

## Special Feature B

# Old, New And Future Globalisation: Understanding The Changes From A Broader Perspective

by Richard Baldwin<sup>1</sup>

## Introduction

This year is the 200th anniversary of the publication of David Ricardo's paradigm-setting work, *On the Principles of Political Economy and Taxation*. Since then, globalisation has generally been viewed as driven by the gradual lowering of natural and man-made trade costs. And this for good reason—falling trade costs were indeed what drove globalisation for the 175 years following Ricardo's seminal work.

This went on for so long that many observers came to view it as immutable. Former US President Bill Clinton, for example, called globalisation “the economic equivalent of a force of nature, like wind or water”. But this pervasive view of globalisation is getting in the way of understanding 21st century globalisation.

## Mental Models Matter

We do not see the world around us in all its glorious detail. The world is too complex for that. We use what Nobel Prize-winning economist Douglass North calls ‘mental models’. These help us boil down reality to something we can get our minds around.

The problem, as physicist Stephen Hawking noted, is that: “When such a model is successful at explaining events, we tend to attribute to it, and to the elements and concepts that constitute it, the

The mainstream view of globalisation is that it should be viewed as a single process driven forward by falling trade costs. This is a serious mistake. Globalisation should be viewed as two processes, not one. The central assertion of my recent book, *The Great Convergence: Information Technology and the New Globalisation*, is that revolutionary changes in communication technology fundamentally changed globalisation around 1990. The book proposes a broader perspective on globalisation that helps us understand how and why 21st century globalisation is impacting economies in such a different way than it did in the 19th and 20th centuries. The fact that most economists and many governments are using the 20th century view of globalisation is really a problem.

quality of reality or absolute truth.” Problems arise when the shared mental model is wrong or incomplete. This is what happened with globalisation.

Globalisation first took off in the early 1800s. While all parts of the planet were linked by trade flows since the 15th century, trade was very much the ‘tail’ to the national economy’s ‘dog’. But from about 1820, the tail started to wag the dog. Prices of traded goods inside, say England, were largely

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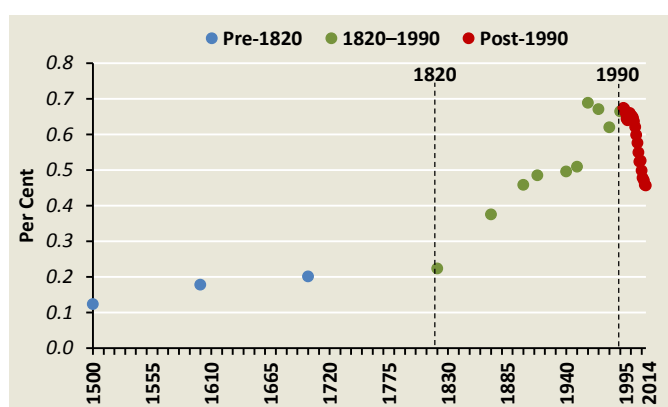
dictated by events abroad. This form of globalisation, which I call the ‘old globalisation’, started when steam power and global peace lowered the costs of moving goods.

Globalisation made a second leap in the late 20th century when information and communications technology (ICT) radically lowered the cost of moving ideas. As Chart 1 shows, these two leaps had dramatically different effects on the world’s economic geography. Curiously, the G7 countries’ share loss of world GDP since 1990 showed up as share gains in very few nations: only 10 nations

saw their share of world manufacturing rise by more than a half of a percentage point. Even among these big share gainers, the expansions were very uneven; China alone picked up twice as much as the others combined. The rest of the world saw little change.

The curiosity lies in the fact that the effect was so concentrated. Why should the impact of globalisation be so narrow geographically when cheap transportation and communication were so broadly available?

**Chart 1**  
**G7 Share of World GDP**



Source: World Bank Databank, the Maddison Project, available at <http://www.ggdc.net/maddison/maddison-project/home.htm>, and author’s calculations.

## Buzzwords In Lieu Of Analysis

These changes were widely observed but were difficult to explain with the conventional view of globalisation driven by falling trade costs. This led many economists to twist the facts to fit the theory rather than the theory to fit the facts (to paraphrase Sherlock Holmes). When the twisting failed to alter the facts, buzzwords came to the rescue. Analysts and institutions developed buzzwords that allowed them to make it seem that the old model was consistent with the new facts.

This brings to mind the ancient Indian parable about the six blind men and the elephant.

*An ancient King, the story goes, had a son who asked why people quarrel so. To show rather than tell, he arranged for six men who were*

*blind from birth to experience an elephant for the first time. Each approached the beast from a different direction and spent a few minutes finding out what an elephant really was. They were then convened to discuss the true nature of elephants.*

*The first declared elephants to be rather like a spear: hard, long and pointed. The second took issue with the first, saying that elephants had nothing to do with spears; they were more like walls. The third declared them both idiots since he had, with his own hands, felt an elephant and it was very rope-like. Each knew that his conception was right while all the others were wrong; quarrelling ensued.*

Globalisation was already old-hat in the 1980s, but something had changed so a number of scholars called it ‘hyper-globalisation’, which must be something like globalisation—only more so. Others, who noticed a correlation between foreign direct investment (FDI) and the radical shift in manufacturing, viewed the changes as being all about foreign investment. People started talking about trade and investment instead of just trade. But FDI had flourished since the 1960s, and indeed was quite important during the Industrial Revolution. Tacking ‘and investment’ onto discussions of globalisation is not analysis and does not explain what changed around 1990.

Other analysts noted the roaring success of rapidly-industrialising developing countries, and a handful of other developing nations whose fortunes rose with the flood of commodity demand. Rather than develop an idea of why so few grew so fast, the moniker ‘emerging markets’

was developed to stretch traditional thinking to fit the new facts. This phrase helped many feel comfortable with the traditional mindset. The phrase is so evocative and action-oriented that it almost makes you feel that you understand why they emerged.

The ‘Washington Consensus’ and the ‘triumph of market economics’ used the success of a handful of developing nations as validation of policy changes applied to most. Perhaps the most obvious substitution of buzzwords for analysis was the World Bank publication that described the recent phase of globalisation’s impact on East Asia as the ‘East Asian Miracle’. By definition, a miracle is something wonderful but inexplicable.

So what is the elephant? Why is globalisation’s impact so shockingly different? Answering these questions requires a broader view of globalisation.

## A Broader View Of Globalisation

Globalisation has been driven by reductions in the costs of moving goods, ideas and people. Understanding the evolving nature of globalisation requires clear distinctions among these three. Since the early 19th century, all three ‘separation’ costs have fallen, but not all at once. Trade costs fell radically for a century and a half before communication costs did. Face-to-face interactions remain very costly even today.

Thinking about how this sequence of cost reductions shaped globalisation is facilitated by a new thought framework—the Three Cascading-Constraints view of globalisation. The framework is best explained by lacing it on to the back of a quick trot across two centuries of globalisation history.

When transportation involved wind power by sea and animal power by land, few items could be profitably shipped over anything but the shortest distances. Apart from elite goods and essential raw materials, most things that people consumed were made within walking distance of their homes. Production and consumption, in other words, were bundled together spatially due to the high cost of moving goods. (Figure 1, Top panel) Of course, princes, priests and pirates could enjoy

goods made far away—and history books tend to dwell on these vivid characters—but most people lived in villages and for them, consumption meant locally-made food, shelter and clothing. To put it differently, the cost of moving goods, people and ideas each formed a ‘glue’, or constraint, which bound together the production and consumption of goods.

### Globalisation’s First Acceleration

The cost of moving goods fell first. (Figure 1, Middle panel) Starting from the early 19th century, transport technologies improved in a process that fostered, and was fostered by, the Industrial Revolution. With easier international shipping, more people bought faraway goods.

The cost of moving ideas and people fell much less and this unbalanced reduction in ‘separation costs’ had monumental effects. As markets expanded globally, industry clustered locally. Today’s developed nations (the North) industrialised while today’s developing nations (the South) de-industrialised.

Northern industrialisation triggered Northern innovation which stimulated Northern growth. Since ideas were costly to move, Northern innovations stayed in the North. This meant that the growth take-offs in today's poor nations were later and slower.

The asymmetric impact of globalisation's first acceleration created the colossal income asymmetries that dominate today's planetary landscape. The core explanation for these vast income differences is the vast imbalance in knowledge-per-worker ratios (along with all that the knowledge differences entail).

### **Globalisation's Second Acceleration**

Globalisation accelerated again from around 1990 when the ICT Revolution radically lowered the cost of moving ideas. Globalisation's *2nd Unbundling*—the long-distance separation of production stages—became feasible when the ICT Revolution made it possible to organise complex activities at distance. Once feasible, the North-South wage gap that arose during the *1st Unbundling* made such offshoring profitable. (Figure 1, Bottom panel)

Just as nature abhors a vacuum, economies abhor imbalances. The easier movement of ideas thus triggered massive, North-to-South flows of know-how and these new knowledge flows reconfigured the world economy. This new-style globalisation—where high-tech moves to low-wage labour—turned *1st Unbundling* trends on their heads. It de-industrialised the North while it industrialised the South. Northern growth slowed as Southern growth accelerated.

Importantly, the knowledge that is moving belongs to G7 firms, so the new North-to-South knowledge movements should not be thought of as some enormous knowledge transfer. G7 firms worked hard to prevent their knowledge from spreading. As a result, the new knowledge flows only really impacted the nations that joined in the global

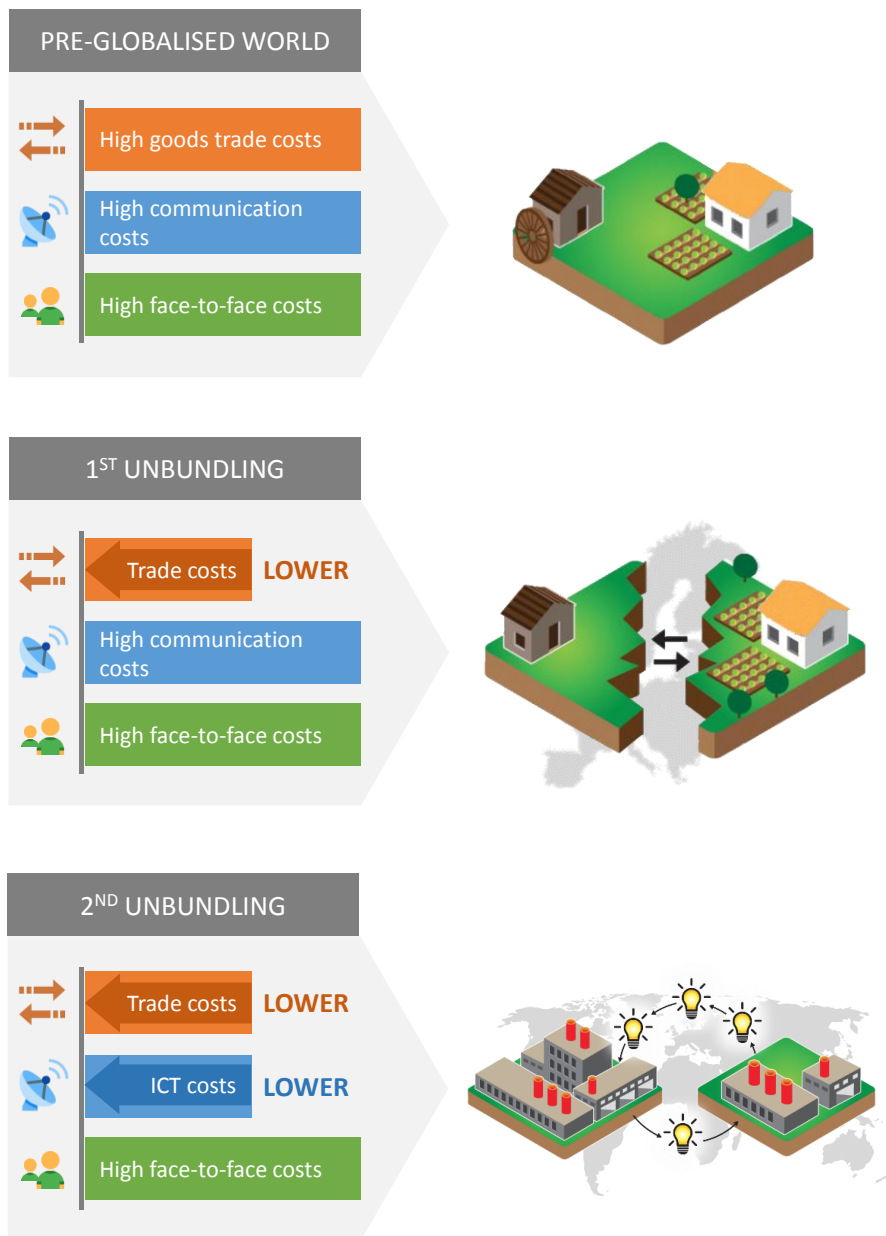
value chain trend. Or to put it differently, 21st century globalisation has de-nationalised comparative advantage. The contours of knowledge are increasingly defined by the geography of global value chains rather than the geography of nations.

This trend was curiously concentrated in a handful of developing nations, with China in the vanguard. My view of globalisation argues that this resulted from the cost of moving people, not goods or ideas. Aeroplane fares have fallen but the time-cost of travel has continued to rise with the salaries of managers and technicians. Since it is still expensive to move people—and international production networks still need people to move among facilities—most of this new-style manufacturing is going on in nations that are close to the G7 industrial powerhouses, especially Germany, Japan and the US. India is an exception, but this is because India has engaged in international production networks primarily via types of services where face-to-face contact is less of an issue.

The *2nd Unbundling* nevertheless indirectly helped many other developing nations. About half of humans live in the developing nations that are rapidly industrialising in this new way. The ensuing income growth triggered a booming demand for raw materials and this, in turn, triggered the 'commodity super-cycle' that sparked growth take-offs in many other developing nations.

This new narrative, which is summarised graphically in Figure 1, plainly admits the possibility of a *3rd Unbundling*, if face-to-face costs plummet.

**Figure 1**  
**The Three Cascading-Constraints View of Globalisation**



**The Third Unbundling?**

I believe that we are entering a new phase of globalisation—one that will affect the service sector far more than the manufacturing or agricultural sectors.

Most Americans and Europeans are today shielded from the sharp end of globalisation and automation for the simple reason that their jobs involve doing things, not making things. If you

make things that can be imported and exported, or your job involves repetitive manual tasks, you are inevitably competing with China abroad and robots at home. Most professional, white-collar and service sector job-holders have not faced such competition yet.

The service sector was shielded from globalisation since most services require face-to-face contact. Automation also left the service sector largely untouched since computers could not think.

Jobs that involved any manner of thinking—be it nuclear physics, arranging flowers, or anything in between—could not really be automated. But “the times they are a’changing”. And at a breakneck pace.

The face-to-face and thinking shields are buckling. The *3rd Unbundling*—the globalisation that is unfolding before our eyes—is all about information—processing it and transmitting it. The globalisation most of us think about concerns goods, physical things made in one nation and sold in another. The next wave concerns data.

## Upheaval In The Developed Markets?

If I am right, globalisation and automation are about to get up-close-and-personal for hundreds of millions of Americans and Europeans who do not work in factories. The technology that allows us to gather, transmit, store, and process digital information is growing explosively and this is creating a new type of globalisation that is virtual, and a new type of robot that can think.

‘Virtual presence’ technology and instant machine translation will enable talented foreigners sitting abroad to provide services in rich-nation offices and workspaces. It will be almost as if these remote workers were actually there and speaking the same language. Call it ‘tele-migration’ or international wage arbitrage. The same digital laws mean that a form of AI known as ‘machine learning’ is teaching computers to automate tasks involving experience-based pattern recognition—tasks that are common in professional, white-collar and service jobs.

## The Great Upheaval, Neo-Luddite Backlash

This AI and RI revolution promises a brilliant future. Handled correctly, we could all be earning a decent living in a fairer, more humane society. But promises can be broken. The danger lies in what might come to be called the Neo-Luddite backlash.

Due to its inhuman pace, AI and RI will unhinge the foundations of middle-class prosperity in America and Europe. In today’s job-centric capitalism,

The central truth is that the laws of physics governing goods are not at all like those governing data. Not to put too fine an edge on it, explosive growth of digital technology means that automation is coming to the hundreds of millions of Europeans and Americans in the service sector via artificial intelligence (AI), and globalisation is coming via ‘remote intelligence’ (RI). This is happening faster than most believe.

Importantly, these changes will, I believe, disorder professional and service sector jobs radically faster than globalisation disrupted the manufacturing sector. Traditional globalisation was driven by a straight-line rise in our ability to ship goods. AI and RI are propelled by a very different kind of growth—namely, exponential growth.

This sort of growth just seems unreasonable. But exponential growth is exactly how global robotics (‘globotics’) is advancing. Many people are either unaware of how revolutionary the changes will be, or are living in denial about how fast they will come.

prosperity is based on good, secure jobs and the stable communities that are built on them. The problem is that many of these jobs are in the sectors that AI and RI will disrupt. When millions of lives are disrupted, we may not see a “stay-calm-and-carry-on” reaction. We may see a backlash. If mishandled, this recoil could spin out of control as others have in the past.

The last great upheaval—industrialisation’s rapid and unguided progress—created a world where job losses meant poverty and perhaps starvation for landless workers. While we did eventually learn how to make industrialisation work for the majority, the process was spread over two world wars and the Great Depression. Fascism and Communism were part of the backlash as people embraced populists who promised authority, justice, and economic security—just as they do today.

To avoid such extremes, governments need to ensure that all this seems like a decent development that is fair, equitable and inclusive. This will require governments to protect individual workers, not individual jobs, and help professional and service sector workers adjust to the rapid changes.