Experimenting with ICT-Intensive Public and Private Collaboration Projects: The Canadian Experience

L. Préfontaine, L. Ricard, H. Sicotte, D. Skander
University of Quebec at Montreal, Montreal, Qc, Canada
M. Bourgault,
École Polytechnique, Montréal, Canada

Department of Management and Technology School of Business, University of Quebec at Montreal B.O. 8888, Downtown Station Montreal (Quebec) Canada H3C 3 P8 prefontaine.lise@uqam.ca

Abstract. This research examines nine ICT-intensive and innovative projects involving both public and private sectors in the delivery of public services and attempts to identify their main critical success factors (CSFs). Several respondents from both sectors were interviewed. Results show that political leadership, thorough planning and communication stand out as the first necessary conditions to the success of ICT-intensive public and private collaboration projects, assuring projects the legitimacy, the direction and the implication most needed to attain success. When reflecting on some of the major issues confronting ICT-intensive projects, research results point to political, operational and technological issues such as lack of regulatory framework, deficit of technological expertise in public organizations or problems of integration of numerous governmental information systems. Canada's overall experience with ICT-intensive public and private collaboration projects is still at the experimentation stage.

1. Introduction

Governments all over the world are increasingly turning to the private sector to gain access to human or financial resources not readily available, for the delivery of public goods or services to citizens and enterprises [St00]. Collaboration between the two sectors often takes the form of contracting agreements, of outsourcing or of public and private partnerships (PPPs). These projects can be classified into two main categories: infrastructure projects such as roads, bridges, buildings, water and waste management, for one; and delivery of public services including portals, one-stop shops, networks and large databases, mostly information and communication technology (ICT) projects, for the other. This research project aimed at uncovering the critical success factors specific to ICT-intensive public and private collaboration projects in the service delivery category and at reflecting on the Canadian experience with these projects.

2. Specific Environment of ICT-Intensive Public and Private Collaboration Projects

A public and private collaboration project is defined as "A reciprocal and voluntary agreement between two or more public and private or non-profit entities, to deliver government services." [DP03:41]. These collaboration projects involve a formal agreement about roles and responsibilities. The participating organizations share a common objective, tangible and intangible risks, benefits, and resources. Moreover, if the goods are public, funds are usually private or, at least, shared by both partners. These projects include public and private partnerships but also public-public collaboration, whether horizontal (same level of government) or vertical (local, provinces and/or state levels). In many ways, they are like alliances or joint ventures with the difference that they always include at least one public partner. Figure 1 depicts the space of public-public and public-private collaboration in the large sphere of interorganizational collaboration.

ICT-intensive public and private collaboration projects for the delivery of public services usually involve partners from two very different sectors, the public and private sectors. These projects aim at the delivery of public services to citizens themselves or to corporate citizens or enterprises. The universal character of most services confer to these projects a social capital and economic importance: electronic points of service for entrepreneurs, transactional internet websites for taxes, electronic toll motorways, computerized medical files, automobile insurance management and others. In brief, these projects are very complex, their scope is wide, the use of ICT is most intensive and the identification of critical success factors can only facilitate and improve their management.

3. Critical Success Factors of Public and Private Collaboration Projects

Factors issued from the literature review and affecting the performance of these collaborative projects were gathered into five main clusters (see figure 2): i) socioeconomic, political and cultural factors; ii) technological and sectorial factors; iii) partners objectives and characteristics; iv) project management factors; v) and collaboration and governance factors. The sixth dimension, performance includes project, relationship and service success or performance.

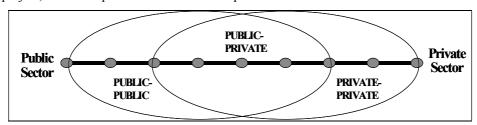


Figure 1: Space for public-public and public-private collaboration

The political, socio-economic and cultural dimension refers to government's politics and institutions that encourage or hinder certain initiatives [Ma96]. Hofstede and al. [HBS90] have acknowledged the importance of culture, values, rites and norms, security or authority known to influence citizens' expectations. The economy of the region and of the country also has a direct impact on the capacity of the state to lead such projects [Po90].

The most immediate environment includes the regulatory framework in use that dictates laws and regulations on commerce, propriety rights, citizens rights and acquisition processes on public markets [WB89]. Technology in this particular study is most important since information and communication technologies act as catalysts of economic development [Di98] and change agents [HD99]. Project environment refers to the industry into which projects unfolds.

The third cluster gathers factors ensuing from the characteristics which model participation and expectations of each partner [CL88]. Collaboration is generally motivated by the need for control and access to resources [Wil92] but opportunism and asymmetries in information will render collaboration most difficult [MFH95]. Differences between the public and the private sectors have been identified as fundamental and will therefore amplify the difficulties in collaborating [LN99]; [DDK04].

Project management factors define the fourth dimension of the framework. These include trust [He01], early encounters and successes [LF99], strong leadership [SB94], presence of a champion and organizational support [VP95]. At each stage of the project, collaboration evolves and so does the relationship between partners [RV94] and success factors [PS88].

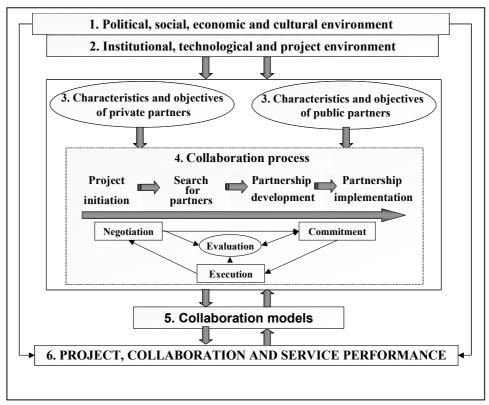


Figure 2: Clusters of factors affecting the success of collaboration projects

The next cluster, collaboration models, identifies the structural and governance differences between partnerships [HH94]. For instance, a too wide decision process reduces efficiency while increasing coordination costs and complexity of deliberations [Pf95]. There exists a wide range of collaboration projects with different degrees of delegation: at one hand, outsourcing where government keeps a major control on activities and at the other hand, concessions where the private sector acts almost freely, in the framework of regulations or laws [BFM05].

Performance or success is a multidimensional concept and is particularly difficult to assess [BC99]. Looking at performance of collaboration projects, one must first include performance of collaboration between partners that leads to their satisfaction. The project itself must be

evaluated using the Project Management Institute success triangle of costs, time and quality [PMI04] to which have been added three other factors, attaining the pursued goals, meeting specifications and expectancies. A final aspect, performance of the service which translates into customer satisfaction [BPZ94] is also of the utmost importance.

Using these six clusters and their related factors, answers to the research question «what are the critical success factors of ICT-intensive public and private collaboration projects for the delivery of public services? », were sought. At the same time, public and private managers were asked to reflect on the issues facing these projects.

4. Research strategy

A comparative analysis of nine case studies covering most of the Canadian territory was conducted. Yin (1994) suggests this research strategy in order to capture the structural, organizational and political complexities of a phenomenon. Cases were selected for their coverage of the Canadian scene, for their representation of different sectors of activities and for the variability of the types of partnerships. In addition, they all make a large use of ICT.

A most interesting aspect of this research is the fact that most public and private partners as well as a few citizens to whom the services were rendered, were interviewed. In all, 112 interviews were conducted with a pre-tested interview guide; these included project managers, human resources technology and finance managers and representative of citizens, when available. Transcripts were coded separately by two researchers using the six clusters and related factors with a 85% degree of concordance. Divergences were discussed and consensus attained. Content analysis was performed using Atlas TI, a qualitative analysis software.

5. Description of the Nine Case Studies

The nine case studies vary at the project, partners and partnership, technology, activity sector and nature of service levels. Follows a brief description of each project:

- «Partners in Change», a performance based project conducted by the Ministry of Human Resources of New Brunswick with Accenture as private partner to reorganize the delivery of security of revenue services (information, counselling, education, financial support). The development and implementation of a case management information system is central to the organizational changes being introduced.
- 2. «Cadastral Renovation », an integration of goods and services project of the Ministry of Natural Resources of Quebec with DMR Consulting Group to develop and implement an electronic infrastructure (mainly computers, a spatial data base and associated software) for real property tax mapping. This included the development of a geomatic data base for managing numerized versions of all real property maps of the province therefore replacing multiples paper copies by a single one that can be actualized rapidly after all land transactions.
- 3. «InfoEntrepreneur», a project initiated by the Montreal Chamber of Commerce in collaboration with Economic Development, Industry Canada and the Ministry of Industry and Commerce of Quebec, to put in place and operate a one stop shop for entrepreneurs, an electronic portal and a telephone support system.
- 4. «Ambassadeur», a pilot project of Development of Human Resources of Canada with the regional Society Aiding Community Development (SACD) for developing and supporting computer literacy among citizens and small businesses. Ambassadors mainly coming from large firms worked at supporting the use of ICT by workers and small firms.

- 5. «BonjourQuébec.com», an electronic business center resulting from the partnership between the Quebec Tourism Agency and Bell Canada, to develop and implement a transactional electronic portal for tourism.
- 6. «CSST Network», an extranet developed by the Health and Security Working Commission of Quebec with a consortium of partners led by the National Bank of Canada to develop and implement a work compensation system. A network linking large firms, hospitals, rehabilitation centres and the Commission was put in place as well as the information systems for sharing relevant information.
- 7. «Ontario Business Connect», a partnership between federal, provincial and local agencies and ministries and also non-profit organizations to design, develop and operate a value added portal for entrepreneurs. The platform designed as a «plug and play» technology enables partners to add legal, marketing or financing services very easily, according to their needs.
- 8. «One Stop Business Registration», a collaboration between federal, provincial and local governments in British Colombia with a private partner to develop a portal integrating registration services for new businesses owners. By filling in a single application form, the entrepreneur obtains incorporation of the new firm as well as all permits issued by different levels of government.
- 9. «Service Canada Initiative», a pilot project of the Treasury Board of Canada with the collaboration of many departments at the federal, provincial and local levels and a few intermediary groups to put in place an integrated network of government information for citizens. The integrated network includes a portal, the 1-800-O-CANADA phone service and person-to-person access centres.

6. Critical Success Factors of ICT-Intensive Public and Private Collaboration Projects

Using the six clusters of the proposed model, analysis of the interviews for each case enabled us to identify the following factors that enhance or impede on success of these projects. Table 1 summarizes these results. At this point, one must acknowledge the fact that frequencies might give an interesting overview of the situation but do not allow for the subtlety of a thorough analysis. Follows brief comments on these results.

In the *macro* environment cluster (1), political support and availability of funds has been mentioned in all nine projects. «On the basis of what we have learned, the concept makes sense. We must now convince deputies and ministers if we want financing for the years to come», commented a manager from Service Canada Initiative. One can also notice that language barrier and geographical proximity have only been mentioned for projects covering large territories where French, English and/or Natives citizens live.

Clusters	Related factors	Occurrences per
		case study

Political, social, economic and cultural environment	- Political support for public and private collaboration (or lack of)	9 out of 9
	- Distance between levels of government	5 out of 9
	- Geographical proximity	2 out of 9
	- Availability of funds (non availability)	9 out of 9
	- Language barrier	2 out of 9
	- Level of computer literacy of citizens	3 out of 9
2. Institutional, technological and project environment	- Regulatory framework (absence of)	8 out of 9
	- Technological expertise (or lack of)	7 out of 9
	- Knowledge, experience with collaboration (or lack of)	8 out of 9
3. Characteristics and objectives of partners	- Cultural differences between the 2 sectors	9 out of 9
	- Legitimacy of project for both partners	9 out of 9
	- Complementarities of expertises	8 out of 9
4. Partnership process and project	- Clear project definition and objectives	9 out of 9
	- Thorough planning	9 out of 9
	- Project management expertise	9 out of 9
	- Communication	9 out of 9
	- Presence of 2 champions: political, operational	9 out of 9
	- Dedicated human resources	9 out of 9
	- Management support	9 out of 9
	- Expertise of project teams	8 out of 9

5. Partnership models	- Number of partners	7 out of 9
	- Level of delegation of decision making	9 out of 9
	- Coordination mechanisms	9 out of 9
6. Project, partnership and service performance	- Project success	7 out of 9
	- Partnership success	7 out of 9
	- Service success	8 out of 9
	- Employee satisfaction	8 out of 9

Table 1: Clusters and related success factors of collaboration projects and occurrences per case

Factors in the second cluster (2) covering the *meso* environment reflects Canada's lack of experience and of institutional framework regarding public and private collaboration projects. As for technological expertise, it was regarded in most projects as essential as this remark from the CSST project manager shows: «*We had the guts and our partners had the technological know-how to do it»*. Most public organizations did not have the technological knowledge to undergo such projects, so complementarity of partners competencies stands out as a most critical feasibility success factor. In all projects, even though the technologies developed and implemented were usually most innovative and necessitated research and development activities, technology was never perceived as a major impediment to projects performance.

In public and private collaboration projects, cultural differences between the public and private sectors (cluster 3) do stand out: *«where it would have taken me four months to get a specialist, they (the private partner) had one on site three hours later»*. Gaining legitimacy for the project was also found a CSF since through legitimacy come support and resources.

Once the projects are launched, project management capabilities (cluster 4) make the difference between success and failure: «We cannot improvise; a rigorous methodology with tools such as implementation guide, risk management and project follow-up must be put in place». But what stood out in the fourth cluster is the presence of two champions: first, a political champion, usually a minister or assistant minister that serves as intermediary between politics and project management; second, a project manager that can fight his way through to get things going.

With several collaboration models, come different levels of delegation and the need for decision making and coordination mechanisms. For instance, the project manager of Ontario Business Connect introduced «Monday morning eight o'clock meetings» to check out the status of the project. Other mechanisms used were shared workplace, mixed teams, integrated working processes, problem solving mechanisms, change management processes, work in progress reports and meetings. All these coordination mechanisms aim at one goal: maintain and support opened channels of communication between partners.

Results show that as projects unfold in time, critical success factors (CSFs) evolve from one cluster to the other in such a way that CSFs of the initial phase become the necessary condition for subsequent phases of the projects. For instance, no projects will survive without political support and many will encounter problems because of the absence of an accepted framework. The wheel is being reinvented almost every time an ICT-intensive public and private collaboration project starts. When projects have been accepted, planning rapidly becomes the main issue. Most of the nine projects encountered a failure on their first launch and had to restart the project on more solid grounds. In the end, when projects really take a go, efficient communications can overcome almost any problem. Overall, political leadership, thorough planning and communication stand out as the first necessary conditions to the success of public-private collaboration, assuring projects the legitimacy, the direction and the implication most needed to attain success.

Looking more closely into collaboration projects performance, results show that the Project Management Institute [PMI04] performance triangle identifying costs, time and quality criteria as critical success factors, are also fundamental for the success of ICT-intensive public and private collaboration projects. However, success of these projects is also linked to the collaboration relationship and the mutual thrust shared between partners and to the level of satisfaction of the citizens making use of the service. Finally, the pride developed by employees who sense they have reached their personal and professional goals while working on these innovative projects also contributes directly to the overall performance of collaboration projects: *«This has been an extraordinary experience. I would start all over tomorrow morning»*.

7. Major issues related to ICT-intensive public and private collaboration projects

The renewal of government services by means of information technologies can hardly take place without creating major upheavals for most public-sector stakeholders. Analysis of the case studies point to three major families of issues: those related to politics (legislative), those related to managing the implementation of technologies (operational), and purely technological issues. Overall, the issues identified depict a context characterized by major challenges at all levels.

7.1. Political and legislative issues

On the political and legislative levels, managers express some reservations as to the ability of public stakeholders to act in full knowledge of the choices to be made. In general, it appears that people are still in a passive position in relation to technology, as this respondent claims: "The current trend is to ask technology to deliver what government needs, instead of looking at how government can exploit it." This finding validates what other reports have already said on this point [Mi99]. At the same time, public managers acknowledge the difficulty of the choices to be made, especially because of the complex trade-off between investments related to electronic services and those made to meet other needs, often very urgent, related to health care, education, or social services, for example.

For several respondents, the resistance of agencies and departments to work together (silo culture) also constitutes a major obstacle: "Some powerful mechanism is needed to overcome the existing departmental demarcations. As the benefits of new technologies can be difficult to quantify in a non-competitive environment, visionary leadership is needed." Only true political will can mitigate these difficulties, which, it must be said, generally affect all large organizations.

According to interviewed managers, the need to make many legislative and regulatory amendments to facilitate the deployment of electronic public services also hampers the realization of electronic service projects. One aspect that is often mentioned is information sharing among different entities. It goes without saying that citizens' interest in the one-stop concept is not easy to reconcile with their requirement for protection of personal information. The image of Big Brother is always present in the public's mind, and it is difficult to balance against government agencies' personal information processing policies.

7.2. Operational issues

With regard to the internal management of these electronic service projects, a strong consensus has developed around four specific themes. In general, most managers first tend to express some doubt concerning public administrations' ability to truly revolutionize their organizational and management methods in order to best adapt to technological innovations. One of the experts said so quite bluntly - "... [public managers] must learn to think outside the box" - expressing the difficulty participants feel at getting off the beaten track. More specifically, the respondents identify management as an important issue in the realization of these ambitious e-government projects. Project planning, coordination, and follow-up methods appear to be particularly important for such ambitious projects, since the resources are not always available within government departments.

The process of acquiring the goods and services related to these new technologies is also seen as an important issue in this context. This view was foreseeable given the fact that, for several years now, starting before the question of new electronic services could even be raised, many governments have been working on the reorganization of public procurement [Wi98]; [Mo99]. The complexity and uncertainty of such technological projects demands new acquisition methods whereby partners are chosen based on their expertise and not solely, because they offer the lowest price.

The financial risk inherent in the electronic delivery of public services also concerns public managers; they believe that the cost of the necessary technological infrastructure (mainly web portal and applications) is staggering. The risk is still greater due to the innovative nature of the electronic solutions that are implemented: sometimes these solutions do not yet exist and so they have to be developed and technological solutions found to the many problems that arise, which makes the evaluation of costs even less accurate.

7.3. Technological issues

Technology itself is a major issue since it often raises new questions concerning both the organization of governments and governments' relationship with citizens.

Given the large investments necessary, interviewees are of the opinion that particular attention must be paid to implementing flexible and open-ended architecture, that is, architecture that makes it possible for systems to be upgraded over time without having to keep on making major investments. The integration of the numerous governmental systems is also desirable despite the obvious difficulties related to the way in which the government departments are structured and financed. On this point, many changes are still necessary, but the creation of chief information officer positions has made it possible to initiate a certain cross-cutting vision of information technologies within governments. Certain U.S. states, including some of the most innovative ones such as Washington, have promoted strategic technology development plans based essentially on interdepartmental applications. Nationally, organizations like NASCIO provide advice on system architecture, in the form of a tool-kit, based on best practices observed [Na05].

In fact, this issue is closely related to the integration issue because integration necessitates a lot of information exchanges between departments, which often raise concerns among citizens. Thus, the technical challenge is to create information that is invisible (inaccessible) to civil servants but moves between the citizen and the machine, thereby evading all human control.

Another important issue is the accessibility of the infrastructure and the services developed (large band network, web access, service providers and computers). A number of respondents recognize the dilemma that governments face: "There will always be policy decisions relating to minimal levels of capability. I don't think government can always use leading-edge technologies if they are not widely available." Others go even further: "The tools with which people interact with the services must be available from the local grocery/hardware store, and be as simple to install as a telephone cord in a telephone jack!" This vision may seem futuristic but it still identifies an important leadership role that governments must assume in giving citizens access to electronic services. At the end of the line, this question comes down to the vision one wishes to have of government-citizen relationships. The experts seem to favour "moving from Government-to-Citizens (G2C) to Government-for-Citizens (G4C)". In this regard, technology may be seen as a facilitator that allows one to offer services that are centred more on the citizen than on the public agency providing the services. However, it is also evident that the answer is not only technological because citizen-centred service will undoubtedly mean continuing to offer certain services "person to person" in the future, in particular to cope with illiteracy and language differences.

8. The Canadian experience with ICT-Intensive Public and Private Collaboration Projects

The striking developments in information and communications technologies have made it possible to reinvent our governments and profoundly transform the delivery of public services [Ca01]. Nevertheless, when looking at the Canadian experience through these nine ICT-intensive projects, one must acknowledge the fact that innovative technologies such as mobile internet, smart cards (electronic signatures and biometrics), applications related to high-bandwidth connections (client-server and multimedia), geographic information systems or transactional portals are almost absent. It is true that on the Canadian scene, portals experience rapid growth and their role is changing from merely informational to dynamic and transactional so that citizens are more and more able to access complete, user-friendly government services at any time. On the other hand, the lack of resources, hesitancy, and silo culture that characterize governments, combined with technological complexity, will continue to impede the development of electronic public services.

Canada's experience with ICT-intensive public and private collaboration projects is still at an early stage compared to other countries such as the United Kingdom, Australia, France or the United States. In Canada, three provinces, Quebec, Ontario and Alberta are now putting in place agencies and regulations to support and frame these projects. As for the federal government, it is now undergoing public consultations to put in place a proper framework for infrastructure projects such as roads or bridges but not yet for the service sector. Citizens and unions are sceptic: will public and private collaboration projects fill their promises, particularly PPPs? Will jobs be maintained? Will the accessibility and quality of public services be enhanced and costs reduced? For now, we thus conclude that the projects can be compared to marriages of convenience and that true love remains to be acknowledged. Both public and private organizations must take some steps to reduce the gap between the two sectors and to face the political, operational and technological issues facing ICT-intensive public and private collaboration projects. Self interest seeking and cultural clashes have caused many partnerships to fail [Ha05] simply because two entities cannot be pulled together and expected to work seamlessly as one [Ja04].

Several practices can be undertaken by the partners to facilitate this bringing together: facilitating information exchange, encouraging horizontal and vertical communication within and between organizations, clarifying goal setting, blending organizational cultures by encouraging interaction among members from both sides, etc. Thus, we believe that this exploration of the major issues and critical success factors of IT-intensive public and private collaboration projects has brought some insight that can benefit most forms of collaboration, whether interpersonal, organizational or interorganizational.

References

- [BC99] Ballantine, J.A.; Cunningham, N. "Analysing Performance Information Needs Using Framework Approaches in a UK Public Healthcare Organization". In *Reinventing Government in the Information Age: International Practice in IT-Enabled Public Sector Reform*, Ed. R. Heeks. 1999. p. 331-49, London: Routledge.
- [BFM05] Belhocine, N.; Facal, J.; Mazouz, B. "Les partenariats public-privé: une forme de coordination de l'intervention publique à maîtriser par les gestionnaires d'aujourd'hui". L'Observatoire de L'Administration Publique. Télescope. 2005. vol. 12, no. 1, p. 2-14.
- [BPZ94] Berry, L.L.; Parasuraman, A; Zeithmal, V.A. "Improving Service Quality in America: Lessons Learned." Academy of Management Executive. 1994. vol. 8, no. 2, p. 32-52.
- [Ca01] Caves, R. "Information Technology, Economic Development, and Smart Communities: Is There a Relationship?" Economic Development Review. 2001. vol. 17, p. 6–7.
- [CL88] Contractor, F.; Lorange, P. "Why Should Firms Cooperate? The Strategy and Economic Basis for Cooperate Ventures", in *Cooperative Strategies in International Business*, ed. F. Contractor and P. Lorange. 1988. p. 3-30. Lexington: Lexington Books.

- [DDK04] Dixon, J.; Dogan, R.; Kouzmin, A. " The Dilemma of Privatized Public Services: Philosophical Frames in Understanding Failure and Managing Partnership Terminations". 2004. Public Organization Review. vol. 4, no. 1, p. 25-46.
- [Di98] Dietz, F. "Technology Development Drives State Economies", Mechanical Engineering. 1998. vol. 120, no. 4, p. 36.
- [DP03] Dawes, S.; Préfontaine, L. "Understanding New Models of Collaboration for Delivering Government Services", *Communications of the ACM*. 2003. vol. 46, no. 1, p. 40-42.
- [Ha05] Hammerschmid, G. « Le pénible parcours des partenariats public-privé en Autriche. » L'Observatoire de L'Administration Publique Téléscope. 2005, vol., 12, no. 1, p. 65-99.
- [HBS90] Hofstede, G., N.; Bram, D.D.; Sanders, G. "Measuring Organizational Cultures: A Qualitative and Quantitative Study Across Twenty Cases". Administrative Science Quarterly. 1990. vol. 35, no. 2, p. 286-316.
- [HD99] Heeks, R.; Davies, A. "Different Approaches to Information Age Reform." In Reinventing Government in the Information Age: International Practice in IT-Enabled Public Sector Reform, Ed. R. Heeks. 1999. p. 22-48, London: Routledge.
- [He01] Herzog, V.L. "Trust Building on Corporate Collaborative Project Teams". Project Management Journal. 2001. vol. 32, no. 1, p. 28-37.
- [HH94] Hill, R.C.; Hellriegel, D. "Critical Contingencies in Joint Venture Management: Some Lessons From Managers". Organization Science. 1994. vol. 5, no. 4, p. 594-607.
- [Ja04] Jamali, D. "Success and Failure Mechanisms of Public Private Partnerships in Developing Countries". The International Journal of Public Sector Management. 2004. vol. 17, no 5, p. 414-430.
- [LF99] Larsson, R.; Finkelstein, S. "Integrating Strategic, Organizational, and Human Resource Perspectives on Mergers and Acquisitions: A Case Survey of Synergy Realization". Organization Science. 1999. vol. 10, no. 1, p. 1-26.
- [LN99] Lovrich J.; Nicholas, P. "Policy Partnering Between the Public and Not-for-Profit Private Sector - A Key Policy Lever or a Dire Warning of Difficulty Ahead? ". American Behavioral Scientist. 1999. vol. 43, no. 1, p. 177-191.
- [Ma96] MacLaren, R. "Government's New Role in Globalization". IEEE Engineering Management Review. 1996. vol. 24, no. 2, p. 107-110.
- [MFH95] McCaffrey, D.P.; Faerman, S. R.; Hart, D.W. "The Appeal and Difficulties of Participative Systems". Organization Science. 1995. vol. 6, no. 6, p. 603-627.
- [Mi99] Ministry of Consumer and Commercial Relations Ontario, Ontario Business Connect. 1999. Discussion Paper no 3: Anchoring New Value Systems Through Infrastructure. Toronto: Queen's Printer.

- [Mo99] Mornan, R.G. "Achats axés sur les résultats : Un modèle de collaboration entre les secteurs public et privé ». Optimum. 1999. vol. 28, p. 45–49.
- [Na05] NASCIO. Best Practices in the Use of Information Technology in State Government. 2005. accessible at www.nascio.org, accessed March 2006.
- [Pf95] Pfeffer, J. "Producing Sustainable Competitive Advantage Through the Effective Management of People". Academy of Management Executive. 1995. vol. 9, no. 1, p. 55-72.
- [PMI04] Project Management Institute (PMI). A Guide to Project Management Body of Knowledge. 2004. Third Edition, Evanston: EIS Digital Publishing.
- [Po90] Porter, M.E. The Competitive Advantage of Nations. 1990. New York: The Free Press.
- [PS88] Pinto, J. K.; Slevin, D.P. "Critical Success Factors across the Project Life Cycle". Project Management Journal. 1988. vol. 19, no. 3, p. 67-74.
- [RV94] Ring, P.S.; Van de Ven, A.H. "Developmental Processes of Cooperative Interorganizational Relationships". Academy of Management Review. 1994. vol. 19, no. 1, p. 90-118.
- [St00] Stainback, J. Public/Private Finance and Development Methodology Deal Structuring Developer Solicitation, 2000, New York, NY: John Wiley.
- [VP95] Van de Ven, A.H.; Poole, M.S. "Explaining Development and Change in Organizations". Academy of Management Review. 1995. vol. 20, no. 3, p. 510-540.
- [WB89] Weiss, A.R.; Birnbaum, P.H. "Technological Infrastructure and the Implementation of Technological Strategies". Management Science. 1989. vol. 35, no. 8, p. 1014-1026.
- [Wi92] Williamson, O.E. "Markets, Hierarchies, and the Modern Corporation". Journal of Economic Behavior and Organization. 1992. vol. 17, no. 3, p. 335-52.
- [Wi98] Williams, A. "A Better Way to Buy", CMA Magazine, November 1998, p. 18–21.
- [Yi94] Yin, R.K. Case Study Research Design and Methods. 1994. Thousand Oaks, CA: Sage.