COMMUNICATION AND MANAGEMENT IN TECHNOLOGICAL INNOVATION AND ACADEMIC GLOBALIZATION

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ABSTRACT

Globalization and the telecommunications revolution have brought to developments that were largely unanticipated. The first is the reemergence of the importance of regions and geographic proximity as important units of economic activity. That innovative activity has become more important is not surprising. What was perhaps less anticipated is that much of the innovative activity is less associated with footloose multinational corporations and more associated with high-tech innovative regional clusters, such as Silicon Valley, Research Triangle, and Route 128. Only a few years ago the conventional wisdom predicted that globalization would render the demise of the region as a meaningful unit of economic analysis.

Keywords: *Technological collaborations; managerial strategies; emerging challenges; new technologies.*

1. MANAGEMENT COMUNICATIONS

Communications management is the systematic planning, implementing, monitoring, and revision of all the channels of communication within an organization, and between organizations; it also includes the organization and dissemination of new communication directives connected with an organization, network, or communications technology. Aspects of communications management include developing corporate communication strategies, designing internal and external communications directives, and managing the flow of information, including online communication. New technology forces constant innovation on the part of communications managers. Communication plays a fundamental role in the success or failure of managers. On any credible list of the most important skills for managers and business leaders, communication is rated at or near the top. Management Communication involves the study and practice of all aspects of communication between various constituencies in business settings. Managers and executives must be able to think about communication strategies and to select the proper strategy for each situation and each audience. The field of Management Communication includes research on communication behavior, theories of communication strategy and application, and practical skill development for managers in a wide variety of areas. Such skill areas include Strategic Communication, Interpersonal and Corporate Communication, Presentations, Persuasion, Interviewing, Giving and Receiving Feedback, Communicating Technical Information to Non-experts, Communicating in Meetings, Team/Project Communication, Communicating across Cultures, Using New Communication Technologies, Facilitation Skills, and Managerial Writing.

The notion of globalization of innovation, similarly to that of nance, production, culture and information, is now diffuse. Scholars, govern- ments and international organizations have attempted to assess the changes that have occurred in innovative activities due to an ever increasingly globalized society. Globalization is not a single phenomenon, but a catch-all concept to describe a wide range of forces. It has been de ned very differently according to the social science within which it is applied. Paul Streeten (1996) has, half in jest, collected the various definitio the literature. Here, we have applied a rather wide de nition of globalization, which conforms to that provided by Giddens (1990: 64): 'the intensi cation of world-wide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa'.

2. KNOWLEDGE MANAGEMENT FOR PUBLIC ADMINISTRATION

The roles of knowledge and understanding for organizational performance have become more noticeable nowthen ever before. Knowledge management is a set of tools and processes, which served to improve the performance of publicservant by transforming them to knowledge workers. Major characteristic of managing knowledge in the publicorganizations is the existence of additional information sourcesand transformers of information.

For instance the utmostimportance in the public organizations is the knowledge that is being accumulated, stored and processed within therelationship of the administrative authorities and the politicalactors with whom the public managers are in directdependence. Usually this type of knowledge is highlyunstructured and hard to systemize and automate. The specificof the administrator-policy maker relationship is such that inmost of the cases the knowledge is being created at individual evel, which makes it difficult for codification, standardization nd linkage to other sources and transformers of knowledge inthe public organizations.

3. THE GLOBAL TECHNOLOGICAL COLLABORATIONS

In recent times, a third type of globalization of innovative activities has made a forceful entry on the scene. This, in some ways, is interme- diate to the two

preceding categories. Technological collaborations occur when two (or more) different rms decide to establish a joint venture with the aim of developing technical knowledge and/or products. Three conditions need to be respected: (1) the joint venture should be something more than an occasional and informal collaboration; (2) rms preserve their ownership; and (3) the bulk of the collaboration is related to sharing know-how and/or the generation of new products and processes (Mowery, 1992). Such collaborations often take place among rms of the same country, but in many cases they involve rms located in two or more count- ries, thus emerging as authentically global. These forms of collaboration for technological advances have promoted a variety of mechanisms for he division of costs and the exploitation of results. In a way, the neces- sity to reduce the costs of innovation – and to cope with its increasing complexity – has created new industrial organization forms and new ownership structures, which today are expanding beyond the simple technological sphere (Dodgson, 1993). However, it was not the private sector that discovered this form of knowledge transmission. The academic world has always had a transnational radius of action: knowledge is traditionally transmitted from one scholar to another and thus disseminated without always requiring pecu- niary compensation.

4. HIGH AND LOW CONTEXT IN COMMUNICATION

Anthropologist Edward T. Hall's theory of high- and low-context culture helps us better understand the powerful effect culture has on communication. A key factor in his theory is context. This relates to the framework, background, and surrounding circumstances in which communication or an event takes place.

4.1 High-context cultures

(Including much of the Middle East, Asia, Africa, and South America) are relational, collectivist, intuitive, and contemplative. This means that people in these cultures emphasize interpersonal relationships. Developing trust is an important first step to any business transaction. According to Hall, these cultures are collectivist, preferring group harmony and consensus to individual achievement. And people in these cultures are less governed by reason than by intuition or feelings. Words are not so important as context, which might include the speaker's tone of voice, facial expression, gestures, posture-and even the person's family history and status. A Japanese manager explained his culture's communication style to an American: "We are a homogeneous people and don't have to speak as much as you do here. When we say one word, we understand ten, but here you have to say ten to understand one." High-context communication tends to be more indirect and more formal. Flowery language, humility, and elaborate apologies are typical.

4.2 Low-context cultures

(Including North America and much of Western Europe) are logical, linear, individualistic, and action-oriented. People from low-context cultures value logic, facts, and directness. Solving a problem means lining up the facts and evaluating one after another. Decisions are based on fact rather than intuition. Discussions end with actions and communicators are expected to be straightforward, concise, and efficient in telling what action is expected. To be absolutely clear, they strive to use precise words and intend them to be taken literally. Explicit contracts conclude negotiations. This is very different from communicators in high-context cultures who depend less on language precision and legal documents. High-context business people may even distrust contracts and be offended by the lack of trust they suggest.

4.3 Reconciling high and low context in communication

Reconciling opposing cultural values is a key skill in crossing cultures and managing diversity. If we merely focus on 'spelling things out' when communicating across cultures, we are likely to end up damaging relationships. On the other hand, if we focus on protecting people's 'face' through a high- context style, we might safeguard relationships but the clarity of the message will suffer. Thus, to reconcile potentially conflicting approaches to communicating meaning in a business context, we need to be able to use a common language (such as English) to make our messages to international partners (or those from other diverse backgrounds) both clear and transparent (the strength of Low Context cultures) as well as sensitive and relationship-orientated (the strength of High Context cultures).

5. THE LESSONS OF GLOBALIZATION: ENERGIZING MANAGERIAL STRATEGIES

Today, globalization impacts customers and the management mindset in profound ways. Unfortunately, the global economy today neither reflects the existence of the political institutions defined as the "nation state" nor the makeover of those very institutions needed to correct the post-1945 imbalances between the "third world" and the first world. Today, a new "Great Game" has arisen, reconstructing the global economy not around a collection of individual nations, but one with global economic institutions, and with membership well beyond the G-7 or G-20 group of countries. The BRIC countries, for example, are a new global force and their influence is felt across a range of sectors, from autos and computers to energy and finance.

Yet there remains a disconnect. For instance, emerging markets and their central bank reserves actually provide the savings for the first world by purchasing foreign governments' treasury bonds. The U.S. is the noted example. Indeed, the financial flows from the emerging countries don't always reflect the rich world's real but critical influences on the capital markets of the rich world. While stock market indexes highly correlate between say New York and Toronto or London, the same is not true between markets in New York and Tokyo in the past or between New York and Shanghai today. The result is that business cycles and savings-investments fluctuations can vary tremendously.
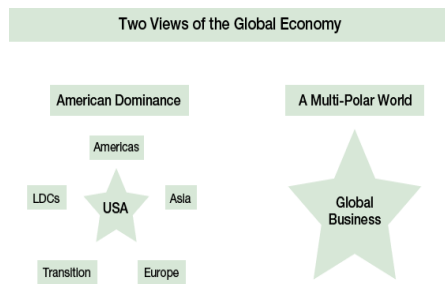
Figure. 1

The unalterable trends of globalization, led by the three main drivers, financial capital, technology and wealth-creating overseas trade, integrate countries and their industries in ways that are unprecedented. Clearly, the impact of China and India on the global business community has no precedent. The two countries account for 40 per cent of the global population. This forces all managers to ask a simple question: Do we have an India or a China strategy? It is a question that must be asked, from the very limited strategic perspective of the nation state, because these two counties impact global competition in direct and indirect ways. The direct ways include the new stock-exchange listings of Indian and Chinese companies that want to be global MNEs. The stereotyping of Indian and Chinese companies – IT and software for India, low-cost labour manufacturing for China – ignores many other sectors, from advanced household appliances to semi-conductors, from medical robots and medical devices to space technologies that are producing best-in-class companies in these two countries. India and China count, not just because of their population and trained labour force, but because they need to import so many technologies, managers and products. This is a great opportunity for Canada, to become part of their supply chains, their research centers and their North American marketing outlets.

China and India also have an indirect impact on other countries, through strategies that range from joint ventures to research alliances, from direct investments abroad to sub-contracting in rich countries. That explains why, in recent years, they have doubled the annual output of engineers, computer scientists and IT specialists with 3- and 4-year degrees, about 600,000, compared to only 225,000 in the United States. These are just some of the reasons why Canada must have a strong presence in these countries. Indian and Chinese prowess is creating real convulsions in the global business environment. Now, two entire continents, South America and Africa, are awakening to globalization. No two continents are so rich in natural resources. No two continents could impact so many industries with sophisticated innovation – from agribusiness to petroleum, minerals to fashion. But South America and Africa need to make their own choices. Some countries want to play the global game, while others do not. Who will be left out? The same issues apply to the Middle East, steeped in ethnic and religious conflicts, and staggering oil wealth. Even a cursory check of developments in place like Dubai or Qatar raises basic questions about managerial biases towards nationalism and even isolationism in North America, where the U.S.

Patriot Act makes it difficult for Arabs to travel in the U.S. or to buy U.S. companies. Where does Canada fit, and which Canadian industries and corporations form part of the solutions? For Canadian managers, the basic challenge is to change the mindset, both of how managers and employees see the world, and of how Canadian institutions – universities, banking, manufacturing, government bureaucracies, and national media (including the CBC) – accommodate this new reality. Globalization forces everyone to have a world perspective. As shown in Exhibit 2, best-practice managers focus on a dominant paradigm, value creation for shareholders. Value creation is a result of excellence at all levels, in strategic positioning, in recognizing value from constant innovation, and from exploiting strengths and competences. In this sense, people count, and the best-practices firms go to inordinate lengths to recruit the best people, cultivate a learning environment, and practice a form of kaizen or continuous improvement of the strategic matters that count.

6. EMERGING CHALLENGES

Technologies offer educators and students alike opportunities for creating meaningful learning environments. Technologies enable different types of social interaction, provide ready access to information and can overcome some of the difficulties presented by time and space. Students can create new materials, artefacts and new knowledge with the media tools now available to them.These tools are constantly evolving as individuals and companies create and refine new software. The futurist Alvin Toffler is reputed to have predicted some 30 years ago that '... the illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn'.Including technologies in teaching and learning requires a reconceptualisation of the curriculum and how it can be taught. Using technologies to simply replace blackboards with whiteboards and pens with computers and word processors does not constitute a reconceptualisation of teaching and learning, nor the nature of school education. Such an approach will not support students to 'learn, unlearn, and relearn'. Studies over the past decade have tended to show that using technologies to improve students' learning outcomes is difficult to demonstrate. Indeed, in the United States of America a recent, large-scale study found that, even with good hardware and educational software, little learning benefit for students was identified (Dynarski, Roberto, Heaviside, Novak, Carey, Campuzano, Means, Murphy, Penuel, Javitz, Emery & Sussex, 2007). Furthermore, Cuban (2001) described how the use of computers in classrooms did not result in improved learning opportunities for students. Such studies demonstrate that using technologies to support a pre-existing curriculum is of contested effectiveness. Instead, they point to some of the challenges facing teachers as they shift to student-centred teaching and learning approaches that include technologies. Other studies point to the potential of technologies to address the complex set of challenges facing the world: addressing issues such as climate change and feeding the planet (Puttnam,

2009). Rather than simply trying to slot technologies into the curriculum, however, educators are now afforded an opportunity to rethink the ways in which they carry out their work. This shift calls for more demanding professional pedagogical repertoires than those that have been required in the past (Johansson, 2000).

7. USING NEW TECHNOLOGIES TO FORGE A PATH TO TOMORROW'S INNOVATIONS

One of the essential foundations for creating a successful company over the long term is to identify technological trends from an early stage and to exploit the opportunities that new technologies offer for product innovations. However, factors such as the hugely dynamic nature of technological progress make it increasingly difficult for companies to comprehensively identify technology-related opportunities and to harness them in a goal-oriented manner. A key prerequisite for successful technology development therefore lies in the ability of an organization to rapidly and efficiently align the requirements of the market with the potential offered by new technologies and to integrate the results in its own products and processes. The methods and organizational solutions developed in the Technology and Innovation Management business unit to improve and synchronize research, innovation and technology development processes have been shown to trigger success in the market: companies whose technology development capabilities have been properly organized achieve higher growth, increased profitability and an enhanced competitive edge.

8. THE TECHNOLOGY AND INNOVATION MANAGEMENT BUSINESS UNIT FOCUSES ON THE FOLLOWING KEY TOPICS:

➢ Developing and implementing innovation and technology strategies
➢ Increasing organizations' capacity for innovation
➢ Organizing innovation and research and development (R&D) effectively and efficiently using lean processes
➢ Identifying, evaluating and exploiting new technologies
➢ Setting up and supporting technology and innovation networks
➢ Intellectual property: IP for innovation
➢ IT support for R&D, technology and innovation management.

9. CONCLUSIONS

Globalization is dependent on communication technology, and communication technology is in turn dependent on globalization. Communication technology is just one of the factors that has played a major role in spreading globalization, and some experts believe that globalization would have never been possible in the absence of communication technology. While the impact of communication technology has been overly positive, it has led to certain challenges. There is a wide disparity when it comes to access to technology between developing and developed nations which can be

countered by making further innovations in communication technology.Contemporary globalization is marked by rapidly and dramatically increasing interdependence, which operates both within and among countries. Increasing global interdependence has profound influence on education at all levels, such as how to deal with a world with more permeable boundaries in which people are on the move more frequently (migration) than ever before in human history, and in which urbanization is increasing at an unprecedented rate. This paper proposes a transformational analysis of contemporary globalization and identifies the increasing challenge for education due to the globalization, including the struggle to match the pace of technology change in society, to provide graduates with skills relevant to contemporary society, and to lead education students to an accommodation with persistent and rapid social change. Among the positive consequences of globalization are the widening of peoples' horizons, access to knowledge and the products of science and technology, multiculturalism and intercultural views, an increase in opportunities, personal and social development and possibilities of sharing ideas and joint action towards solutions to common problems. The negative consequences are mainly on social, economic and environmental levels. On one hand, there is increasing poverty in societies, a growing gap between developed and developing countries and between privileged and excluded people, low standards of living, disease, forced migration and human rights violations, exploitation of weak social groups, racism and xenophobia, conflicts, insecurity and growing individualism. On the other hand, there are many environmental repercussions, such as the greenhouse effect, climate change, pollution and the exhaustion of natural resources. Resistance to globalization, from various ideological perspectives, has grown as people have come to recognize its effects on their lives and on the world. Anti-globalization forces are critical of the inequities of global trade, environmental problems, loss of national sovereignty, and cultural imperialism.

10. REFEREENCES

[1] Thomas H.Davenport., *Process Innovation, Reengineering Work trough Information Technology*, Harvard Business Press, 2013

[2] Dorothy Leonard-Barton „*Implementation as mutual adaptation of technology and organization"* Harvard graduate School of Business, Cambridge, february 1988

[3] Yar M. Ebadi, *The Effects of Communication on Technological Innovation*, Management Science 1984

[4] Kevin J. Boudreau, Nicola Lacetera, Karim R. Lakhani., *Incentives and Problem Uncertainty in Innovation Contests: An Empirical Analysis.*, Management Science, 2011

[5] Kinshuk Jerath, Serguei Netessine, Senthil K. Veeraraghavan., *Revenue Management with Strategic Customers: Last-Minute Selling and Opaque Selling*, Management Science, 2010

[6] Thomas Lager., *Managing Process Innovation: From Idea Generation to Implementation*, Portada World Scientific, 2010

[7] Erik Brynjolfsson, Adam Saunders., *Wired for Innovation*, Massachusetts Institute of Technology, 2010