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Trade and Development Report 2018 (Power, Platforms and The Free Trade Delusion)

Content

Chapter 1: Current Trends And Challenges In The Global Economy

Seven Important Characteristics of the Most Recent Wave of Globalisation

This section describes seven major features of the current era of hyperglobalization and of today's trading system:

- Hyperglobalization (the rapid rise in trade integration)
- The dematerialization of globalization (the importance of services)
- Democratic globalization (the widespread embrace of openness)
- Criss-crossing globalization (the similarity of North-to-South trade and investment flows with flows in the other direction)
- The rise of a mega-trader (China), the first since Imperial Britain
- The proliferation of regional trade agreements and the imminence of mega-regional ones
- The decline of barriers to trade in goods but the continued existence of high barriers to trade in services.

Making Sense of Global Economic Trends

- Recent growth estimates have been more mixed than forecast and show growing unpredictability. For example, euro zone growth in the first quarter of 2018 is estimated to have decelerated to 0.4 per cent relative to the previous quarter, the slowest rate since the third quarter of 2016 (Euro stat, May 2018).
- In the United States, annualized GDP growth for the first quarter has been revised down 2.2 per cent, lower than the previous three quarters, while second quarter growth rebounded spectacularly to 4.1 per cent, thanks to increased household spending and a sharp rise in export earnings.
- In G20 countries as a group, year-on-year growth in the first quarter of 2018 at 3.9 per cent was still much lower than the 5.4 per cent rates recorded in the middle of 2010, during the short-term recovery just after the crisis.
- All this suggests that the recovery observed since 2017 remains uneven and its trajectory uncertain.

Emerging Policy Challenges

- At the global level, excess liquidity has rendered the system vulnerable to crises. As we have seen, vulnerabilities are particularly serious in the emerging markets. The large foreign capital inflows that drove asset-price inflation also led to the accumulation of stocks of foreign financial capital, brought in by investors with short-term interests, who are likely to exit when access to cheap money in developed countries comes to an end.
- But policymakers face other factors that are potent sources of instability. These are:
 1. The oil price hike
 2. United States protectionism and potential trade wars

Global Trade Patterns

Signals from global trade

- World merchandise trade has picked up recently but still remains below recent highs. World merchandise exports amounted to \$17 trillion in 2017, higher than the \$16 trillion recorded in the previous year, but below the \$19 trillion level recorded in 2013 and 2014, though this partly reflects the decline of commodity prices from the pre-2014 highs.
- Trade measured in volume terms is also showing signs of losing momentum.

Commercial services trade

World services exports, which fell in 2015 and were sluggish in 2016, registered significant revival in 2017, from a little less than \$5 trillion to \$5.3 trillion.

Commodity price trends

A return of buoyancy to commodity markets is likely to benefit some developing country commodity exporters. The prices of a broad range of commodities are set to rise over 2018, continuing (with some exceptions) the trend observed since January 2016, which is when the decline in commodity prices from 2011 was reversed.

The Drivers of Growth



- The strategy of reviving growth through quantitative easing in the advanced economies has had only limited success in spurring income and employment growth. The persistent weakness of effective demand, compounded by post-crisis deleveraging by households and firms, dampened productive investment, while higher income inequality and lower employment rates prevented a strong rebound of consumption.
- In the two decades prior to the global crisis, in a context of financial liberalization and tight fiscal policies, two means of stimulating growth operated to differing degrees in the various regions of the world: ***debt-fuelled consumption expansion and export expansion***. A mapping of global growth shows that these have continued to be the major strategies in the post crisis period.
- Countries showing a tendency towards a relative reduction of imports are likely to be those dealing with current account deficits, such as France, India, Turkey, the United Kingdom and some countries in Central America and the Caribbean. An obvious alternative way for these countries to reduce their external deficits would be for other trading countries that consistently run surpluses to increase their domestic demand and thus their imports, which would in the process contribute to an addition to global demand for exports. Besides helping other countries, this would also facilitate a recovery of global growth.
- A second cause for concern is with respect to economies whose aggregate supply growth is mostly driven by net external demand (includes INDIA), Nearly half of them rely heavily on commodity or oil exports.

Regional Growth Trends

Developed countries

- Amid signs of a loss of momentum in the global economy, the United States is a partial exception. Europe and Japan, after showing promise of consistently positive and significant rates of growth, have seen growth rates fall. But the United States appears to be staying on course.
- The sharp fall in the unemployment rate in the United States, from close to 10 per cent in the middle of the crisis to 4.0 per cent in June 2018, is seen as evidence of the strength of recovery.
- Growth in the United Kingdom is expected to be lower in 2018 compared to 2017, with uncertainty over Brexit negotiations adding to structural weaknesses reflected in weak productivity growth and sluggish business investment.

Transition economies

- The transition economies that are members of the Commonwealth of Independent States (CIS) recorded a strong rebound in 2017, with growth of 2 per cent, as compared with 0.2 per cent in 2016.
- An important factor underlying the recovery was an increase in commodity prices, especially of oil, which accounts for close to 60 per cent of merchandise exports from the Russian Federation. The spike in oil prices improved both the current account on the balance of payments and the revenues of the Government in the Russian Federation.
- The growth dynamics of the transition economies in South-Eastern Europe is determined by the performance of the European Union, which consumes anywhere between half and 80 per cent of exports from these economies. Uncertainties in Europe can affect the pace of GDP growth in this region.

Latin America

Having benefited from the recovery from recession in two large economies in the region (Argentina and Brazil), the rise in commodity prices, and a consequent 3 per cent improvement in the terms of trade, Latin American economies recorded higher growth in 2017, especially in relation to the slowdown starting 2015. The recovery is expected to continue with GDP growth in Latin America and the Caribbean projected at around 1.7 per cent in 2018, compared to 1.1 per cent in 2017.

West Asia

- Growth in West Asia in 2017 was at its lowest in the post-crisis period, as low oil prices and voluntary production restraints affected income growth in the oil-producing countries, and political conditions adversely affected economic performance in countries like the Syrian Arab Republic and Yemen. Strikingly, GDP in Kuwait and Saudi Arabia contracted by 3.2 and 0.7 per cent respectively.
- This, however, is likely to change in 2018, given the sharp increase in oil prices and the positive effect that would have on budgetary revenues and expenditures. However, such gains may be partly neutralized by the need to keep production low to prevent oil prices from returning to their earlier lows.

Developing Africa

- After having experienced a rise in the average growth rate from 1.7 to 3.0 per cent between 2016 and 2017, developing countries on the African continent are projected to grow at 3.5 per cent in 2018. A major factor in this recovery is the commodity price rise, which is crucial for this set of countries given their dependence on commodity exports. The rise in oil prices particularly benefits countries like Algeria, Angola, the Democratic Republic of Congo, Ghana and Nigeria.

- Factors driving growth included, besides increased commodity prices, increased infrastructure investments. However, much of the expenditure driving growth was funded with borrowing from abroad in many cases, resulting in a return of the “high indebtedness” problem.
- Nigeria, the largest economy in Africa, saw a return to moderate growth in 2018, after two years of contraction and stagnation.
- A fundamental and well-recognized failure of South Africa is its inability to diversify out of mining into manufacturing.

Developing Asia

- After recording GDP growth rates of 5.7 and 5.5 per cent in 2016 and 2017, the developing countries in Asia are expected to sustain that rate in 2018 as well. This is partly because while growth in China is expected to decelerate from 6.9 in 2017 to 6.7 per cent in 2018, in India it is expected to rise from 6.2 to 7 per cent.
- A lending spree by the banking system during the high growth years has led to the accumulation of large volumes of bad debt or non-performing assets in the balance sheets of leading banks. This, besides threatening financial stability, is curbing credit expansion and is likely to adversely affect investment and growth. Further, the Indian rupee is under pressure on foreign exchange markets. Over the first five months of 2018 the currency had depreciated by more than 7.5 per cent relative to the dollar.

Growth in an environment of instability

The likely emerging scenario, in the absence of quick proactive macro policy measures by governments, is as follows:

- Net outflows of capital, especially of portfolio capital, from emerging markets, are triggered largely by monetary tightening and increases in interest rates in the United States and other advanced countries.
- The consequent depreciation of currencies is then worsened by speculative attacks, even as domestic inflation is triggered by the depreciation.
- Debt service payments valued in domestic currency, on substantially increased corporate debt, rise sharply, precipitating default and bankruptcies.
- This further depresses investment precisely at a time when it was expected to revive.

Way forward

In an interdependent global economy, inward-looking policies do not offer a way forward; substantial and coordinated shifts in macroeconomic strategy appear to be the only way out of this trap

A “Trade War” Scenario

- In case of Escalation of trade tensions between the United States, and Canada, China, Japan, Mexico, The Republic of Korea and the European Union.
- The direct impact of actual tariff increases on the economies involved appears negligible – for example, recent United States tariffs hit \$34 billion of imports from China, or less 0.02 per cent of the GDP of the United States.
- However, the indirect consequences of a “trade war” have raised more serious concerns, with most assessments focusing on supply-side effects such as the possible disruption of global supply chains and the risk that technology flows across countries may become restricted.
- Seen through the lens of these projections the most serious effect of a trade war may be to trigger a fall in aggregate demand.
- The external imbalance of the United States is expected to worsen, given the larger fiscal deficit and moderate “releveraging” by the private sector.
- China is assumed to continue its shift towards greater reliance on domestic demand.
- In the trade war scenario, the tariff escalation triggers downward pressures on wages and generates uncertainty around the path of economic policy. This damages aggregate demand, economic growth and, ultimately, trade activity and financial stability.

Chapter 2: The Shifting Contours of Trade Under Hyperglobalization

- The hyper globalized world is one where money and power have become inseparable and where capital – whether tangible or intangible, long term or short term, industrial or financial – has extricated itself from regulatory oversight and restraint and muted the voice and influence of other social stakeholders with an interest in the direction of public policy.
- Mainstream economists bear part of the responsibility for the current state of affairs. Ignoring their own analytical nuances and the subtleties of economic history, they remain biased in favour of unqualified free trade when it comes to communicating with policymakers and broader audiences (see e.g. Driskill, 2012; Rodrik, 2017, 2018).
- The mainstream narrative pitches “comparative advantage” as a “win-win” boost to economic efficiency and social welfare, without specifying the conditions under which such beneficial outcomes can occur or how any negative effects could be abrogated.
- There is no doubt that the new protectionist tide, together with the declining spirit of international cooperation, poses significant challenges for governments around the world. However, the call to double down on “free trade” provides a cover for a regime of footloose capital, concentrated market power and the capture of public policy by powerful economic interests.

- Fighting isolationism effectively requires recognizing that many of the rules adopted to promote “free trade” have not promoted a rules-based system that is inclusive, transparent and development friendly.

Trade Dynamics After the Second World War

- Between the end of the Second World War and the global financial crisis (GFC), the growth of world trade consistently outpaced that of global output.
- The rise and fall of the Golden Age: 1950–1986
- Between 1950 and 1973, world trade grew at an average annual rate of nearly 8 per cent, amid strong declines of trade costs of all kinds resulting from peace dividends, improvements in transport, a fast pace of investment and rapid productivity growth, a measured drop in tariffs, and a stable international monetary system.
- Most of the increase in trade flows reflected rising intra- and inter-industry trade among developed countries and with a strong regional dimension. Trade rules, consequently, were designed by a small club of relatively wealthy converging economies, to consolidate broad economic gains coming from outside the trading system (Rose, 2004), tolerance of the trade practices of (mainly developing) countries who were not part of the club but with little concern to address their particular challenges.
- The asymmetric structure of international trade and lagging growth performance of most developing countries fuelled growing concerns among many of their policymakers over biases in the rules of the trading system. It also underpinned the idea of “unequal exchange”, which argued that the structure of world trade was responsible for the persistent inequality between developed and developing economies.
- Under pressure from a series of internal and external shocks, the 1973–1986 period was difficult for advanced and developing countries alike, except for oil exporters, who enjoyed significant terms-of-trade gains. As a result, the annual growth of trade almost halved in the 1973–1986 period compared to 1950–1973.

Hyperglobalization: 1986–present

- Starting from the mid-1980s, a new phase of trade expansion took place. In contrast with the two previous post-war periods included in figure 2.1 – the Golden Age and the subsequent turbulent decade – this new round of globalization was marked by very fast acceleration of trade, especially in some parts of the developing world.
- This period coincides with the beginning of the Uruguay Round and came in the wake of several important political shifts. It occurred when many developing countries were still adjusting to the debt crisis by abandoning import-substitution industrialization (ISI) and turning to more export-oriented strategies based on liberalized imports.

- It also coincided with the end of the East–West divide and the rise of a “new world order” dominated by liberal ideology. On the supply side, the erosion of organized labour and the flexibilization of labour markets, along with the continued spread of technological progress (containerization, information and communication technology (ICT), etc.), facilitated the fragmentation of production along GVCs and the coordination of complex processes across long distances, with the resulting cross-border movement of inputs instrumental in boosting trade. This was supported by the proliferation of free trade agreements (FTAs) and bilateral investment treaties (BITs) and subsequently by the accession of China to the World Trade Organization (WTO) in 2001, which lowered the cost of labour by enlarging the globally available reserve army of workers.
- The trade acceleration was particularly strong in East and South-East Asia, most of all the with the growth acceleration and structural transformation in China. This then spilled over to the rest of the developing world, mainly in the form of boosted demand for raw materials.

Trade-Charged Structural Change: Diverging Paths Among Developing Regions

- The “rise of the South” in international trade has been a much-cited feature of hyperglobalization, disrupting the dominant pattern of North–North trade in the previous era of managed globalization, and establishing a landscape in which North–South and South–South trade have assumed greater weight. BRICS6 have become symbolic of this changing landscape but GVCs are seen as its great disruptors.
- On the one hand, the first-tier NIEs (newly industrializing economy) and China display clear trends towards technological upgrading, even though questions remain about the extent to which this has benefited workers employed at the assembly stage in manufacturing GVCs . By contrast, Africa and West Asia showed limited progress as their exports remain extremely concentrated in commodities, with hardly any increase in shares of technology-intensive manufactures, regardless of their labour skill levels.
- This suggests that the rapid development of China (and more generally East and South-East Asia) has not triggered significant positive structural changes in the export structures of other developing regions; rather, it has intensified their role as providers of commodities. This need not be a negative outcome, if the revenues from such exports are used to finance domestic economic diversification and technological upgrading. But such a push typically requires systematic industrial policies in a context of rising domestic demand. In practice, such examples are not that common. By contrast, intraregional trade seems to have the greatest potential in terms of providing support to move up the ladder, confirming the validity of previous UNCTAD calls for strengthening regional trade (UNCTAD, 2013).

Trade and Inequality Under Hyperglobalization

- Trade under hyperglobalization, and the associated expansion of GVCs, is often pitched as widening the opportunities for inclusive growth and shared prosperity.
- The underlying assumption is that because GVCs allow developing countries to focus on individual links in the chain, their firms can integrate with the world economy “on a shoestring” without facing the large risks (and costs) incurred by investing in all the tasks required for producing the finished product or services (e.g. World Bank et al., 2017).
- According to this view, developing countries can thereby more easily reap the benefits of their major comparative advantage: abundant cheap labour. Following this logic, such integration in the global economy should lead to a reduction of inequality in the South as demand for unskilled labour increases.

GVCS, jobs off shoring, processing trade and income polarization in manufacturing

Reality is, that trade patterns under hyperglobalization contributed to polarizing domestic income and wealth distribution not only in the North but also in the South, thus exacerbating domestic economic inequalities.

- Prevalence of oligopolistic enterprises in exports of manufactures and how export market structures can affect income distribution. Buying practices of lead firms can lead to shaving markups and cost cutting by suppliers that leave them unable to innovate and resistant to improvements in wages or labour standards”.
- In developing countries, the negative impact of international trade on inequality was partly the result of the proliferation of special processing trade regimes and EPZs(Export Processing Zones). Many countries created regimes favoring exporters, with the objective of attracting or preserving investment, production and jobs on their shores. The associated risk, however, is that such regimes merely subsidize labour-intensive assembly work or, more precisely, subsidize the organization of low-cost and low-productivity assembly work by large exporters or foreign TNCs in control of GVCs.
- Evidence accumulating in recent years, particularly from experiences in China, points to the limited benefits of such policies for the broader economy and their negative effects on income distribution. This meant that, while China could count on foreign TNCs to integrate its economy into GVCs, it could not rely on them to significantly upgrade the skills and the pay of its workforce or bolster its productive capacities.

- The ongoing success of China at bolstering its productive capacities – thus slowly breaking out of the trap of processing trade and moving up the value ladder – has crucially relied on its capacity to claim and use policy space to actively leverage trade through targeted industrial and other policies aiming at raising domestic value added in manufacturing exports (Poon, 2014, 2018). It has also relied on the ability of the Chinese authorities to develop independent financing mechanisms and acquire control over foreign assets, which are being perceived by developed countries as a threat to their own business interests (e.g. USTR, 2018).

Concentration in export markets, intangible barriers to competition and corporate rents

To an even larger extent than domestic markets, global exports today are dominated by very large companies, most of them TNC.

- Recent evidence from aggregated firm-level data on goods exports (excluding the oil sector, as well as services) shows that, within the very restricted circle of exporting firms, the top 1 per cent accounted for 57 per cent of country exports on average in 2014. Moreover, while the share of the top 5 per cent exceeded 80 per cent of country export revenues on average, the top 25 per cent accounted for virtually all country exports.
- The Implications include both the polarizing effects of trade on income distribution resulting from concentration and monopolistic behaviour of large firms, as well as plausible negative macro-financial externalities that harm the potential for inclusive development.
- This is because corporate rents (and thus higher profits) also arise out of strategies aimed at instrumentalizing other actors, by lobbying policymakers, buying out competitors, sharing markets, collusion, blocking new entrants, etc.
- Paradoxically, even as tangible barriers to trade imposed by governments, such as tariffs and quotas, have been declining over the last 30 years or so, intangible barriers to competition rooted in “free trade” treaties and erected by large firms themselves have surged, as they exploit the increased legal protection of intellectual property and the broadening scope for intangible intra-firm trade
- As the World Trade Organization (WTO, 2012) notes, “many products that used to be traded as low-technology goods or commodities now contain a higher proportion of invention and design in their value”, that is, protected intellectual property content. In short, knowledge intensive intangible assets are valuable because they ensure a certain degree of market power, not because they represent an inherent and benevolent force for innovation and technological progress.

- IPR charges are merely one of the many forms of more widespread profit shifting within companies or groups, that weigh negatively on public finances and collective wage bargaining in many countries. Indeed, the largest recipient country (the United States) is simultaneously the victim of the most massive IPR-related corporate tax avoidance by TNCs “trading” intangibles.
- This increase in profits of large firms has been a major driver of global functional inequality, associated with declines in the global labour income share during the last two decades. Market concentration increases as industries become progressively dominated by “superstar” firms with high profits and low shares of labour in firm value added, and as the importance of superstar firms increases, the aggregate labour share tends to fall.

Unequalizing Trade: Macroeconomic Risks and Development Policy Challenges

- The belief that international trade can be an “engine for development” and help establish an inclusive growth path, as recently affirmed in the 2030 Agenda for Sustainable Development , is neither new nor unreasonable.
- Yet, these objectives should not lead to simplistic advocacy of *free trade*. When UNCTAD was convened for the first time in 1964, policymakers from the South were concerned that their countries were increasingly being marginalized by an international trading system that added to polarizing pressures in the global economy.
- More than half a century later, and despite myriad changes in the volume, direction and governance of cross-border trade, such concerns have surfaced once again, in advanced-economies as well as in developing economies.
- It is evident that increased trade under hyperglobalization has created opportunities for structural change, but only in very limited parts of the Global South. Besides the first-tier NIEs and more recently China, only a few countries have managed to leverage trade as a means for mobilizing and reallocating productive factors away from primary commodities towards higher value added manufacturing and service activities.
- These outcomes pose several macroeconomic risks and development challenges, which are starkly evident today. The main concern is probably the negative impact that trade under hyperglobalization has had on aggregate demand.
- Facing weaker prospective sales in a context of weak aggregate demand and compounded by the post-crisis turn to austerity, large corporations have cut back on investment, further depressing aggregate demand and contributing to slower trade in recent years.

- In such an environment, incentives are strong for seeking to boost profitability through means other than raising productivity, such as intensifying international competition between workers and between governments to reduce labour and tax costs, crushing or buying up competitors to build up market dominance and increase markups, etc. The unfortunate truth is that the attempts of individual TNCs to enhance their own market position through such strategies only makes the broader economic system more fragile and vulnerable, since together they lead to more inequality, under-consumption, debt and, consequently, macroeconomic vulnerability.
- This focus on employment has largely been lost in the period of hyperglobalization, and also finds little reflection in the “trade” and “economic cooperation” agreements that have dominated the landscape.

Chapter 3: Economic Development In A Digital World: Prospects, Pitfalls And Policy Options

- Digital technologies have already transformed how people communicate, learn, work and shop. They are also changing the geography of economic activity through their impact on corporate strategy, investment behaviour and trade flows.
- From a development perspective, the promise of digitalization is that it will open new sectors, promote new markets, boost innovation and generate the productivity gains needed to lift living standards in developing countries. Fulfilling this promise of a new digital future will, for many developing countries, require an ambitious programme of infrastructure support and skills training.
- Today’s hyperglobalized world has become more unequal, unstable and insecure: rent extraction has become an acceptable feature of doing business at the top of the corporate food chain and unchecked competition has made for precarious working conditions for many at the bottom. As a result, the gains from technological progress and open economies have been captured by a small portion of society, while their costs have been carried by an increasingly frustrated majority.

Digital Technologies In Value Chains: Potential Opportunities For Income Generation And Upgrading

- Digital technologies are based on information that is recorded in binary code of combinations of the digits 0 and 1, also called “bits”, which represent words and images (Negroponte, 1995).
- The distribution of value added and upgrading in traditional value chains
- Since many developing countries have faced difficulties in achieving the policy, their place in Global Value Chains has tended to be located on the lower portions rather than higher.

- However, in the absence of solid evidence on significant “spillovers” from participation in value chains, policymakers should also continue to look for ways to establish domestic forward and backward linkages that facilitate a rising share of domestically generated value added, encourage more widespread transfers of technology and diffusion of knowledge, and support economic diversification and upgrading towards higher value added activities that rely on more sophisticated technology and skill sets.

Digitalization: Potential impacts on the manufacturing process

- What may be most significant of all is that digital technologies enable more decentralized and flexible production and distribution, reducing some of the scale economies that dominated the era of mass production. This can result in a “hyper-segmentation of markets, activities and technologies” whereby companies of varying sizes can respond to and accommodate multiple demand segments, and small producers can cater to niche markets that need not be in geographical proximity.
- The use of new digital technologies may, therefore, allow developing countries to add more value in their production stages, whether or not the final product is for export or domestic consumption.
- However, this depends crucially not only on available infrastructure but on access to data and a supportive ecosystem.

Potential Impacts on Income Generation

The Production Segment

- Much of the debate on digitalization has focused on the use of industrial robots in the production segment of the manufacturing process.
- The Report suggested that, for now at least, robot-based automation per se does not invalidate the traditional role of industrialization as a development strategy for lower-income countries moving into manufacturing activities (such as clothing and leather sectors) dominated by manual and routine tasks, although in countries already experiencing premature deindustrialization and low rates of investment, the danger of getting trapped in these low-value-added sectors is likely to increase.
- The small shares across all economies could indicate that digitalization is little more than a media hype. But these small numbers could also be a result of the slack in global demand following the global financial crisis, which has been a key factor holding back productive.

The Pre And Post-Production Segments

- The economic benefits of owning data in terms of transforming it into a profitable asset increase with the volume of data. This gives an advantage to first movers. They are most easily able to scale up their initial investment in data intelligence and analytics, thereby increasing the value of their data and associated knowledge base.
- Such first-mover advantages underline both the urgency with which developing countries need to act and the difficulties and associated policy challenges related to their engaging in activities in the post-production segment of digitized value chains.

Potential Impact on Governance and Distributional Outcomes

- More recently, as value chains have entered (and reconfigured) manufacturing sectors and as developing countries have provided more links in these chains, the international division of labour has become more fragmented, employment relations more fractured and governance arrangements more complex.
- At the same time, large corporations have shifted their attention to “core competencies” and increasingly employed a range of financial instruments, such as share buy-backs and mergers and acquisitions, to increase their “value” while cost containment, through outsourcing, work intensification, segmented labour markets and insecure supplier contracts, has become the principal strategy in managing the production process.
- Another way in which digitization is impacting distribution is through the emergence of platform monopolies, in which the key strategic asset of the lead firm is control and use of digitized data to organize and mediate transactions between the various actors in the chain.
- The domination of the United States is evident in social media and content platforms, with the top seven such firms all originating there.
- The only exception is China, which has been able to expand its own firms by preventing the global firms from entering its market.
- Similarly, Internet search platforms are dominated by United States firms, other than Baidu in China and Yandex from the Russian Federation.
- This is also true for mobile ecosystems, with three United States-based firms completely dominant: Android with 81.7 per cent market share, iOS with 17.9 per cent and Windows with 0.3 per cent of the global market. Internet of Things (IoT) or industrial digital platforms are similarly dominated by companies from the United States and Europe.

Adapting Economic Policies to a Digital World

- While new digital technologies may provide additional impetus to income generation in developing countries, they also pose challenges because of the potential for greater monopoly control in some areas and the distributional implications of corporate rent-seeking.

- International cooperation, including in the form of South–South cooperation, is particularly relevant for overcoming digital divides and addressing fiscal and regulatory issues.

Facilitating integration into a digital economy and ensuring an equitable sharing of its benefits

- Digital infrastructure and digital capabilities: Basic conditions for integrating into a digital world
- Industrial policy
- Innovation policy
- Regulatory policies
- Control and use of data

A. Digital Infrastructure and Digital Capabilities: Basic Conditions for Integrating into a Digital World

- A digital economy is built on digital infrastructure and digital capabilities. Three broad interrelated components of digital infrastructure which can be identified are:
 - Networks
 - Software
 - Data
- • And digital capabilities are needed to use them effectively.

Digital Infrastructure

- **Networks**
 - Over the past two decades, countries have been steadily building their digital networks (i.e. ICT and broadband infrastructure) as the principal tool for collecting and transmitting Information flows.
 - This ICT infrastructure forms the base of the digital infrastructure as it provides Internet access to the population, while broadband infrastructure helps in delivering large amounts of data at a much faster speed.
 - Internet access and connectivity dominated by private Internet service providers. However, remote areas were not adequately served by private companies. Since the universality of broadband infrastructure is a prerequisite for a more equitable digital economy, this points to the need for enhanced public investment in broadband infrastructure in most developing countries.

- **Software**
 - Its use across a full range of economic activities, with increasing emphasis on access through a cloud computing infrastructure.
 - Cloud computing combines software power with network power allowing quick, wide and deep global spread of relatively inexpensive cutting-edge technologies.
 - However, cloud applications provide its owners immense power, as dependencies, for example, global cloud applications have provided Google, Facebook, Uber, etc. the power to become the virtual control panels for reorganizing entire sectors.
 - This creates a policy challenge for developing countries whose national antitrust legislation may not be adequate to address the cross-sectoral market power increasingly held by such multinational companies.
- **Data**
 - This is, arguably, the most important component of the digital infrastructure, providing the basis for generating huge profit streams and potentially changing the relative positions of countries in terms of their shares in global production, consumption, investment and international trade.
 - Many observers have termed “data” the “new oil”, not only because they have to be extracted and processed from an initially unrefined state, but because processed data can also give monopolistic powers to its owners. Indeed, because (unlike oil) data are not a finite resource, the ability to exclude competitors from access can generate even more monopoly power and rent-seeking behaviour.

The challenges faced by developing countries in ensuring such digital infrastructure are evident from the still large gaps in most developing countries.

- Broadband speed is a crucial determinant of the potential for digitalization and related business, and it remains relatively much slower in most developing countries. Reducing these large infrastructure deficits is a huge task that will require large investments.
- In addition to digital infrastructure, building a digital economy obviously requires the presence of supportive physical infrastructure and institutions, of which continuous power connections and access to banking and financial institutions are obviously crucial.
- Due to rapid advancement of digital technologies there is a growing “digital skill gap” which is being felt by both developed and developing countries. To develop digital skills, efforts have to be made by the developing countries at various levels: introducing digital education in schools and universities, upskilling the digital skills of the existing workforce, running special basic and advanced skill development programmes for the youth and older persons

Digital Capabilities

These are also referred to as *digital skills or digital competence*.

LO-ITU (2017) describe four kinds of such skills:

1. basic digital skills, related to the effective use of technology, including web research, online communications, etc.;
2. soft skills necessary to ensure collaborative work among professionals;
3. advanced digital skills related to technology development such as coding, software and app development, etc.; and
4. digital entrepreneurship which includes digital skills required by entrepreneurs for strategic planning, market research, business analysis,

All these should ideally be part of an overall national strategy of building digital skills for the twenty-first century.

B. Industrial Policy

Two elements of the changing dynamics of the world economy may be crucial for the effectiveness of industrial policies:

1. The move towards a digital economy and its associated increased systemic interactions between innovation, education, production and services activities;
 2. The increased weight of developing countries in the global economy, which may allow for a rebalancing of external and domestic markets as destinations of developing countries' production activities.
- Industrial policies for digitalization must seek to exploit the potential of using new technologies for transformational purposes to create and shape new products and new markets, as well as to compensate for the job destruction that the application of such technologies may cause.
 - A digital strategy must also adapt to the changed structure of finance for investment in the digital economy. Contrary to tangible assets – such as buildings, machines or particular plots of land – intangible assets, such as data, software, market analysis, organizational design, patents, copyrights and the like, tend to be unique or most valuable supporting investment in intangibles may well imply an increased role for development banks as sources of finance or of specialized financing vehicles.

C. Innovation Policy

The World Intellectual Property Organization's global innovation index shows that a few developing countries have caught up on certain innovation variables, even though significant divides remain.

- Digitalization may provide specific opportunities for frugal innovation by developing country firms because they tend to reduce the cost of innovation.
- Such customization of new digital technologies can be related to the idea of frugal innovations, which are those that provide “new functionality at lower cost”.
- Similarly, the digital economy may also open up new possibilities for more reverse innovation, which refers to ideas, technologies and products that may be generated in developing countries but are subsequently used by firms from developed countries.
- Digital innovations increasingly rely on big-data analytics and other digital technologies. Therefore, policies designed to prevent monopolistic control and to ensure that small and medium producers and potential innovators have affordable access to such data, are obviously important.
- In addition to a sizeable increase in R&D spending and the size of in-house design departments, enhanced skilled labour migration in the form of both intellectual returnees and skilled expatriates from developed countries could provide substantial support to developing countries’ more active innovation policy.
- While returnees appear to have played a crucial role for example in the development of the photovoltaic industry in China (Luo et al., 2017)
- Expatriates have been instrumental in creating the designs for automobile production in developing countries such as Brazil, **India** and Morocco, as well as in Romania.
- There, designers have focused on the functionalities and price ranges that would appeal to customers in developing countries, as well as to relatively low-income customers in developed countries.

D. Regulatory Policies

- The digital economy creates significant new regulatory policy challenges because the network effects and economies of scale associated with digitalization can cause rising inequality and generate barriers to market entry.
- First-mover advantages in the form of benefits from controlling and scaling large volumes of data tend to create a few highly profitable large firms and “winner-takes-most” concerns.
- The resulting increases in market concentration may sizeably augment the financial power of a few leading firms and cause increased rent-seeking, anticompetitive practices and attempts to block actual or potential competitors.
- This means that established competition and antitrust policies may be unsuited to the digital economy.
- The overwhelming control over digital platforms by a few firms, mostly based in the United States, the United Kingdom and some other European countries, points to the need for active consideration of policies to prevent anticompetitive behaviour by such firms, as well as potential misuse of data that are collected in the process.
- It also provides an inkling of the difficulties associated with developing countries wishing to break into these areas.

- But for developing countries an additional concern could be the concentration of profits generated in such platforms by the companies that are largely based in the North.
- Such **super-platforms** (companies that dominate the digital landscape like Google, Apple and Amazon) are increasingly using algorithms based on big data to drive away competition.
- The algorithms monitor the price changes and swiftly react to competitor's price reduction, similarly it also follows price increases when sustainable, such as when others follow in a timely manner, so that all competitors raise prices and profit together leading to an outcome not much different from that arrived by collusion.
- This makes it extremely difficult to hold the superplatforms liable for the pricing decisions of their self-learning algorithms, which may transfer wealth from consumers to sellers.
- Although the super-platforms compete, they can also become "frenemies" to maximize joint profits and drive away competition.²² This interdependence of super-platforms can severely hinder innovations as companies know that they cannot effectively reach consumers unless admitted by super-platforms.
- There are other ways in which such digital platform companies can slip through regulatory cracks.

However, since the existing digital platforms are changing the competitive landscape, there is a need to regulate the digital platforms in order to provide developing countries' firms/platforms with an opportunity to compete with the existing platforms and avail themselves of new opportunities in the digital world.

Developing country governments need to be aware of these concerns before signing on to agreements that could effectively reduce their national sovereignty and policy space in the digital world.

E. Control and Use of Data

- All companies, and not just digital platforms, need to be able to collect and analyse data for innovation and efficiency gains.
- However, access to and control of data can be, indeed has long been, a source of market power and can create barriers to entry for new players. Policymakers have had to strike a balance between these conflicting pressures. Perhaps the single biggest difference with firms and platforms in the digital economy is that controlling data is the business model.
- For countries to be able to build their data infrastructures and use their data to provide efficient public goods and services to their citizens, it is important for the countries to control their data and be able to use/share their data and regulate its flow.

- Doing so help them design policies for developing data processing skills in the pre-production and postproduction stages as well as encourage customized production.

Data is not a homogeneous product and there is a need, to have a clear distinction between personal and non-personal data.

- Personal Data - data on the consumers' behavioural patterns or education data, transport data or health data of a country, which requires to be regulated and protected.
- Rest, non-personal data needs to be allowed to flow freely within the country

Developing countries need to retain their data sovereignty to build their digital skills and avoid rules which restrict their ability to monitor the flow of their national data.

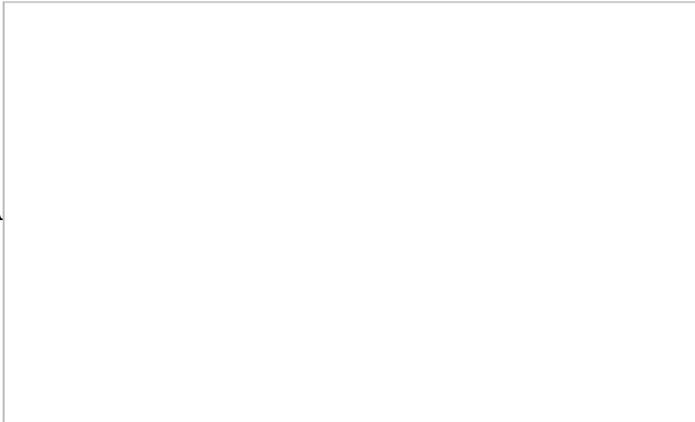
- To encourage domestic linkages of foreign investments and to develop domestic digital capacities and digital infrastructure to upgrade in value chains, many governments are using localization measures, akin to what they used when they designed their FDI policies
- In the context of the digital economy, localization measures include requirements such as locating servers and/or computing facilities within the national boundaries which can encourage foreign firms to invest in domestic digital infrastructure and allow local authorities to enforce national laws and regulations.
 - For example, the Decree on Information Technology Services 2013 in Viet Nam required every digital service or website to locate at least one server in Viet Nam.
 - In the Philippines, a draft administrative order in 2014 required government agencies to buy cloud services from the Philippine Government's cloud.

Such policies can be adopted to promote

1. Local digital capabilities;
2. Infant industry protection;
3. Avoiding long-term dependency on foreign-owned and located digital infrastructure;
4. To protect privacy of the citizens, their legal jurisdictions and
5. National cyber sovereignty.

Trade and Investment Rules in the Digital Era

Concerns

- A  agreements, like the Trans-Pacific

Partnership (TPP), include binding rules on governments' ability to restrict use or location of computing facilities inside the national boundaries. Some of the proposals on e-commerce in the WTO include binding rules on cross-border data transfers and localization restrictions.

- Such rules, being put forward as part of progressively expanding e-commerce chapters in free trade agreements (FTAs), may limit the ability of the governments to gain from FDI to build their national digital technological capacity and skills.
- Localization rules, as discussed in the previous section, have been extensively used by the developed countries in the earlier phase of digitalization and are still being used. Some of the rules in existing trade agreements, as well as those under negotiation, restrict the flexibilities of the signatory governments to adopt these localization measures.

Way Forward

- To keep up in the ongoing technological revolution, developing countries are in urgent need of international technology transfers (ITT) from the developed countries and other developing countries which have been able to develop advanced digital technologies.
- The new digital technologies using AI, robots and IoT can potentially help developing countries to upgrade in value chains by increasing the digital content in the production stages.
- For digital technology transfers in developing countries, policies around source-code sharing can play an important role in encouraging ITT and developing national digital skills.
- While technology transfers need to be encouraged, developing countries should be proactive in increasing the digital content in their production processes, by supporting more domestically produced digital services like ICT services and telecommunication services in their manufacturing or by using digital technologies to digitalize their production. Digitalized products refer to those products which were earlier exported physically but are now being electronically transmitted, for example, films, printed matter, sound and media, software and video games.

However, technology transfers from foreign firms by hosting FDI has rarely happened automatically and developing countries have always used targeted policies to encourage technology spillovers, through joint ventures, technology licensing, technology transfer clauses in their investment agreements, training arrangements.

The bottom line is that the potential for development provided by digital technologies can be easily eclipsed if developing countries are not given the flexibility and policy space to design their economic and industrial policies and national regulatory frameworks to promote digital infrastructure and digital capacities.

South–South and Triangular Cooperation for a Digital World

- Digital cooperation at the regional level can be added to the ongoing regional integration initiatives in the South, including in Africa.
- UNTCAD suggested a ten-point South– South digital cooperation agenda which includes:
 1. Building a data economy.
 2. Building cloud computing infrastructure.
 3. Strengthening broadband infrastructure.
 4. Promoting e-commerce in the region.
 5. Promoting regional digital payments.
 6. Progressing on single digital market in the region.
 7. Sharing experiences on e-government.
 8. Forging partnerships for building smart cities.
 9. Promoting digital innovations and technologies.
 10. Building statistics for measuring digitization.
- An important step towards digital cooperation is to build a regional data economy among neighbouring countries. This can help each country as they can use the big data of the region to develop AI for manufacturing customized digital products. However, to build a regional data economy, countries first need to **"own"** their data.
- Ownership of data at the national level by governments will allow the countries to decide with whom to share their data.
- For all countries in a region to have a level playing field in terms of access to opportunities arising from cloud computing, it is important that all countries within a regional bloc have a similar broadband ecosystem.

The Way Forward for Developing Countries

- The simple truth for the governments of developing countries is that realizing the potential benefits from a digital world will be difficult, and that ensuring those benefits have a wide social reach will be more difficult still. It requires ambitious policies in a wide range of areas that must be employed in a coherent way.
- Digital preparedness in many developing countries will require international support and cooperation;
- Some of the key policies that can help developing countries face the challenges posed by the digital revolution and increase their developmental gains are as follows:

1. **Building digital infrastructure.**
2. **Devising national data regulatory policies.**
3. **Regulating digital platforms and developing national marketing platforms.**
4. **Taxing the super-firms.**

Taxing these firms where their activities are based rather than where they declare their headquarters will help in redistributing their rents and increase government revenues.

5. **Drawing up digital industrial policies.**
6. **Harnessing digital start-ups.**

While many developing countries are encouraging digital start-ups as the primary source of digital innovations, there is a need for a more comprehensive policy with respect to digital start-ups, which prevents the gains of innovations flowing out of the country. Direct investment by governments in corporate equities can sustain digital innovations, enhance use of advanced technology and promote reverse innovations.

7. **Developing digital competencies.**

Chapter 4: Bridging Gaps or Widening Divides: Infrastructure Development And Structural Transformation

- Aschauer's influential work (1989) found evidence for the widely accepted wisdom that "roads lead to prosperity" (see also Deng, 2013). Looking at the economy of the United States from 1948 to 1985, he concluded that infrastructure investments led to productivity increases, finding that a 10 per cent rise in infrastructure stock over time was associated with a 4 per cent increase in productivity. The study even showed that the converse also held: declining infrastructure investment from 1970 to 1985 was responsible for declining output per capita over the same period in the United States.
- This chapter addresses the role of infrastructure in the process of structural transformation as its central question.

Infrastructure Matters: Conceptual Issues and Historical Lessons

- Types of infrastructure

- Infrastructure and the virtuous circle of growth
- Historical experiences

Types of Infrastructure

Infrastructure encompasses a broad category of goods and services that involve investments in both the social and physical stock of capital.

Hirschman, defined infrastructure as those “basic services without which primary, secondary and tertiary productive activities cannot function”

- **Networked Infrastructure Includes:**
 - Energy
 - Water
 - Public Transport
 - Telecommunications Sector
- The infrastructure services dealing with water provision include
 - dams and hydropower;
 - water supply;
 - wastewater, sanitation and water quality;
 - storm water systems; irrigation and drainage;
 - river and coastal works;
 - pipelines and canals; and
 - natural water infrastructure
- Transport Infrastructure includes: roads, railways, airports, seaports, bridges, waterways and tramways.
- Like energy, transportation infrastructure calls for large-scale investment projects and have a long gestation period.
- But its provision dramatically increases both economic productivity and quality of life.
- Like in rural areas, access to affordable energy can boost farm productivity because of its uses in pumping water for irrigation, mechanization, agricultural processing and post-harvest storage.
- An example of the strong network externalities associated with infrastructure comes from telecommunications infrastructure. For example, Hjort and Poulsen (2017) report that new submarine telecom cables in different parts of Africa brought the arrival of fast Internet, leading to the emergence of technology start-ups and a manufacturing sector that produces Internet-capable devices to serve the region, an improvement of supply chain coordination enhancing productivity in manufacturing and agribusiness, and the creation of jobs in the ICT sector and elsewhere.

Infrastructure and the Virtuous Circle of Growth

- There are ways in which infrastructure spending can drive productivity and growth.
- Industrial development was central to Hirschman's idea that developing countries should pursue "**unbalanced growth**" with productive resources targeted at a few sectors.
- This was based on the belief that the resulting disruption would not only stimulate further private investment in the favoured sectors but would help promote various organizational and other capabilities whose shortage might otherwise curtail the growth process.
- Hirschman believed that this framework would provide the best guide for the efficient sequencing of infrastructure spending.
- The government spending on infrastructure investment boosts aggregate demand, potentially sparking broader-based output growth through scale economies which feed into productivity increases. This typically leads to greater private sector investment, and by extension, also raises private demand for physical capital over a longer time-horizon.
- Infrastructure investment can simultaneously address supply-side constraints and thereby raise the productivity of other activities. Insofar as this reduces costs and improves the durability of private capital investment, it also enables the private sector to spend less on maintaining its own capital, releasing resources for other productive investment. Infrastructure provision that promotes social inclusion – such as better housing and improvements in health, education, sanitation and nutrition – enhances labour productivity in addition to promoting social welfare.
- Conversely, low or insufficient infrastructure can handicap enterprises by increasing production costs. Indeed, countries that have experienced stalled industrialization or premature deindustrialization have tended to have inconsistent trajectories of infrastructure investments, that have been inadequate overall and sometimes pulled the economy in other directions.
- In India, for example, several studies have noted that underinvestment in infrastructure required for manufacturing sector (Ghosh, 2012; Simon and Natarajan, 2017) has constrained private investment. By contrast, the rise of information technology services and digital products was possible in India because the conditions for the expansion of telecommunications and broadband networks were relatively less costly for the government to deliver.
- The resulting infrastructure gaps then become constraints on supply. For example, Mesquita Moreira et al. (2013) found that high transportation costs were associated with falling exports in Chile and Peru.
- While poor infrastructure in Africa increased transport and energy costs for local firms, with severe consequences for manufacturing productivity and competitiveness.

Historical Experiences

While infrastructure can boost productivity growth through a variety of channels, its contribution to sustaining a virtuous development circle does not occur in an institutional or policy vacuum.

Europe

- The gains that infrastructure brought during the industrial revolution, first in England and then in continental European countries, were not only the result of long-standing investments spanning decades or even centuries; they were often built on clear policy visions that placed infrastructure at the centre of nation-building efforts.
- Conceived in 1830, Chevalier's impressive plan was for a grand European transport system to connect the entire continent with rails, roads and shipping routes, whereby railway lines spanning over 60,000 km would traverse from the Mediterranean, the Black Sea and the Caspian Sea (through northbound lines), linking them to eastbound destinations of Flanders at the North Sea via Warsaw, Vilnius, Riga and St Petersburg to the Russian Pacific (Högselius et al., 2015; Drolet, 2015).
- He believed that enhanced connectivity between regions would encourage trade, commerce and industrialization in Europe and the Ottoman Empire, and that this was the only way to foster political harmony. This vision tied "public works" (as infrastructure was then known) intimately with the economic, political and industrial progress of Europe at the time.
- The essential features of this plan were indeed adopted by France as well as a number of European countries that became independent between 1830 and 1871, including Belgium, the German Empire, Greece, Italy, Serbia and Romania; and it even led to cross-country multilateral initiatives for infrastructure expansion

USA

- In the United States, the development of transport (notably railway) stimulated several industries such as iron, steel and timber; encouraged financial enterprise by promoting private investments into these sectors and railway construction; and contributed directly to the generation of national income through the provision and expansion of interregional and local transportation services

- Bold public moves on infrastructure in the United States over two centuries that transformed the country and its economic potential:
 - Construction of the Erie Canal, which opened a water route to the west;
 - Lincoln’s support for the transcontinental railroad, which transformed the country and enabled vast new cities to emerge;
 - Land Grant colleges that started in the midnineteenth century, which dramatically expanded access to higher education;
 - The Homestead Act of 1852, which enabled the westward expansion of population and settlement;
 - The construction of the Panama Canal in the early twentieth century, which enabled ships to pass between Atlantic and Pacific oceans and effectively sealed the hegemony of the United States in the region for the next century;
 - The Rural Electrification Administration of the Franklin D. Roosevelt government, which brought electricity to the rural United States with all its attendant benefits;
 - The GI Bill (Serviceman’s Readjustment Act of 1944), which provided free college education and low-interest home and business loans to all veterans with more than 90 days in uniform, thereby creating a secure domestic market;
 - The interstate highway system created by Eisenhower’s Federal Aid Highway Act, which revitalized the economy and modernized the United States.

Infrastructure in Developing Countries

- Needs and gaps
- The financing gap narrative

Needs and Gaps

The emphasis on a “top-down” approach based on the use of global models is to the detriment of a “bottom-up” assessment of needs based on country-specific circumstances and specific long-term development strategies.

- There are large regional and intraregional variations in current infrastructure investment, for instance, In Africa, Ethiopia and United Republic of Tanzania spend well above 5 per cent of GDP on infrastructure, while Nigeria and South Africa (the region’s two largest economies) have expenditures of just above 3 per cent and Egypt just over 2 per cent.
- In Latin America, the regional average is, to a large extent, influenced by low infrastructure expenditure in the region’s larger economies, with Argentina, Brazil and Mexico spending less than 2 per cent of GDP in 2015.

- In Asia, at one extreme, East Asia spent 5.8 per cent of its GDP on infrastructure in 2011, but this subregional average was dominated by China, which showed infrastructure expenditure of 6.8 per cent of GDP over 2010–2014. At the other extreme, South-East Asia spent just 2.1 per cent, as the economies hit by the East Asian financial crisis of 1997 (such as Indonesia, Malaysia, the Philippines and Thailand) experienced significant declines in public spending as a proportion of GDP that have not fully recovered thereafter.

Therefore, while on the whole Asia invests more and Africa and Latin America invest less in infrastructure development, no clear patterns emerge within regions, even in terms of country size or per capita income.

The “Financing-Gap” Narrative

- There is the need for countries to have a comprehensive long-term vision that recognizes the need to coordinate across sectors, regions and timelines, along with a more targeted medium-term planned approach towards infrastructure creation.
- This contrasts, quite sharply, with the current approach to infrastructure investment that looks at individual projects on a case-by-case basis to ensure that they are “bankable” (assuring repayment of loans taken for such investment) and requires that all investors in such projects get adequate returns.

The financing gap narrative with respect to infrastructure is built around a few key points.

1. First, estimated infrastructure investment gaps in each country (discussed above) are taken to imply a financing gap of a similar order of magnitude.
 2. Second, it is taken for granted that national public sectors in most countries are financially constrained with limited budgetary resources, face governance problems and run the risk of running into debt sustainability issues if they undertake infrastructure investments on the scale needed in the coming years.
 3. Third, given this public resource constraint, private capital, which is typically invested in short-term financial assets, should be unlocked for infrastructure projects.
 4. Fourth, for this to occur, a pipeline of “bankable” projects needs to be developed.
- The standard diagnosis is that projects that fit that profile are currently scarce and the risk-adjusted returns of existing projects are too low to attract private investors.
 - Numerous factors are pinpointed as restricting the delivery of “bankable” projects.

- These include low preparation capacity, high transaction costs, lack of liquid financial instruments, weak regulatory frameworks and legal opposition, along with various types of risks at the different phases of the life cycle of a project, such as: macroeconomic, political, technical and environmental risks at the phase of preparation; construction risks (overrun, cost escalation) during construction phase; and demand, operating and revenue risks (e.g. price and exchange risks; unrealized projected demand) at the operation phase.
- In order to expand the supply of “bankable” projects, there should be clear identification of actual returns and possible risks (including of default); development of governance structures to ensure approval of stakeholders, including through compensation schemes; provision of de-risking instruments such as sovereign and credit guarantees; and government mapping of long-term investment paths to reduce investors’ uncertainty about the future.

A Framework for Considering the Role of Infrastructure in Development

1. Some basic consider
 2. The role of planning in infrastructure development
 3. Experiences with national development plans: Country evidence
- A strategy of unbalanced growth, as noted earlier, assumes that there are some sectors that generate more forward and backward linkages than others and that government policy should target those sectors in terms of its efforts to mobilize, channel and manage resources and capabilities in ways that support a more virtuous growth circle.
 - This chapter has argued that infrastructure programmes should also be seen as a complementary part of such a development strategy.

Some Basic Considerations

Some critical considerations that have direct relevance for organizing infrastructure investments in developing countries are as follows:

1. The impact of infrastructure depends on the kind of investment
2. The impact of infrastructure is context- and sector-specific.
Like the infrastructure development has immediate and relatively large impacts on poorer countries, as opposed to advanced countries where there is already a relatively good network of infrastructure in place.
3. The impact of infrastructure is non-linear
Greater infrastructure investment does not always lead immediately to faster growth.

4. The impact of infrastructure depends on network effects within and between different kinds of investments.

All forms of modern infrastructure – transport, electricity, telecommunications and broadband – exhibit their own network effects. For instance, in the case of the Internet, the greater the number of Internet users, the greater the possibility of providing various online services but energy to promote production in rural areas would not necessarily lead to an increase in the rate of return to enterprises in the absence of other investments, such as roads or telecommunications.

The Role of Planning in Infrastructure Development

- Rapid economic transformation is unlikely to occur spontaneously, and throughout the twentieth century if successful countries had not relied on planning to “initiate, spur, and steer economic development”.
- Planning involves a wide range of choices, from what sectors to prioritize and technologies to adopt, to the degree of macro coordination of investment decisions, to the amount of resources required and how to mobilize them.
- The design and execution of an infrastructure plan should take into account a country’s stage of development, existing infrastructure, industrial capabilities and expansion plans, urban versus rural divides, levels of policy ambition, existing infrastructure institutions and their coordination, availability of new financial, technical or other resources and the existence of political and managerial capacity for effective implementation.

Experiences with National Development Plans: Country Evidence

Since the early 2000s, many developing countries have started to prepare and publish national development plans. These initiatives do not necessarily imply that countries rigorously stick to each of their provisions, but rather indicate a vision which countries may want to pursue in terms of their national trajectories.

Conclusion

- Managing structural transformation is a big challenge at all levels of development. In part, that is because the mixture of creative and destructive forces accompanying such a transformation do not automatically translate into a virtuous growth circle.
- This chapter has argued that structural transformation will also need to be accompanied by infrastructure planning. However, even as the funding for infrastructure has begun to recover after decades of decline, serious discussion of what is needed to effectively embed infrastructure programmes in a development strategy has not followed.

- Indeed, even when infrastructure has been included in national plans, there does not appear to be any clear framework for moving from ambition to implementation. This disconnect is in part the result of a singular ideological drive to limit the infrastructure challenge to a matter of project bankability, leaving it solely in the hands of finance ministries.
- But it also reflects a reluctance on the part of governments in developing countries to think about the challenge in a more comprehensive and integrated manner and to invest in the techniques, skills and institutional capacities required to ensure that infrastructure will not just build bridges but ensure those bridges deliver on the ambitions of the 2030 Agenda.

Way Forward

- Going forward, the trading system will have to tackle three fundamental challenges:
- First, in developed countries, the domestic support for globalization needs to be sustained in the face of economic weakness and the reduced ability to maintain social insurance mechanisms.
- Second, China has become the world's largest trader and a major beneficiary of the current rules of the game. It will be called upon to shoulder more of the responsibilities of maintaining an open system.
- The third challenge will be to prevent the rise of mega-regionalism from leading to discrimination and becoming a source of trade conflicts.

Hyperglobalization

Since the early 1990s, the world has entered into an era of what might be called hyperglobalization. The years between 1870 and 1914 have been described as the first golden age of globalization. World trade as a share of GDP surged from 9 percent in 1870 to 16 percent on the eve of World War I. This was the era that John Maynard Keynes waxed eloquently about, noting that an inhabitant of London “could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery upon his doorstep” (Keynes 1920, 11). The period between 1914 and the end of World War II witnessed the great reversal of globalization, as the combustible mix of isolationism, nationalism, and militarism ignited protectionist policies. World trade plunged to a low of 5.5 percent of world GDP just before World War II began (O'Rourke and Williamson 1999, Frieden 2006, and Irwin 2011). A third era, starting after World War II, saw the restoration of world trade, aided by declines in transportation costs and trade barriers. Only by about the mid- to late-1970s did world trade revert to the peaks seen before World War I. The world is now in a fourth era—of hyperglobalization—in which world trade has soared much more rapidly than world GDP. Merchandise exports-to-GDP ratios soared from 15 percent to 26 percent, and goods and services exports to about 33 percent over the course of the last two decades. This rapid

increase is somewhat surprising, because transportation costs do not appear to have declined as rapidly as in earlier eras (Hummels, Ishii, and Yi 2001 and Baldwin 2011a). The cost of information and communications did decline significantly, however. Part of the increase in trade reflects the fragmentation of manufacturing across borders—the famous slicing up of the value-added chain—as individual production stages are located where the costs of production are lowest. This phenomenon, whereby technology no longer requires that successive stages of manufacturing production be physically contiguous or proximate, has been dubbed the “second unbundling” (Baldwin 2011a).