Conference Papers

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London Conference on Globalization and World Order

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CHATHAM HOUSE
The Royal Institute of International Affairs

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Foreword

This collection of papers has been prepared as an accompaniment to the London Conference on Globalization and World Order, convened by Chatham House on 3 June 2014 at Lancaster House in St James's, London.

The London Conference aims to foster a comprehensive debate on the systemic risks facing the world as a result of the deepening process of globalization. It draws on Chatham House's extensive international networks and capabilities as one of the world's leading independent institutes on international affairs. The conference brings together senior decision-makers from the policy community, business, civil society and academia to discuss ways to enhance cooperation and to close the divide between governments and other actors engaged in managing the relative shifts in economic and political power across the world.

These papers, written by members of Chatham House's in-house research teams, are designed to help participants in isolating and considering some of these systemic risks, under the following headings:

- Globalization and World Order: 1914 vs 2014
- Globalization: Winners and Losers
- Power and Governance in the Digital Age
- Resource Security and Geopolitics
- What Now? First Steps towards a Rebalanced World

The first paper sets the debate in the context of the world today, including the risks to international order as well as some of the likely mediating forces that will strengthen prospects for peace and security. The other four papers address specific topics and include policy proposals for progress in their respective areas.

The London Conference is conceived as an interactive dialogue between speakers and participants. The aim is not only to discuss the challenges that accompany the rebalancing of world order, but also to explore specific ways in which they can most effectively be met – that is, 'how' and 'by whom'.

This collection of papers and the London Conference itself would not be possible without the generosity and support of our partners. Accenture and Chevron join us as founding partners and have provided us with invaluable support as we launch this new initiative. The institute is also pleased to receive support from Rio Tinto and Bloomberg, and likewise grateful to the UK Foreign and Commonwealth Office for its generosity in allowing us to hold the event in historic Lancaster House.

Robin Niblett
Director

1. Globalization and World Order: 1914 vs 2014

Summary

- The world in 2014 is undergoing a profound rebalancing of economic power and wealth. Not surprisingly, it is witnessing many of the same insecurities as it did 100 years ago. A critical difference from 1914, however, is the nature of today's economic globalization. Foreign investment and global supply chains are interconnecting governments and nations as much as markets.
- The structural vulnerabilities of today's rising powers are another major dissimilarity. For example, China and India have yet to overcome the looming middle-income trap. Existing powers are in turn holding on to much of their economic and political status – not least the United States with its abundant resource endowments.
- Totalitarian or populist ideologies have likewise not emerged as a dominant alternative to the existing order, while international treaties, organizations and alliances that provided much of the infrastructure of international security in the 20th century continue to operate at the start of the 21st.
- The risks to international order are real, however. Rising economic power has reawakened sovereign claims backed by large-scale military build-ups. Nationalism is a potent force around the world. It is also unclear whether the information and communications revolution will diffuse or sharpen the emotional drivers of conflict.
- Building a durable international order for a rebalanced world will not be easy. Western governments need to engage rising powers more as equal partners in institutions such as the International Monetary Fund and International Energy Agency. New regional agreements, such as the Trans-Pacific Partnership and Transatlantic Trade and Investment Partnership, should remain open to other countries willing to sign up to their rules.
- At the same time, Western states must continue investing in their own security if they are to thrive in what is still a highly competitive if increasingly interdependent world.

Introduction

The centenary of the outbreak of the First World War has inevitably emerged as a year to revisit the question of world order.[1] The rise of new powers, China in particular, together with the seeming decline of the world's leading power, the United States, carries echoes of the geopolitical transition that occurred at the outset of the 20th century: Britain beginning its relative decline; China the sick man of Asia; and Germany, Japan and the US on the rise. Whereas Europe was the centre of the First World War with East Asia as a side stage, East Asia is now the focus of concerns about an outbreak of inter-state conflict, as China's leaders seek to regain the country's position as regional hegemon. Europe, however, is still haunted by its past, with President Vladimir Putin seeking to reassert Russian influence westwards, much as Soviet leaders created the Soviet Union after 1918 in the chaos that followed the First World War.

Seen through the lens of hindsight, the world may be entering a period of serious insecurity, but using historical analogies is a risky business. It is not preordained that today's decision-makers will follow a course similar to that of their 20th-century counterparts. And the world in 2014 is very different from that in 1914, 1938 or 1954.

This paper looks first at the difference between the changing balance of economic power in 1914 and 2014. It explores the risks that this change poses to international order, and assesses the structural differences that separate the two eras. In the final section, it offers some thoughts on how leaders and societies can benefit from the lessons of the past in order to manage this period of geopolitical transition.

The changing balance of world power

The world is undergoing a profound rebalancing in terms of the relative weight key countries and regions carry in the global economy. In 2000 the US, Japan and EU accounted respectively for 31%, 14% and 26% of world GDP, while China and the Association of Southeast Asian Nations (ASEAN) and Latin America and the Caribbean accounted for 3.7%, 1.5% and 6.6%. Figures for share of world exports were similar. In contrast, by 2018 the US, Japan and EU will

[1] Margaret MacMillan, '1914 and 2014: Should We be Worried?', and Harold James, 'Cosmos, Chaos: Finance, Power and Conflict', *International Affairs,* January 2014; Richard Evans, 'What can 1914 tell us about 2014? The disturbing parallels between pre-World War I and today', *New Statesman*, January 2014; Niall Ferguson, 'Why Obama must stop history repeating itself', *The Sunday Times*, 23 February 2014.

shrink to 21.6%, 6% and 20% of world GDP, while China, ASEAN and Latin America will grow to 15.3%, 3.3% and 8.3% respectively.[2]

Globalization – the opening of national markets to trade, international capital and foreign investment, and the resultant global flows of technology – has been the engine of this economic rebalancing. Globalization is re-establishing the connection between the size of a country's population and the size of its GDP across large swathes of the world, potentially leading to the recovery by China and India of the relative shares of world economic output that they enjoyed for hundreds of years until the mid-19th century.

Globalization means countries are interconnected to an extent never before experienced. The idea that the globalization of 2014 resembles that of 1914 is misleading. World trade as a percentage of world GDP in 2010, at 27.7%,[3] was indeed similar to its level in 1914, when it stood at 21%. But in 1914 the terms of trade were fundamentally different. Britain, France, the Netherlands and others used their industrial 'first-mover' advantage to create empires and dominate markets, ensuring they remained at the top of the wealth pyramid. Trade and mercantilism went hand in hand.[4] Now, companies from Britain, the US, Japan and elsewhere have invested across the world to create complex global supply chains, taking advantage of wage differentials, proximity to markets and resource considerations to make their operations truly international. The value of sales by US and European subsidiaries in their respective markets is five times greater than the value of transatlantic trade. The drive by Germany and Japan in the first half of the 20th century to create captive markets in their neighbourhoods, in an attempt to match the economic advantages Britain and France enjoyed through their empires, bears no meaning for rising powers such as China, Brazil or India.

In addition, the globalization of the last 30 years has had a dramatic impact on the wealth of individuals in those economies that have opened up to its effects: GDP per capita in China grew from $314 in 1990 to $6,091 in 2012,[5] while in sub-Saharan Africa GDP per capita grew from $627 in 2004 to $1,349 in 2012.[6] Multinational companies from emerging economies are now among the biggest in the world, trading and investing not only with developed economies in the West but, increasingly, also across the South. For example, a quarter of world merchandise exports in 2012 comprised exports among developing countries – so-called 'South-South' trade.[7] And the world's new economic powers are using sovereign wealth funds to invest their countries' recent gains into those regions and sectors that offer the best returns globally. These aspects of 21st-century economic globalization create new opportunities but also new constraints on governments, which need to maintain their international connectivity to continue delivering the rates of economic growth their citizens expect.

Globalization is a brutal process. Societies accustomed to being at the top of the pyramid are being forced to make harsh structural adjustments.

Two other related factors reveal the dissimilarity between 2014 and 1914: the vulnerability of today's rising powers, which must overcome the middle-income trap if they are to convert industrialization into sustainable welfare domestically and influence internationally; and the seeming resilience of existing powers, such as the US and Germany, where both corporate and social organization (as well as abundant resource endowments in the US case) appear to make up for apparent weaknesses in domestic governance.

Risks to international order

Does this global hyper-interdependence of countries and societies mean the end of large-scale conflict of the sort the world witnessed 100 years ago and 60 years ago? Globalization is a brutal process. Societies accustomed to being at the top of the pyramid are being forced to make harsh structural adjustments. The longer the delay, the more brutal the adjustment – as southern countries in the EU have discovered. This has led to popular frustration, demands for economic protection and the rise of populist parties and sentiment more broadly in the US, Europe, Japan and Russia.

It does not appear that this adjustment will trigger a new rise of totalitarian ideologies. Despite their frustrations, most European voters continue to focus on which parties will offer the most effective national governance. Emerging powers appear to face the same constraint. China's focus on disciplined if authoritarian economic governance has propelled its growth ahead of that of India. Chile and Brazil have demonstrated the benefits of relatively open markets,

[2] Figures derived from IMF World Economic Outlook database, GDP (current US$).
[3] Ratio of world exports of merchandize and commercial services to world GDP in current US$ values. Figure from WTO report, *Trade Developments in 2012 and Early 2013,* http://www.wto.org/english/res_e/booksp_e/wtr13-1_e.pdf.
[4] Richard Baldwin and Philippe Martin, 'Two Waves of Globalization: Superficial Similarities, Fundamental Differences', NBER Working Paper, January 1999.
[5] Francis Fukuyama, 'The middle class revolution', *Wall Street Journal*, June 2013.
[6] In current US dollars. Figure from WTO data bank, GDP per capita (current US$).
[7] UNCTAD Handbook of Statistics, 2013.

in contrast to Venezuela and Cuba. And whereas Poland's GDP per head has quadrupled in the past 20 years, Ukraine's has barely changed.

Instead, 21st century interdependence creates its own vulnerabilities. First, interdependence to some can mean dependence to others. Japanese leaders highlight the illogic of rising tensions with China by pointing to the extensive investments they have made in China and the growth in bilateral trade. From a Chinese perspective, however, Japan – with its weakening domestic drivers of growth – has made itself dependent on China and potentially open to economic coercion. In a similar vein, President Vladimir Putin hopes that European dependence on Russian oil and gas will outweigh Russia's dependence on the income from its sales of both, allowing Russia to subjugate Ukraine.

Second, the growth being delivered by globalization is awakening the sovereign aspirations of formerly weak powers. Rather than integrating into mutually supportive structures of the sort developed by EU members over the past 55 years, emerging powers continue to prioritize promoting and defending their sovereign rights. This is manifested by the dramatic rise in global military spending, with China, India, Saudi Arabia and Russia spending an average extra US$22.5 billion over the past five years.[8]

The capacity to enforce or repel claims to contested resource-rich territories remains a core driver of military spending for governments concerned that they will not be able to sustain the economic growth their citizens expect without reliable access to natural resources at competitive prices. But pursuit of sovereign claims can also be promoted by powerful interest groups clustered around newly empowered military leaderships, growing indigenous defence sectors and supportive politicians.

Third, countries in relative decline, often as a result of their detachment from globalization, have less to lose from challenging the emerging order. From Russia and Pakistan to North Korea, decision-makers can interpret their position as 'outsiders' as giving them more rather than less strategic flexibility to pursue their own national interests relative to their neighbours.

Fourth, the persistent pull of history and emotion sharpens the risk of conflict. Nationalism remains a powerful force in international affairs. As countries regain influence or sense relative decline, unresolved aspects of national identity can surface. The propaganda used by Russian leaders over Crimea and Ukraine bears witness to the political power of revisionist narratives. The same dynamic is at play in East Asia, where Chinese leaders are using rising economic and military power to assert their claims to islands in the South and East China Seas that they believe were unjustly taken from them in the first half of the 20th century.

Managing risk and opportunity

Given the ongoing struggle between the integrating forces of 21st-century globalization and the persistent risks of 20th-century competition and conflict, what are some of the mediating forces that will influence future prospects for peace and security?

First, the world today remains connected by an institutional infrastructure that has no historical parallels. Institutions created in the 1940s and 1950s as an antidote to world-scale inter-state violence have demonstrated a remarkable resilience. The UN's Security Council, General Assembly and agencies from the International Court of Justice to the Human Rights Council expose the infractions of member states even if they are rarely able to sanction them effectively. Although the UN Security Council has done little to end some of the world's most persistent unresolved conflicts, it appears to serve as a brake on their potential escalation to outright conflict among its permanent members.

Second, the fact that we now live in a nuclear-armed world continues to serve as a restraint on major conflict, although it has not prevented intra-state conflict. To date, the Nuclear Non-Proliferation Treaty (NPT) and the International Atomic Energy Agency have been able to hold back the broader military nuclearization of the world that some had feared in the 1960s and 1970s, although there is a serious risk of nuclear break-outs in the Middle East and East Asia.

Third, Western nations have not forgotten the importance of deterrence and alliances. The US has sustained its military presence and treaty commitments from Europe to the Middle East and East Asia for 65 years. NATO still exists, despite predictions that it would collapse after the end of the Cold War and despite ambivalence among its members about its strategic purpose and the need to invest in strengthening its capabilities. And the European Union has continued to deepen the connections between its members, even after the global financial crisis. These institutions have provided an element of stability in international relations that was largely absent before the Second World War.

Other countries have sought to imitate aspects of the European model to gain similar economic and political benefits: ASEAN, the African Union, the Economic

[8] Military expenditure in constant (2011) US$ in 2008 and 2012, from SIPRI Military Expenditures Database. However, between 2008 and 2012, military expenditure as a share of GDP *decreased* in India (from 2.6% to 2.5%), *stagnated* in China (at 2.0%) and *increased* in Russia (from 3.7% to 4.4%) and Saudi Arabia (from 8.0% to 8.9%).

Community of West African States (ECOWAS), the Pacific Alliance and the Gulf Cooperation Council are unlikely ever to achieve the EU's level of integration, but they have each made smaller countries feel safer and imposed constraints upon the actions of larger ones, inside or outside these regional groupings.

Today, the creation of the G20 reflects a gradual rebalancing of world institutions away from Western dominance via the G7, while providing a new avenue for the G7 to promote its perspectives at a global level.

A fourth phenomenon that mitigates the rise of sovereign competition has been the emergence of politically influential non-state actors. Companies and individuals whose wealth is connected to global supply chains have interests that are increasingly detached from notions of 'national interest' (making targeted sanctions an important tool of 21st-century diplomacy). Cross-border civil society groups also challenge the interests of national governments or serve as partners in the delivery of international public goods (humanitarian crisis response and internet governance, for example) and local welfare (such as the provision of health care and environmental improvement).

On the other hand, while interdependent societies offer opportunities for wealth creation and broader prosperity, they are also more vulnerable to disruption from perennial risks such as natural disasters and pandemics, and new ones such as terrorist attacks, cyber warfare and climate change.

The big unresolved question for governments that need to cooperate in confronting these challenges is whether the increasing interconnectivity of individuals through the web and social media and the concurrent 'global political awakening' will act as an accelerant or a diffuser of nationalist sentiment in the 21st century.

Conclusions

The world order during the 21st century will be determined by whether governments and societies can find together a productive balance between the simultaneous increase in levels of state competition and transnational interdependence. They will have to do so without formal structures of global governance or the hegemonic leadership that the US provided across much of the Western world in the second half of the 20th century.

It will be important, therefore, to engage rising powers inside existing international institutions as equal partners. Some institutions and agreements, such as the UN Security Council and Non-Proliferation Treaty, are probably unreformable, given the vested interests of their privileged members. But others, such as the International Energy Agency, the World Bank and the IMF, can be reformed, with the G20 often playing an enabling role.

Western governments need to invest in the resources necessary to deter aggression and manage security threats, just as rising powers are doing.

In addition, groups of countries that share interests and are willing to act together can contribute to a thickening of the rules for international economic and, ultimately, political order. This is the driving philosophy behind the negotiation of the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership. But their contribution to international order will depend on their openness to other countries joining in the future.

Nevertheless, given the changing balance of political power across the world and the risks this poses to international order, Western governments need to invest in the resources necessary to deter aggression and manage security threats, just as rising powers are doing. With confidence in their capabilities for mutual deterrence Western and emerging powers might find it easier to work together to confront global security threats that pose risks to the security and prosperity of all nations. Anti-piracy operations and joint responses to natural disasters have already offered some positive examples, but more ambitious international cooperation could be explored, from the governance of space to fighting organized crime, international terrorism and pandemics to promoting energy efficiency and collaborative standards for renewable energy.

The lessons of history must not be forgotten, but nor should they blind nations to the growing benefits from international cooperation in a more interdependent world.

2. Globalization: Winners and Losers

Summary

- The past two decades have seen a huge increase in global trade and wealth, a changing distribution of global GDP and a redrawing of the industrial landscape. China's rise is the defining economic feature of the age.
- It is difficult to measure the effects of globalization on inequality. In terms of individual incomes, the biggest 'winners' from globalization are the very wealthy – the 1% – and the emerging global middle class, based mainly in emerging economies.
- The biggest losers are the very poor and those between the 75% and the 90% percentile – spread between former communist states, Latin America and the poor in advanced economies – whose real incomes have not increased at all.
- Globalization poses challenges to traditional forms of political order. There is tension between global markets and the nation-states that are the regulators and legitimate political authorities over those markets.

Introduction

Few concepts in international affairs are used as frequently or as loosely as globalization. Martin Wolf has called it a 'hideous term of obscure meaning' and its use, perhaps because of its ambiguity, seems to be in decline.[9] Despite that, the term still serves as shorthand for a number of long-term trends in economics, technology and culture that have enhanced the interconnections between people, politics and production and reduced the importance of the boundaries between them.

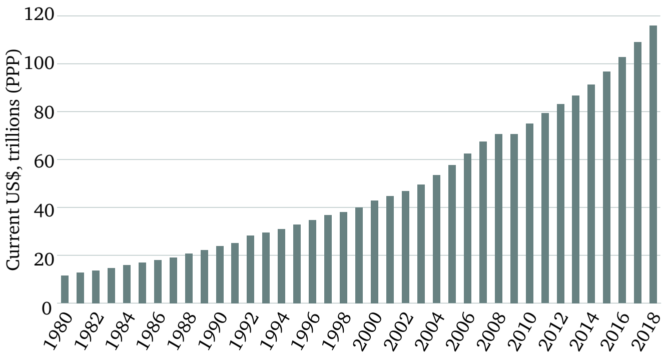
Global economic integration has had profound and varied effects on the economies of developed and developing states. Some of these effects are welcomed and some are resisted. This is perhaps the inevitable response to the contradictions created by the integrating global economy: greater overall wealth, but often greater societal inequality; economic growth but environmental degradation; cheaper products, but a race to the bottom on wages in certain sectors; a bulging middle class alongside stubborn poverty; a strengthening of the political legitimacy of authoritarian governments that use globalization to deliver higher rates of economic growth alongside the undermining of democracy in parts of the world where squeezed incomes are linked to a loss of national sovereignty.

This paper will briefly discuss the positive and negative effects of globalization. It will conclude with a synopsis of some of the issues that may shape the character of globalization over the coming decade.

Some characteristics of global economic integration

- *The past two decades have seen a huge increase in global wealth*. For example, gross world product has more than trebled between 1988 and 2008.

Figure 2.1: Gross world product 1980–2018



Source: IMF, 2014.
(2014-18 estimated)

- *Emerging economies account for an ever-growing share of world output.* The growth of emerging economies, in particular China and India, is radically changing the distribution of global economic power. By some projections the OECD countries may constitute a minority of the world economy by 2030.[10]
- *China's rise is the defining economic feature of the age.* China's economy grew from 5% of global GDP in 1978 to 17% in 2011,[11] and is set to become the world's largest at some point within the next 15 years.[12]

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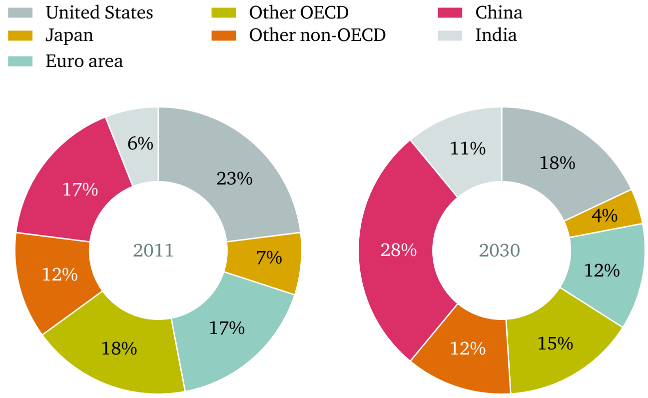
[9] Martin Wolf, *Why Globalization Works* (New Haven: Yale University Press, 2004), p. 13.
[10] OECD, *Looking to 2060: Long-term Global Growth Prospects* (Paris: OECD, 2012).
[11] Angus Maddison, 'Statistics on World Population, GDP and Per Capita GDP, 1–2008 AD', Groningen Growth and Development Centre, 2008.
[12] Estimates vary on the date at which China will overtake the US to become the world's largest economy. The Centre for Economics and Business Research estimates 2028. The US National Intelligence Council has forecast 2030 at the latest. *The Economist* has predicted 2019.

Figure 2.2: Projected change in share of global GDP, 2011–30



Source: OECD, 2012.

- *There has been a huge rise in global trade*. Despite the financial crisis, there has been an almost 50% increase in traded resources in the last decade. Rising prices for resources mean that the value of these trades has more than trebled in the same period.[13]
- *The industrial landscape has been redrawn*. Economic integration has accelerated changes in economic activity in the West. The service sector has grown to almost 80% of several major Western economies while industry has declined as a share of the economy across the OECD. In the UK, industry has declined from about half of the economy in the 1950s to about a fifth today.[14] Manufacturing accounts for about a tenth.[15]
- *Patterns of trade are changing*. 30% of global trade in resources, is now 'South-South', overtaking in 2010 the volume flowing South-North. Meanwhile, South-South trade in merchandise is almost on a par with North-North trade.[16] Major industrialized economies such as Australia, the United States and Canada are exporting large quantities of raw materials to emerging economies.
- *Supply chains are becoming global*. Trade in intermediate products is estimated to constitute 56% of total trade in goods and 73% of total trade in services. Most of what is traded is used to produce other things, rather than for consumption.[17]

Globalization and inequality

Advocates of globalization say it produces a rising economic tide that lifts all boats, and that consumers have benefited from falling prices. Critics say it increases inequality and serves the wealthiest at the expense of the poor.

It is difficult to measure inequality internationally or to determine the extent to which economic globalization is responsible. An IMF study suggested that clear recent rises in inequality within states were driven more by changes in technology than by global economic integration. It also concluded that different aspects of economic integration have contradictory effects on inequality: trade liberalization tends to equalize, while financial globalization and foreign direct investment (FDI) flows in particular tend to have the opposite effect. The effects also varied between countries.[18]

In a recent study on global inequality, the World Bank showed that different measures of inequality tend to lead to different conclusions about globalization's distributional effects:

- Inequality between states measured by the Gini coefficient of average incomes increased steadily between 1980 and the 2000s before beginning to decline;
- Inequality between states adjusted for population size shows a marked decline in inequality, fuelled predominantly by high growth in populous China and India; and
- Global inequality based on individual incomes rather than state averages is persistently high, but appears to be on a slightly downward trend, decreasing by 1.4 Gini points between 2002 and 2008.[19]

Efforts to measure the effects of the last two decades of global economic integration on global income distribution show the remarkably uneven effects of globalization:

- The biggest 'winners' were the very wealthy – the top 1% of the global income distribution – and the middle classes of emerging economies; the 50th and 60th percentile of global income distribution saw the biggest rise of all (almost 80%).

[13] Giovanni Grevi, Daniel Keohane, Bernice Lee and Patricia Lewis, *Empowering Europe's Future: Governance, Power and Options for the EU in a Changing World* (Brussels: Chatham House/FRIDE, 2013), p. 25.
[14] Bart van Ark, *Sectoral Growth Accounting and Structural Change in Post-war Europe*, Research Memorandum GD-23,(December 1995); World Bank, World Development Indicators, 2014.
[15] 'Manufacturing', House of Commons Library, Standard Note SN/EP/1942, January 2014.
[16] Grevi et al., *Empowering Europe's Future*.
[17] S. Miroudot, R. Lanz and A. Ragoussis (2009), '*Trade in Intermediate Goods and Services*', OECD Trade Policy Papers, No. 93, OECD Publishing.
[18] *World Economic Outlook: Globalization and Inequality* (Washington, DC: International Monetary Fund, October 2007), Chapter 4.
[19] Branko Milanovic, 'Global Income Inequality by the Numbers: In History and Now – an Overview', Policy Research Working Paper No. WPS 6259 (Washington DC: World Bank, 2012).

- The biggest losers were the very poor (bottom 5%) and those between the 75% and the 90% percentile – spread between former communist states, Latin America and the poor in advanced economies, whose real incomes did not increase at all, and in some cases actually shrank.
- However, with the exception of these two groups, there was a general increase in the real incomes of the majority of the world's population, including the poorest third of the world's population (above the bottom 5%).[20]

Figure 2.3: Change in real income between 1988 and 2008 at various percentiles of global income distribution (in 2005 international dollars)

Source: World Bank, 2012.

In short, although globalization has benefited most individual incomes, the effects are uneven and many people have not benefited at all. This indicates a number of challenges:

- Support for aspects of globalization that reduce inequality might be undermined by perceptions that the process is unfair and disruptive;
- Growth of the services sector in developed economies in particular and, eventually, in the East and South, may lead to a structural divergence between the incomes of people in the tradeable and non-tradeable sectors. For example, the incomes of hairdressers or carpenters can be depressed by their limited pools of customers and the arrival of immigrants who will accept lower wages for these jobs. Meanwhile, the salaries of workers in the financial and legal sectors can benefit from high barriers to entry and global pools of customers;
- Improving education will be a key factor in enabling citizens to adjust to the un-equalizing aspects of global economic integration.
- Managing these uneven effects is difficult, partly because of the divide between national politics and international economics.

Globalization and the nation-state

A core feature of global economic integration is the tension between transnational economic forces and global markets, and the nation-states that are the principal regulators and legitimate political authorities over those markets. Critics argue that global economic forces constrain the ability of governments to tax, spend, regulate or run deficits as they would choose. Capital mobility and competition on tax rates pit countries against one another in a way that benefits companies more than individuals; the liberal goal to reduce barriers to trade and capital flows undermines the ability of states to regulate what happens on their own territory. Instead, interest groups capture the process of globalization.

The nation-state is hostage to the fluctuation of international markets and the constraints of international lenders, and exposed to the effects of environmental degradation and global warming.

Defenders of globalization say this tension is exaggerated. The state remains essential as the deliverer of the 'public goods' – such as security, the rule of law and social protection for the disadvantaged – that allow the benefits of global economic integration to be realized. Some have even argued that the constraints on states and the narrowing of pursuable fiscal and monetary policies serve the interests of citizens.[21] The technocrats' response is that well-run states have nothing to fear.

But the tension is real. Descriptions of the world as 'borderless' or 'flat' by so-called 'hyper-globalists'[22] may capture aspects of international economic integration, but they do not change the continuing fact that the state is the basic bloc of political organization. States function on the basis that their governments can control what happens within their borders. However, the nation-state is hostage to the fluctuation of international markets and the constraints of international lenders, and exposed

[20] Ibid.
[21] Wolf, *Why Globalization Works*, p. 276.
[22] Thomas Friedman, *The World is Flat: A Brief History of the Twenty-First Century* (New York: Farrar, Straus and Giroux, 2005); Keniche Ohmae, *The Next Global Stage: Challenges and Opportunities in Our Borderless World* (Philadelphia: Wharton School Publishing, 2005).

to the effects of environmental degradation and global warming. What is the basis of self-government if transnational forces cannot be controlled or regulated according to the preferences of citizens?

These issues pose a particular challenge for democratic governments, which can be held accountable for forces beyond their control. In contrast, many international institutions – including the IMF, WTO and World Bank or multinational corporations – have influence without democratic responsibility, control without accountability. The EU – the world's most advanced experiment in regional governance – has the most democratically developed institutions of any supranational body, yet suffers from persistent criticisms over its lack of democratic legitimacy.

There are challenges for non-democratic states too. In many emerging economies, rapid economic growth has legitimized governments. In China, for example, successful economic stewardship rather than a democratic mandate is the foundation of the Communist Party's legitimacy. But transnational forces also challenge authoritarian governments.

Demographics may accelerate the challenge of globalization to the nation-state. Social contracts in democratic states rest in part upon solidarity expressed through welfare provisions and redistributive taxation. Falling worker–dependency ratios, rising life expectancy and declining fertility rates may change the relationship between state and citizen, as states with dwindling resources struggle to provide for an ageing population.

Many states in East Asia and Eastern Europe are reaching the point where they no longer benefit from the demographic dividend and their age profile will inhibit growth. Rapidly ageing populations may hold back transitions in middle-income countries. Antipathy towards immigration may prevent demographic relief.

These challenges to the state have implications that may become more pronounced in future.

Policy proposals

The challenge for international policy-makers is to make globalization serve the interests of a clear majority of their citizens, if not all. If globalization continues its inexorable advance, the real challenge may be to create structures that incentivize international cooperation in economic management over competition. There are at least four areas where this will be important:

- **Advancing the global trade agenda**. Well-functioning markets can support prosperity and reduce inequality. Developed and emerging economies will need to work together. In the meantime, bilateral and regional trade agreements can reduce barriers to trade, but they also have distorting effects.[23]
- **Bridging between the national and international**. The tension between transnational forces and national politics does not have an obvious resolution. Mitigation is likely to come through international institutions becoming more representative of global economic changes; and through greater international cooperation in areas where it is currently underdeveloped, for example in the trade in resources. Institutionalized regional blocs may perhaps improve international cooperation.
- **Mitigate the effects of global ageing.** Global economic integration may alleviate some of its own worst effects through increased migration, outsourcing and productivity growth via international divisions of labour.[24] However, this process may be hamstrung politically by citizens putting societal preferences above national economic efficiency.
- **Managing systemic risks**. Growing interdependence has generated wealth but also enhanced global vulnerability to shocks, be they economic, political or natural. For globalization to be resilient, the systems upon which economic integration relies – international transport, open digital communications, well-regulated financial markets, and international law – must be reinforced and safeguarded. This will require greater cooperation between states, based on transparency and mutual responsibility.

[23] United Nations, *World Economic Situation and Prospects* (New York: UN, 2011).
[24] Richard Jackson, Neil Howe and Keisuke Nakashima, *Global Ageing and the Future of Emerging Markets* (Washington, DC: Center for Strategic and International Studies).

3. Power and Governance in the Digital Age

Summary

- Initially, new technologies tend to disrupt the status quo and threaten the establishment's hold on power. As these technologies mature, however, elites eventually learn how to harness them for their own gain. The question is whether the internet will follow this same pattern. The battle for control is currently under way.
- At present, internet governance follows a 'multi-stakeholder model' that involves input from a variety of interest groups. However, splits are emerging between states favouring 'national sovereignty models' (more state control over their populations' access to information) and states wanting to broaden the current multi-stakeholder model.
- Many developing countires have not yet determined which model of internet governance they prefer. Dialogue and debate with and within these countries will be essential if they are to support an open internet that will contribute to economic growth.
- Upholding 'net neutrality' – the principle that all internet traffic should be treated equally – can prevent large-scale corporations from gaining dominance over the internet. This will be vital to preserve innovation and prosperity – helping start-ups and entrepreneurs in poorer communities to compete with these larger companies.

Introduction

> Just as steel can be used to build hospitals or machine guns and nuclear energy can power a city or destroy it, modern information networks and the technologies they support can be harnessed for good or ill.[25]

The internet has already facilitated citizen economies, greater international understanding and democratic uprisings by making communication and the spread of information ubiquitous and economical around the globe. By 2020, 10 times as many devices will be connected to the 'internet of things' than at present, including the industrial internet, driving new levels of economic efficiency. However, the internet has also enabled terrorists to coordinate attacks with greater reach and efficacy, and authoritarian regimes to monitor and crack down on dissidents more effectively. Moreover, critical infrastructure is increasingly at risk from cyberattack, and in the future common household appliances such as refrigerators could potentially be weaponized.

Impact of the digital revolution on government, corporations and political power

Will the digital revolution break the hold of government and established bodies on political power, or are information societies likely to be easier to control? And what do these trends mean for the future of internet governance? In their initial stages, new technologies tend to disrupt the status quo and threaten the established hold on power. The invention of the printing press enabled reformers such as Martin Luther to spread their ideas more rapidly, effectively and affordably than ever before, thus giving impetus to the Reformation and breaking the omnipotence of the Roman Catholic Church. The mechanization of weaving and steel production likewise upended societies, and new technologies have had a significant impact on the conduct of war – and the survival of empires – throughout history.

Online discussions are far more challenging to the political hold on power in authoritarian states than they are in liberal democracies. If people have increased connectivity to the world beyond their borders – as in the case of East Germans, who had access to West German television – then they learn how other people live and think, and what other people have that they lack. Ideas can spread rapidly and people can connect and organize. The Arab uprisings showed how citizen activists made effective use of social media to coordinate, bringing down the governments of Tunisia, Egypt, Libya and Yemen in what have been called 'Twitter Revolutions'.

The equality of opportunity afforded by the internet has also enabled small start-up companies to compete successfully with corporate giants and is already beginning to lessen inequalities between the developed and developing world. New communication and information technologies have – at least at the outset – lowered costs and other barriers to entry, allowing more stakeholders to participate in governance and commerce.

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[25] Speech by then US Secretary of State Hillary Clinton on 'Internet Freedoms' at the Newseum, Washington DC, 21 January 2010. Clinton described 'a new information curtain [that] is descending across much of the world'. See http://www.foreignpolicy.com/articles/2010/01/21/internet_freedom.

As a technology matures, however, the very elites whose existence it initially threatened learn how to harness and control it for their own gain. The cost savings and other benefits generated by digital technologies have created opportunities for all: from workers and nascent companies to governments and big business. Data gathering and mass surveillance by governments and commerce have entered a new era of unimagined opportunities, both for human development and for exploitation.

From the telephone to television,[26] the pattern for new communications technologies has been a progression from the promise of initial openness and innovation to domination by monopolies or cartels. Indeed, conglomerates have already tried to gain control of the internet. Several major internet service providers (ISPs) have suggested that websites and applications should have the option of paying for preferential (faster) delivery of their content. This has led to serious opposition from advocates of 'net neutrality' – the principle that all internet traffic should be treated equally – who fear that this will create a 'tiered' internet. It would also allow ISPs to discriminate against traffic from websites and applications that do not pay, which would make it harder for start-ups and entrepreneurs in poorer communities to compete with big business.

Another concern is the increase in 'tethered applications' that can only be modified by their original developers. These not only have the potential to stifle innovation but are also easier for governments to control.[27] The promise of open access for all has thus far been the aspirational hallmark of the web. Is the internet doomed to evolve into a closed cost-based system, or will innovation and the spread of new, disruptive technology ensure that it remains open, accessible and empowering for all?

The evidence is mixed when it comes to government censorship of the internet.[28] Shutting down connectivity may affect ordinary people who do not know their way around the barriers or are frightened to break the rules, but it will not stop disruptive activists: more likely it will spur them to further action. They will find ways to circumvent these obstacles and become adept at cyber subterfuge, as non-state armed groups have done. For example, during the 2010–11 Arab uprisings, the Egyptian regime shut down the internet for five days at the height of the protests in Tahrir Square, while in Libya Colonel Muammar Gaddafi ordered sites such as Facebook to be blocked. In response, Egyptian protesters used satellite technologies to access the web, and Libyan protesters turned to dating sites to communicate, arranging 'dates' and sharing passionate poems as coded language to coordinate the protests.

However, in other Arab countries the arrest – and alleged killing – of bloggers critical of the regimes has so far been effective in subduing protest. The government of President Bashar al-Assad in Syria is known as a 'tech-savvy foe' whose use of false Facebook login pages to steal the passwords of online dissidents allows it to monitor their activities closely.[29] It thus remains to be seen whether activists or governments will retain the technological advantage.

As regards liberal democratic regimes, the internet has facilitated 'open government' and made a number of political processes more accessible to citizens. Some politicians – such as Carl Bildt, the Swedish foreign minister, and Marietje Schaake, a Dutch member of the European Parliament, have made effective use of online tools such as Twitter to foster greater direct engagement with citizens. The internet has also encouraged participatory mechanisms such as e-petitions. This is likely to increase as younger generations of digital natives reach adulthood. On the more disruptive side of the ledger, this phenomenon is eroding the membership base of traditional political parties, as individuals engage politically issue by issue rather than by supporting multi-year party platforms.

Concerning individual behaviour, people do not suddenly become a new species when they go online: what they do in cyberspace is an extension of what they do in their physical lives. People lie in real life and deceive online. People cheat in real life and swindle online. People bully in real life and torment online. However, on the internet people may feel more anonymous and are thus readier to behave badly, not realizing that the web can also open up new opportunities for law enforcement to identify and punish criminal behaviour – and indeed recent arrests for racist abuse show the power and the pitfalls of social media. Although people may feel more empowered, they can also be more easily manipulated through targeted advertisements and fake identities. Whether it is a force for good or ill, what is clear is that the battle for control of the internet is fully under way.

Current challenges to internet governance

The internet is already fragmented, be it in terms of language, national firewalls or political censorship. And it is at risk of fragmenting further still. The debate over whether the functions of the Internet Corporation for Assigned

[26] Tim Wu, *The Master Switch: The Rise and Fall of Information Empires*, Atlantic Books, 2010.
[27] Jonathan Zittrain, *The Future of the Internet: And How to Stop It*, Penguin Books, 2008.
[28] Ronald Deibert, John Palfrey, Rafal Rohozinski and Jonathan Zittrain (eds), *Access Controlled: The Shaping of Power, Rights, and Rule in Cyberspace*, MIT Press, 2010.
[29] Evgeny Morozov, *The Net Delusion: How Not to Liberate the World*, Penguin Books, 2012.

Names and Numbers (ICANN) should be transferred to the International Telecommunication Union (ITU) is one example of discord. The current internet governance system is a 'multi-stakeholder model' in that it involves input from a variety of interest groups. It evolved organically and, owing to the primal role of the United States in developing the internet, the US retains considerable influence: ICANN, the body that currently manages IP addresses and the domain name system, is a private non-profit corporation that is based in California, is subject to Californian law and operates under a Memorandum of Understanding with the US Department of Commerce.[30]

Although the United States was for many years the country with the highest number of internet users, today almost half are in Asia and most future internet growth is forecast to take place in Africa and South America. There is therefore a need for what we might call a 'broadened multi-stakeholder model' – or a more inclusive model that features participation by an even larger (and ever-growing) number of stakeholders. US President Barack Obama has recently indicated a willingness to cede control over ICANN, but under what conditions this will occur remains to be seen.

The internet is already fragmented, be it in terms of language, national firewalls or political censorship. And it is at risk of fragmenting further still.

The attempt to shift ICANN governance to the ITU, the UN's specialized agency for information and communication technologies in Geneva,[31] has also revealed splits between states favouring 'national sovereignty models' of internet governance and those wanting to broaden the current multi-stakeholder model. The countries that have led the push for the shift to the ITU – notably Russia, China and several states in the Middle East – also tend to be ones that desire more state control over the internet and their populations' access to information. Because the UN is based on the principle of 'one state, one vote', critics of the proposed shift contend that if enough states wanted to curtail internet freedoms in the ITU, it could lead to a 'race to the bottom' – resulting in an internet that reduces access, constrains economic activity and disempowers people throughout the world.[32]

The way forward

Last century, Aldous Huxley recognized that technological progress was ushering in a period of profound societal change, and with outstanding prescience he envisioned two futures. *Brave New World*,[33] published in 1932, set out a post-industrial planet in which a unified World State maintains its hold over the population by promoting a culture of consumerism and hedonism supported through genetically engineered castes. Thirty years later, just before his death, in *Island*,[34] Huxley imagined a completely different world on the island of Pala, where the forces of technology could be harnessed to create an enlightened and open society.

What will the digital revolution mean for the non-fictional world of tomorrow? Shall we see a preponderance of authoritarian regimes? Or shall we witness a growth in democratic societies, where freedom of expression and economic empowerment are allowed to flourish? Much will depend on whether, over the next few years, we can reconcile the diverging attempts to control the soul of the internet and achieve consensus on a practical way forward for global internet governance.

A large number of actors – including liberal governments, authoritarian governments, individual citizens, political activists, small companies, established corporations and existing engineering bodies – all claim a stake in the governance of the internet. Can we reconcile the different global visions for the future of internet governance? And if we cannot, are we likely to witness the emergence of a set of competing internets and governance models?

Policy proposals

1. **Involve all stakeholders in the decision-making process.** An accessible, legitimate and inclusive mechanism for internet governance must take account of the needs and concerns of all stakeholders. The problem is that the costs and mechanics of engagement limit participation by those without corporate resources behind them, without corporate or national interests to advocate, and without English-language skills. At present, participation in ICANN working groups tends to comprise approximately 70% US representation, 20% EU delegates, and just 10% from other regions.

[30] For more details, see https://www.icann.org/.
[31] For more details, see http://www.itu.int/.
[32] Laura DeNardis, *The Global War for Internet Governance*, Yale University Press, 2014.
[33] Aldous Huxley, *Brave New World*, Everyman Classics, 2013.
[34] Aldous Huxley, *Island*, Vintage Classics, 2005.

Emerging economies – especially in Africa and South America – that are rapidly acquiring and adapting internet connectivity should also be part of the conversation. Many developing nations are 'swing states,' countries that have not yet determined whether they prefer the national sovereignty model or a broadened multi-stakeholder model – or a combination of both. Dialogue and debate with and within those countries will be essential if they are to support the sort of open internet that can contribute most effectively to future prosperity.

2. **Rebuild trust**. The revelations in 2013 by Edward Snowden, the US National Security Agency whistleblower, have opened up divisions between the United States and many of its long-term allies, who were not only shocked by the extent of US spying on their activities but also now perceive fundamental differences in their approaches to data and privacy protection and the oversight of intelligence activities. This loss of trust has cast doubt on the future of a reformed model of multi-stakeholder internet governance.

   Snowden's revelations have also had a detrimental impact on commerce, with countries increasingly concerned about buying IT equipment, including security products, from international companies for fear that it might contain the means for espionage. US citizens as much as those of other countries have lost trust in the internet because of fears that their data are being used by governments and commercial entities in ways they never agreed to and do not fully understand. President Obama's address on 17 January 2014 regarding the review of the US signals intelligence programmes is an important start,[35] but further confidence-building measures will be needed in order to restore faith in the efficacy of the current multi-stakeholder approach to internet governance. One positive step would be to increase international cooperative efforts to tackle cyber crime, which is also eroding trust in the internet and poses important risks to citizens and governments from all corners of the world.

3. **Uphold net neutrality principles**. By upholding the principles of net neutrality that have been at the core of the internet, big business can be prevented from gaining dominance over the internet, and the evolution towards a tiered system with privileged, gated communities only for the wealthy can be halted. This will be vital in order to preserve the innovation and prosperity that the internet has enabled.

4. **Improve accountability and transparency of institutions**. The way decisions about internet governance are made also needs to be more transparent and comprehensible. If governance of the internet is to remain within ICANN, the corporation could, for instance, open the meetings of its Governmental Advisory Committee to outside observers. Moreover, communications on internet governance from governments and commercial bodies need to be more intelligible to all stakeholders; too often they are written in acronym-riddled technical language that makes them inaccessible to those without an engineering background.

[35] See White House press site: http://www.whitehouse.gov/the-press-office/2014/01/17/fact-sheet-review-us-signals-intelligence.

4. Resource Security and Geopolitics

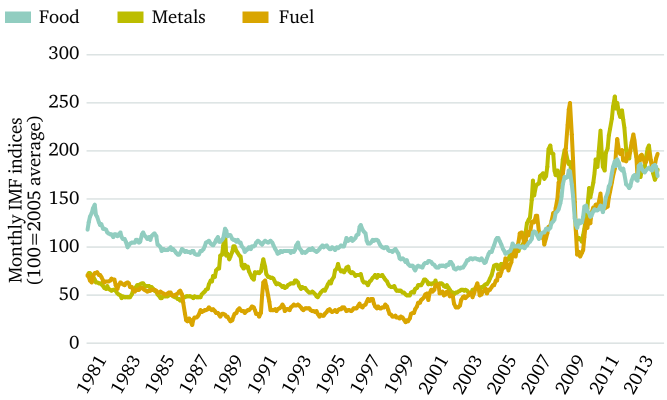
Summary

- Although resources remain abundant, resource security has risen up the agendas of governments and businesses following a prolonged period of high and volatile commodity prices.
- Underinvestment in extraction and infrastructure, and the migration of resource production to more challenging environments have contributed to higher prices and more sluggish supply, but the politicization of resources has been a key contributor to resource insecurity.
- Resources can act as a lightning rod for wider geopolitical tensions. Other issues include resource nationalism, the use of export controls and instability within key producing countries.
- The risks posed by politicization of resources are multiplied by a lack of international rules and institutions for resource governance, and by climate change which will become an increasing source of market instability and may contribute to heightened tensions over resources.
- Governments and businesses can reduce vulnerability through measures to enhance resource efficiency, increasing competitiveness and reducing pollution as they do so. Pricing resources appropriately – by removing subsidies and pricing-in environmental externalities such as greenhouse gas emissions – is central to driving efficiency gains and accelerating innovation.

Insecurity in a world of plenty

The spectre of resource insecurity has returned to haunt global commodity markets. Resource prices have increased (Figure 4.1) and the years 2005 to 2012 saw volatility reach unprecedented levels. Many countries have seen protests against rising food and fuel bills, while governments struggled to contain ballooning consumer subsidies.

Figure 4.1: International commodity prices (1980–2013)

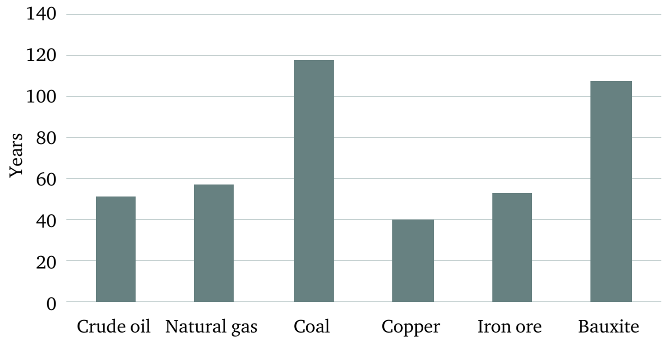


Source: Chatham House calculations based on IMF commodity price data.

Despite first appearances, this is not a neo-Malthusian scenario of resource exhaustion. Global agriculture produces more than enough food to feed a growing population.[36] Known resources of most fuels, metals and minerals have risen, not fallen, over the past decade. Even if no new reserves were added, at current consumption levels there are sufficient resources for 50 years or more (see Figure 4.2).

The case of shale gas shows how quickly resources can expand with innovation and investment. Worldwide, shale reserves have added an estimated 47% to total gas resources, since the US 'shale gas revolution' took off in 2007.[37] Many people now believe we have entered a 'golden age for gas'. Indeed, the real challenge presented to policy-makers by fossil energy resources is one of abundance. Estimates suggest that to keep global warming below 2 degrees Celsius – the internationally agreed target – most fossil reserves cannot continue to be burned unabatedly,[38] posing a major threat to the current models of coal, oil and gas producers.

Figure 4.2: Global reserve ranges for major fossil fuels and metals



Source: Chatham House calculations based on data from the US Geological Service and BP.

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[36] Global agriculture in 2010 is estimated to have produced 5,359 kcal per person, more than double the 2,500 needed.
[37] Technically recoverable proved and unproved reserves. EIA (2013), www.eia.gov/analysis/studies/worldshalegas/.
[38] See LSE (2013), 'Unburnable Carbon 2013: Wasted Capital and Stranded Assets', Carbon Tracker and the Grantham Research Institute, LSE, www.lse.ac.uk/GranthamInstitute/publications/Policy/docs/PB-unburnable-carbon-2013-wasted-capital-stranded-assets.pdf.

Concern about the accessibility of resources, rather than physical scarcity, is the primary driver of resource insecurity. Resources may be abundant, but can they be delivered on time and at an affordable price? Underinvestment in extraction, processing and transport infrastructure and the migration of resource production to more challenging environments have contributed to higher prices and more sluggish supply. But access is increasingly a political question. A handful of countries supply international markets. Whether resources are delivered on time and at an affordable price is often a function of the domestic politics within these countries, and the geopolitics that shape their relations with the rest of the world.

Resource politics and trade

Resource politics in key exporters can have major implications for trade. During the 2007–08 global food price crisis more than 30 governments imposed agricultural export controls in attempts to contain domestic prices and placate restive populations. Rice markets almost dried up as big producers such as India, Pakistan and Vietnam stopped exporting.

In energy and metals markets industries may oppose exports in order to keep domestic prices down and boost competitiveness. For example, US manufacturers, benefiting from the low energy prices of the shale gas revolution, have recently opposed liquefied natural gas (LNG) exports.

Resource nationalism has increased, as producer countries have sought more control over their resources and a greater share of the economic rents. This trend is unlikely to lead to direct inter-state confrontation (such as happened during the 1956 Suez crisis), but it may erode trust between states and increase the possibility of reprisals.[39]

Domestic resource politics are rarely divorced from wider geopolitics. The US national debate about LNG exports has been heavily influenced by Russia's annexation of Crimea and its threat to stop gas supplies to Ukraine. With onward supplies to Europe implicitly threated, export proponents argue that American LNG could reduce European reliance on Russian gas.[40] Meanwhile, the resource implications of the Ukraine crisis continue to play out in Eurasia. EU discussions about future energy policy, which had emphasized competitiveness after the US shale revolution, now prioritize the development of alternative sources of energy. In response, Russia is looking to establish new markets for its gas, in particular in China, with which it is now close to agreeing a pipeline deal – after more than a decade of false starts.

Political unrest in producer regions can disrupt exports and destabilize international markets. As an extreme example, the collapse of Libya into civil war in 2011 saw international oil prices reach their highest levels since the 2008 spike. In general, resource production is migrating to countries with weak governance or unstable politics, or both; a significant proportion of the new reserves is in countries with low political stability, including 37% of oil, 19% of gas and 49% of copper.[41]

Tensions in the Middle East remain a particular concern. Some form of regional conflict could seriously curtail global oil production, but shipping routes are also highly insecure. Iran has occasionally threatened to close the Strait of Hormuz – the shipping artery through which about a third of global oil exports passes[42] – and in 2013, militants in Egypt attempted to close the Suez Canal by firing rocket-propelled grenades at a container ship in transit.[43] A strong US naval presence in the region has helped maintain maritime security, but since the White House failed to gain approval for military intervention in Syria in 2013 America's regional allies have been concerned that domestic support for its engagement may weaken, especially now US dependence on Middle Eastern oil is waning.

China, the world's largest importer of resources, also has a major stake in keeping sea lanes open and is rapidly developing its naval capacity in order to secure shipping routes in the South China Sea. This may lead to increased tension, with the Pacific's major naval power, the United States, currently 'pivoting' towards Asia. Yet secure maritime trade is a global benefit and should thus offer an opportunity for cooperation.

Despite the common interest in trade safety, the South China Sea remains a flashpoint for resource-related conflict. The seabed may be rich in oil and gas, contributing to competing claims over exclusive economic zones (the offshore area in which a country has exclusive resource rights) and territorial disputes over tiny islands with waters rich in fish and mineral deposits. Similar dynamics exist

[39] B. Lee et al. (2012), *Resources Futures*, Chatham House, http://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/1212r_resourcesfutures.pdf.
[40] The extent to which this would happen in practice is debatable. The EU would have to compete for shipments in a global marketplace, and US gas is likely to be more expensive than the Russian equivalent. Nor are exports likely to begin any time soon; the first LNG export terminal is not due to be completed until 2015.
[41] McKinsey Global Institute (2011), *Resource Revolution: Meeting the World's Energy, Materials, Food, and Water Needs*, p. 65, November, http://www.mckinsey.com/insights/energy_resources_materials/resource_revolution [accessed 13 February 2014].
[42] C. Emmerson and P. Stevens (2012), *Maritime Choke Points and the Global Energy System: Charting a Way Forward*, Chatham House Briefing Paper.
[43] R. Bailey (2013), *Edible Oil: Food Security in the Gulf*, Chatham House, http://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/bp1113edibleoil.pdf.

in the East China Sea and are also evident in the Arctic, although less sensitive relations among the Arctic states mean the risk of confrontation is lower.

Linkages between water and other resources

Linkages between resources complicate the challenge facing government and business; food and energy prices have become coupled as agriculture has become more dependent on fertilizers and as biofuel crops have become substitutes for petroleum. Water is often the common link and water scarcity the common vulnerability (Box 4.1).

Water resources that cross or straddle borders can provide a lightning rod for wider regional tensions, particularly where water demand is growing. Potential flashpoints include the Nile, the Euphrates, the Indus, the Ganges and the Mekong.

Box 4.1: The food–water–energy nexus in India

India's self-sufficiency target in food staples means feeding 17% of the world's population with 4% of its freshwater resources. Agriculture accounts for 90% of freshwater withdrawals, but collapsing water tables and increasing demand from urban and industrial users suggest this is not sustainable. Irrigation accounts for 40–60% of electricity use in key agricultural regions.

Meanwhile, power generation is expanding. Coal plants account for about 60% of Indian electricity supply and are water intensive – a 1,000 MW plant consumes enough water to irrigate 7,000 hectares. Hydropower provides most of the remainder, followed by gas and nuclear (both needing water for cooling).

These stresses came to a head in 2012 when 650 million people were left without electricity in the world's largest blackout. A weak monsoon led to an excessive pumping load for rice irrigation, hydro-power collapsed and a lack of cooling water forced thermal plants to close.

Climate change is a risk multiplier

Climate change multiplies the risks posed by politicization of resources. Tensions over freshwater resources may increase within and between countries as the risk of water scarcity increases. Wheat and maize yields are already thought to have been affected by climate change.[44] Extreme weather is becoming more common[45] and poses a major threat to food systems.[46] The 2010 Russian heat wave and the 2012 US drought provide a glimpse of the potential impacts on international food markets.

Targeted measures to protect vulnerable consumers and transparency within government contribute to legitimacy and increase the likelihood of acceptance.

Global trade and key production sites for fuels, metals and other resources may also be seriously affected.[47] The cost of flooding, for example, at 136 major port cities could increase from $6 billion in 2005 to $60 billion in 2050, owing to storms, rising sea levels and subsidence.[48] Extreme weather could lead to the breakdown of infrastructure networks, electricity networks and water supplies.[49]

Technology and resource efficiency

As the US shale revolution shows, technology has the potential to reduce dependency and disrupt resource geopolitics. But the hydraulic fracturing and horizontal drilling technologies behind the US shale revolution are the result of decades of support from successive federal governments as America sought to increase its energy independence. Solar photovoltaic is another technology that has benefited from strong and sustained government support. Its costs are falling precipitously, and solar energy is now at or approaching grid parity in many countries.[50]

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[44] IPCC (2014), 'Working Group II on Impacts, Adaptation and Vulnerability, Fifth Assessment Report: Summary for Policymakers', Intergovernmental Panel on Climate Change, http://ipcc-wg2.gov/AR5/images/uploads/IPCC_WG2AR5_SPM_Approved.pdf.
[45] Many types of extreme events have become more common since 1950. In most regions both precipitation and heat events are likely to become more common than today in the 2046–81 time horizon, with an even clearer signal by 2100. See Intergovernmental Panel on Climate Change (IPCC) (2012), 'Summary for Policymakers', in C.B. Field, V. Barros, T.F. Stocker, D. Qin et al. (eds), *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* (Cambridge University Press), pp. 1–19 (future trends) and p. 111 (historical trends), http://www.ipcc-wg2.gov/SREX/images/uploads/SREX-All_FINAL.pdf. See also WMO (2014), 'WMO Statement on the Status of the Global Climate in 2013', World Meteorological Organisation.
[46] IPCC (2014).
[47] C. Paskal (2010), *Global Warring: How Environmental, Economic, and Political Crises will Redraw the World Map* (New York: Palgrave Macmillan).
[48] S. Hallegatte, C. Green, R.J. Nicholls and J. Corfee-Morlot (2013), 'Future Flood Losses in Major Coastal Cities', *Nature Climate Change* 3, pp. 802–06.
[49] IPCC (2014).
[50] R. Bailey and F. Preston (2014), *Stuck in Transition: Managing the Political Economy of Low-carbon Development*, Chatham House Briefing Paper, http://www.chathamhouse.org/sites/default/files/home/chatham/public_html/sites/default/files/20140200LowCarbonBaileyPreston.pdf.

Picking winners is, however, a risky endeavour for governments. Arguably the most useful thing they can do to spur innovation is to ensure resource prices reflect scarcity and environmental costs. This is rarely the case. Fossil fuel subsidies worldwide were estimated at $544 billion in 2012,[51] about six times the sum spent on renewable energy subsidies. Appropriate resource prices would also enable greater efficiency, reducing dependency on imports and increasing competitiveness. Implementing efficiency measures could reduce resource needs by 13–29% and save $2.9 trillion per year by 2030.[52]

Yet resource price reform is fraught with political risk, as governments have to overcome opposition from domestic industries and populations. Successful strategies are likely to entail campaigns to explain the benefits of reform, such as creating jobs, redirecting resources towards public services, tackling inequality (subsidies are usually regressive), or reducing pollution and waste. Targeted measures to protect vulnerable consumers and transparency within government contribute to legitimacy and increase the likelihood of acceptance.

Gaps in global governance

There is a lack of internationally accepted rules and institutions for resource governance. The International Energy Agency (IEA) is limited to industrialized energy consumers and excludes emerging consumers such as China and India, and major producers. The World Trade Organization effectively deals only with import restrictions, not export controls. Attempts to agree a framework to define and phase out fossil fuel subsidies at the G20 have met with little success. There are no international rules to prevent or limit export cartels, nor universally agreed frameworks for cooperation on 'transboundary' water. There is no regime governing maritime choke points and strategic sea lanes,[53] and no global deal to reduce greenhouse gas emissions – which remains one of the most urgent deficiencies, not least owing to the threat that climate change poses to resource security.

Policy proposals

Politicization of markets threatens resource security. Governments and businesses can reduce vulnerability by enhancing resource efficiency, which also improves competitiveness and lowers pollution. Pricing resources appropriately – by removing subsidies and pricing-in environmental costs such as greenhouse gas emissions – is central to driving efficiency gains and accelerating innovation.

Although issues such as trade, investment and resource governance are difficult to divorce from geopolitics, and the appetite for multilateralism remains low, a functioning global resource system represents a common good and governments should work to address gaps in international governance. Opportunities for progress include:

- New producer-consumer dialogues to address key governance gaps and resolve disputes. One option might be an informal 'Resources 30' or R-30 club comprising the major producing, consuming, importing or exporting countries. Most ambitiously, this could provide a forum to depoliticize resource governance by removing discussions from wider geopolitics.
- Politically smart strategies for resource price reform that justify and explain the approach to key constituencies, ensure appropriate compensation for the vulnerable, and phase reforms over time. Competitiveness concerns may be partially offset by tackling reform in cooperation with regional neighbours or through international forums such as an R-30.
- New models of trilateral international cooperation, to be developed with developing countries by donors and emerging economies to accelerate deployment of resource-efficient, clean technology. This could form a part of the post-2015 development agenda.

[51] It should be noted that the 'price gap' methodology used by the IEA to estimate subsidies to consumed products is controversial in some producer countries. See 'The Cost of Domestic Energy Prices to Saudi Arabia', *Energy Policy,* Vol. 31, No. 11, pp. 6900–05.
[52] This calculation is based on 2011 prices for natural resources and a 10% discount rate, compared with a 'business as usual' scenario. These savings could further increase significantly if water and carbon emissions were to be priced efficiently. See McKinsey Global Institute (2011).
[53] See, for example, Emmerson and Stevens (2012).

5. What Now? First Steps Towards a Rebalanced World

Summary

- Many of the pillars of the 20th-century international order are struggling to meet the challenges of the 21st century, suffering from structural weaknesses such as unrepresentative membership, inflexible design and too great a focus on state actors.
- Some reform of existing international organizations may be possible, including pruning obsolete forums, but any genuine revival would require widespread recognition of the nature and urgency of international problems, supported by domestic political opinion. Structural reform of international organizations will follow rather than bring about such a consensus.
- Ad hoc groupings of states united by interest or region will operate as caucuses or advance guards within existing international structures. The role of large organizations will increasingly be to provide the institutional framework for such caucuses rather than to mobilize joint action by the full membership.
- Such ad hoc groupings may, however, lack the legitimacy of larger organizations, may not be as resilient in unexpected crises, and may undercut the ability of smaller and weaker nations to have their voices heard.
- States, and state-based organizations, will find it increasingly difficult to do more than merely respond to changes triggered by technological and commercial developments. A new form of hybrid international organization may become necessary, involving state governments, transnational corporations and civil society groups. In the long term, any joint effort to deal with global problems may be based more on informal networks within or across borders, may be issue-focused and may be more commercial, cultural or religious than governmental.

Criticisms and problems

Is the post-1945 multilateral order waxing or waning? Is the world returning to a disordered state of relatively unrestrained competition, or can some new configuration provide a more effective framework for cooperation?

Some pillars of the 20th-century order such as the United Nations, the Bretton Woods financial institutions and the World Trade Organization have struggled to meet the challenges of the 21st century. Critics complain of organizational inefficiency and policy failure, pointing (among other disappointments) to:

- A UN Security Council whose permanent members block joint action, overstep mandates or bypass the council when rulings do not suit their interests;
- A moribund international arms control regime, apparently unable to prevent proliferation or uphold commitment to disarm;
- A stuttering international trade round, largely driven by deals between small numbers of like-minded nations;
- Global environmental talks unable to agree a credible pathway to limiting climate change;
- The erosion of collective commitment in organizations such as NATO and the EU, with members taking differing positions on the organization's aims and demonstrating differing levels of commitment to its activities; and
- International regulation and policy lagging behind fast-moving developments with wide impact, especially in finance and information technology.

Not all such criticisms are justified. A mixed performance is often the most that can be expected from such complex organizations. Nor is cooperation outside the established institutional architecture necessarily a sign that the big organizations are doomed; they have never had a monopoly on international policy and have often worked intimately with national and multilateral efforts.

Moreover, some of the challenges such bodies now face are the direct product of their past successes; notably, recent global economic growth, which is in part the result of efforts by organizations such as the UN, NATO and the WTO to build a secure and free-trading world. Some organizations also continue to outperform national alternatives, especially where they are seen as a source of international legitimacy or a repository of neutral and authoritative technical expertise.

Nevertheless, many of the established international organizations suffer from some clear structural problems, which – taken together with their mixed performance record – suggest that something is wrong.

- Membership and institutional power seem not to reflect current international economic power (UN Security Council membership is the most prominent case).
- Many of the big organizations – the UN, the International Monetary Fund/International Bank for Reconstruction and Development, and NATO – were designed for a particular purpose and may now have lost that focus or be unable to adapt their structures and processes to new challenges.
- Organizations made up solely of national governments are poorly positioned to foresee and shape global changes driven by non-state actors, including large corporations and financial institutions, technology-enabled individuals and networks, and – an especially powerful mixture of the two – private organizations that can shape, adopt and exploit very rapid technological changes to profit from information flows.

Identifying the causes

Much of the debate about reforming or replacing international organizations focuses on structure. It seems right to tackle outstanding anomalies such as unrepresentative membership, and there is an obvious need in many cases to improve procedures, finance and internal management. But while such reforms may be necessary, they are not sufficient to ensure success. The key to real change lies not with the structure of international organizations but with their purpose – not with their hardware but with their software.

The future shape of 'global governance' will therefore depend on whether it is possible to build a new consensus and how far it would be shared.

The institutions of 'global governance' are not an independent structure distinct from states, and they cannot independently resolve or manage the problems of globalization. Despite their separate bureaucracies and the prestige that sometimes attaches to their institutional identities and leadership, they are groupings of national member states. This is sometimes forgotten in discussions about 'global governance' (a formulation that contributes to this confusion), which is surprising given the way national policies are so often to blame for the very inefficiencies and failures of these organizations.

It follows, therefore, that the key question is not whether organizations such as the UN Security Council can be reformed, but whether there is sufficient international agreement as to what the problems are, what needs to be done and what role any international organization might play. In many cases, the answer seems to be that there is not sufficient agreement.

From this perspective, the difficulties of the UN, WTO and the international financial institutions are not a cause of rising international uncertainty and disorder but a symptom of a much wider and more profound problem: a disturbing decline of consensus about what is going on in the world, and how to manage the problems that disagreement will bring.

Can the problem be fixed?

The future shape of 'global governance' will therefore depend on whether it is possible to build a new consensus and how far it would be shared. This is to a large extent a matter of national attitudes and politics, and any solution will have to be based as much on developments within states as between them.

In effect this means determining how far states are able domestically to recognize and support some of the principal elements that make cooperation through international organizations possible, such as the belief that:

- International arbitration or collective action is necessary to deal with international problems.
- International agreement may imply some limitation of national freedom of action.
- Compromise is necessary, both to achieve direct benefits in exchange and to keep the international process alive.
- Member states must not only defend their narrow national interest but also engage actively with the agenda of the organization to support or enforce the collective interest.

Some prominent members of existing organizations have a mixed record in their support of such principles, at least in practice. In some important cases, the domestic political debate seems hostile or uninterested; these include the apparently increasing polarization and obstructionism of US national politics, the nationalist tone of much Chinese political rhetoric; the lack of strong and consistent international political engagement from some of the world's major emerging economic powers; apparently unresolvable tensions between some of the principal regional powers, and questions as to whether middle-sized powers such as France and the United Kingdom have the appetite and resources to maintain their international engagement.

A further complicating factor is that the relationship is no longer solely between international organizations and their member states. It has now expanded to include individuals or groups whose interests are transnational – for example, reflecting religious, cultural, ethnic, economic or moral concerns – but who may not wish to be represented by their national governments or are actively hostile to the state. Civil society organizations are already taking part in international forums, notably on issues of human rights, the environment and arms control, but new communications technology is giving individuals the opportunity to organize and express themselves without formal or physical structures, and without engaging with established international organizations.

The transnational impacts of globalization and technological advances together make this expanding input an area of increasing interest. However, established international organizations lack both the experience and the flexible structures to engage seriously with this decentralized and inchoate form of opinion.

Possible first steps to a solution

International organizations are poorly placed to take the lead in reforming themselves, given their dependence on the authority and support of member states which are themselves the cause of some of the principal problems. It follows that nation-states will have the key role in any attempt at reform, involving national governments as well as the domestic political process that shapes and constrains them.

But although nation-states may be the principal actors in rebuilding the international structure, they are not well equipped for a more radical reshaping. Many of the greatest current and likely future challenges are attributable to non-state actors, or flow from the withdrawal of state power through deregulation or state failure. National governments are often unable or unwilling to roll back this loss of power, or to respond as fast as technology or commerce develops. International organizations based on states will continue to share these structural weaknesses.

The open question is whether non-state actors will become better able than states and international organizations to develop a new form of international collaboration, either by bypassing existing structures or by engaging with them. It is currently difficult to imagine any coherent and legitimate form of action based entirely on a virtual network of individuals operating without some form of structure and without an element of government support, for example to provide security or a legal framework.

A hybrid of current structures may be the most likely development, adapted to enable new forms of individual engagement. But in the long term it is possible that an entirely separate system of global cooperation may emerge, based on a community of interests unmediated by national governments, a network of organizations that are no longer 'international' but rather 'intercommunity' in character. In this context, the principal role of governments and state-led institutions will be to provide regulatory consistency and the essential public good of security.

To sum up, a number of observations can be made:

1. Established international institutions are likely to continue in formal existence, although perhaps through inertia rather than because they are widely seen as relevant. However, it may be time to start discussing whether, for example, all the UN bodies are still useful, and whether some could be abolished or combined. Radical pruning is unlikely to be possible, but the discussion might be useful as a way of restating and refocusing the agenda and checking the balance of resources across the various UN arms.
2. Any revival of large-membership international organizations would require widespread and concurrent international recognition of the nature and urgency of global problems; and any structural redesigning to boost their legitimacy and efficiency is more likely to be the result than the cause of such a new consensus. Such a revival would depend on changes in the domestic political debate in major countries such as the United States and China, to portray international engagement as a means for delivering national interest.
3. Established regional organizations might seem a more attractive option than larger international ones, as they have smaller membership and apparently greater identity of interest, but they are as likely as larger groupings to include a variety of agendas and competition between neighbours. Common geography does not necessarily signify common interest. Nevertheless, a less assertive US international position might mean that countries in, for instance, Europe or Latin America had to cooperate more closely with one another, particularly in areas such as security, where the US role has been dominant.

4. There will be an increase in the number of ad hoc groupings of states with similar interests, limited to specific issues or events. These may help build trust and habits of cooperation, but without an institutional structure they will not be resilient in the face of unexpected crises. They may explore ways to entrench cooperative relationships without institutions or fixed cycles of summits or meetings, for example by adopting joint regulatory or legal codes, or by pooling their state resources (such as elements of their armed forces).
5. Such ad hoc groupings may operate as caucuses within larger organizations, ready to move further than the membership as a whole through some form of 'enhanced cooperation'. The role of the larger organizations may increasingly be to provide the institutional framework for each caucus, rather than to mobilize joint action by the full membership. Organizations such as NATO could focus on providing a toolkit of regulation, resources and forums for members or groups of members to draw on as required.
6. Neither ad hoc interest-based groupings nor regional organizations could provide as strong a foundation of international legitimacy and law as the established large international organizations. Some alternative source of legitimacy might be necessary, for example through some new democratic mechanism for more directly consulting the citizens of the states involved or some way of formally associating such ad hoc cooperation with the established structures, which is perhaps easier. The role of organizations such as the WTO or UN would then be to ratify agreements made elsewhere, rather than being the primary negotiating forums themselves.
7. Smaller and weaker nations would be particularly at risk if ad hoc interest-based organizations replace large international ones. Smaller nations are guaranteed a (limited) voice in existing international forums, but they would be at a disadvantage in a more competitive and uncertain environment. Although this might benefit larger states in the short term, it is likely to store up discontent and instability. Larger states have a long-term interest to find ways to enhance the voice of smaller states, including by supporting effective and well-resourced diplomatic services for them.
8. States and state-based organizations will increasingly struggle to do more than merely respond to changes triggered by technological and commercial developments. Attempts to shape or regulate such changes by states acting individually would be ineffective or economically disruptive. Some new form of international organization may become necessary, involving state governments and transnational corporations, and representing their voters and shareholders.
9. In the long term, therefore, any joint effort to deal with global problems may have to be based on more informal networks within or across borders, and may be issue-focused, commercial, cultural or religious in character rather than governmental. International businesses, cultural or sporting organizations and indeed religions may prove better able to influence the behaviour of the billions of individuals both empowered and threatened by globalization. An organization such as the International Olympic Committee may, despite the controversy surrounding it, offer a potentially useful model for such a mix of governmental, commercial and popular engagement.

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