ICT AND THE NEW GLOBAL INVESTMENT PARADIGM: CHALLENGES TO CROSS-BORDER TRADE AND INVESTMENT

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Abstract

This article explores the broader context of the use of Information and Communication Technology (ICT) in the cross-border environment from the perspective of one of the world's largest providers of IT hardware, software and services. It highlights a number of new and emerging thoughts and approaches around the continuing challenges of globalisation as it relates to business growth, investment, technological advancement and economic development. These developments are then discussed in the context of their applicability to the cross-border environment with a specific focus on the role that ICT can play in achieving a balance between trade facilitation and compliance in the customs environment. Existing mechanisms for achieving this balance are also explored along with some recommendations for ensuring that future developments align with the broader globalisation agenda and the key role that technology will play in determining the prosperity of individual nations and trading blocs.

Introduction

IBM currently operates in over 170 countries and moves approximately $US24 billion worth of goods around the globe annually. In addition it employs nearly 400,000 people and had annual revenues of $US103.6 billion in 2008. As a truly global provider of IT hardware, software, services and consulting, the company is able to provide unique insights into important developments in the global economy as a business, a corporate citizen and an innovator.

The following examples represent some of the recent thinking and observations around developments in the global economy. While they may not appear particularly relevant to the day-to-day challenges faced by cross-border agencies and related policy makers, it is important to grasp how rapidly technological innovation, true globalisation of the supply chain and skills/knowledge transfer are transforming the international trading landscape.

1. The Globally Integrated Enterprise

In an article for *Foreign Affairs* in 2006, IBM Chairman, President and Chief Executive Officer, Samuel J Palmisano posited the idea of the Globally Integrated Enterprise. The central premise of the article was that the multinational corporation (MNC) is taking on a new form as the result of increasing liberalisation of trade and investment flows and development and standardisation of new technologies:

> Many parties to the globalization debate mistakenly project into the future a picture of corporations that is unchanged from that of today or yesterday. This happens as often among free-market advocates

as it does among people opposed to globalization. But businesses are changing in fundamental ways – structurally, operationally, culturally – in response to the imperatives of globalization and **new technology** [emphasis added] (Palmisano 2006, p. 127).

The article identified distinct phases in the evolution of the corporation from the early mercantilists to mid-nineteenth century hub-and-spoke networks with a basic structure of home country manufacture and international distribution to the post World War I MNC that responded to rising tariffs and other trade barriers by establishing local production facilities in major markets. In the last three decades of the twentieth century, the combination of increasing trade liberalisation and the information technology revolution enabled the true internationalisation of the global corporation with the old model of country-based subsidiaries, business units and product lines superseded by a truly global approach to procurement, manufacturing, research, sales and distribution, etc.

> These decisions are not simply a matter of offloading noncore activities, nor are they mere labor arbitrage. They are about actively managing different operations, expertise, and capabilities so as to open the enterprise up in multiple ways, allowing it to connect more intimately with partners, suppliers and customers (Palmisano 2006, p. 131).

Mr Palmisano went on to outline a number of challenges that this new model will face moving forward, including skills development, regulation of intellectual property, governance, security and organisational culture. Importantly, he identified security and order as critical challenges:

> Among the most urgent of the challenges facing emergent global institutions in all spheres of society is global security and order. Companies will only invest in global systems of production if they believe that the geopolitical relationships that enable their investments will be stable and lasting. Without such confidence, investment will collapse (Palmisano 2006, p. 135).

He also identified the growth of horizontal, intergovernmental networks among the world's regulators as a promising development in helping to ensure global stability. The World Customs Organization (WCO) could be described as one such example.

2. Major markets and growth markets

In 2008 IBM implemented a new global strategy that centered on the unique characteristics of 'major markets' and 'growth markets'.

The traditional approach to doing business in different economic markets around the world involves grouping clients and markets according to their physical location and serving them via geographic units. The new approach recognises that geographic location may not be a critical factor from a strategic market development perspective.

Major markets are large, stable, mature markets with a high penetration of IT. IT investment in major markets – which represent more than 70 per cent of global Gross Domestic Product (GDP) and 85 per cent of global IT spending – requires sophisticated products and services that enable differentiation from competitors. Clients in these markets implement innovation and technology to generate cost savings, increased productivity, new opportunities and the ability to compete in the global economy.

Growth markets are expanding rapidly through different stages of development as clients build new IT infrastructures and implement innovative business models to compete and stimulate growth in their market. These markets, which encompass 140 of the countries in which IBM does business and 85 per cent of the world's population, comprise 60 per cent of the world's IT growth. IBM's business in Brazil, Russia, India and China collectively grew 25 per cent in 2007. Mexico, Egypt and Vietnam are examples of the many countries in growth markets that grew more than 10 per cent.

Countries in growth markets are focused on expanding infrastructures – from airports and subways to highways, buildings and stores. They are increasingly participating in the global economy and have growing consumer populations.

For example, at first glance, Egypt, Mexico, Poland and Vietnam seem worlds apart. Each has a different culture, language, history and geographic location. However, from a strategic market development perspective, these countries have more similarities than meet the eye. For example, each has:

* high GDP growth
* low IT market penetration
* market share and vendor leadership that are still being established
* limited resources requiring innovative business models.

These hyper-growth economies, spread across the Asia Pacific, Latin America, Central and Eastern Europe, the Middle East and Africa, are at varying stages of development.

Interestingly, IBM's strategy for growth markets includes a specific commitment to 'reinforce business integrity and compliance'. This represents a clear acknowledgement that understanding and adhering to compliance requirements will form an important part of IBM's value proposition as it ramps up investment in growth markets. In other words, the efficiency, transparency and security of cross-border transactions and processes will be determining factors in these investment decisions, as will the willingness of individual border agencies to proactively balance enforcement and revenue responsibilities with the broader need to facilitate trade, promote investment, and implement risk management schemes that focus limited resources on higher risk transactions.

3. A Smarter Planet

In his address to the Council on Foreign Relation in November 2008, Mr Palmisano introduced the idea of a Smarter Planet.

The premise of a Smarter Planet adds a further dimension to the earlier discussion on the globally integrated enterprise in that it recognises the increasing interconnectedness of the world with reference to a number of geopolitical issues and challenges:

> In the last few years, our eyes have been opened to global climate change, and to the environmental and geopolitical issues surrounding energy. We have been made aware of global supply chains for food and medicine. And, of course, we entered the new century with the shock to our sense of security delivered by the attacks on 9/11.

> These collective realizations have reminded us that we are all now connected – economically, technically and socially. But we're also learning that being connected is not sufficient. Yes, the world continues to get 'flatter.' And yes, it continues to get smaller and more interconnected. But something is happening that holds even greater potential. In a word, our planet is becoming smarter.

> This isn't just a metaphor. I mean infusing intelligence into the way the world literally works – the systems and processes that enable physical goods to be developed, manufactured, bought and sold… services to be delivered…everything from people and money to oil, water and electrons to move… and billions of people to work and live (Palmisano 2008).

Several reasons were provided to help explain what is behind this development:

* **First, our world is becoming instrumented:** The transistor, invented 60 years ago, is the basic building block of the digital age. Now, consider a world in which there are a billion transistors per human, each one costing one ten-millionth of a cent. We'll have that by 2010. There will likely

be 4 billion mobile phone subscribers by the end of this year…and 30 billion Radio Frequency Identification tags produced globally within two years. Sensors are being embedded across entire ecosystems – supply-chains, healthcare networks, cities…even natural systems like rivers.

- **Second, our world is becoming interconnected:** Very soon there will be 2 billion people on the Internet. But in an instrumented world, systems and objects can now 'speak' to one another, too. Think about the prospect of a trillion connected and intelligent things – cars, appliances, cameras, roadways, pipelines…even pharmaceuticals and livestock. The amount of information produced by the interaction of all those things will be unprecedented.

- **Third, all things are becoming intelligent:** New computing models can handle the proliferation of end-user devices, sensors and actuators and connect them with back-end systems. Combined with advanced analytics, those supercomputers can turn mountains of data into intelligence that can be translated into action, making our systems, processes and infrastructures more efficient, more productive and responsive – in a word, smarter (Palmisano 2008).

Given this rapid convergence of digital and physical infrastructures and computational power, the real challenge will be how to harness these innovations to address numerous social and economic challenges facing the planet:

How much energy we waste: According to published reports, the losses of electrical energy because grid systems are not 'smart' range as high as 40 to 70 per cent around the world.

How gridlocked our cities are: Congested roadways in the U.S. cost $78 billion annually, in the form of 4.2 billion lost hours and 2.9 billion gallons of wasted gas – and that's not even counting the impact on our air quality.

How inefficient our supply chains are: Consumer product and retail industries lose about $40 billion annually, or 3.5 per cent of their sales, due to supply chain inefficiencies.

How antiquated our healthcare system is: In truth, it isn't a 'system' at all. It doesn't link from diagnosis, to drug discovery, to healthcare deliverers, to insurers, to employers. Meanwhile, personal expenditures on health now push more than 100 million people worldwide below the poverty line each year.

How our planet's water supply is drying up: Global water usage has increased six-fold since the 1900s, twice the rate of human population growth. According to the Asian Development Bank, one in five people living today lacks access to safe drinking water, and half the world's population does not have adequate sanitation.

And, of course, the crisis in our financial markets: This will be analyzed for decades, but one thing is already clear. Financial institutions spread risk but weren't able to track risk – and that uncertainty, that lack of knowing with precision, undermined confidence (Palmisano 2008).

Of most relevance to this article, the address pointed out that smart infrastructure is becoming the basis of competition between nations, regions and cities:

In a globally integrated economy, investment and work flow not only to the places in the world that offer cost advantages, skills and expertise. It is flowing to countries, regions and cities that offer smart infrastructure – everything from efficient transportation systems, modern airports and secure trade lanes...to reliable energy grids, transparent and trusted markets, and enhanced quality of life (Palmisano 2008).

The cross-border context

A common thread in each of the global developments outlined above is not so much the increasing pervasiveness of technology in driving economic and social outcomes but that individuals, organisations and governments alike need to think carefully about how they should best collaborate in the use of that technology to achieve their desired outcomes.

This is just as relevant to customs processes as it is to health records, vehicle congestion or water management. In fact it is hard to think of a customs reform or improvement project today that would not involve the use of ICT – from the complexity of a multilateral Single Window project to the publication of customs notices via a website to the risk management systems used for targeting cargo for inspection.

A key challenge remains, however, at the intersection of Customs' traditional enforcement and revenue collection mindset and the increasing need for a more collaborative and facilitative approach to managing cross-border transactions.[1]

There is little doubt that much can be done to improve the efficiency of cross-border procedures in many countries and particularly those in developing countries. A cursory glance at the Doing Business Report[2] or World Bank Logistics Performance Index[3] only serves to reinforce this point. Similarly, a reliance on import duties as a key revenue generator[4] also creates challenges for customs administrations and can act as an inhibitor to facilitation-based reform. More importantly, however, is the need to look beyond these raw numbers and identify distinct opportunities to drive mutually beneficial reforms that take advantage of the trends in global commerce and smart technologies – and this is a challenge for industry as much as it is for governments.

Existing mechanisms and initiatives

Previous editions of this Journal have focused on a number of existing mechanisms and initiatives designed to introduce standards and drive improvements in cross-border trade and security. This has included discussion on relevant WTO General Agreement on Tariffs and Trade (GATT) articles, the WCO SAFE Framework of Standards to Secure and Facilitate Global Trade, the Revised Kyoto Convention and the United Nations Centre for Trade Facilitation and Electronic Business.

There certainly appears to be strong support at the global level in respect to international cooperation and agreement around standards setting, harmonisation and simplification in customs procedures consistent with the 'growth of horizontal, intergovernmental networks among the world's regulators' referred to above. The following is an extract from the WCO SAFE Framework:

> This Framework provides a new and consolidated platform which will enhance world trade, ensure better security against terrorism, and increase the contribution of Customs and trade partners to the economic and social wellbeing of nations. It will improve the ability of Customs to detect and deal with high risk consignments and increase efficiencies in the administration of goods, thereby expediting the clearance and release of goods (WCO 2006, p. 5).

The ongoing challenge, however, is to ensure that high level commitments morph into concrete action at the regional and country level as this is where the 'rubber hits the road' in respect to ensuring material outcomes for industry and governments alike. Countries and trading blocs that are able to grasp the critical role that transparent and efficient cross-border transactions play in enabling trade and investment stand to gain the most, not only from existing mechanisms but from the flexibility that this will provide to deal with the next wave of challenges in the global economy – technological, economic or social.

As a globally integrated enterprise, IBM has a strong incentive to not only ensure the highest level of compliance and integrity in its cross-border activity but also to participate in trusted partner initiatives that deliver quantifiable benefits while also meeting the risk management and enforcement imperatives of the respective border agencies.

IBM has been very active in this sphere in recent years particularly in the area of Authorised Economic Operator (AEO) implementation, and has previously contributed to this Journal on that topic (Fletcher 2007). IBM is also a member of the WCO's Private Sector Consultative Group and has participated in and presented at numerous forums such as the Asia-Pacific Economic Cooperation (APEC) and the Association of Southeast Asian Nations (ASEAN) on the topic of supply chain security and trade facilitation. More importantly, however, we have worked with a number of countries worldwide on the development and implementation of their AEO programs and have been a strong proponent of the mutual recognition aspect of this process. We also participate in a number of trade facilitation programs worldwide and are continually advocating the introduction of similar initiatives in other countries.

Conclusions

The global economy is posing many challenges for border agencies, including the need to balance law enforcement and revenue collection with the pressure to promote and facilitate trade in the face of increasingly complex global supply chains, technological developments and investment attraction parameters. While there are positive signs that these challenges are understood by international agencies and national policy makers, there remains a disconnect with action at the country and regional level. While technology in itself is not the panacea for meeting all these challenges, it is certainly a common denominator in many of the current global initiatives and standards and appears to have a high correlation to customs modernisation status.

There is also a lot more that can be achieved in respect to the Customs-to-Business dynamic. From IBM's experience to date, this can best be achieved through a true partnership that enables consultation at the development and implementation stages of both policy and program development. This is particularly relevant to developing or growth market countries where IBM's reputation as a trusted partner and experience with existing programs can be shared along with the many capacity building initiatives currently under way.[5]

Technology is not only an enabler of customs modernisation – it is also driving adoption of the business models, organisational culture and global standards that are necessitating that change.

References

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Endnotes

1 See Kafeero 2008, pp. 63–71, and Buyonge & Kireeva 2008, pp. 41–54, for two excellent articles on the customs reform challenges faced in Africa.

2 See: http://www.doingbusiness.org/.

3 See: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTTRANSPORT/EXTTLF/0,,contentMDK:21514122~menuPK:3875957~pagePK:210058~piPK:210062~theSitePK:515434,00.html.

4 See: http://www.wcoomd.org/files/1.%20Public%20files/PDFandDocuments/Harmonized%20System/SurveyCDEN20080910.pdf.

5 For example, see http://www.wcoomd.org/home_wco_topics_cboverviewboxes.htm.

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