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AFRICA RISING? A HISTORICAL PERSPECTIVE

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ABSTRACT

Sub-Saharan Africa's recent economic boom has raised hopes and expectations to lift the regions' 'bottom millions' out of poverty by 2030. How realistic is that goal? We approach this question by comparing the experiences of three front-runners of region-specific development trajectories – Britain's capital-intensive, Japan's labour-intensive, and Ghana's land-extensive growth path, highlighting some historical analogies that are relevant for Africa, but often overlooked in the current 'Africa rising' debate. We draw particular attention to Africa's demographic boom and the possibilities for a quick transition to labour-intensive export-led industrialization. Although our exercise in diachronic comparative history offers little hope for poverty eradication by 2030, we do see broadened opportunities for sustained African economic growth in the longer term.

SUB-SAHARAN AFRICA HAS EXPERIENCED TWENTY years of virtually uninterrupted growth since the mid-1990s. Combined with greater political and macro-economic stability in the region, this record has unseated the deep sense of 'Afro-pessimism' that dominated the 1980s–2000s, and replaced it with a more optimistic and at times even 'Afro-euphoric'

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outlook.[1] The effect of this economic boom on poverty reduction, however, has remained ambiguous. Although relative poverty is on the decline in most countries, absolute poverty levels remain on the rise as population growth rates offset the fall in poverty rates. In order to meet the objective of full-scale poverty eradication by 2030, the priority target of the United Nation's Sustainable Development Goals program, sub-Saharan Africa will have to replicate the poverty alleviation record of China in the past three to four decades.[2] How realistic is this ambition?

Economists and development specialists widely agree that a higher pace of poverty alleviation will require a more intensive process of *structural economic transformation* that includes (1) labour productivity growth in all major sectors of the economy (agriculture, industry and services); (2) a continued transition of labour out of low productivity sectors (e.g. subsistence agriculture, informal economy) towards high productivity sectors; and (3) a relatively even distribution of the income growth that results from labour productivity growth, so that the poorest strata of African societies profit as much as, or even more than the higher income strata.

So far, there is little evidence of sustained labour productivity growth within a broad range of sectors, or of a systematic movement of labour from low- to high-productive sectors.[3] In particular, the growth of a high-productivity manufacturing sector, which has the potential to absorb large numbers of workers, has been lagging. By 2012, the average added value in GDP from manufacturing had still not surpassed its earlier peak of about 10 percent in 1970.[4] Instead, the current growth wave is primarily based on increasing the exports of tropical crops and minerals, facilitated

1. This changing perception was perhaps best captured by *The Economist* in 2011, when the editors openly apologized for their 2000 cover that portrayed Africa as 'the hopeless continent'. The title of the new cover conveyed a more hopeful message: 'Africa rising'. *The Economist*, 13 May 2000; Ibid. 3 December 2011.
2. An immediate fall in absolute poverty in sub-Saharan Africa leading to a full-scale eradication by 2030 requires a decline in relative poverty of 2.4 percentage points a year. This number is close to the impressive rate achieved by China since 1981, where the share of extreme poverty fell from 88 percent to less than 2 percent in 2013 (an average annual decline of 2.7 percent under an average demographic expansion of ca. 1 percent per year). Although the pace of poverty reduction has climbed to 1.2 percentage points in the last five years, this is still only half of the rate required. Data from the World Bank, *World Development Indicators*, accessed 24 October 2016.
3. Jorge Saba Arbache and John Page, 'How fragile is Africa's recent growth?', *Journal of African Economies* 19, 1 (2009), pp. 1–24; See also the introduction to a special issue in the *Journal of African Economies* in 2012 by Olu Ajakaiye and John Page, 'Industrialisation and economic transformation in Africa: Introduction and overview', *Journal of African Economies* 21, S2 (2012), pp. ii3-ii18, and Margaret McMillan and Derek Headey, 'Introduction – Understanding structural transformation in Africa', *World Development* 63 (2014), pp. 1–10.
4. Carol Newman, John Page, John Rand, Abebe Shimeles, and Måns Söderbom, 'Made in Africa: Learning to compete in industry' (Brookings Institution Press, Washington D.C., 2016), pp. ix and 34–37; Gareth Austin, Ewout Frankema and Morten Jerven, 'Patterns of manufacturing growth in Sub-Saharan Africa: From colonization to the present', in Kevin O'Rourke and Jeffrey Williamson (eds), *The spread of modern industry to the periphery since 1871* (Oxford University Press, Oxford, 2017), pp. 345–373.

by improving terms of trade. This growth pattern resembles earlier episodes of rapid economic expansion in the 1920s and 1950s–1960s, but is vulnerable to both internal and external economic shocks that can reverse much of the accumulated welfare gains.[5] Moreover, the growing reliance on revenues from natural resource extraction has stimulated 'jobless' growth and conspicuous consumption, and too little expansion of employment in grassroots manufacturing firms with smaller profit windows than big mining companies.[6]

That said, there is clearly more going on than an extension of the long-term path of export specialization in primary commodities. Scholars are divided about the extent to which recent growth is also driven by improved governance, increased levels of education and investment, growing urban middle classes, deepening financial markets, region-wide ICT revolutions, on-going electrification, and rapid demographic growth as a result of major improvements in human health.[7] But is this enough?

The silent hopes to repeat Chinese accomplishments in combining rapid growth with accelerated poverty alleviation are especially founded on the idea that Africa is getting ready to repeat the widely lauded 'Asian model' of labour-intensive export-led industrialization.[8] The main idea underpinning this expectation is that global industrial development follows a 'flying geese' pattern, in which lesser developed economies with lower wage costs take over from 'more advanced' industrial countries in a regional pattern of technology diffusion and increasing capital investment. The economic logic is that countries climbing the ladder of industrial modernization, and associated modernization of service industries, will

5. Morten Jerven, 'African growth recurring: An economic history perspective on African growth episodes', *Economic History of Developing Regions* 25, 2 (2010), pp. 127–154

6. Ernest Aryeetey and William Baah-Boateng, 'Understanding Ghana's growth success story and job creation challenges' (Brookings Institute Report, Washington, D.C., 2016).

7. To some scholars, African economic growth has been a statistical illusion, and in any case predicated on a commodity price boom. See Lipton, 'Income from work: The food-population-resource crisis in 'The short Africa'', *British Academy Review* 22 (2013). Others point to signs of a more fundamental breakthrough. See Alwyn Young, 'The African growth miracle', *Journal of Political Economy* 120, 4 (2012), pp. 696–739; Steven Radelet, Emerging Africa: How 17 countries are leading the way (Center for Global Development, Baltimore, MD, 2010), and more recently *The great surge: The ascent of the developing world* (Simon and Schuster Paperbacks, New York, NY, 2015); Robert Bates, Steven Block, Ghada Fayad, and Anke Hoeffler, 'The new institutionalism and Africa', *Journal of African Economies* 22, 4 (2013): pp. 499–522; Jake Bright and Aubrey Hruby, *The next Africa: An emerging continent becomes a global powerhouse* (St. Martin's Press, New York, NY, 2015); Mthuli Ncube and Charles Lufumpa, *The emerging middle class in Africa* (Routledge, New York, NY, 2015); For a middle position, see Xinshen Diao and Margaret McMillan, 'Toward an understanding of economic growth in Africa: A re-interpretation of the Lewis model' (NBER Working Paper No. 21018, 2015), and for a case that African growth is of a different nature than the growth miracle observed in Asia, see Dani Rodrik, 'An African growth miracle?' (CEPR Discussion Paper No. 10005, 2014).

8. Hinh Dinh, Vincent Palmade, Vandana Chandra, and Frances Cossar, Light manufacturing in Africa: Targeted policies to enhance private investment and create jobs (World Bank, Washington, D.C., 2012), Newman et al., *Made in Africa*.

experience significant wage rises that open up a gap for lesser developed economies. The 'followers' move along similar paths of industrialization as the 'leaders', by first substituting domestic production of manufactures for imports, and then by continuing to build up an export position. This process also involves a transition from the production of light consumer manufactures towards more capital and technology intensive manufactures.[9]

In Asia, Japan was the leading goose, followed by the Asian 'Tigers' – South Korea, Taiwan, Singapore and Hong Kong – and further back at the pack China. More recently, Vietnam, Cambodia and Bangladesh have started to make impressive inroads into global manufacturing markets, and, following this logic, African economies could be *next in line*, especially now that new generations of (urban) workers with more diverse skill sets and higher education levels are expanding so quickly.[10]

In this article, we scrutinize the expectation of industrial growth by taking a closer look at the promises and pitfalls of historical development analogies. We structure our assessment around three guiding questions. First, how likely is it that economies that long specialized in a land- or resource-extensive path of primary export commodities will make a quick transition to labour-intensive industrialization? Second, is there historical evidence to assume that such transitions result in a rapid improvement in the standard of living of the poorest income groups? And third, do the industrialization processes in Asia, or even the earlier ones in Europe, offer an appropriate historical precedent, considering these took place in a world with different structures of competitive advantage? Put differently, what are the chances for Africa to replicate Asia's 'growth miracle' in a world where Asia has just obtained its competitive edge?

To deepen historical views on the Africa rising debate, we explore these questions in light of the successful transition processes that took place in Britain and Japan in the nineteenth and twentieth centuries, and the strong but eventually unsustained growth episode in Ghana from the 1890s up to the late 1960s. Each of these three economies can be regarded as a front-runner of a region-specific growth trajectory. Britain

9. Kaname Akamatsu first formulated the 'flying geese' in the 1930s. His work was translated into English in the early 1960s, see 'Historical pattern of economic growth in developing countries', *The Developing Economies* 1 (1962), pp. 3–25. For further discussion, see Kiyoshi Kojima, 'The 'flying geese' model of Asian economic development: Origin, theoretical extensions, and regional policy implications', *Journal of Asian Economies* 11 (2000), pp. 375–401; Justin Yifu Lin, 'From flying geese to leading dragons: New opportunities and strategies for structural transformation in developing countries', in Joseph Stiglitz, Justin Yifu Lin, and Ebrahim Patel (eds), *The industrial policy revolution II – Africa in the 21st century* (Palgrave Macmillan, Houndmills, 2013), pp. 50–72.

10. An idea *The Economist* enthusiastically promulgated, when it portrayed Africa as the next awakening 'manufacturing giant'. 'Manufacturing in Africa: An awakening giant', 8 February 2014, pp. 29–30. For education trends, see Robert J. Barro and John-Wha Lee, *Education matters: Global schooling gains from the 19th to 21st century* (Oxford University Press, New York, NY, 2015).

heralded the Industrial Revolution along a *capital-intensive* growth path, and set the stage for a rapid diffusion of industrial manufacturing in nineteenth-century Europe and North America. Japan was the first non-Western country to complete the transition from an agrarian economy towards a modern industrial economy under a *labour-intensive* growth path that became characteristic for Asian catch-up growth. And when Japan had started to industrialize in the late nineteenth century, Ghana – then the Gold Coast – further deepened its *land-extensive* growth path of agricultural commodity exports that was mainly driven by an impressive cocoa boom.[11] Although Ghana's growing economy translated into tangible living standard improvements for broad segments of its population, this boom also set the stage for an amplified economic collapse.[12]

Our exercise in diachronic comparative history offers some insights that can enrich discussions on the growth-poverty nexus in present-day Africa. First, rapid industrialization in Asia was stimulated by a profound labour cost gap between the West and the 'rest'. Current wage gaps between African economies and late industrializing countries in Asia such as Vietnam and Bangladesh, or even China, are not nearly as large as the gap between Britain and Japan around 1900. Hence, labour-intensive export-led industrialization seems harder to realize for Africa in a world where Asian manufacturing is still gaining prominence.

Second, an industrialization 'push' does not automatically need to have a poverty-reducing impact in the short or medium run. In Britain and Japan, industrialization did not improve the lot of the working classes for at least half a century. If Africa is to follow a path of labour-intensive industrialization, the time-lag that has historically manifested itself between labour productivity growth and labour income growth will require specific policy attention.

Third, current levels of population growth in Africa are of a higher magnitude than they were in Britain, Japan or later Asian industrializers at the time of their growth accelerations. However, the possibilities for releasing labour surpluses through emigration are far more limited for Africans today than they were for British or Japanese people in a period where empires functioned as population valves that partly relieved downward pressure on real incomes of the working classes. Both conditions imply larger reserve armies of underemployed workers in Africa and reinforce our second point.

11. For these three typologies, see Gareth Austin and Kaoru Sugihara (eds), *Labour-intensive industrialization in global history* (Routledge, New York, NY, 2013), pp. 85–106.
12. In 2005, about 25 percent of Ghanaians were living below the extreme poverty line, down from its high of 47 percent in 1991. Although this is much better than the sub-Saharan African average, poverty reduction rates did not nearly approximate Chinese figures. Data from The World Bank's World Development Indicators 2016 (accessed 1 December 2016).

Fourth, the long-term specialization in the production of land-extensive and resource-rich primary commodities, which deepened after the decline of the external slave trades in West and East Africa, have eroded many of the proto-industrial roots of rural African economies due to prolonged manufacturing imports as well as crowding out effects of mineral resource exports from currency-overvaluation. While it is difficult to know how quickly these roots can be restored, it puts more weight on the issue of infant industry protection in contemporary development debates than neo-liberal policy agendas allow for.

And fifth, the economic policies pursued by the most successful industrializers, including Britain and Japan, were backed by central states that were both willing and able to sacrifice human freedoms in return for national glory. These states were in a position to amass the geo-political power required to manipulate external markets (e.g. to get access to cheap raw materials and create export markets for domestic manufactures) and to shield domestic markets. Moreover, the national governments of Asian industrializers, including Japan, had the political clout to suppress labour incomes for decades in order to secure international competitiveness.

African governments are not operating in a similar context, even though their political weight can be expected to grow significantly in the twenty-first century as a result of the impressive shift in world population towards the region. Today, the existence of global economic governance bodies such as the International Monetary Fund and World Trade Organization constrain the freedom of African countries to pursue beggar-thy-neighbour policies. Nor do we foresee African countries building overseas empires, adopting one-child policies, or enforcing stringent labour market regulations in order to enhance labour discipline and repress wage rises.

All these factors together make it unlikely that a transition to labour-intensive export-led industrialization will be made quickly in the region. Even if a few African countries, such as Ethiopia or Rwanda, are about to achieve it, this process will unlikely reduce poverty rates at a Chinese-style record speed. In the final section of the article, we sketch a more realistic route for Africa's twenty-first-century rise out of poverty; a trajectory that certainly includes industrialization, but of a different type than observed among the Asian 'model geese' and that will take well beyond 2030. That route, we argue, is predicated on the growth of integrated *domestic* consumer markets.

Britain and Japan: capital- vs. labour-intensive industrialization

The Industrial Revolution put Britain as the first nation in the world on a path of 'modern economic growth', characterized by a sustained long-term

rise in labour productivity and a permanent employment shift from agriculture towards manufacturing and service sectors.[13] Britain's economic transformation was so profound that it became irreversible: two World Wars and the Great Depression combined did not set Britain's economy back anywhere close to pre-industrial output and income levels. The kind of resilience to severe internal and external shocks that modern economic growth displays, and the enormous welfare gains it can generate over time, are unique in human history and the very reason that nations seek to emulate it.

In Britain, the share of agricultural employment plummeted from c. 55 percent in 1760 to about 10 percent on the eve of World War One.[14] The motor behind structural change was the strong linkage between the accumulation of 'useful knowledge' and the development of new industrial technologies.[15] The growing nodes of feedback loops between innovations in industrial production, transportation, and the fossil fuel economy facilitated rapid urbanization and enhanced agricultural productivity growth.[16] As industrialization progressed, technological innovation became increasingly endogenous to economic modernization, receiving continuous impulses from a scientific and managerial approach to research and development.[17]

The British Industrial Revolution largely unfolded along a process of *capital-intensive* technological change: machines replaced human and animal labour, and rising shares of capital per worker sustained the rise in labour productivity. Importantly, this process of labour-saving technological change did not result in a *net loss* of jobs – on the contrary. Increasing output of an expanding range of manufacturing activities led to an increase in demand for industrial labour, even though the labour required to produce one unit of output decreased dramatically. In short, Britain's economy not only came to have more productive (industrial) workers, but also to employ a greater number of them.

In this transition, the *nature* of human labour changed profoundly. Work became increasingly standardized, task-oriented and dictated by the

13. See Simon Kuznets, *Modern economic growth* (Yale University Press, New Haven, CT, 1966); N. Crafts, *British economic growth during the Industrial Revolution* (Oxford University Press, New York, NY, 1985); Joel Mokyr, *The lever of riches: Technological innovation and economic progress* (Oxford University Press, New York, NY, 1990); Robert Allen, *The British Industrial Revolution in global perspective* (Cambridge University Press, Cambridge, 2009).
14. Gregory Clark, 'Land rental values and the agrarian economy: England and Wales, 1500–1914' *European Review of Economic History* 6, 3 (2002), pp. 281–308.
15. Mokyr, *Lever of riches*; *The gifts of Athena: The historical origins of the knowledge economy* (Princeton University Press, Princeton, NJ, 2004).
16. Astrid Kander, Paolo Malanima, and Paul Warde, *Power to the people: Energy in Europe over the last five centuries* (Princeton University Press, Princeton, NJ, 2014).
17. Vaclav Smil, *Creating the twentieth century: Technical innovations of 1867–1914 and their lasting impact* (Oxford University Press, Oxford, 2005).

clock. Capital intensification fostered new forms of 'proletarization', including a growing economic reliance on child and female labour in the factories to carry out specific tasks that were complementary to the capital-intensive production process.[18] Moreover, machine-operated factories did not necessarily produce manufactures of higher quality than 'hand-made' artisanal ones. However, the increasing British domination of global networks of cotton production and consumer markets, which was aided by the principles of 'war capitalism', gave British cloth manufactures a significant competitive advantage.[19]

Despite the profound transformation of the British economy, the long-term annual average per capita rate of economic growth remained a modest 1 percent up to 1850. Only in the second half of the nineteenth century did it rise to a long-term average of about 1.5 percent per annum.[20] As pointed out by Alexander Gerschenkron and many others after him, the crucial difference between Britain's industrialization experience and that of its immediate followers is that initial 'backwardness' allows for a process of *catch-up growth* through the adoption of existing production technologies that were invented by the industrial leader.[21] The followers do not face the costs of invention and tend to face lower 'sunk costs' in older generations of technology, allowing them to jump straight onto the state-of-the art. The development literature has cast this principle of catch-up growth in terms such as 'the penalties of the pioneer' and the 'advantages of backwardness'.[22] This is not to say that 'late' industrializers can exclusively rely on imported technologies, or that it is generally easy for latecomers to achieve sustained economic growth. After all, the barriers that restricted industrial growth in the first place do not dissolve spontaneously, but the principle is clear: the greater the technology backlog, the higher the *potential* future growth rate. This is good news for Africa.

When the first phase of the Industrial Revolution came to a close by the mid-nineteenth century, and European countries moved into the 'Second Industrial Revolution', Japan made a profound break with its policy of isolationism. Although essentially a set of political reforms that restored imperial rule at the expense of the Tokugawa Shogunate, dismantling the economic

18. Jane Humphries, *Childhood and child labour in the British Industrial Revolution* (Cambridge University Press, Cambridge, 2010).
19. For an explanation of the term 'war capitalism', see Sven Beckert, *Empire of cotton: A global history* (Alfred Knopf, New York, NY, 2015), pp. 29–55
20. P. Dean and W. Cole, *British economic growth, 1688–1959: Trends and structure* (Cambridge University Press, Cambridge, 1962); Crafts, *British Economic Growth*.
21. Alexander Gerschenkron, *Economic backwardness in historical perspective: A book of essays* (Belknap Press of Harvard University Press, Cambridge, 1962).
22. Edward Denison, assisted by Jean-Pierre Poullier, Why growth rates differ: Postwar experience in nine Western countries (Brookings Institute, Washington, D.C., 1967); and Moses Abramovitz, 'Catching Up, Forging Ahead and Falling Behind', *The Journal of Economic History* 46, 2 (1986), pp. 385–406.

privileges of the Samurai class, the Meiji reforms also opened up new possibilities for international trade and large state-led investments in infrastructure. Moreover, the Meiji government pursued an active policy to adopt Western knowledge and technology and adapt it to the Japanese context, with the aim of expanding its industrial and military capacity.[23]

These investments stimulated a process of industrialization that had been set in motion during the late Tokugawa era and pushed the Japanese economy on a path of labour productivity growth in a wide range of production sectors.[24] A sequence of 'technology regime' changes resulted in a continuous diversification of merchandise exports as well as the build-up of confounding military capacity rooted in incipient heavy industries. By World War Two, Japanese silk and cotton textile industries had established themselves as the prime Asian competitor of British textile manufactures.[25] In the post-war era, Japan became a leading exporter of electronics, machinery, automobiles and other high-tech manufactures. Each of these technology regime shifts was associated with a further expansion and diversification of productive activities, involving increasing skill-technology complexity levels.[26]

Despite growing Western concerns in the 1980s that Japan would soon 'overtake' the West, the Japanese economy entered into a long period of stagnation in the 1990s, plagued by endemic deflation, rising government deficits, increasing competition from Asian neighbours and a rapidly aging labour force. Yet, like the European and North American experiences, Japan's earlier economic attainments did not evaporate in the face of severe internal and external shocks. Gerschenkron's vision about the advantages of 'backwardness' was in many ways realized by Japan. While British growth had long witnessed a ceiling of 1 percent, Japan achieved an annual per capita GDP growth rate of 5 percent between 1945 and 2000.[27]

23. Carl Mosk, *Japanese economic development: Markets, norms, structures* (Routledge, New York, NY, 2007).
24. It has been argued that agriculture only came to fully back up this process after the Second World War, See Christer Gunnarsson, 'Misinterpreting the East Asian miracle – A Gerschenkronian perspective on substitution and advantages of backwardness in the industrialization of Eastern Asia', in Martin Andersson and Tobias Axelsson (eds), *Diverse development paths and structural transformation in the escape from poverty* (Oxford University Press, Oxford, 2016), pp. 93–127.
25. Janet Hunter, *Women and the labour market in Japan's industrialising economy: The textile industry before the Pacific War* (Routledge, New York, NY, 2003); Tirthankar Roy, *India in the world economy: From antiquity to the present* (Cambridge University Press, Cambridge, 2012), pp. 211–212.
26. Stephen Broadberry, Kyoji Fukao, Bishnupriya Gupta, and Nick Zammit, 'How did Japan catch-upon the West? A sectoral analysis of Anglo-Japanese productivity differences, 1885–2000' (University of Warwick Working Paper no. 231, 2015).
27. Growth rates calculated using Angus Maddison, *Statistics on world population, GDP and per capita GDP, 1–2008 AD* (2010): http://www.ggdc.net/maddison/oriindex.htm (accessed 30 May 2018).

Unlike Britain, Japanese industrialization began as a *labour-intensive* endeavour, and only fused with a more *capital-intensive* path at a later stage. The ability to absorb new technologies was facilitated by the long historical presence of a proto-industrial labour force with specific handicraft skills, ingrained knowledge of product quality, and a high degree of labour discipline.[28] The widespread availability of cheap unskilled *and* skilled workers fulfilled one of the necessary conditions for Japanese manufactures to conquer global consumer markets.[29] Capital-labour ratios increased, but never reached levels common in British manufacturing, let alone American or German manufacturing. Even though mechanization was part of Japan's *labour-intensive path* of industrialization, it was the wage cost advantage that offered Japanese textiles an inroad in markets that had been dominated by European or American merchants during the nineteenth century.[30]

Although these paths differed, they were *interconnected* and *contingent* on each other's existence in an increasingly integrated world economy. As Kaoru Sugihara has argued, Asia's labour-intensive path of industrialization could not have opened up *without* the capital-intensive path of the West preceding it.[31] It was precisely the West's rise out of poverty that created a gap in labour costs that was sufficiently large for Asian producers to undercut the prices of Western manufactures.

When did industrialization reduce poverty?

Economic historians have long debated *when* urban workers in industrializing Britain started to benefit from the ongoing structural transformation of the British economy. The optimist camp of this 'standards of living debate' initially argued that a clear trend break in real wage development for the lower income classes could be observed in the 1820s. A later, and

28. Osamu Saito, 'An industrious revolution in an East Asian market economy? Tokugawa Japan and implications for the Great Divergence', *Australian Economic History Review* 50, 3 (2010), pp. 240–261. According to Richard Smethurst, Japan's industrialization process emerged out of the growth of a rural market economy that provided new income-earning opportunities for farmers and raised disputes over tenancy relations. See *Agricultural development and tenancy disputes in Japan, 1870–1940* (Princeton University Press, Princeton, NJ, 1986).
29. Osamu Saito, 'Proto-industrialization and labour-intensive industrialization: Reflections on Smithian growth and the role of skill intensity', in Austin and Sugihara (eds), *Labour-intensive industrialization* (Routledge, New York, NY, 2013) pp. 85–106.
30. Stephen Broadberry, *The productivity race: British manufacturing in international perspective, 1850–1990* (Cambridge University Press, Cambridge, 1997); Broadberry et al. 'How did Japan catch-up on the West?'.
31. Austin and Sugihara, *Labour-intensive industrialization*.

more pessimistic view suggested that this did not occur until the 1850s.[32] Recent progress in the measurement of historical real wage developments has made the timing more precise.

A new method developed by Robert Allen has recently made it possible to compare historical real wage levels *across the globe*.[33] It starts with a standardized consumption basket that contains the basic necessities for human survival, while still allowing for varying dietary compositions across time and space. **Appendix Tables A2.1 and A2.2** show the contents of such 'subsistence baskets' for the series we created for Ghana and Japan. From here, the real wage levels, or 'welfare ratios', of unskilled urban male workers are expressed as the number of *family* subsistence baskets (3.15 times the individual basket) that the worker's annual wage can buy.[34] A welfare ratio below 1 implies that households needed additional sources of income, or that part of the contents had to be produced within the household.

To be sure, economic historians adopting this method do not suppose that families across the globe and at all points in time typically consisted of two adults and three children, that they exclusively relied on adult male wage income, or that they precisely consumed these standardized commodity baskets. For our study it is important that the intuition behind this methodology is similar to the construction of present-day poverty indices, in which nominal daily incomes are adjusted for the relative price levels of primary consumer commodities to see how they relate to the threshold of US$1.90 (2011 PPP) per day. Although historical real wage series are of course not the direct equivalent of contemporary poverty data, they do offer us a window into the comparative development of material living standards of the lower income strata for times and places where we lack sufficient data to construct aggregated poverty-indices.

Figure 1 depicts the long-term real wage trends of unskilled male wage workers in London and Tokyo from 1740 to 1970.[35] Although the levels are well above subsistence, the graph also reveals that real wages fell throughout the second half of the eighteenth century and did not start to recover until after the end of the Napoleonic wars. In fact, it took almost *a full century* after 1760 before real wages started to exceed the levels of

32. Peter Lindert and Jeffrey Williamson, 'English workers' living standards during the Industrial Revolution: A new look', *Economic History Review* 36, 1 (1983): pp. 1–25; Charles Feinstein, 'Pessimism perpetuated: Real wages and the standard of living during the Industrial Revolution', *Journal of Economic History* 58, 3 (1998): pp. 625–658.
33. For its application on a global scale, see Robert Allen, Jean-Pascal Bassino, Debin Ma, Christine Moll-Murata, and Jan Luiten van Zanden, 'Wages, prices and living standards in China, 1738–1925: In comparison with Europe, Japan, and India', *Economic History Review* 64, S1 (2011), pp. 8–38.
34. The family basket is based on the needs of two adults and three children, and for which the costs of the individual basket (also adding rent) are multiplied by 3.15.
35. Allen et al., 'Wages, prices and living standards'.

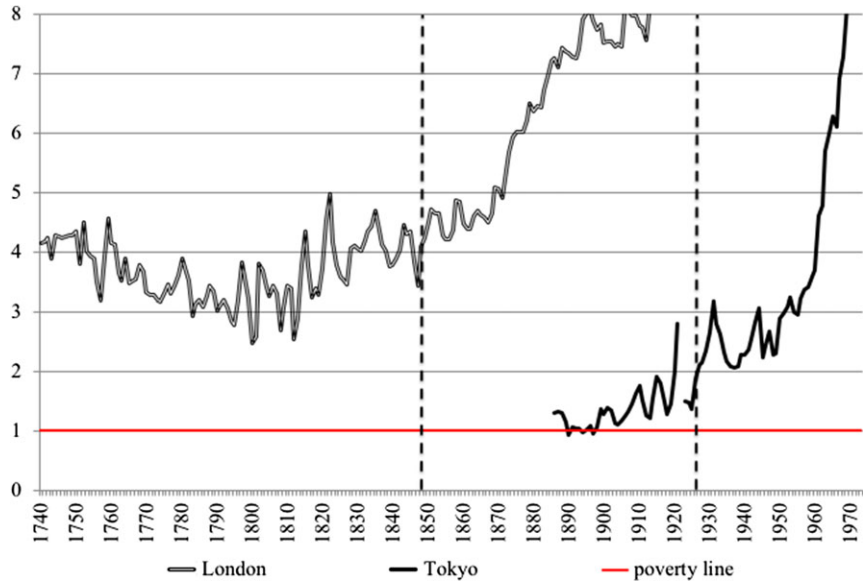

Figure 1 Welfare ratios of male unskilled labour in London and Tokyo, 1740–1970

Sources: Series for London taken from Allen et al., 'Wages, prices and living standards'. Japanese series from *Historical Statistics of Japan, Volume 4* (print and online), and David Jacks' submission to the Global Price and Income History Group (GPIHG) at UC Davis. See **Appendices A.1–A.2** for further details.

the early eighteenth century. The key lesson is that the industrialization of the British economy only translated into tangible and sustained welfare rises after a very long delay.

Figure 1 also reveals how slow the increase of purchasing power of unskilled workers in Tokyo was during the early phases of Japanese industrialization. It was not until the 1920s, fifty years after the Meiji restoration, that Tokyo's unskilled workers started to experience a substantial rise in purchasing power, only to fall back again during the Great Depression. These findings line up well with recent studies of Japanese economic historians documenting a rapid rise in income inequality in the 1920s and 1930s.[36] Keeping real wage growth below labour productivity growth was part of a deliberate policy to maintain Japan's labour cost

36. Osamu Saito, 'Growth and inequality in the Great and Little Divergence debate: A Japanese Perspective', *Economic History Review* 68, 2 (2015), pp. 399–419; Ryoshin Minami, 'Economic development and income distribution in Japan: An assessment of the Kuznets hypothesis', *Cambridge Journal of Economics*, 22 (1998), pp. 39–58.

advantage, and to plow surpluses back into expanding manufacturing industries.[37]

Neither one of these regional front-runners thus offers any reason to believe that a fundamental economic transition towards broad-based welfare growth will automatically imply rapid improvements in material living standards for lower income groups. Sustained welfare gains associated with structural change have generally *taken time* to trickle down to the lower income groups. Moreover, *deliberate* policies of export-led labour-intensive industrialization seem to have even further exacerbated this trend, by leading employers and governments to suppress wage growth for extended periods of time. Contrary to the explicit target of the SDGs – the full eradication of extreme poverty by 2030 – there is little historical basis for the idea that structural economic change will achieve this aim in a time-span of less than two decades.

Although often invoked as a prime example that this *is* possible, China's remarkable industrialization and poverty reduction record should be seen as an *exception* to these historical trends. The conditions for rapid poverty reduction were unusually conducive in China, as rural poverty was at an all-time high after the Great Leap Forward and the Cultural Revolution and responded rapidly to the dismantling of associated institutions like collectivized agriculture.[38] More generally, it should be kept in mind that China's rapid labour-intensive industrial ascent did not occur overnight. The structural transformation of the economy was, amongst others, made possible by historical conditions that facilitated a transition of this scale and pace, such as deep investments in labour 'quality' (skills, education, discipline), the presence of a large domestic consumer market, and relatively high levels of state-capacity to pro-actively foster industrial development, curb high rates of demographic growth, and repress labour costs in a broad range of economic sectors, including agriculture, industry and services.[39]

Land-extensive agricultural growth in Ghana

A survey of Ghana's historical growth trajectory is useful to assess the chances of a rapid transition to labour-intensive export-led industrialization. Two decades after Ghana (then the Gold Coast) started exporting cocoa beans in 1892, it overtook Brazil as the world market leader. Around 1910 cocoa comprised about 45 percent of total Ghanaian

37. Broadberry et al. 'How did Japan catch-up on the West?', pp. 14–16.
38. Martin Ravallion and Shaohua Chen, 'China's (uneven) progress against poverty', *Journal of Development Economics* 82, 1 (2007), pp. 1–42.
39. Kenneth Pomeranz, *The great divergence: Europe, China, and the making of the modern world economy* (Princeton University Press, Princeton, NJ, 2000); Dic Lo and Guicai Li, 'China's economic growth, 1978–2007: Structural-institutional changes and efficiency attributes', *Journal of Post Keynesian Economics* 34, 1 (2011), pp. 59–83.

exports. By 1929 the crop accounted for no less than 84 percent of total exports and had crowded out 'traditional' export commodities such as palm kernels, palm oil and rubber. Ghana's cocoa boom provides us with a key example of the 'cash-crop revolution' that emerged after the abolition of the slave trade and diffused across Africa during the colonial era, facilitated by mounting opportunities of international trade in the second half of the nineteenth century.[40]

The expanding demand for 'luxury' tropical foods in the industrializing economies and dramatically falling transportation costs (railways, roads, steamships) had opened up vast markets for Ghana's cocoa beans. This boom was consistent with the acceleration of an export-specialization path that had already gained momentum during the 'commercial transition' from slave exports to 'legitimate' trade in cash crops in the course of the eighteenth and early nineteenth centuries.[41] The shift from exporting human captives to the cultivation of cash-crops (often done with retained domestic slave labour) corresponded with a shift in the use of production factors, especially the use of abundant supplies of land. This path of *land-extensive* agricultural growth was complemented by a notable expansion of mineral resource exports, gold in particular.

The introduction of cocoa in Ghana required the development of previously unknown cultivation techniques as well as new investments in infrastructure to connect cocoa-producing regions in the hinterland to the coast. Yet, the early phase of agricultural innovation was followed by a prolonged phase of predominantly extensive growth, in which increasing amounts of land and labour were allocated to cocoa farming without fundamental changes in production technology. Growth was possible as long as farmers could capitalize upon underutilized resources of seasonal labour, capital and 'idle' forest land. Cocoa cultivation extended year-round employment opportunities, enlarged the possibilities of intercropping, and generated a growing demand for urban commercial services linked to the expanding export sector. Open land frontiers allowed migrant farmers to obtain so-called 'forest rents', by bringing fertile virgin soils into cultivation.[42] The export revenues infused Ghana's economy

40. Ewout Frankema, Jeffrey Williamson, and Pieter Woltjer, 'An economic rationale for the African scramble: The commercial transition and the commodity price boom of 1845–1885', *Journal of Economic History* 78, 1 (2018), pp. 231–267; John Tosh, 'The cash-crop revolution in tropical Africa: An agricultural reappraisal', *African Affairs* 79, 314 (1980), pp. 79–94.

41. See for example, Polly Hill, *The migrant cocoa-farmers of Southern Ghana* (Cambridge University Press, Cambridge, 1963) and Gareth Austin, *Labour, land, and capital in Ghana: From slavery to free labour in Asante, 1807–1956* (University of Rochester Press, New York, NY, 2005).

42. On the concept of forest rent, see François Ruf, 'From 'forest rent' to 'tree capital': Basic 'laws' of cocoa supply', in François Ruf and P. S. Siswoputranto (eds), *Cocoa cycles: The economics of cocoa supply* (Woodhead Publishing Limited, Cambridge, 1995), pp. 1–55.

with new investment opportunities and enhanced the commercialization of land and labour markets, but it did not lead to a process of sustained structural change.[43] Such extensive forms of agricultural export-led growth suited the conditions of low population pressures and ample supply of land.

This trajectory of land-extensive growth eventually stagnated, and then contracted. Endemic crop-diseases, such as the swollen shoot disease, destroyed substantial shares of annual cocoa harvests, especially in the 1940s.[44] The collapse of international cocoa prices after the first oil crisis led to a sharp economic decline in the years 1973–1985, as it eroded the expanding production volumes of cocoa of the 1950s and 1960s. Exactly at the time when a fundamental productivity breakthrough associated with the development of new high value-added sectors came to underpin labour-intensive industrialization in a number of Asian countries, Ghana's economy came to a complete halt. The political instability that accompanied post-colonial struggles in many African countries further aggravated the ensuing economic crisis and undermined Ghana's capacity to absorb adverse world market shocks.

Ghana's land-extensive growth path also had a distinct effect on the development of wage workers' incomes. Figure 2 places the welfare ratios for Accra that we constructed for 1880–2010 in the global picture.[45] Two observations stand out. First, unlike in Britain and Japan, real wage levels in Accra responded relatively rapidly to economic growth. Cocoa production and exports reached a significant scale in the 1900s and real wages started to rise before the First World War, then fell back with the collapse of trade during the war, but recovered so strongly in the 1920s that they had a noticeable impact on living standards of urban wage workers. The rapidly rising trend in material living standards is supported by recent anthropometric research, which has shown that people from various parts of the country gained height as a result of improved nutritional conditions.[46]

43. Sara Berry, *No condition is permanent: The social dynamics of agrarian change in Sub-Saharan Africa* (University of Wisconsin Press, Madison, WI, 1993).
44. Francis K. Danquah, 'Sustaining a West African cocoa economy: Agricultural science and the swollen shoot contagion in Ghana, 1936–1965', *African Economic History* 31 (2003), pp. 43–74.
45. Real wage figures for the colonial period are taken from Ewout Frankema and Marlous van Waijenburg, 'Structural impediments to African growth? New evidence from real wages in British Africa, 1880–1965', *Journal of Economic History* 72, 2 (2012), pp. 895–926.
46. Alexander Moradi, Gareth Austin and Joerg Baten, 'Heights and development in a cash-crop colony: Living standards in Ghana, 1870–1980' (African Economic History Network Working Paper no. 7, 2013). Wages of rural workers in Ghana also suggest that these welfare gains were certainly not confined to the capital city alone. See Frankema and van Waijenburg, 'Structural impediments', p. 903.

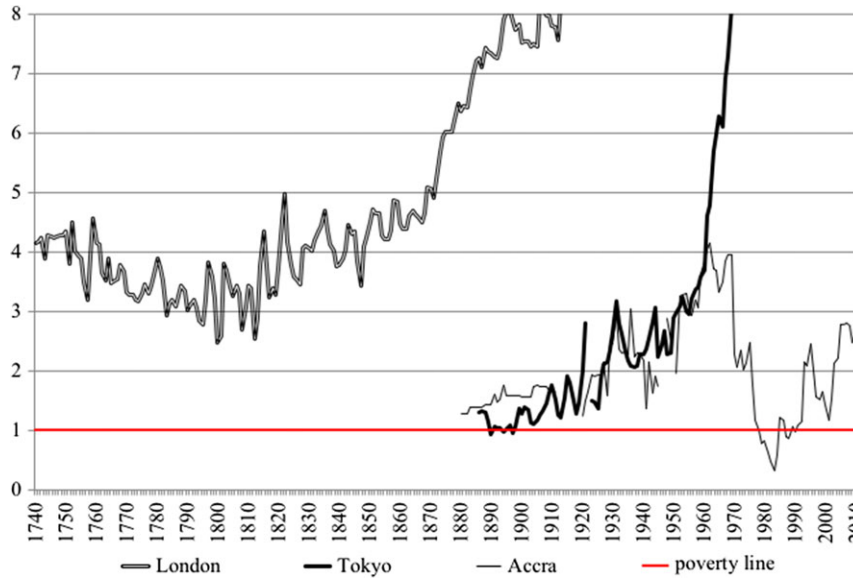

Figure 2 Welfare ratios in London, Tokyo and Accra, 1740–2010
Sources: Series for London taken from Allen et al., 'Wages, prices and living standards'. For the Japanese series see figure 1. The Ghanaian series for the colonial era from Frankema and van Waijenburg, 'Structural impediments', and for the post-colonial period from the *Quarterly Digest of Statistics*, and the *International Labour Organization's Labour Statistics Database*. See **Appendices A.1–A.2** for further details.

Second, despite the radically different paths of economic specialization and structural change, and despite the fact that Ghana's GDP per capita levels were probably only 50–75 percent of those in Japan, real wages levels in Ghana remained largely at par with levels in Japan *for more than eight decades*. A divergence of real wages only occurred from the 1960s onwards, when real wage growth in Tokyo started to accelerate, while real wages in Accra collapsed, falling back to early twentieth century levels. Despite a notable recovery from the disastrous low during the mid-1980s, the purchasing power of Ghanaian unskilled urban wages had not recovered to the peak levels of the 1960s by 2010.

Table 1 illustrates an important driving factor of the different paces at which welfare gains trickled down in Britain, Japan and Ghana. In 1911, the population estimate for Ghana was about 3.1 million, which translates into a population density of ca. 13 people per km^2 and 26 people per km^2 of agricultural land, including both cropland and pastures. In Japan, the total population in 1911 was estimated at about 50 million, resulting in average densities of 137 people per km^2. Given the mountainous

Table 1 Comparative population densities in Ghana and Japan, 1911

	Population (×1000)	*Total land (km^2)*	*Agricultural land (km^2)*	*Population density*	
				Total land area (people/km^2)	*Agricultural land (people/km^2)*
Ghana	3,079	227,540	117,000	13.5	26.3
UK	45,268	241,930	198,000	187.1	228.6
Japan	50,215	366,700	71,100	136.9	706.3

Sources: Population of Ghana from Ewout Frankema and Morten Jerven, 'Writing history backwards or sideways: Towards a consensus on African population, 1850–2010', *Economic History Review* 67, 4 (2014), pp. 907–931. Population of Japan and UK from Maddison, *Statistics on world population*. Total land surface and agricultural land shares based on the first globally comparable observations from 1961, provided by FAOSTAT, <http://www.fao.org/faostat/en/#data/RL> (1 March 2017).

geography of the island only about 19 percent of the Japanese land surface was suitable for agriculture, implying more than 700 people per km^2 of agricultural land. In Britain too, the pressure on agricultural land was much higher, almost a tenfold of the Ghanaian figure. The dramatic contrast in land-labour ratios is important to understand the different modes of labour market organization as well as the observed trends in real wages.

Where Ghanaian farmers had virtually free access to forest land in the early twentieth century, Japanese farmers could only augment their incomes by raising the productivity of their fixed small plots of land or engaging in non-agricultural activities. Cocoa farmers in southern Ghana used the open land frontier to expand their productive activities in the wake of new profit-horizons.[47] The rapid rise in demand for wage labour outpaced the growth of local labour supply and competitive wages were offered to attract labour migrants from elsewhere to accommodate these shortages. Since labour was the scarce production factor, real wages were under upward pressure and the surpluses of the cocoa boom thus became relatively evenly distributed.

Japan, by contrast, was approaching the limits of its environmental carrying capacity, and deforestation had already led to environmental catastrophes.[48] During the Tokugawa era major reforms of forest and land management were introduced. Japan's high rural population densities formed the basis for sizeable domestic consumer markets, but the process of agricultural intensification also meant that the marginal productivity of new labour force entrants declined. As a result, the rising demand for

47. Hill, *The migrant cocoa-farmers.*
48. See Conrad D. Totman, *Japan: An environmental history* (I.B. Tauris, London, 2014) and *The green archipelago: Forestry in pre-industrial Japan* (University of California Press, Berkeley, CA, 1989).

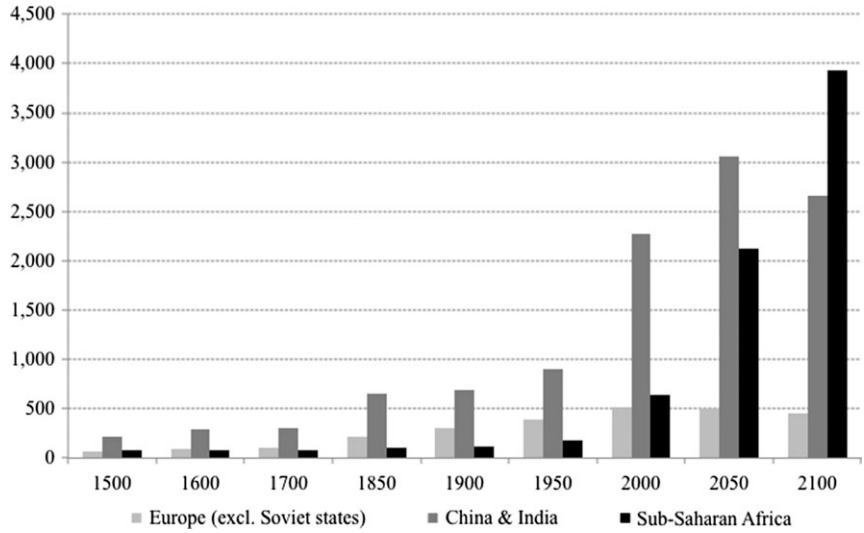

Figure 3 Historical and projected population trends in Sub-Saharan Africa, Europe and Asia, 1500–2100 (in millions)
Sources: Population estimates for Europe, and Asia 1500–1950 were based on Maddison, *Statistics on world population*; African historical population estimates for the period 1500–1950 were based on recent estimations by Patrick Manning, 'African Population. Projections 1850–1960', in K. Ittman, D. Cordell, and G. Maddox (eds), *The demographics of empire: The colonial order and the creation of knowledge* (Ohio University Press, Athens, OH, 2010), pp. 245–275; Frankema and Jerven, 'Writing history backwards or sideways'. All figures for 1950–2100 were based on the medium-fertility scenarios of the United Nations, Department of Economic and Social Affairs, Population Division, 2015 revision.

labour from the emerging manufacturing industries could be accommodated at comparatively low labour costs.

What matters for development efforts today is that current population growth in Ghana, and in other African countries, is closing the door to a path of land-extensive agricultural growth that was pursued for the last two centuries. Arable land is increasingly becoming a scarce production factor, while unskilled labour is now abundantly available and can no longer be absorbed in agriculture. As Figure 3 illustrates, Africa will be the only world region to witness significant demographic growth beyond 2050. Its relative share in the total world population is estimated to climb from about 11 percent in 2000, to about 40 percent at the end of this century. This will propel a dramatic shift in the world's population distribution and will transform a historically low-populated region (c. 5 pp/km^2 in 1950) into one of the most densely populated continents of the world (c. 150 pp/km^2 in 2100). In short, exactly those conditions that helped facilitate relatively high and rapidly increasing (albeit volatile) real wages

for lower income groups in the past are now irreversibly disappearing. With the long history of land-extensive growth now closing, an alternative development path is thus needed to reduce poverty in the twenty-first century. Can labour-intensive export-led industrialization be the new route?

African industrialization in a changing world order

The conditions for an African path of labour-intensive industrialization are certainly better today than they were a century ago. Large concentrations of excess (urban) labour ready to take on factory wage jobs are now widely available. Increasing investments in health and education have led to a more diverse supply of labour skills. Cheap labour, however, may be a necessary condition, but it is certainly not a sufficient condition to kick-start labour-intensive industrialization. There are at least *four* contextual factors that make the initial conditions for Africa today very different than they were for Japan in the late nineteenth century, or the Asian geese that followed Japan later in the twentieth century.

First, Gareth Austin, Kaoru Sugihara and others have argued that Asian economies were able to make inroads into expanding global export markets precisely because of the great surge in global income inequality in the past two centuries.[49] In fact, the authors suggest that labour-intensive industrialization in Asia would have been *impossible* without having been preceded by a capital-intensive path of industrialization in the West. Figure 1 (p. 12) shows that the real wage gap of unskilled workers in London and Tokyo in the closing decades of the nineteenth century was in the order of 8 to 1, and even larger in nominal terms. With this vast labour cost advantage, small and medium sized Japanese firms could compensate for lower productivity levels and other comparative inefficiencies.

Figure 4 gives a sense of comparative wage differentials today, showing the average official minimum wages in Asian and African countries in 2013 (the last year available). Although there are issues of comparability and different applications of minimum wage legislation in wage setting practices that require a cautious interpretation of this graph, the general picture is unambiguous: the current nominal wage gap between emerging Asian economies such as Bangladesh or Vietnam, and even India, and the majority of African countries is not nearly as large as the one that had existed in real and nominal terms between Britain and Japan in the late nineteenth century. And despite increasing wages in China, minimum wages still only exceed the unweighted African average by a factor of 3 to

49. Kaoru Sugihara, 'The second Noel Butlin lecture: Labour-intensive industrialisation in global history', *Australian Economic History Review* 47, 2 (2007), pp. 121–154; Austin and Sugihara, *Labour-intensive industrialization*.

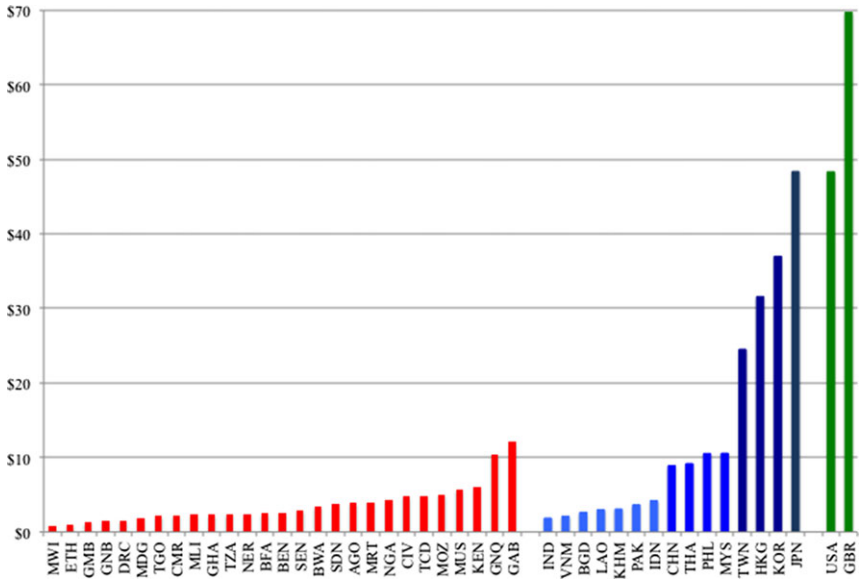

Figure 4 Official minimum wages levels in Asia and Africa, 2013 (US$ per day)
Sources: Wages were derived from ILOSTAT (accessed: 21 March 2017), exchange rates for 31 December of the corresponding year from http://www.xe.com/currencytables/
Notes: All figures in principle refer to 2013 (the most recent year that was available in this dataset), but in case this year was unavailable year closest to 2013 was selected.

1 at this moment. A recent survey of wages paid in African and Chinese manufacturing firms reveals that the labour costs *per unit of output* remain far too high to be competitive.[50] The main take-away from this comparison is that income levels in Asia and/or labour productivity in Africa will have to rise much further before the gap is large enough to give African economies a production cost advantage identical to the one enjoyed by Japan, China or other Asian economies with respect to Western manufacturing companies.

This of course does not mean that there are no possibilities to reap wage costs advantages for investors in Africa. It just means that investments will only pay off if specific locational cost advantages are present too: strategic input monopolies, low transportation costs, culture specific branding, and marketing advantages. Nor are comparative (wage) costs

50. For the concept of so-called relative unit labour costs and the survey, see Janet Ceglowski, Stephen Golub, Aly Mbaye and Varun Prasad, 'Can Africa compete with China in manufacturing? The role of relative unit labour costs' (DPRU Working Paper 2015–04, University of Cape Town and World Bank Group, 2015).

prohibitively high everywhere in Africa, as there are exceptions to the rule. In Ethiopia, for example, where signs of a burgeoning manufacturing sector are by now indisputable, the wage differential with China approaches a factor of 1 to 8, while labour productivity seems to reach comparable levels.[51] The presence of mineral resources, cheap land or other raw materials, which serve as a strategic input into particular sectors, can also draw investment to Africa, as witnessed by growing Chinese engagement. The point, however, is that the wage cost advantage itself is too small to turn Africa into an awakening manufacturing giant.

Second, Japan's labour-intensive development route was facilitated partly by the widespread presence of proto-industrial roots and well-developed rural markets. Rural markets had been stimulated for centuries by dense settlements of rural populations that created a high concentration of consumer demand. The development of markets entailed networks for credit provision, value chain management, standards for assessing product quality and (changing) consumer tastes, and an on-going diversification of wholesale and retail services.

Proto-industrial activities have deep roots in sub-Saharan Africa as well, as testified by indigenous markets for textiles, ironware, ceramics, furniture, weapons, mats, baskets, soap, washing and cooking gear. Industrial modernization is not new to Africa either. During the late colonial period and early independence era, manufacturing output per capita was not impressive, but close to what it is today.[52] But there are two important historical distinctions. First, significantly lower population densities and much sparser concentrations of human settlement in cities limited conditions for labour specialization. Second, Africa has experienced large-scale erosion of these proto-industrial roots. While the scale of imports was probably too low to do great damage before the colonial era, British, Indian, Japanese and Chinese textile imports in the twentieth century have effectively curtailed the evolution of an indigenous textile industry that could supply growing consumer markets. The period of industrial expansion under import-substitution industrialization was short-lived and the gains, with the notable exception of South Africa, evaporated in the crisis of the late twentieth century. Even in periods of structurally declining terms of trade (e.g. 1880–1940), Africa's specialization in primary export commodities further deepened.[53]

Weak proto-industrial foundations are not an impossible barrier to overcome, but it does mean that both the technology and skill gap have grown wider. Whether African states have sufficient capacity to implement

51. Dinh et al., *Light manufacturing in Africa*, pp. 30–31.
52. Austin et al., 'Patterns of manufacturing growth'; Newman et al., *Made in Africa*, pp. 34–37.
53. Frankema et al., 'An economic rationale for the African scramble'.

rigorous industrial policies is a question we leave open here, but we do note that very few African regimes can set their development goals independent from foreign interests. Donor countries and international organizations have a serious handle on African domestic economic policies. It remains therefore questionable whether African countries can pursue powerful industrialization policies that are both effective and inclusive, and at the same time congruent with the interests of foreign donors and investors.

The example of Ethiopia's economic development planning may illustrate this argument, as it comes closest to the type of state-directed development under authoritarian rule that we have seen in many Asian countries not so long ago: industrialization and infrastructural investments stimulate economic growth, but the authoritarian development model can hardly be called inclusive, as it tends to go hand in hand with strong repression of rural communities (whose land is taken), urban workers (who have no right to unionize) and a myriad of civil and political restrictions. It thus remains to be seen if the regime's hard-handed enforcement of its 'development goals' will prove politically sustainable.

Finally, we need to return to the question of African demography. Both Britain and Japan benefitted from what may be called a natural population valve in their expanding empires. Britain imported essential resources from its dependencies in North America (its 'ghost acres'), while at the same time having outlets for emigrants in search of religious freedom and access to virgin farmlands.[54] In fact, as the Industrial Revolution diffused throughout Europe, more than 50 million of the continent's 'tired, poor, and huddled masses' sought to escape poverty by crossing the Atlantic.[55] The Japanese dependencies also served the metropolitan economy in supplying basic necessities and facilitating an outflow of people active in the army, government functions, commercial enterprises and overseas farming.

African societies today, however, do not have similar 'outlets' to mitigate the stresses of growing demographic pressure. In present-day systems of tightly controlled national borders these population valves are no longer present, and it is mainly through risky illegal migration that Africans search for a better life. Nor do African governments seem to have the capacity or political willingness to implement stringent family planning programs in order to reduce fertility rates more quickly. It is highly likely that the so-called demographic dividend that comes with an expansion of the economically active share of the population occurs in a phase of development preceding the creation of new jobs in high productivity industrial

54. On the 'ghost acres' argument, see Pomeranz, *The great divergence*.
55. Timothy Hatton and Jeffrey Williamson, *The age of mass migration: causes and economic impact* (Oxford University Press, New York, NY, 1998).

and service sectors, rather than coinciding with it. And it is precisely in such a context when poverty reduction is likely to be slowed down instead of gaining pace.

Conclusions: opportunities for an African path?

Our assessment of historical development analogies has left us with a rather pessimistic perspective: expectations of accelerated poverty reduction in Africa through labour-intensive export-led growth have little historical foundation. What does this leave us with? Are large parts of Africa doomed to experience a Malthusian disaster driven by rapid population growth in a context of sluggish agrarian development, adverse shocks from climate change, (too) weak productivity growth in non-agricultural sectors, and slum-formation driven by pools of unemployed youth flocking to overcrowded cities?

Africa's development prospects are not that bleak. The demographic boom is also stimulating another more promising transformation process: a rapid concentration of human settlement and increasing human interconnectedness. The intensification and diversification of rural–urban exchange networks are fuelling a process of *domestic market integration* and provide an alternative development path.[56] This transformation was a crucial element in the long-term development processes of all industrialized economies, including Britain and Japan, and especially in the case of China. Domestic market integration is important for the functioning of factor markets (land, labour, capital) and creates opportunities for scale economies in tradable commodities and services that enjoy a natural degree of protection against foreign imports (e.g. perishables, culture-specific products), products with high per unit transportation costs (bottled beer, cement), and services that require local knowledge (e.g. banking, public transportation).

Domestic market integration tends to come with labour productivity gains, with public demand for institutional reforms, and with the adoption and dissemination of new knowledge and technologies. In theory, market integration is at the heart of *Smithian growth*, where scale economies allow for labour specialization and competition enhances efficiency gains. Whether this type of growth will also reduce poverty depends in part on how the process is coordinated and facilitated by governing bodies. Yet, strong domestic economic linkages are a necessary condition for industrial

56. Where only 15 percent of Africans lived in an urban area in 1960, this share had grown to 38 percent in 2015. The World Bank, World Development Indicators, accessed 30 March 2017.

modernization in the longer run and deserve closer attention by the development community.[57]

Until very recently, human settlement patterns in most parts of Africa had remained comparatively thin, rural, and dispersed.[58] Historical studies and contemporary data on the geography of poverty point out that distant hinterlands with the weakest connections to 'core' markets contain larger shares of the poor. Output per capita is higher in urban centres than in the countryside. While poverty rates are declining in both rural and urban areas in the majority of African countries, urban poverty rates remain consistently lower.[59] The greater the so-called 'tyranny of distance', the more limited the opportunities for escaping poverty traps.

It remains an open question in the history of pre-industrial Europe whether urbanization drove agricultural commercialization or vice versa, but regardless of the direction of causation (much of it was a two-way process), the links between town and countryside were key for long-term growth in an era where technological innovations were more of a consequence than a driver of growth. Agricultural intensification occurred in the proximity of urban centres, where consumer demand was concentrated. Expanding handicraft manufacturing required impetus from both the countryside (e.g. labour, raw materials), and from towns and cities (e.g. capital, consumers).[60] This process of market integration went hand in hand with institutional reforms, albeit not necessarily of a growth promoting type.[61] Merchant and craft guilds as well as city councils regulated markets by introducing standards for weight measurement, quality control, contract enforcement, product sales rights, and training facilities for apprentices, but also created opportunities for rent-seeking. Market integration fostered improvements in the development of transport and communication infrastructures. It is this basic, but deeply transformative process of economic change – the scope of which is virtually impossible to quantify – that is now in full swing in Africa.

57. There is a burgeoning literature that looks into the effects of urbanization, but there seems to be less attention for domestic market integration. See for instance Simon Bekker and Göran Therborn (eds), *Capital cities in Africa. Power and powerlessness* (CODESRIA and HSRC Press, Dakar and Cape Town, 2012); Edward Glaeser and Abha Joshi-Ghani. The urban imperative: Towards competitive cities (The World Bank, New Delhi, 2015).
58. Ewout Frankema, 'The biogeographic roots of world inequality: Animals, disease, and human settlement patterns in Africa and the Americas before 1492', *World Development* 70 (2015), pp. 274–285.
59. The World Bank, *World Development Indicators*, accessed 30 March 2017.
60. Peter Kriedte, Hans Medick, and Jürgen Schlumbohm, *Industrialization before industrialization: Rural industry in the genesis of capitalism* (Cambridge University Press, Cambridge, 1981).
61. For positive implications, see Stephan Epstein and Maarten Prak, *Guilds, innovation, and the European economy, 1400–1800* (Cambridge University Press, Cambridge, 2010); for a more pessimistic take on this, see Sheilagh Ogilvie, 'Whatever is, is right? Economic institutions in pre-industrial Europe', *Economic History Review* 60, 4 (2007), pp. 649–84.

The drivers of this process differ in kind and in degree. For one, African demographic growth is occurring at a much faster pace. Additionally, favourable demand conditions in global export markets have greatly augmented the possibilities to import capital-embedded technologies, such as ICT devices and solar panels. The rapidly declining costs of domestic transportation and communication have stimulated market access for producers, traders and consumers alike in a much more dramatic manner than ever seen in the pre-industrial era. Especially as a result of the ICT revolution, millions of Africans have been (digitally) connected to expanding local, regional and national trade networks over the last two decades. The development of these domestic networks affect the daily livelihoods of the rural and urban masses, if not more so than the global markets that feature so prominently in present-day development discourses.

The evolution of rural–urban exchange networks is not a linear historical development, and its intensity varies from one region to the next. Three generalizations seem valid though. First, the current process of urbanization in Africa is stimulating economic growth via enhanced consumer demand, not primarily via supply-side changes in production.[62] Second, agglomeration effects are raising labour productivity by increasing the degree of labour division, resource sharing, access to public goods (health, education) and faster spill-overs of knowledge. Third, this process of domestic market integration strengthens the linkages between the agricultural, industrial and services sectors, without having one sector (i.e. manufacturing) pulling the economy to higher GDP levels.

This development path holds a different promise for poverty eradication in the long run than the 2030 target postulated by the SDGs. The productivity gains are not spectacular and lead to a diverse empirical assessment of economic change.[63] In fact, parts of this growth process may remain invisible in national accounts statistics.[64] At the same time, this type of growth *is* visible in growing urban traffic congestion, in changing consumer behaviour of urban and rural dwellers, and in annual growth rates of energy and beer consumption. It is also visible in expanding facilities serving locally produced or manufactured food and beverages, in growing demand for locally produced movies and soap series (e.g. Nollywood), in home-based sweatshops and ever expanding open-air

62. For the distinction between 'production cities' and 'consumption cities', see Douglass Gollin, Remi Jedwab and Dietrich Vollrath, 'Urbanization with and without industrialization', *Journal of Economic Growth* 21, 1 (2016), pp. 35–70.
63. For the variegated effects on agricultural intensification see Hans Binswanger-Mkhize and Sara Savastano, 'Agricultural intensification: The status in six African countries', *Food Policy* 67 (2017), pp. 26–40.
64. Morten Jerven, *Poor numbers: How we are misled by African development statistics and what to do about it* (Cornell University Press, Ithaca, NY, 2013)

markets. To be sure, the fact that domestic networks of exchange are widening and deepening does not mean that people benefit equally. The dissolution of physical distance is a necessary, but not a sufficient condition for an escape from poverty. There is evidence that the absolute number of urban poor is growing, while at the same time poverty in secondary towns in the countryside is coming down.[65]

Knowing that population growth and urbanization are inevitable processes does not absolve African governments from playing a pro-active role though. On the contrary, the associated policy challenges are numerous and large, but let us list a few here. First, domestic market integration can only mature in a context of macro-economic stability that enhances investor and consumer confidence. Second, it has to be underpinned by on-going institutional improvements in property rights regimes, bureaucratic procedures, and the support of credit facilities and financial services. Third, targeted programs to stimulate technology transfers and improved agricultural productivity can stimulate the virtuous cycle, while cautious and targeted infant industry protection can help to replace imports with local manufactures. Fourth, creating a basic form of social security for the extreme poor will help to alleviate poverty and reduce fertility rates. And last but not least, there are important political choices to be made about how to reform and enforce fiscal systems to raise tax revenues on domestic transactions, and how to allocate public resources.

If we thus consider the second question we posed in the introduction, whether it is possible to jump straight from a path of land-extensive agricultural export-led growth to a path of labour-intensive export-led industrialization, a historically informed answer is that this depends to a large extent on the market linkages and conditions in the domestic economy. Historical processes of domestic market integration take time and tend to reduce poverty at a gradual if not glacial pace.

65. Luc Christiaensen and Yasuyuki Todo, 'Poverty reduction during the rural–urban transformation – The role of the missing middle', *World Development* 63 (2014), pp. 43–58.