chinese have world-class domestically owned firms and a strategically open competitive economy. The Chinese government seems to be fully aware of a number of current factors that may have negative effects, such as corruption, rising inequality of income distribution, the spatial over-concentration of industry and its implications for labour, the net fiscal costs of state-owned firms. In relation to the latter, as OECD (2005) report on the Chinese economy notes, for the last five years, the Chinese government has been involved in a vast programme of restructuring the state-owned industrial sector, reducing its payroll, and rearranging the provision of social welfare benefits. OECD observes that no European country has undertaken such a vast reform programme.

As in the case of China, close examination of the post-1980 acceleration of economic growth in India also does not fit the orthodox analysis. As noted earlier, contrary to the expectations of the IFIs and orthodox economists, the major turning point in India's economic growth occurred in 1980, rather than in 1990. Had it occurred ten years later, faster growth could have been ascribed to the liberalisation programme introduced by the government in response to the 1991 crisis. There is a large literature discussing the timing of and reasons for the 1980 turning point. Some emphasize macroeconomic policies introduced to induce a much more expansive policy stance in the post 1980 era; others suggest a change in Indira Gandhi's ideological position from an anti-business to pro-business stance. The present author has suggested that accelerated economic growth in the post 1980 period resulted from economic reform which promoted internal liberalisation while maintaining external controls much as before. The government itself had concluded that, on the basis of a large number of reports by its own high level committees, that the massive government controls on private sector domestic investment were counter-productive.¹⁰ The *domestic* investment regime was therefore greatly liberalised in the 1980s, leading to a huge supply response from Indian private

¹⁰ Private sector investment was subject to comprehensive controls under the import substitution regime.

enterprise for both the domestic and the foreign markets.¹¹ These alternative explanations for the 1980 turning point are not, however, necessarily mutually exclusive.

The role of external liberalisation in bringing about a trend increase in growth rate is still very much in dispute. This is because despite extensive external liberalisation in the early 90s there was no further acceleration in Indian economic growth during the 90s compared with the 80s. Nevertheless, casual evidence strongly suggests since 2000 there has been a further trend increase in the rate of economic growth from about six per cent to around eight per cent. However, it is arguable that this faster growth is based less on external liberalisation, but much more so on a more active entrepreneurial spirit, manifested in greater domestic investment. The latter's share in GDP has risen from about 23 per cent to 29 per cent and this increased investment appears to be the main driver of growth. Indian entrepreneurs today are evidently much more confident about government policy as well as India's place in the international economy than they have been in the past.

Although as indicated above, both China and India have the capacity and the capabilities on the supply side of achieving fast economic growth, there are nevertheless serious questions about the sustainability of these high growth rates from a structural perspective owing to the observed slow rate of structural change. Table 4, which reports on the structure of a sample of Asian and Latin American countries, suggests that relatively little change has occurred during the last quarter century. In interpreting the data in Table 4, two things need to be borne in mind. First the figures for industry also include mining and oil extraction. In terms of the theory of structural change and economic growth, it is manufacturing - a sub-category of industry that is deemed to be important - because of its assumed superior dynamism and spill-over effects. The second caveat with respect to the Table 4 is that it assumes constant domestic terms of trade between agriculture industry and services. However, empirical studies suggest that the terms of trade between industry and services change in favour of services during the course of economic growth. Therefore, other things being equal, the share of manufacturing in current prices should fall and that of services should rise even if there

¹¹ For some early contributions to this debate, see, for example, Isher Ahluwalia (1985), Montek Ahluwalia (1986), Singh and Ghosh (1988). For more recent contributions see Kohli (2006), Rodrik and Subramanian (2004), DasGupta and Singh (2005).

was no change in their respective levels of production. This effect will not be present if all the relevant variables were measured in constant prices. Both these caveats must be kept in mind in making comparisons between countries, which is the main purpose of Table 4.

Slow structural change is understandable in the case of economies that are not growing fast, but much less so for China and India which have grown rapidly over the last quarter of a century. As Table 4 indicates the share of industry in India rose from 20 per cent to 27 per cent in the period 1960 to 2000. However, most of this increase took place between 1960 and 1980. Since the latter date, industry's share has increased by only one percentage point. In China, the share of industry rose from 47 to 49 per cent between 1980 and 2000. The corresponding figures for the share of industry indicate a decline in the period 1980 and 2000 in all Latin America countries, except Venezuela, where the high share of industry is presumably due to oil extraction and refining rather than to manufacturing.

There is also evidence reviewed in DasGupta and Singh (2005) suggesting that many DCs in the most recent period have been suffering from premature deindustrialization. Both theoretical analysis and empirical evidence from past economic development suggest that, as per capita incomes rise, the share of industry in GDP and employment increases until a very high level of per capita income is reached, after which the share of both begins to fall, though the employment share tends to fall first. However, it is found that for many DCs, the share of industrial employment has begun to fall at much lower levels of per capita income than has hitherto been the case. In that sense, Table 5, that gives sectoral employment shares, suggests that China has been de-industrializing mildly for some years now, while India has not. The latter's share of manufacturing employment has been increasing, albeit at a very slow rate. However, further analysis indicates that the share of *modern* manufacturing labour in India has declined, so that all net additional manufacturing jobs have been created in the informal sector.¹²

¹² There is no uniform definition of the informal sector. See further Harris-White (2003) and Dasgupta and Singh (2005). The informal manufacturing sector in India has a precise statistical definition, namely all establishments of ten or less employees and that use electrical power, and those establishments with more than ten employees that do not use electrical power. See further Dasgupta and Singh (2006).

An important question arises whether this premature de-industrialization pattern of economic development will prove to be a hindrance to further development of the economy or whether it could be a benign feature. It will be appreciated that deindustrialization (especially in terms of employment) in and of itself is not always a necessarily negative development, as for example when a country has over-manning and surplus labour in manufacturing. Deindustrialization becomes problematical only if it stops the economy from achieving its full potential, or the social implications are unacceptable. Whether there is such a pathological outcome depends on the nature and extent of the country's interactions with the rest of the world. As manufacturing is critical to current account balance, a weak or inefficient manufacturing sector may force the economy to work below its potential, for example, below the full employment level; or the economy may be able to achieve full employment only at levels of exchange rates, which lead to unacceptable inflation.¹³

This issue is particularly important for the Indian economy, where services have grown faster than manufacturing in the last ten years.¹⁴ Services have grown at an annual rate of 8 per cent while manufacturing has grown by 6 per cent (Dasgupta and Singh, 2005). The faster growth of services is largely due to the fast growth of the use of IT in domestic and foreign industry and services. But fast growth overall has been jobless, that is, in both the *formal manufacturing* as already noted above, and also in the *formal services* sector. Many Indian economists have argued that this pattern of growth is lopsided and unsustainable. They suggest that India will need to have fast growth of low-skill manufactured exports to remedy the situation and avoid social unrest (Joshi (2004).

It may be noted that the IT sector itself, despite India's advantage, can only make a limited direct contribution to growth of output and employment as it employs a mere 1 per cent of India's labour force. However the sector's indirect contribution to the economy is far larger. This is because it generates twenty per cent of the country's total

¹³ The relationship between per capita income and share of manufacturing in output and employment, changes in terms of domestic and external terms of trade are complex issues. (See further Baumol, Blackman and Wolfe (1989), Rowthorn and Wells (1986), Blackaby (1978), Cairncross (1978), Kaldor (1978), Singh (1977, 1989, 1992), Howes and Singh (2000).

¹⁴ Although the Chinese economy has also suffered from premature de-industrialization, the rate of growth of services in that country has not been greater than that of manufactures. This differentiates the Chinese economy from that of India.

exports and thereby helps to relax the balance of payments constraint for the economy as a whole. This contribution is already significant and is expected to become even more so in the future. The Economist (June 3, 2006, p.7), in a survey of business in India, reports on a recent Nasscom-McKinsey study forecasting India's BPO (business back office) export revenues. The latter were worth US\$ 5.2 billion in 2005 and are expected to increase five-fold to reach a level of over US\$ 25 billion in 2010, a compound annual growth rate of 37 per cent. Using a Kaldorian analysis, Dasgupta and Singh (2005, 2006) have argued that the ITC sector is an additional engine of growth for the Indian economy, now and well into the future. It more than meets the criteria normally applied to manufacturing for regarding it as an engine of growth.

Finally, it should be noted that, despite the disappointing overall formal sector employment outcomes of fast economic growth, it is socially imperative that India's industrial revolution should continue, including the further development of the IT sector and its progressively wide use in all other sectors of the economy. This is the challenge facing India's policy makers to bring about wide adoption and diffusion of this technology in order to enhance competitiveness and productivity throughout the economy. This alone may enable the economy to be run at a level that would ensure full employment at rising real wages. The latter constitute the long-term requirements for social peace (Singh, 2000).

There are other challenges for both economies that lie more in the realm of developments in the international economy, over which currently China and India, despite their size, have relatively little control. This boils down in the short to medium term to the current financial imbalances in the world economy and how these can best be resolved, without jeopardizing the industrial revolution in these two countries and economic prospect elsewhere in the South. In the longer term, the point at issue is whether current globalisation is optimal for the people of the world as a whole, or whether a different regime would be likely to be more beneficial. As indicated in the Introduction, these issues are taken up in sections VII and VIII.

IV. Globalisation and Labour Market Difficulties in the North

It will be useful to start with some stylised facts concerning labour market difficulties in ACs, which are normally attributed to integration of developing countries with the world economy and the consequent competition from low wage DCs.

- The growth rate of the average real wage in the US was 0.25 per cent per year during the 1980s and 1990s compared with the historic norm of 2 per cent per year. As a result of the ‘new economy’ boom of the late 1990s the real wages of the median worker rose by 6 per cent over the period 1995-2000. However, since 2000 the median worker’s wages have risen by less than 1 per cent per annum, even though overall productivity growth during the period 1995-2005 has been much faster (about 3 per cent per annum). US productivity growth is discussed further in the sections which follow.
- Wage dispersion and income inequality in the US greatly increased during the 1980s and 90s, having remained steady or declined for almost fifty years before. Saez and Piketty (2006) estimate that the share of aggregate income received by the top one per cent of income earners has doubled from 8 per cent to over 16 per cent in 2004; that received by the top one tenth of one per cent has increased more than three fold, from 2 per cent in 1980 to 7 per cent a quarter of a century later; that received by the top one hundredth of one per cent (14,000 highest tax payers) quadrupled over the same period from 0.65 per cent to 2.87 per cent. The picture which emerges from this latest data on US incomes is that the wages of the lowest decile of workers has increased; those at the top are forging ahead whilst median workers are being squeezed. Similarly, in the US large corporations the average chief executive used to earn about ten times as much as the average worker in 1970. Now he or she earns three hundred times as much¹⁵.
- It is a remarkable fact that the US economy has been much more stable over the last fifteen years than ever before. The long Clinton up-swing lasted a record eight years and the recession since then in 2000-2001 was relatively mild.

¹⁵ The source of the data in this paragraph is the Economist (2006), p. 28.

However, paradoxically the incomes of the firms and middle-income workers are subject to much greater fluctuations than was the case twenty years ago¹⁶.

- There has been considerable de-industrialisation, with millions of people leaving good jobs in manufacturing and being relocated in ‘informal’ service sector jobs, or remaining unemployed. It will, however, be recognised that de-industrialisation has been a long-term trend for the economies of the advanced countries, starting well before the competition from developing countries came on the scene. Thus, the Economist (2005) estimates that the US manufacturing industry employed 25 per cent of the workforce in 1970, but only 10 per cent today. The decline has been sharper still in the UK with the manufacturing workforce being reduced from 35 per cent to 14 per cent in the same period. As we saw earlier, even developing countries have been experiencing de-industrialisation in the sense above, i.e. a fall in the proportion of people employed in manufacturing. Some of the fall is indeed due to changes in statistical definitions of what constitutes manufacturing and what comprises services, but serious students of the subject believe that this factor can account for only a small proportion of the observed decline in the manufacturing labour force (Coutts and Rowthorn, 2005).
- In contrast to acute deterioration in income distribution in the US, European countries have suffered instead from mass unemployment. To illustrate this point, consider the case of Germany between 1964 and 1973, the last ten years of the Golden Age (1950-73), the country’s average unemployment rate was less than 1%. During the last ten years (chronologically) the rate is about 9%, which would have been unthinkable in the Golden Age. Some of the differences in the two figures is, indeed, due to the fact that the former statistic refers to West Germany and the latter refers to Germany as a whole. This, however, does not detract from the main point that there has been a huge trend increase in German

¹⁶ On economic stability in ACs see Martin and Rowthorn (2005), in relation to stability in DCs see Fagernas and Singh (2006).

unemployment since the golden age. The same holds true to a lesser or greater extent for many other European countries.¹⁷

A central question for this paper is to what extent if any these labour market difficulties of the North can be ascribed to competition from the low-waged labour products from the South. It is indeed true that DC exports expanded at a very fast rate during 1980s and 90s leading to a big increase, (albeit starting from a very low level) in their share of the world manufacturing exports and a corresponding fall in that of DCs. As Table 6 indicates the United Kingdom accounted for more than 12% of the world exports of manufactures in 1962-1965. By 2001-2003, its share has fallen to just over 5% which is less than that of China (6.2%). The latter had a negligible share of world manufacturing exports as late as 1985. Although this fast growth of exports from DCs has occurred about the same time as the labour market difficulties of the Northern workers documented above, it does not necessarily follow that one has caused the other.

Economic theory does not, unfortunately, provide clear-cut answers as to how this causal question should be tackled empirically. The pure neo-classical theory is singularly unsuited for this purpose as it assumes full employment. Unemployment in this traditional model arises entirely from market imperfections including those in the labour market. In a less pure form, the theory can be used to consider questions of unemployment by postulating labour market rigidities in the face, for example, of changing comparative advantages for goods and services between countries. However, the theory suggests that this will be a temporary phenomenon and the

¹⁷ Similarly in France during the last ten years of the golden age (1964-1973) the average standardized unemployment rate was about 2.5 per cent. By the 1990s, the average rate had risen to well above 10 per cent. Despite the enormous economic and social concern with mass unemployment, between 2003-06, the French unemployment rate remained close to 10 per cent. It may however be observed that although average unemployment rose in most advanced countries, there were exceptions, notably some north European countries as well as Austria. In Anglo-Saxon countries, including the US and UK, unemployment rose in the 1980s and early 1990s but was eventually controlled by following arguably the policies of labour market flexibility (i.e., reducing the scope of the welfare state, privatization, deregulation, and increasing competition in all spheres). These are however controversial questions with a large body of literature. This literature is referred to in Singh (1995) and Glyn (2006).

resources will ultimately be optimally employed through the normal working of the market system (Beanstock, 1984).¹⁸

In contrast to the classical analysis the Keynesian approach allows explicit consideration of the question of unemployment and balance of payments constraints. Following this approach, Singh (1989) suggested that in order to empirically test whether trade with the Third World was responsible for the labour market difficulties of AC workers discussed above, the following issues required examination:

- Was the country in long-term structural disequilibrium in the sense that it was unable to operate at its full economic potential, e.g. it became balance of payments constrained well before full employment was reached. The emphasis was on the long-term, as any temporary disequilibria may be speedily resolved by normal market forces. The notions of “structural” refer here to the fact that market solutions such as devaluation might not be adequate to restore full employment.¹⁹
- If the economy was indeed in long-term structural disequilibrium, was this caused by trade in manufacturing or in other products.
- If it was being caused by trade in manufacturing, was it due to trade with the Third World or ACs.

It is only after all these tests have been carried out that one can estimate to what extent, if any, Southern trade in manufacturing is responsible for the North’s labour market difficulties. And, indeed Singh (1989) found that UK’s trade in manufactures with the Third World countries in the 1970s led to a small net increase in employment rather than a decrease. The above approaches were used in what may be called the first

¹⁸ In measuring the effect of third world imports on employment in advanced countries the typical mainstream ‘first-generation’ models were particularly simplistic and limited (see Singh, 1987 for fuller discussion).

¹⁹ As much of the competition in international trade among advanced countries takes place in non-price terms, the extent of the devaluation required may be too large to correct the trade balance. A devaluation will affect all prices and also have a distributional impact, often leading to real wage resistance by workers, and thereby undermining wage-price flexibility.

generation of empirical studies of North-South trade mainly pertaining to the period 1960-1980.

The second generation of these studies, covering the subsequent period, roughly 1980-2000, have included contributions from trade economists as well as labour economists. Although they had strong theoretical differences, in empirical terms the two groups have produced broadly similar results. This body of empirical work reached the overall conclusion that the ACs manufacturing trade with DCs during the 1980s was responsible for about 20% of the observed wage dispersion in the US²⁰. It was also thought to contribute to de-industrialization and unemployment on a similar modest scale.²¹ Most of the observed negative changes in the labour market outcomes in the North were thus ascribed to technology rather than to globalisation in this analysis.

Most researchers accept the view that the proximate cause of the negative labour market outcomes in the North, has been a fall in the demand for un-skilled labour which in turn is ascribed to either trade or technology. Professor Sir Tony Atkinson (1999, 2000, 2001) refers to this common view as the transatlantic consensus, since it provides a unified explanation for both unemployment in Western Europe and inequality in income distribution in the US. It does so by making the auxiliary assumption that labour markets in Western Europe are highly imperfect because of the welfare state etc., so that reduced demand for unskilled labour leads to unemployment rather than reduced wages. However in the US, the flexible labour market prevents unemployment at the expense of unfavourable changes in income distribution.

Be that as it may, the most recent research on the subject that includes the data for the 1990s leads to radically different conclusions. It suggests that neither trade nor technology can satisfactorily explain the observed changes, either in income distribution in the US or in unemployment in Europe. This third generation of empirical work on the North-South trade suggests that macroeconomic factors, including decline in

²⁰ For recent reviews of this literature see Slaughter and Swagel (1997), Atkinson (1999,2000,2001), Singh (2003a) and Gottschalk and Smeeding (1997).

²¹ However, Wood (1994) regards North-South manufacturing trade to be a major cause of the adverse labour market outcomes in the North. For alternative perspectives see the references cited in footnote 17. See also Singh's (1995c) review of Wood.

unionisation and variables such as social norms are more important than either trade or technology, in explaining the observed changes in the 1990s.

To elaborate, at an empirical level this third generation work, covering the most recent ten year period, suggests that the trade story is not convincing as earnings dispersion has increased not only in the US traded sector but also in the far bigger non-traded sector. This points towards some common forces at work other than trade. Moreover, as Krugman (2000) and others have pointed out despite the relative rise in skills premiums in the 1980's, the demand for skilled workers rose rather than fell in most sectors of the economy. This again points towards a non-trade explanation, indeed, in the direction of a broad-based skill-biased technical progress. Thus, on the face of it, the technology hypothesis would appear to be a better explanation of some of the observed trends in unemployment and wage dispersion than the globalization theory. However, there are faults in the technology story as well which require careful consideration. These deficiencies will be reviewed below.

The first important point is the latest available data on earnings and income distribution for the period since the mid-1990's does not support the underlying premise of either trade or technology theories. Evidence for the period 1995-1999 suggests that the bottom decile of wage earners in countries such as the US and the UK have gained at the expense of the average worker, thus calling into question the shift of demand away from unskilled and low paid workers to the skilled and the more highly paid. This is contrary to the predictions of the trade theory since imports from developing countries or foreign outsourcing by the large US companies, have not slowed down but have continued to increase throughout the 1990's.

Skill-bias in technical progress is also difficult to reconcile with the 1995-1999 evidence of the gains of the low paid presumably unskilled workers at the expense of the average more skilled worker.

There are also other important difficulties with the technology story. As noted earlier income distribution has become more unequal not only between industries but also within industries and firms. It has also become more unequal in narrowly defined occupations such as lawyers, doctors, cooks. It is difficult to believe that this increased

dispersion is in each case due to skill biased techniques progress. There is little to suggest that the highest-paid lawyers are being paid relatively even more than before because (say) technical progress in the form of information technology has improved their skills more than that of the average lawyer.

Katz (1999), suggests that the rate of growth of relative demand for college graduates has fallen substantially in the 1990's, compared not only with the 1980's but also with the 1950's and the subsequent decades. If the technology hypothesis were valid for the last two decades, the data should indicate a trend increase in the rate of growth of relative demand for college graduates in the 1980's and 1990's, which Katz's figures do not.

Equally significantly, empirical studies of the effects of trade and technology on AC labour markets, do not take into account changes in terms of trade, which are connected with the trade with the South and which have a highly positive effect on the welfare in the North. To illustrate, the large devaluations that occurred in the crisis affected Asian countries as a consequence of the acute macro-economic disturbances in the region in the period 1997 to 2000, did not cause serious difficulties for US industry as was feared. Instead, improvements in terms of trade helped reduce inflation in the US which enabled the Federal Reserve to run the economy at a higher level of output and employment than would otherwise have been the case.

This point together with some additional new third generation of empirical studies of North-South interactions will be taken up further in section VII.

V. Dangers from New Globalisers for ACs – The Freeman Thesis

As indicated in the last section, the third generation of empirical work on the impact of North-South trade in manufacturers on the labour markets in the ACs do not suggest that globalisation is responsible for the large increase in income inequality in the US or mass unemployment in W. Europe. This third generation empirical work encompassed statistical data covering the 1990s till 2000 i.e. the latest available data. However, it is important to note that although globalisation may not have been a malevolent force in the past, there is no guarantee that it may not adversely affect the North's labour

markets in the future. This is precisely Prof. Richard Freeman of Harvard University's (2005) contention in his 2004 Siciliano lecture. Freeman's contribution is important in part because ten years ago he had written a seminal article with a provocative title "Are Your Wages Set in Beijing"? Freeman (1995) at that time argued that this was not the case and there was insufficient integration between the US and the Chinese labour markets to warrant the conclusion that it is the Chinese rather than the US labour market, which determines employment and wages for US workers. Professor Freeman today reaches more or less the opposite conclusion.

Freeman's new line of thought, which regards globalisation as a potentially major threat for the North's workers, chimes in very well with popular sentiment in advanced countries (ACs). Opinion polls indicate 6 out of 10 citizens in the US are not persuaded by the supposed benefits of globalisation. This is quite remarkable in view of the fact that the US economy has recorded the strongest growth rate of all major economies in the last 10 years and, as suggested earlier, it has also been much more stable than ever before. However, as also noted earlier, wages and salaries have been more volatile than before which suggests that the general scepticism about globalisation is perhaps not so remarkable after all. Freeman's 2005 contribution provides a formidable and sophisticated articulation of this sentiment; further, in addition to the short term, Freeman is very much concerned with the potential adverse long-term effects of global economic integration. The latter aspect adds to the weight of Freeman's analysis.

The essential basis for Freeman's argument is his observation that the global labour force has all of a sudden doubled with the entry of India, China and former Soviet Block countries into the liberalised global market in the recent period. He suggests that in 1985 there were about a billion workers who competed with each other under 'globalisation' i.e. these countries by then had achieved more or less free trade and more or less free capital movements amongst themselves. This globalised countries group at the time consisted of the OECD economies and Latin America. According to Freeman's estimate, approximately 960 million people worked in these countries in 1980. By the year 2000, the size of this labour force had increased to 1460 million workers, mainly through population growth in the developing countries part of this group. However, with the entry of India and China and the former Soviet bloc countries into the globalised economy, by the year 2000 the global labour force had

doubled to 3 billion, of which nearly half, i.e. 1.47 billion were the Chinese, Indian and other new entrants to the labour force (see Graph 2). This doubling of the labour force of the world's integrating liberal capitalist economy Freeman suggests, has, on the whole, pleasant consequences for low income countries such as India and China, but potentially rather unpleasant outcomes for high wage workers in rich countries.

Freeman notes that these additional 1.5 billion workers from the newly globalising countries had brought very little capital with them. As a result, the global capital labour ratio was cut to 55 percent of its pre-2000 level. This decline in the world capital labour ratio not only reduces average productivity but also makes capital scarce shifting the balance of power towards it.

The conventional analysis of North-South trade involves the notion that countries should produce according to their comparative advantage, with rich countries specializing in skill intensive or capital-intensive products and poor countries in labour-intensive and less skilled products. Freeman regards this theory as obsolete in view of the outsourcing of many skill intensive jobs to the South and the ability of countries like India and China to produce more absolute numbers of engineers and science graduates than the US. In 2003, China graduated 325,000 engineers and the US only 65,000. Even taking into account the technical superiority of the American engineers over the Chinese, this difference is too large for US comfort. Freeman argues that the probability of achieving technological innovations depends on the *absolute* numbers of technically trained people rather than their relative numbers. The reality according to Freeman is that the US is likely to lose its technological lead unless it takes extraordinary steps to reverse the present course of events. In the hi-tech sector, US pre-eminence is visibly under threat. The US share of world exports of hi-tech manufacturers fell from 30 percent in 1980 to 17 percent in 2000 and similarly its share of imports rose from 13 to 18 percent over the same period. To sum up, Freeman is basically suggesting that industrial revolutions in China and India, represent gigantic supply-side shocks for many parts of the world economy, particularly the US. These are likely to be extremely disruptive and harmful for these countries and regions not just in the short-run but also importantly in the long-term.

Nevertheless, it must be emphasized that Freeman does not advocate protection as a way out of these difficulties. However, though non-protectionist, Freeman's policy perspective is highly interventionist, and none the worse for that. He calls for resolute and determined government intervention, at the national as well as at the international levels to manage the transition during which the new globalisers will catch up with the United States. He expects this transition to be long and protracted – it may take as much as thirty to forty years. His examples of good transition include West European catch-up after World War II; the bad transitions include southern American states' integration after the civil war with the more industrialised north. These also include the East German integration with West Germany after the break-up of the Berlin Wall. Freeman argues against the current 'Washington Consensus' globalisation that, in his view, is biased towards protecting the interests of capital. He writes eloquently: "The international financial institutions may have to worry about instability of capital markets and crony corrupt capitalists, but they don't have to worry about capital more broadly: George Soros and his billionaire friends can take care of themselves. It is the average worker in the world who needs the protection of the international community" (Rocco C. and Marion S. Siciliano Forum (2005), pages not numbered).

VI. Supply-side Shocks and the Growth of Demand

Professor Freeman's apprehensions about the impact of China's and India's integration on the North's workers are well argued and supported by careful analysis and evidence. Like his 1995 article, this research represents a seminal contribution to the debate on this important subject. His arguments therefore require careful consideration.

At a theoretical level Professor Freeman's essential argument is that the supply side shock of doubling of the world's labour force will have a profound impact on labour markets in other countries. The size of the shock will make it disruptive, as will the fact that India and China both have a huge advantage over the US in terms of the absolute number of science and engineering students that graduate every year. There is much in Freeman's analysis I agree with, but there are also parts with which I have difficulties. For reasons of space and to add to the debate, it is the latter that I highlight below.

Thus, one important shortcoming of Freeman's analysis, in my view, is that it provides very little explicit consideration of demand side factors. In an early contribution, Singh (1977) suggested that foreign competition and the balance of payments position of an economy can affect its growth and industrial development through three distinct but related channels: (a) through the level and growth of demand; (b) through the structure of demand and (c) importantly, through investment. In considering these channels, R.S. Sayers's (1965) simple distinction between the complementary and competitive aspects of economic growth elsewhere is useful. Economic growth elsewhere, Sayers suggested in his seminal paper, is complementary to the extent that it raises demand for exports, but it becomes competitive in so far as it leads to the development of alternative sources of supply. His central point is that "the expansion of the world economy, although it may raise the demand for a country's products, also creates alternative sources of supply, which may compete with them in any market, including its home market. So, from the point of view of a particular country, the development of the world economy may be characterised by a changing balance between 'complementarity' and 'competitiveness'."

In the specific case of the integration of China and India with the world economy, economic growth in these two countries is on the whole likely to be more complementary than competitive with the US economy and that of many other countries. The essential point is that India and China, by virtue of their size and high growth rates which they require for meeting their huge employment and other social needs, now constitute another growth pole for the world economy. Together, these two countries account for 20 percent of world production and world demand. Their demand side effects have already led to expansion in several countries, both developed and developing. There is evidence that in the recent period China's trade with Japan was helpful in preventing the Japanese economy from going into recession. As Overholt (2005) notes

Chinese demand provided the stimulus that lifted Japan out of recession [during the slowdown in world economic growth following the collapse of the technology bubble on the stock market]. It is difficult to overstate the risk the world economy faced from the Japanese situation, where mountainous debt created the risk of a domino-like collapse inside Japan and subsequent rippling collapses around the world. That risk seems to

have passed, helped by a critical margin of stimulus from China. Few books are written about global depressions that never happened, but it is quite possible that China's globalisation saved us from beginning the new century with a drastic global economic squeeze.

Developing countries in general have benefited from the demand stimulus for raw materials and commodities provided by fast economic growth in China and India leading also to faster economic growth elsewhere. Sustained growth in these two countries thus provides a stable source for the growth of world demand in general with favourable effects on the developing as well as developed countries.

The aggregate and sectoral demand effects of Chinese and Indian economic expansion manifest themselves in other ways too. For example, the production of cheap goods in India and China, particularly in the latter, helps reduce inflationary pressures in advanced countries thereby allowing their economies to be run at higher levels of output and employment than they otherwise would. Unfortunately, there are few empirical studies which quantify the effects of this channel. IMF (2006) has recently explored the question of the effects of globalisation on inflation. These effects are estimated to be in general quite small – a reduction in inflation of the order of 0.25 percent, although estimates rise to 1 percent or more for specific years and specific countries. These studies, however, are unable to measure the full extent of the effects of globalisation on reducing the general level of prices, in large part because the real influence of globalisation is in this instance not directly quantifiable. As Raghuram Rajan (2006) notes: “In my view, however, the true impact of globalisation has been in contributing to wage and price restraint at a time when central bankers were establishing their inflation-fighting credibility, thus allowing them to achieve targets and gain credibility without the need to tighten to politically difficult levels” (IMF (2006), p. xi).

The favourable impact of Chinese and Indian economic growth on the US economy comes also through other related channels. For example, it is estimated that lower prices for basic goods as a result of trade with China, India and other developing countries has contributed significantly to the standard of living of low-paid American citizens. Preliminary estimates suggest that these lower prices help raise standards of living of poor Americans by about 5 to 10 per cent. Similarly, Chinese purchases of US

Treasury bonds have helped to finance US budget deficits without which the US would have had higher interest rates and hence slower growth. Although these may be regarded as short-term measures, they have nevertheless helped to keep up for several years the rate of growth of the US economy and hence of the world economy. This issue will be discussed further in the next section.

There are undoubtedly also some negative effects of Chinese and Indian economic growth on the US economy. The most important of these is the competition from the two countries for the world's scarce raw materials and commodities. The enormous Chinese and Indian demand for these products, including oil, helps raise their prices and thereby, other things being equal, disadvantage the US economy. Even taking this negative factor into account, the overall balance of globalisation for the US economy is certainly likely to be favourable, particularly if the world's nation states adopt in the future a mutually advantageous cooperative attitude towards issues concerning environment and scarcity of raw materials.

The above considerations do not show adequately, if at all, in the three generations (namely those covering the periods 1962-1980, 1980-2000 and 2000-2005 respectively) of conventional studies of the impact of globalisation on US labour markets. This is partly because these studies are partial equilibrium ones rather than general equilibrium studies. There is very little research of the latter kind that is available. There is, however, a recent contribution by Bailey and Lawrence (2006) that addresses this methodological problem to some extent. The two authors examine changes in employment between 2000 and 2003 in the US economy, a period which has been marked by a relatively short recession. The strong upturn following the recession did not however lead to much net job creation, and hence the emergence of 'jobless growth.' In the normal public discourse, these unfavourable labour market outcomes, are blamed on globalisation, including outsourcing of service jobs to India. The authors carry out their empirical analysis on a detailed individual industry basis. They use the following empirical model, as well as an input-output model of the US economy to address these questions.

$$e_i = w_d (d - v) + w_x (x - v) - w_m (m - v)$$

Where e_i connotes percentage change in employment; w_d , w_x and w_m are the weights attached to domestic use, imports and exports respectively. This equation is an ex-post identity, in which “percentage change in employment is equal to the weighted average of the percentage changes in the differences between the growth rate of labor productivity and value added due to domestic use, value added due to exports, and value added attributable to imports” (p.229).

Using this framework, the authors conclude that of the 950,000 net manufacturing jobs lost by the year 2003, only 105,000 were due to trade and the remaining 845,000 to reduced growth of domestic demand (see Sichel 2004, p.279).

Thus Baily and Lawrence’s paper suggests that the jobless growth in the US economy in the first half of this decade was not due to globalisation as is commonly believed, but to other factors. It further indicates that imports from the Third World, including outsourcing, had a negligible impact on US labour markets. Much the greater impact of globalisation came from reduced US exports to other countries that was mainly a result of the appreciation of the US dollar against other currencies. The other main reason for the jobless growth and unfavourable labour market outcomes such as job instability arose from insufficient expansion of aggregate demand in the US economy. Although Baily and Lawrence’s contribution represents a methodological advance over previous studies, even this does not yet provide a fully satisfactory general equilibrium model. Baily and Lawrence assume that the rate of growth of productivity is an exogenous variable, which many analysts would regard as being eminently endogenous.

Although Professor Freeman has raised the right question about the potential for disruption which doubling of the labour force raises, he perhaps under-estimates the capacity of the US economy to provide employment and adjustment to those who would lose their jobs as a result of competition. As John Hicks suggests, although there is no guarantee that all those who have lost their jobs due to competition in the product markets will find jobs elsewhere, the probability is much higher that they will do so in a fast-growing, dynamic economy than in a stagnant, low-income economy. The US, during the last ten years in particular, is precisely the former kind of economy.

Table 7 provides the data on growth, productivity, IT services and other relevant variables for G7 countries on a comparable basis. This research by Professor Jorgensen and his colleagues (Jorgensen et al., 2005) is the most authoritative work on the subject. It represents immense scholarship and exceptional hard work as it provides comparable data for all these countries, particularly in relation to the input and output of IT services, adjusted for quality changes. This table provides data for the period 1980-2000.²² The notable features of the table from the perspective of this paper are the following:

- During the period 1995-2000, the US economy has been by far the fastest growing economy among G7 countries with a growth rate considerably higher than that of European countries as well as Japan. The Japanese economy performs better than the US in terms of the growth of labour productivity over this period. However, whereas hours worked arose by 1.99 percentage points in the US, in Japan these fell by 0.79 percentage points. Taking output and employment together, the US performance was clearly the best of all G7 countries.
- In addition, there is general agreement that the US economy has continued to perform strongly in the new millennium. The figures for the period 2000-2005 indicate that the productivity growth rate accelerated further and the country recorded during this period the highest productivity growth in its history. Overall, the data suggest that since 1995 the US economy has achieved a trend increase in its long-term historic growth rate of almost one percentage point per

²² The methodology underlying this analysis is succinctly summarised by Professor Jorgensen (2001) as follows: ‘Under the assumption that product and factor markets are competitive, producer equilibrium implies that the share-weighted growth of outputs is the sum of the share-weighted growth of inputs and growth in total factor productivity:

$$\begin{aligned}
& \bar{w}_{I,n} \Delta \ln I_n + \bar{w}_{I,c} \Delta \ln I_c + \bar{w}_{I,s} \Delta \ln I_s \\
& \quad + \bar{w}_{I,t} \Delta \ln I_t + \bar{w}_{C,n} \Delta \ln C_n \\
& \quad + \bar{w}_{C,c} \Delta \ln C_c \\
& = \bar{v}_{K,n} \Delta \ln K_n + \bar{v}_{K,c} \Delta \ln K_c \\
& \quad + \bar{v}_{K,s} \Delta \ln K_s + \bar{v}_{K,t} \Delta \ln K_t \\
& \quad + \bar{v}_L \Delta \ln L + \Delta \ln A
\end{aligned}$$

where \bar{w} and \bar{v} denote average value shares. The shares of outputs and inputs add to one under the additional assumption of constant returns,

$$\bar{w}_{I,n} + \bar{w}_{I,c} + \bar{w}_{I,s} + \bar{w}_{I,t} + \bar{w}_{C,n} + \bar{w}_{C,c} = \bar{v}_{K,n} + \bar{v}_{K,c} + \bar{v}_{K,s} + \bar{v}_{K,t} + \bar{v}_L = 1.'$$

annum. This surge in productivity growth in part contributed to the US phenomena of jobless growth in the early parts of this decade. Table 8 provides Jorgensen, Ho and Stiroh's most up-to-date data on pre- and post-1995 changes in productivity growth in the US economy. It suggests that the 1.57 percentage points difference between productivity growth in the periods 1973-95 and 1995-2003 respectively was about half due to an increase in capital per person including IT technology (i.e., capital deepening) and half due to an increase in total factor productivity. In view of the aging of the labour force the contribution of the labour input to productivity growth was slightly negative.

- In short, the above data suggest that the US has one of the most dynamic economies in the world. The US dynamism is remarkable for the fact that it is not a catch-up economy but a frontier economy which has to do the hard work of discovering new knowledge in order to achieve sustained growth. In these circumstances the significant recent trend increase in output and productivity growth rates over that of the last hundred years is quite extraordinary.

Professor Freeman raises two other issues that require comment in the light of the discussion above. He is worried about the US economy being able to retain its technological lead in view of the much larger number of science and engineering graduates in developing countries. This apprehension also seems to be somewhat overdrawn. It is indeed true that India and China have large educated labour forces, but their capacity to innovate is hugely below that of the US. This is because innovation does not just depend upon the ideas of science and engineering graduates, but also importantly on the scientific and technical infrastructure, on the country's technical culture, and on organizational capabilities of firms. In these respects, the US is way ahead of India and China and will remain so for a long time. Baumol (2002) has convincingly argued that the US industrial structure of oligopolistic competition between giant firms is capitalism's built-in innovating machine. There is no reason to believe that this machine will become any less potent in the future. However, it may also be the case that substantial government intervention may also be required in this area to achieve the desired social goals. The US economic historian, William Lazonik suggests that the US government is already doing a great deal of work in this area.

Finally, Professor Freeman's point about investment is critical. However, the inherent dynamism of the US economy suggests that it will continue to be an attractive place both for domestic and foreign companies. This issue is taken up in the section below.

VII. World Financial Imbalances

In order for current globalisation to be sustainable it must not only address the fears and anxieties of high-waged workers and salary-earners of advanced countries, but also the difficulties of China and India in continuing with their industrial revolutions on integration with the world economy. With respect to the latter an important issue concerns current existence of huge global financial imbalances which, depending on the way the rebalancing occurs would have a profound influence on the short- and medium-term prospects of developed as well as developing countries; it may indeed also affect their long-term growth and development prospects. Not only is the resolution of these imbalances salient for the countries running such imbalances (e.g., China and US), it will also profoundly effect the prospects of countries like India which are not regarded as being contributors to these imbalances.

There are several debates in this area – starting with the blame game of who is responsible for these imbalances, the profligate US consumer or the savings surplus of the Asian countries due to their low levels of investment. Larry Summers (2005) in a recent paper argues that there are important facts that do not tally with the former theory. Specifically, he observes that the world today is awash with savings and the world interest rates are low. If it were the case, that the US was extracting savings from all over the world at the expense of investment opportunities elsewhere, that should have raised the real world interest rates instead of keeping them low.

A major manifestation of the global imbalances today is the huge and persistent current account deficit of the US economy. Contrary to what is commonly believed, it is not matched by a similarly large and persistent surplus of the Chinese economy. China does have a huge current account surplus with the US but this is a bilateral interaction of the two economies. Overall, the Chinese current account has a much smaller surplus, constituting less than 8 percent of the total world surplus of countries that have positive current account balances (see Table 9). As the table shows, the Chinese surplus is

considerably smaller than that of Japan or Germany in 2004. Table 9 also shows that in 2004 the US current account deficit amounted to nearly \$666 billion dollars and it comprised 69% of the total deficit of countries running negative current account balances that year. In the last quarter of 2005, the US deficit was estimated to be \$700 billion dollars, or 7% of GDP. Thus an already high deficit in proportion to GDP for the US has been getting bigger, which on the face of it is not a healthy development. Nevertheless, the markets seem to have accepted the situation as indicated by the relative stability of the exchange rates of the main currencies (See Cooper (2005); Summers (2006)).

Another related manifestation of global imbalances is the huge and growing foreign currency reserves of the Chinese Central Bank. In stock terms the value of these reserves is estimated to be around a trillion US dollars, or as Martin Wolf puts it, it amounts to US \$600 for each man, woman and child in the country.

A central analytical and policy question at issue is whether the above imbalances can safely be left to the market forces for an automatic, though perhaps not necessarily swift resolution. If so that would constitute an optimistic soft-landing scenario for the US and the world economy. However, many serious analysts suggest that there maybe a hard landing instead. The latter may be triggered by any number of proximate causes including the collapse in US consumer confidence due to the high-level of consumer debt. Such a scenario could arise from irrational exuberance or pessimism of the investors leading to a fall in their “speculative confidence” in the sense the term is used by J M Keynes in the *General Theory* (See further Izzuteria and McKinley (2006)). The collapse in asset values could in principle also be triggered by an abrupt change in Chinese government policy of financing the US deficit by buying US Treasury paper. A policy change may be prompted by say, an unexpected devaluation of the dollar and the perception that it may be subject to further downward movement.

There are also however, important arguments against a hard landing. These include first of all the question of why such an event has not happened so far. Many economists have been suggesting hard-landing scenario for a long time, none of which has yet materialised. It may well be the case that there are significant forces that protect the value of the dollar and not allow it to go into a freefall. These forces have, in part, been

discussed in section VI and include the outstanding record of the US real economy during the last decade and its inherent strength and dynamism; the fact that in geopolitical terms US is a much safer haven for the capitalist world than the currencies of other countries such as those of the Eurozone and Japan.

So although there are reasons to believe that the hard-landing may not necessarily happen, the probability of its occurrence cannot be ruled out. In view of the damage such an event can cause to economic growth in DCs as well as ACs, an appropriate policy response would involve orderly rebalancing of the surpluses and deficits by cooperation between countries. There is by now a general consensus that the optimal solution would require concerted actions by both surplus and deficit countries. Specifically the leading surplus countries including China would need to revalue their currencies while the US and other deficit countries may need to devalue. It would also require relatively faster growth of aggregate demand in the Eurozone and Japan and correspondingly slower growth in the deficit countries such as the US. Such international cooperation implies deep interference with the market forces that is inconsistent with current globalisation of free trade and free capital movements. This alternative globalisation, based on close cooperation between countries, is able to provide coordination, prevent potentially dangerous market failures of current globalisation and achieve socially desirable outcomes. Such alternative globalisation is more likely to result in the positive-sum outcomes from international trade and capital movements, both for rich and poor countries, for China and India as well as the US. This point will be developed further in the next section.

VIII. Conclusion and Policy Implications

This paper has reviewed both economic theory as well as several generations of empirical work on the effects of the fast expansion of exports from developing countries including China and India on the labour markets of the ACs. Taking into account the positive as well as the negative and the direct as well as the indirect effects, the most up-to-date empirical works suggest that globalisation has a relatively small effect on output and employment in the US, which is just as likely to be favourable as unfavourable. Much of the previous work, by being of the partial equilibrium kind, did not adequately take into account the positive and indirect effects of globalisation on labour market

outcomes in the ACs. There are very few empirical models that are able to satisfactorily incorporate all the relevant variables and their interactions; the subject needs urgent further research. This is all the more necessary in view of the high-profile public policy interest, which North-South competition in goods and services attracts.

This paper has paid particular attention to the important new work of Professor Freeman which suggests that even if trade with the Third World has not in the past seriously disadvantaged workers in the North, the doubling of the global labour force with the entry of India and China into the liberalised global economy in the new millennium may have profoundly unfavourable repercussions for workers in ACs. This paper has welcomed Professor Freeman's pioneering and original contribution to this debate. It is broadly in sympathy with some of his analysis but it also contains a friendly and constructive criticism of parts of the Freeman argument. Two major points of difference with Freeman have been emphasized here. The first concerns his inadequate attention to the demand side variables, which may in part address the supply side problems arising from the entry of India and China. Secondly on the supply side, he does not give adequate recognition to the inherent economic strength and dynamics of the US economy and its innovative large corporations, which should enable the U.S to maintain its technological leadership.

The present paper suggests that there are significant forces at work both on the demand and the supply sides which indicate that notwithstanding the size of the two countries, the effects of China's and India's industrial revolutions on advanced countries in the future can be accommodated just as well as those of Japan and Italy were in the past during their periods of rapid industrialization in the 1950's and 1960's (See further Singh, 2005; UNCTAD, 1995). As elaborated in UNCTAD (1995) and Singh (2005), this accommodation occurred in the golden age, mainly because of faster OECD and world GDP growth.

Although the analysis here indicates that Professor Freeman is perhaps unduly pessimistic about the prospects of the US economy in response to Chinese and Indian industrial revolutions, he has nevertheless raised extremely important policy questions that deserve the attention of economists now and in the future. These will be examined below.

Policy Implications

It was noted in the introduction that the current globalisation of free trade and free capital movements can only survive as a way of organizing the world economy if it is able to satisfy the legitimate aspirations of citizens both in rich and poor countries. The underlying policy question that has been examined in this paper is whether India and China's industrial revolutions, which are a social imperative for these countries, can be sustained and made compatible with the desired labour market outcomes in rich countries. Meeting the twin objectives of sustaining the industrial revolution in the two giant Asian countries, together with maintaining, say, full employment, with rising real wages in the US, faces major constraints in each case, at both the national and international levels. Although the national constraints (e.g., savings and investments rates, mobility of resources) are as important, if not more so, this paper has by and large focussed only on the international framework. It must however be recognised that coping with international constraints often requires changes both in national policies of the individual nation states as well as the international policies of the relevant multilateral institutions.

We have already seen that current globalisation has serious difficulties in meeting the twin objectives outlined above. As seen earlier, even the intellectually relatively straightforward problems of global financial imbalances cannot be left to the market forces for their resolution. Coordination and cooperation between nation states are much the better way, if not the only way, of resolving these difficulties. This applies even more so to other main shortcomings of current globalisation that are salient to the themes of this paper. Firstly, as Professor Freeman rightly points out, the present international framework and the management of the world economy favours capital at the expense of labour. This is despite the fact that the latter is already burdened with bearing most of the costs of adjustment to global economic integration. The international financial institutions, namely the World Bank and the IMF, which greatly influence economic policy in developing countries, generally promote the interests of capital, rather than that of labour, giving precedence, for example, to fighting inflation than to promoting the growth of output and employment. This must be altered. However, it would require major changes in the mindset and approaches of these institutions to economic and social issues. Thus, instead of encouraging export-led

growth all over the world these institutions should be calling for balanced growth, based more on national consumption and investment than on foreign demand. Similarly instead of encouraging capital account liberalisation in developing countries, they should permit them to have capital controls, and indeed help them to devise suitable methods for implementing such controls.

Secondly, it will be appreciated that the twin objectives above, namely:

- a. sustaining India and China's industrial revolutions, and
- b. without jeopardising employment and real wages in the North

are certainly feasible on the supply side. With the new paradigm technology of information and communication revolution, with catch-up possibilities in India and China and elsewhere, the world economy on the supply side is capable of growing at a rate which can more than meet these requirements. However, the main constraints to faster growth lie on the demand side. In previous contributions (Singh, 2000; Singh & Zammit, 2000, 2005) have argued that the coordination failures on the demand side are the main obstacles to faster economic expansion. In order for the rate of growth of real world demand to be compatible with production possibilities on the supply side, either new institutions are required, or existing ones (e.g., the IMF and the World Bank) given a different mandate to resolve the coordination problems on a sustained long term basis.

These authors also point out that a faster rate of growth of real world aggregate demand will also lead to a greater and deeper use of the new ICT technology in various sectors of the economy. This should result in a virtuous circle of increased demand, increased growth of output, and increased productivity – as is normally the case with the introduction of technological innovations.

However, it must be emphasized that industrial countries cannot affect a trend increase in the rate of growth of real aggregate demand by simply using normal fiscal and monetary policies. In order to be effective and not lead to further payments disequilibria between leading industrialized countries, it would be necessary for the demand expansion to be coordinated. Moreover, past experience suggests that there will still be some need for restrictive institutional mechanisms at the national level, so that an increase in aggregate monetary demand translates itself into an expansion of real demand, and is not simply dissipated by a rise in wages and prices. Thus, despite the

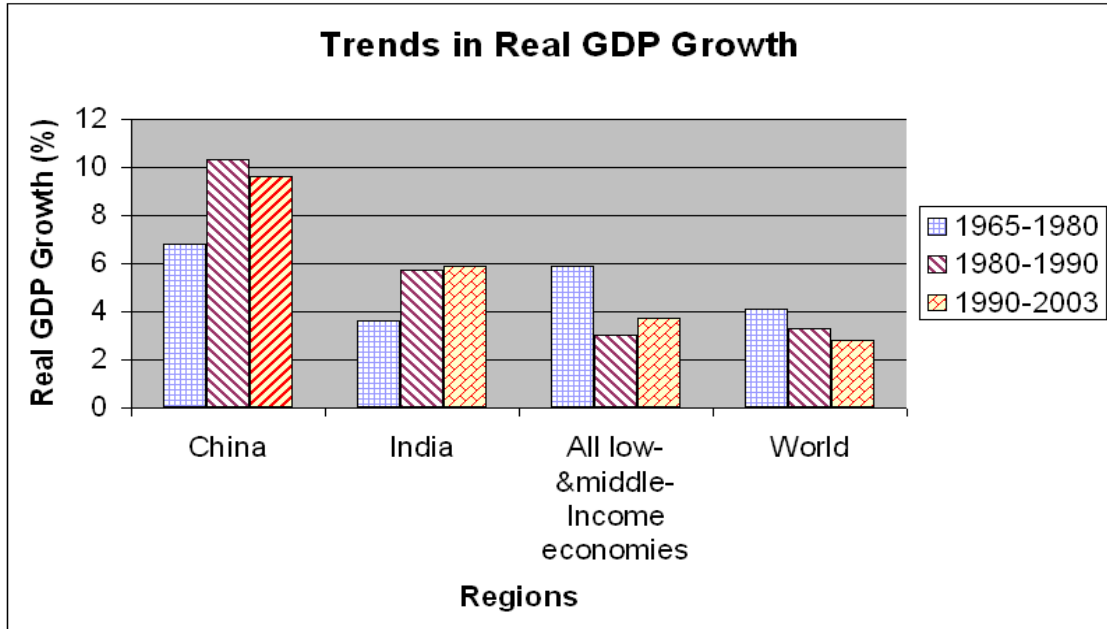
recent price stability in the industrialized countries, pay coordinating mechanisms may be necessary to ensure that increased aggregate demand does not lead to rising prices. These mechanisms generally take the form of social contacts between workers, employers and governments (see further Van der Hoeven and Lübker (2006)).

To sum up, faster growth of world demand is easier to organize today than in the past. This is mainly because of industrial revolutions in China and India and the social imperative for these countries to achieve faster growth of output and employment to meet the basic needs of their people. China and India together constitute about twenty (20) percent of the world demand and therefore represent a new growth pole for the world economy. Further, in this context, Krugman's 1994 observation on changes in productivity growth and growth of real wages and real demand continue to be highly relevant. Krugman noted:

Economic history offers no example of a country that experienced long-term productivity growth without a roughly equal rise in real wages. In the 1950s, when European productivity was typically less than half of US productivity, so were European wages; today average compensation measured in dollars is about the same. Japan climbed the productivity ladder over the past thirty years, its wages also rose from 10 per cent to 110 per cent of the US level. (Krugman, 1994, p.116)

Although there have been fears that China will not obey Krugman's law, all the signs are that with the continuing boom, many sectors of Chinese workers are able to obtain real wage increases close to the achieved rate of growth of productivity. This augurs well for the harmonious development for India and China as well as the US and the North, albeit under alternative rather than current globalisation.

Graph 1. Trends in Real GDP Growth: China, India, developing economies, and the world
1965- 2003
(Average annual percentage growth)



Source: Adapted from Dasgupta and Singh (2005).

Graph 2

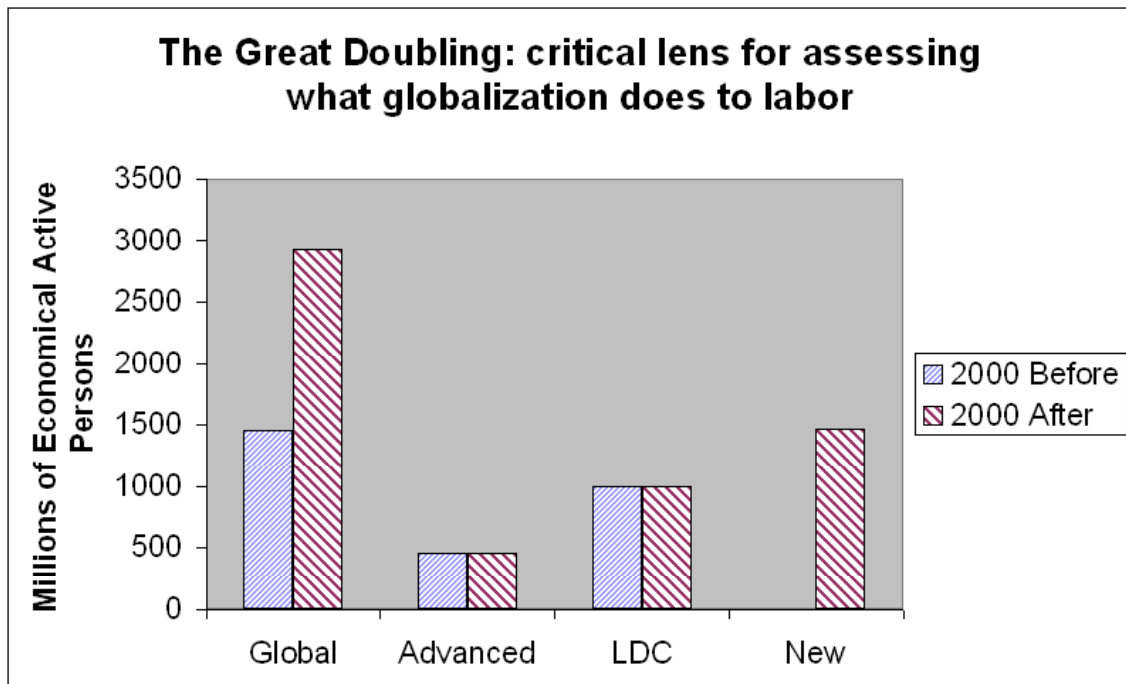


Table 1. Population, GDP and GDP per capita, 1900-2030

(selected countries and the world)

GDP per Capita 1900 - 2030

	GDP per capita (1990 INT \$)				
	1900	1950	1990	2001	2030
W Europe	2,893	4,579	15,966	19,256	30,503
USA	4,091	9,561	23,201	27,948	44,286
Japan	1,180	1,921	18,789	20,683	32,774
China	545	439	1,858	3,583	11,174
India	599	619	1,309	1,957	6,103
World	1,262	2,111	5,157	6,049	11,689

Population 1900 - 2030

	Population (million)				
	1900	1950	1990	2001	2030
W Europe	234	305	377	392	392
USA	76	152	250	285	358
Japan	44	84	124	127	121
China	400	547	1,135	1,275	1,477
*India	285	359	839	1,024	1,414
World	1,564	2,524	5,260	6,149	7,655

*India: 1950 population including Bangladesh and Pakistan

GDP 1900 - 2030

	GDP (billion 1990 int. \$)				
	1900	1950	1990	2001	2030
W Europe	676	1,396	6,033	7,550	11,964
USA	313	1,456	5,803	7,965	15,851
Japan	52	161	2,321	2,625	3,975
China	218	240	2,109	4,570	16,504
India	171	222	1,098	2,003	8,630
World	1,974	5,330	27,122	37,194	89,480

GDP per Capita (annual average compound growth rate) 1900 - 2030

	1900-50	1950-90	1990-2001	2001-30
W Europe	0.92	3.17	1.72	1.6
USA	1.71	2.24	1.71	1.6
Japan	0.98	5.87	0.88	1.6
China	-0.43	3.67	6.15	4.0
India	0.07	1.89	3.72	4.0
World	1.03	2.26	1.46	2.3

Source: Maddison(2005), Memorandum by Professor Angus Maddison

Retrieved on 03/06/2006 from:

<http://www.publications.parliament.uk/pa/ld200506/ldselect/ldeconaf/12/12we14.htm>

Table 2. Real GDP per Capita and Growth in China, India, Japan and the Republic of Korea during their rapid growth periods

	Real GDP per capita (dollars)								Average growth rate (per cent)				
	Market prices ^a				PPP ^b				1 st decade	2 nd decade	3 rd decade	4 th decade	1 st 20 years
	Year 1	Year 10	Year 20	Year 2003	Year 1	Year 10	Year 20	Year 2000					
China(1979)	163	347	752	1,067	1,023	1,752	3,276	3,747	8.6	8.1	.	.	8.3
India(1980)	222	304	440	511	1,159	1,634	2,414	2,479	3.7	3.8	.	.	3.7
Japan(1957)	5,481	11,575	20,763	38,222	3,605	7,515	13,544	24,675	8.4	6.1	2.9	2.9	7.2
Rep. Of Korea (1965)	1,297	2,397	4,149	12,232	1,803	3,501	6,237	15,876	6.7	5.7	7.5	4.2 ^c	6.2
United States	.	.	.	35,566	.	.	.	33,293

Source: UN (2005), Trade and development report, 2005. pp29.

^a In constant 2000 dollars

^b In constant 1996 dollars

^c The Republic of Korea's average growth rate in the 4th decade covers only 9 years due to data constraints

Table 3. Recent Economic Development in India and China: Some Salient Facts

2002	CHINA	INDIA
Gross national savings	44% of GDP	22% of GDP
Trade in Goods	49% of GDP	21% of GDP
2003		
Share in World merchandise Exports	5.8% (4 th in World)	0.7% (31 st in World)
Share in World exports of Commercial Services	2.6% (9 th in World)	1.4% (21 st in World)
1992-2001		
Weighted average tariff	Fell from 35.6% to 12.8%	Fell from 70.8% to 28.4%
2003		
Inward Stock of Foreign Direct Investment	\$501.5 bn	\$30.8 bn
FDI inflow	\$ 53.5 bn (4% of capital formation)	\$ 4.3 bn (12.4% of capital formation)
2000		
Illiteracy	6%	35%
1996-2002		
Private investment		
• In telecommunications	\$13 bn	\$ 9.2 bn
• In energy	\$14.3 bn	\$ 7.5 bn
• In transport	\$15.9 bn	\$ 2.3 bn

Source: Compiled from Martin Wolf's various columns, Financial Times (2005).

Table 4. Sectoral distribution of GDP: 1960, 1980 and 2000

(value added as percentage of GDP)

	Agricultural			Industry			Services		
	1960	1980	2000	1960	1980	2000	1960	1980	2000
Asia									
China	..	31	16	..	47	49	..	22	34
India	50	37	27	20	26	27	30	37	46
Indonesia	54	26	17	14	42	47	32	32	36
Korea	37	16	5	20	41	44	43	43	51
Malaysia	37	24	12	18	37	40	45	39	48
Pakistan	46	31	26	16	25	23	38	44	50
Philippines	26	23	17	28	37	30	46	40	53
Sri Lanka	32	28	21	20	30	27	48	42	52
Thailand	40	25	10	19	29	40	41	46	49
Median	38.5	26	17	19.5	37	40	42	40	49
Latin America									
Argentina	16	..	5	38	..	28	46	..	68
Bolivia	26	18	18	25	29	34	49	53	48
Brazil	16	10	9	35	37	32	49	53	59
Chile	10	7	8	51	37	34	39	56	57
Colombia	34	28	15	26	30	29	40	42	56
Ecuador	29	13	11	19	38	25	48	49	64
Mexico	16	10	4	29	38	28	55	52	67
Peru	18	8	8	33	45	38	49	47	55
Venezuela	6	6	5	22	47	47	72	47	47
Median	16	10	8	29	37.5	32	49	50.5	57

Source: World Development Report (1982) and (2002)

Table 5. Employment in Manufacturing (% of total)

Region	1960	1970	1980	1990	1998
Sub-Saharan Africa	4.4	4.8	6.2	5.5	5.5
Latin America	15.4	16.3	16.5	16.8	14.2
Southern Cone and Brazil	17.4	17.2	16.2	16.6	11.8
South Asia	8.7	9.2	10.7	13.0	13.9
NICs 1..	10.5	12.9	18.5	21.0	16.1
China	10.9	11.5	10.3	13.5	12.3
India	9.5	-	11.0	11.7	12.0

Source: Calculations made using statistics from the ILO Databank. Regional averages are weighted by economically active population. Re-produced from Palma, 2004.

Table 6. Shares in World Exports of Manufactures^a of Selected Asian Developing Economies And Major Developed Countries, 1962-2003

Period	Total Manufactures (Percentage)				
	United States	United Kingdom	Japan	Republican of Korea	China
1962-1965	19.2	12.2	7.1	0.1	.
1966-1970	17.2	9.6	9.1	0.2	.
1971-1975	14.4	7.8	11.1	0.7	.
1976-1980	13.8	7.6	12.2	1.5	.
1981-1985	14.5	6.3	14.9	2.3	0.9
1986-1990	11.9	6.1	13.5	2.7	1.5
1991-1995	13.1	5.4	12.2	2.9	2.9
1996-2000	13.3	5.3	9.4	3.0	3.9
2001-2003	12.0	5.1	8.1	3.1	6.2

Source: Adapted from UNCTAD, Trade and Development Report, 2005, pp78.

^a SITC 5-8 less 68.

^b Including Puerto Rico for 1962-1980.

Table 7. Sources of Labour Productivity Growth

Year	US	Canada	UK	France	Germany	Italy	Japan
Output							
1980- 1989	3.34	2.96	2.72	2.61	2.15	2.47	4.41
1989-1995	2.36	1.00	1.65	1.49	1.67	1.51	2.51
1995-2000	4.10	3.63	2.64	2.44	1.78	1.90	2.13
Hours							
1980- 1989	1.79	1.87	0.82	-0.66	0.11	0.15	0.56
1989-1995	1.02	0.20	-1.17	-0.41	-0.71	-0.57	-0.67
1995-2000	1.99	2.31	1.08	1.04	-0.05	0.95	-0.71
Labor Productivity							
1980- 1989	1.55	1.08	1.90	3.27	2.04	2.32	3.84
1989-1995	1.34	0.80	2.82	1.90	2.38	2.08	3.17
1995-2000	2.11	1.32	1.56	1.41	1.83	0.96	2.84
IT Capital Deepening							
1980- 1989	0.41	0.27	0.20	0.17	0.17	0.23	0.42
1989-1995	0.43	0.34	0.25	0.17	0.25	0.24	0.33
1995-2000	0.87	0.46	0.64	0.30	0.41	0.38	0.81
Non-IT Capital Deepening							
1980- 1989	0.31	0.51	0.76	3.08	1.17	2.22	1.20
1989-1995	0.32	0.36	1.48	1.43	1.38	1.08	1.42
1995-2000	0.39	-0.03	-0.27	0.31	1.01	0.85	0.66
Labour Quality							
1980- 1989	0.30	0.55	0.11	0.24	0.27	0.24	0.87
1989-1995	0.36	0.42	0.50	0.59	0.33	0.38	0.53
1995-2000	0.21	0.23	0.33	0.34	0.21	0.46	0.29
Productivity from IT Production							
1980- 1989	0.22	0.14	0.20	0.23	0.23	0.28	0.23
1989-1995	0.25	0.14	0.22	0.22	0.29	0.31	0.29
1995-2000	0.44	0.21	0.62	0.43	0.57	0.62	0.61
Productivity from Non-IT Production							
1980- 1989	0.31	-0.38	0.62	-0.45	0.20	-0.65	1.12
1989-1995	-0.02	-0.46	0.37	-0.52	0.12	0.06	0.60
1995-2000	0.20	0.45	0.24	0.03	-0.38	-1.35	0.47

Note: Percentage. Contribution. Canada data begins in 1981

Source: Jorgensen (2004).

Table 8. Explaining the Productivity Surge in the US

Average Annual Growth	1973-95	1995-03	Difference
Labour productivity	1.49	3.06	1.57
O/w capital deepening	0.89	1.75	0.86
Labour quality	0.26	0.17	-0.09
Total factor productivity	0.34	1.14	0.80
Source: Jorgenson, Ho and Stiroh			

Table 9. Current-account balances, selected economies, 2000-2004

Economies \ Year		2000	2002	2004	2000	2002	2004
		(\$ Billion)			(As a percentage of total surplus or deficit)		
Surplus Economies	Japan	119.6	112.6	171.8	23.8	21.9	19.3
	Germany	-25.7	43.1	96.4	3.9	8.4	10.9
	China	20.5	35.4	70.0	4.1	6.9	7.9
	Russian Federation	44.6	30.9	59.6	8.9	6.0	6.7
	Saudi Arabia	14.3	11.9	49.3	2.9	2.3	5.5
Deficit Economies	United States	-413.5	-473.9	-665.9	62.2	72.5	69.0
	Spain	-19.4	-15.9	-49.2	2.9	2.4	5.1
	United Kingdom	-36.5	-26.4	-47.0	5.5	4.0	4.9
	Australia	-15.3	-16.6	-39.4	2.3	2.5	4.1
	Italy	-5.8	-6.7	-24.8	0.9	1.0	2.6

Adapted from IMF, World Economic Outlook, April 2005.

Note: Calculations are based on a total of 180 countries; the sum of total surpluses and deficits is different from zero because of errors and omissions. Countries are listed according to the levels of their surplus/deficit in 2004

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