ICIS 2009 Proceedings

International Conference on Information Systems (ICIS)

2009

How Green is my Outsourcer - Environmental Responsibility in Global IT Outsourcing

Ron Babin
Ryerson University, rbabin@ryerson.ca

Brian Nicholson
Manchester Business School, brian.nicholson@manchester.ac.uk

Follow this and additional works at: http://aisel.aisnet.org/icis2009

ICIS 2009 PHOENIX

HOW GREEN IS MY OUTSOURCER – ENVIRONMENTAL RESPONSIBILITY IN GLOBAL IT OUTSOURCING

Research-in-Progress

Ron Babin
Ryerson University
350 Victoria Street
Toronto, Canada, M5B 2K3
and Manchester Business School, UK
rbabin@ryerson.ca

Dr. Brian Nicholson
Manchester Business School
Booth Street West
Manchester, UK, M15 6PB

brian.nicholson@manchester.ac.uk

The focus of this paper is on the intersection of Environmental Responsibility (ER) and Global IT Outsourcing (GITO). GITO is well established as a business practice towards reducing costs and improving performance. ER is becoming increasingly important in global outsourcing in relation to environmental issues. The cost of energy has already increased dramatically and further increases appear likely. Sustainability issues related to carbon footprint and greenhouse gases (GHG) are also becoming increasingly important. Thus responsible and economic energy management has become a critical business capability and an important social responsibility. Global outsourcing of IT operations to a less energy efficient, less environmentally responsible organization may provide increased returns to shareholders, but may also become an ER liability. The key question this paper seeks to answer is how are GITO vendors transforming their ER capabilities? Drawing on preliminary fieldwork and an extensive literature search, we conclude that ER issues will become important capabilities for outsourcers to demonstrate, as buyers are increasingly sensitive to their stakeholders' environmental concerns.

Keywords: global outsourcing, environmental responsibility, sustainability, corporate social responsibility

Introduction

This paper presents findings from Research-in-Progress that seeks to improve our understanding of the impact of Environmental Responsibility (ER) in global IT outsourcing (GITO). Global IT outsourcing refers to a third party management of IT assets and services, including people and knowledge content, which are delivered on a coordinated fashion across multiple national locations (Lacity and Willcocks 2006, Sahay et al. 2003). GITO is an accepted practice in many business organizations and a significant body of knowledge has emerged over the last decade which has improved our understanding of the management of GITO relationships (e.g., Oshri et al. 2009).

In contrast to GITO, environmental responsibility is less clearly defined. Environmental responsibility can be considered under the larger topic of Corporate Social Responsibility (CSR). As suggested by Crane et al. (2008), "definitions of CSR abound, and there are as many definitions of CSR as there are disagreements over the appropriate role of the corporation in society." Matten and Moon (2004) provide the most current and comprehensive definition of CSR, including environmental issues: "CSR is a cluster concept which overlaps with such concepts as business ethics, corporate philosophy, corporate citizenship, sustainability and environmental responsibility."

A gap in the current literature is related to the impact of ER on GITO vendors' capabilities. As many organizations and their stakeholders increase their expectations regarding social and environmental issues we posit that ER expectations will be applied to outsourcing providers. For example, Walmart's Green Goods (Dias 2008) environmental campaign has had a significant impact on its supply partners. Similarly, IT outsourcing vendors should expect to be held to the same level of ER performance to which their customers aspire. A problem facing vendors and clients is related to the impact of ER on capabilities. This leads us to the research question guiding this inquiry: how are GITO vendors transforming their ER capabilities?

The paper is organized as follows: the next section reviews relevant GITO literature focusing on capabilities. Then we identify the current and emerging ER challenges and issues facing GITO clients and vendors. Following a description of research methodology, we present our preliminary findings from qualitative interviews with GITO clients and vendors identifying current ER practices and perceived implications for GITO. We conclude the paper with some initial conclusions on capabilities, anticipated contribution to theory and practice and our plans for future work.

Literature Review

Over the last few years a considerable literature has emerged exploring GITO. In a review of the literature, Dibbern et al. (2004) identify contributions that focus on why firms outsource (e.g., Loh and Venkatraman 1992), what to outsource (e.g., Lacity et al. 1996), the decision process (e.g., Hirschheim and Lacity 2000) and contracting (e.g., Willcocks and Kern 1998). The majority of the GITO literature is focused on the client side of the relationship and only a few exceptions offer the GITO vendor perspectives, (e.g., Levina and Ross 2003; Feeny et al. 2005; Garud et al. 2006; Oshri et al. 2007). Clients embark on GITO for tactical and strategic reasons: "tactical" reasons include a desire to reduce costs, free up cash, obtain resources not available internally, and to improve performance. Other rationales, which can be termed "strategic", include long-term flexibility, access to best practices, and acquisition of new skills (King and Malhotra 2000; Lacity and Hirschheim 1993a,b; Currie and Willcocks 1997). To date no study has examined the importance of ER in the rationale for GITO.

Outsourcing has been viewed through three main conceptual perspectives. Firstly, transaction cost economics and the "make or buy" decision framework has been used by a number of IS researchers studying IT outsourcing (Aubert et al., 2004; Carmel and Nicholson, 2005; Lacity and Willcocks, 1997; 1998; 2001). The second perspective is the relational approach which focuses on the relationship that develops between the client company and its supplier(s) (Kern and Willcocks 2001, Sahay et al. 2003). The third perspective, which we adopt in our study, is the competency or capability approach. This views the company as a collection of capabilities some of which are difficult to replicate and provide the basis of competitive advantage (Prahaled and Hamel, 1990). Outsourcing should take place either to obtain critical resources that are not available to the company or to substitute competencies that are peripheral to the organization. In this paper we adopt a capability approach focusing on the GITO vendor. There are currently a limited number of prior studies focusing on GITO vendor capability. Levina and Ross (2003) point out a complementary set of core capabilities: IT personnel development, methodology

development and dissemination, and customer relationship management. Feeny et al. (2005) present a set of 12 supplier capabilities around delivery competency, relationship competency and transformation competency. Other research (Ethiraj et al. 2005, Garud et al. 2006, Oshri et al. 2007, Jarvenpaa and Mao 2008) also explores GITO vendor capability. Although these studies have made significant progress in elaborating vendor capability development, little is known about the importance and impact of ER in relation to vendor capabilities. We outline the ER issues and challenges of relevance to GITO in the following sections.

Environmental issue affecting GITO

Two issues have driven environmental concerns regarding GITO and both are related to increasing power consumption by IT. First, the increasing cost of energy is having an economic impact on IT operations. Second, the production of electrical power, with the exception of alternative generation sources such as wind or solar, involves the bi-production of green house gases (GHGs) which have been strongly linked to global warming. GHG and global warming have been extensively documented by the Intergovernmental Panel on Climate Change in the Fourth Report on Climate Change (2007). An in depth discussion of GHGs and global warming is beyond the scope of this research however, the role of GITO vendors in electrical power consumption presents an environmental responsibility issue within our scope. Two additional GITO ER issues are related to the total carbon footprint of the global Information and Communications Technology (ICT) industry and electronic waste (eWaste).

The cost of power to operate data centres is predicted to grow considerably. Although the recent global economic turmoil has resulted in short-term reductions in oil prices (e.g. the price of oil dropped by 40% from September to November 2008), several researchers have identified a long-term trend of rising energy costs. With the price of oil dramatically increasing (a "quadruple" increase forecast by The Economist May 31, 2008), the cost of energy is now a major concern for all organizations. Homer-Dixon (2006) describes the significant changes that will come from "increasingly serious energy constraints, and the era of cheap oil [having] come to an end." Other economists such as Rubin (2009) have described the impact of the end of low-cost energy and the potential resulting de-globalization. Rifkin (2009) argued a similar point at a Global Sourcing Conference sponsored by the Centre for Outsourcing Research and Education (CORE) that the declining access to low cost energy will require a "new energy model" for global sourcing. Rifkin argues that organizations and governments should anticipate the need to shift to energy sources other than oil. Finally, the 2009 Green Outsourcing Survey (Brown 2009) states that "the adoption of green technology is more likely the result of escalating energy costs than ecological altruism" as reported by 85% of the senior executives surveyed.

Alongside rising energy costs, there is an unrelenting appetite for energy in data centres, as described by Forge (2007). From 1996 to 2006 the number of computer servers in operation globally has increased by 400% and at the same time the power consumption per server has also increased by 400%, resulting in a situation where "(t)oday, from 15 percent to 35 percent of the operating budget of data centers goes on power supplies, including cooling energy." The dramatic increase in global computer capacity has contributed substantially to demand for electrical energy, resulting in increased GHG production. With a substantial increase in the computer power demand in one decade, and increasing energy costs, many organizations are concerned about this rising and uncontrollable cost. The power costs of running one server can equal half of its hardware costs over four years. Forge estimates that current UK data centres consume five percent of Britain's maximum generation capacity.

The Institute for Energy of the European Commission has recognized the problem of growing data centre energy consumption. The "Code of Conduct on Data Centres Energy Efficiency" (2008) recognizes that "(t)he projected energy consumption rise poses a problem for EU energy and environmental policies. It is important that the energy efficiency of data centres is maximized to ensure the carbon emissions and other impacts such as strain on infrastructure associated with increases in energy consumption are mitigated." The Code is voluntary and sets out a plan to define best practices and commitments for industry and governments. This document suggests an important and rising concern for environmental issues related to IT. Similarly, the United States Department of Energy (DOE) is: "leading the charge towards reducing power consumption and moving toward energy efficient computing." The DOE established an industry goal of reducing data centre energy use by 10 percent by 2011.

GITO does not solve the energy consumption problem, as it simply moves the problem from an in-house data centre to an outsourced facility. Recognizing this, Accenture manager Keathley identifies a new data centre where "the lease is based on power, not square footage", which would represent a significant change in the data centre outsourcing economic model (Yasin 2008).

Regarding the impact of environmental responsibility on outsourcing, Brown (2008) goes further, positing that "the influence of consumer and investor opinions for green corporate accountability and the creation of new government regulations in favor of protecting the environment have pushed green issues onto the boardroom agenda and onto the outsourcing vendors' growing plate of priorities". Brown argues that over 94 percent of US and UK publicly traded companies that outsource functions plan on adding "green" clauses to their outsourcing renegotiation process. For organizations that outsourced for the first time in 2007, 43 percent included green factors in the selection process.

The last two ER issues that affect GITO are total carbon footprint and eWaste. The ICT industry has established an initiative to address global sustainability. In the 2008 report, Smart 2020, the Global e-Sustainability Initiative (GeSI) identifies the 2007 ICT total carbon footprint at "about 2% of the estimated total emissions from human activity released that year." However, GeSI estimates the compound annual growth rate for global ICT to be 6% ("with the most significant growth ... attributable to increasing demand for ICT in developing countries") and predicts that the global ICT carbon footprint will grow 300% by 2020.

The issue of eWaste has been recognized in several jurisdictions, with new legislation that requires a planned and environmentally appropriate method for disposing of obsolete electronic equipment. For example, in Canada the Ontario government has enacted the Waste Diversion Act, which has resulted in an industry led electronic waste removal program. The Waste Electrical and Electronic Equipment (WEEE) Program Plan requires buyers of electronic equipment to pay an up-front disposal fee for equipment such as computers, printers, monitors, etc. Overall, environmental issues related to GITO are becoming increasingly important, reflecting both economic concerns and the environmental responsibility concerns of many stakeholders.

Global Environmental Responsibility Standards and GITO

Environmental responsibility is a topic within the wider discussion of CSR. Crane et al. (2008) refer to the recent "rise in prominence of CSR" as well as "a burgeoning number of CSR standards, watchdogs, auditors and certifiers aiming at institutionalizing and harmonizing CSR practices globally." Several industries such as apparel manufacturers, mining and forestry have created environmental and social responsibility standards and codes of conduct for their industries. Often these standards were developed in response to pressures from unions, non-governmental organizations (NGOs) and multi-stakeholder organizations. To date there are no ER industry standards defined for, or applied to the GITO industry. However, at least two potentially relevant ER standards are appropriate to the IT outsourcing industry. The first is the Global Reporting Initiative (GRI) which provides a consistent standard for reporting social and environmental activities. Second, the International Standards Organization (ISO) has drafted ISO 26000 which defines a set of standard practices across all industries for social and environmental responsibility activities.

GRI provides a "trusted and credible framework for sustainability reporting that can be used by organizations of any size, sector or location." (2006). GRI was developed over the last ten years and is now broadly recognized by many organizations as a standard for corporate responsibility and environmental sustainability reporting. GRI provides a public record of organizations which have voluntarily provided their sustainability reports.

ISO 26000 is a working draft that has not yet been ratified by ISO members and therefore has not at the time of writing been implemented. This standard provides a guide for organizations to voluntarily adopt CSR practices. With participation from about 80 countries and many stakeholder groups, ISO 26000 will likely be recognized as a universal standard, across most industries, when it is completed. The ISO 26000 standard addresses core CSR subjects including governance, human rights, labour practices, the environment, fair operating practices, consumer issues and community involvement and development.

In summary, two major themes are evident in the literature review. First, environmental impacts and costs of IT related energy consumption are rapidly becoming an important issue for outsourced IT operations. Second, governments and non-government organizations have begun to define and monitor standards for corporate social and environmental activities, which are applicable in varying degrees to GITO vendors. To conclude the literature review, the topic of ER in GITO appears to be highly relevant and timely for further research.

Research Methods

We adopt an interpretive approach commencing with preliminary interviews with the intention of proceeding in the next phase of research to in depth case studies (Walsham 1993, 2006). We posit that the emerging environmental responsibility issues in outsourcing are defined by managers and executives in response to societal expectations and government regulations regarding the environment. Our initial position begins as an "outside researcher" "carrying out a study mainly through formal interviews, with no direct involvement in action in the field or in providing significant feedback to field participants." (Walsham, 2006). We conducted 12 semi-structured interviews with GITO clients, buyers, vendors or advisors. Interviewees included representatives from two major banks, two consumer product companies, three global outsourcing vendors and three legal and accounting advisors. The interviewees were senior executives in their representative organizations, who were initially contacted to confirm their interest in this research topic. In addition, two subject matter experts, one from industry and one from academia, were interviewed.

Bryman and Bell (2007) define structured interviews as a standardized interview where interviewees are given exactly the same context of questioning, so that each respondent receives exactly the same interview stimulus as any other. The key benefit of structured interviews is that the answers can be aggregated when the replies are in response to identical cues. Our approach uses semi-structured interviews that allow for standardization but with person-to-person interaction, and the ability to alter the line of questioning depending on the answers and discussion. Bryman and Bell (2007) describe the semi-structured approach as flexible, where the interviewer "picks up on things said by interviewees" and "the interviewee has a great deal of leeway in how to reply."

The qualitative interviews consisted of asking a number of defined questions, which were based on topics from the literature review of GITO and ER and based on the interviewee role. Each interview lasted approximately 45 minutes and was conducted in the interviewee offices. Interviewees were asked to describe their past experience and future expectations regarding ER in outsourcing, and how that would be relevant to their business operations. Detailed notes were taken and these were written up in full as soon as possible along with comments and interpretations of the researcher. After each interview, the notes were reviewed and the interviewee responses were analysed. Comments that were not repeated by more than one interviewee were not analysed further. Comments that were mentioned in multiple interviews were clustered into categories representing common themes. This grounded theory approach, where concepts are coded and categorized, is described by Bryman and Bell (2007) as "by far the most widely used framework for analyzing qualitative data."

A panel discussion was conducted after the interviews had been completed, with four of the 12 interviewees as panel members. The panel was co-sponsored by CORE and the Ted Rogers School of Management at Ryerson University, with an audience of 50 participants. Detailed notes were taken on the presentations, questions and discussion which were written up in full and analysed alongside the interview data. Following Barrett and Walsham (2004), no a priori theoretical framework was chosen prior to the commencement of preliminary interviews. The interview results and analysis were considered in relation to GITO literature enabling the selection of capability models as pertinent to our further research.

ANALYSIS

Five key themes were derived from interviews with outsourcing buyers, vendors and advisors, as well as the focus group.

ER in outsourcing is relevant and environmental concerns will be the most important issues.

Several interviewees suggested that the ER factor in outsourcing decisions was new, they had not seen any of these issues previously, but they expected ER to be an important issue in the near future. A recurring theme across all interviews was that environmental concerns such as carbon footprint, will be an important social issue 'in the very near future'. The recent EU Code of Conduct for Data Centre Efficiency is an example of increasing concern for environmental issues in IT. For some outsource providers, attention to environmental sustainability will be both an economic advantage and potentially a reputation advantage, as mentioned by two large global outsourcing firms.

Buyers told us of their growing ER requirements for their outsourcing providers. To illustrate, the following is an extract of a requirement taken from a GITO request for proposal (RFP) sent to several major outsourcing vendors in North America:

> *"The Company is committed to the highest standards of safety, health and environmental practices and expects its Suppliers to be similarly focussed.*

> *The Company will seek to establish a relationship with a Supplier that can demonstrate it has the appropriate safety, health and environmental objectives and has the management systems in place to deliver on these objectives."*

For some outsource providers, attention to environmental sustainability will be both an economic advantage and potentially a reputation advantage, as mentioned by two large global outsourcing firms.

Capability requirements in this area are becoming clear: as CSER capabilities within GITO become mandatory there will be an emphasis on environmental issues. Within GITO firms, specialist knowledge will be needed in the areas of environmental regulation, data centre efficiency, environmental audits and reporting, carbon credits management, and stakeholder analysis and communications.

ER will be driven by consumer and employee stakeholder concerns.

A recurrent theme from interviewees and at the focus group was responsiveness to consumer pressures regarding ER issues. Financial service representatives suggested that reputational risk is an important issue in any outsourcing activity. Equally important for many organizations is the perception of their employees. The implication is that employers, especially in IT outsourcing firms which rely heavily on "bright young talent", need a strong positive ER profile to attract and retain employees.   An organization's brand reputation is an important ER protection.

A theme in several interviews was a belief that major outsourcing vendors would protect their reputation and "do the right thing" with respect to ER. Several mentioned how the offshore data centres look identical to North American corporate campuses. One outsource vendor suggested that ER capabilities are a competitive advantage compared to other competitors, and especially when compared to second tier, or start-up, outsourcing providers. For example, IBM recently began an advertising campaign advocating their environmental and Green-IT capabilities, building on and evolving their strong brand reputation, and IBM recently published a white paper on CSR (2008). A corollary of this is that organizations will need to develop a capability to communicate with relevant internal and external stakeholders. This implies the capability to understand and monitor key stakeholder ER expectations and to measure and report performance in relation to these expectations.

Due diligence is a required component in ER; beware of ER cynicism.

Several intermediaries (consultants, advisors) suggested that a thorough walk-through of ER capability, in the due diligence phase of contracting, is the best way to ensure that the provider "can live up to the ER requirements of the buyer". However, most buyers rarely or never validate an outsource providers' ER claims. Although several global ER standards are defined (as explained above) no one in the interviews or focus group was able to quickly identify ER outsourcing standards or norms other than the buyer's own expectations for ER. Further, one advisor mentioned that acceptable ER norms from North America may not be relevant in other economies and societies, so a buyer should not hold its provider to the same ER standards. Several interviewees cautioned that ER may become a marketing message, lacking substance, for some organizations. Organizations may quickly respond to consumer concerns with slick marketing messages rather than substantive ER programs. One interviewee expressed caution against "green-washing" on environmental issues. At the focus group, panel members cautioned against ER hypocrisy "being good at home, but bad abroad", and the need to demonstrate ER "walk the talk". With corporate transparency enabled through global access to information on the Internet, "organizations can no longer say one thing and do another". GITO clients will need to develop knowledge and capabilities that are able to verify outsource provider ER claims, through audit or other mechanisms. The role of third party advisors may fill this skill gap, where the advisor has specialist knowledge in ER regulations and standards.

Government and non-government standards and regulations will encourage ER capabilities

As part of the interview phase, CSR subject matter experts provided a perspective on the emerging global standards. These standards include ISO26000, Global Reporting Initiative, and the UN Global Compact. Various ER industry related standards are starting to emerge, such as the EU Code of Conduct on Data Centre Energy Efficiency.

One executive at a large GITO provider pointed to the Canadian province of British Columbia (BC) government's environment policies, and how the BC Ministry of Finance now "requires an outsourcer to comply with government goals of 30% reduction in carbon [GHG] output by 2020." The BC government requires outsourcers to provide 'green data centres', which can be challenging for vendors who "built data centres when power was cheap." These concerns were echoed by an executive at another GITO who mentioned "CSR environmental issues will be driven by increasing costs of power and potential government carbon tax issues". As further evidence, The Green IT Review (Foster 2009) recently cited the impact of the UK's Carbon Reduction Commitment on local and offshore data centres.

As part of the Sustainability Reporting Guidelines, GRI has defined standards for industry sectors, such as financial institutions, automotive manufacturing metals and mining, etc. Some authors such as Sahay et al. (2003) have suggested an industry ER code of conduct for global IT outsourcing.

The most compelling environmental regulation is the concept of a carbon tax. Several jurisdictions have implemented some form of a carbon tax, which typically encourages re-usable energy sources such as hydro and bio-mass, while discouraging non-renewable sources such as oil and coal or sources that contribute to green house gasses and climate change. Finland and Sweden implemented carbon based taxes in the 1990s. In North America, two Canadian jurisdictions, Quebec and British Columbia, implemented carbon based taxes in the last two years. With the US election of Democratic President Barack Obama there is a strong voice for consideration of a carbon tax and GHG restrictions.

For IT infrastructure outsource vendors this suggests that an efficient carbon management model will be important. For example, outsourcing a data centre from North America to India may result in lower costs, but may result in higher carbon emissions because of the less clean power sources such as diesel and coal. A government tax on the global emissions would force the buyer and provider to reconsider how and where outsourced infrastructure services are delivered. As organizations begin to report their environmental profile to stakeholders, which includes customers and employees, that profile will likely include direct vendors such as IT outsource vendors who will need to be as efficient as or better than their customers. The implications for capabilities are clear: outsourcing organizations, and clients, must have the capability to understand and comply with global ER standards.

Expected Contributions and Future Research

The research question guiding this inquiry is 'how are GITO vendors transforming their ER capabilities?' Our findings show that GITO vendors should anticipate increasing ER expectations from the market as buyers indicate that they have increasing expectations for environmentally responsible GITO vendors. Several countries have established guidelines and regulations for energy efficiency and environmental responsibility. Vendors who are able to demonstrate strong ER and other social responsibility capabilities should be able to carve out a niche or defend a competitive advantage.

Regarding anticipated contributions to GITO theory, we anticipate that a central contribution of our future work will be to augment theoretical models such as the supplier capability model described by Feeny et al. (2005) to include environmental and other social responsibilities. An important focus will be to improve our understanding of ER in relation to other GITO vendor competencies already identified such as relationship management, business transformation and service delivery.

Regarding contributions to practice, we are working with two professional organizations to develop this research in a way that is relevant to the outsourcing industry. First, an industry survey has been initiated by the International Association of Outsourcing Professionals (IAOP). According to the IAOP website (www.outsourcingprofessional.org), "With more than 100,000 members and affiliates worldwide, IAOP is leading the effort to transform the world of business through outsourcing". IAOP has established a CSR committee, which "examines corporate socially responsible policies and practices for outsourcing, including identifying and showcasing policies that our membership have adopted, creating a framework for companies to model new CSR

policies, and developing a network of resources for members". The IAOP concept of CSR includes "addressing environmental, green, and sustainability issues." IAOP has asked its members to respond to an electronic survey on social and environmental issues in outsourcing. The data are now being collected for analysis and interpretation in the latter months of 2009. Second, the Centre for Outsourcing Research and Education (CORE) has decided to include social and environmental responsibility as part of its Accredited Outsourcing Professional education program. The participation of the two professional organizations represents an industry and societal need to better understand the implications of environmental issues in GITO, confirming that this research will be relevant and useful to practitioners.

The preliminary findings described above establish the foundation for future research. The research will specifically seek to focus on the concerns of organizations regarding ER and environmental issues in global outsourcing. Specifically, how will organizations evaluate environmental responsibility issues when outsourcing on a global basis? How will vendors anticipate and provide ER capabilities? The next stage of research will rely on more extensive organizational interviews to develop access for in-depth case studies coupled with large scale survey data to understand how GITO vendors are transforming their ER capabilities.

Starting in 2009 the authors have initiated several case studies to better understand the importance of ER in global outsourcing decisions. As Bryman and Bell (2007) describe, "multiple case studies have become increasingly common in business and management research", allowing the researcher to develop theoretical reflections based on the comparative findings. Case studies have commenced with two large firms (a North American energy firm and a global mining resources organization) each with a history of frequent and significant outsourcing. In both cases the interviews focus on the environmental components in the GITO process and decisions. Interviews are conducted with both the in-house outsourcing buyers and the external vendors. Thus far the case studies have yielded additional qualitative support to the semi structured interview findings, including sample Request for Proposal documents that focus on environmental requirements. Additional case studies will begin in late 2009.

Acknowledgements

References

Aubert, B., Rivard, S., and Patry, M. "A transaction cost model of IT outsourcing", *Information & Management*, (41:7), September 2004, pp. 921-932.

Barrett, M., and Walsham, G., "Electronic Trading and Work Transformation in the London Insurance Market", *Information Systems Research*, (10:1), March 1999, pp. 1-22.

Brown, D., "It is Good to be Green", *Strategic Outsourcing: An International Journal*, (1:1), 2008, pp.87-95.

Brown, D*., The 2009 Green Outsourcing Survey*, retrieved at www.theblackbookofoutsourcing.com/resourceslinks.htm , on August 24th, 2009.

Bryman, A. and Bell, E., *Business Research Methods*, Oxford: Oxford University Press, 2007.

Carmel, E., and Nicholson, B. "Small firms and offshore software outsourcing: high transaction costs and their mitigation", *Journal of Global Information Management*, (13:3) July-September 2005, pp.33-54.

Crane, A., and Matten, D., Spence, L., *Corporate Social Responsibility, Readings and cases in a global context*. London: Routledge, 2008.

Currie, W., and Willcocks, L., *New Strategies in IT Outsourcing*, Business Intelligence Ltd., London, January 1997.

Dias, D., "Giant Steps: Save a Dollar, Save the World; Can it Really be Done?", *Financial Post Business*, July 7, 2008. Available at http://www.financialpost.com/magazine/story.html?id=610758, retrieved September 11, 2009.

Dibbern J., Goles, T. and Hirschcheim, R., "Information Systems Outsourcing: A Survey and Analysis of the Literature", *The DATA BASE for Advances in Information Systems*, (35:4), Fall 2004.

Ethiraj, S. K., Kale, P., Krishnan, M., and Singh, J. "Where Do Capabilities Come From and How Do They Matter? A Study in the Software Services Industry", *Strategic Management Journal*, (26:1), 2005, pp. 25-45.

Feeny, D., Lacity, M., and Willcocks, L., "Taking the Measure of Outsourcing Providers", *MIT Sloan Management Review*, (46:3), Spring 2005, pp. 41-48.

Forge, S., "Powering down: remedies for unsustainable ICT", *Emerald Foresight*, (9:4), 2007, pp.3-21.

Foster, P., The Impact of Carbon Legislation on Data Centres/ IT Services*, The Green IT Review,* May 27, 2009*,* at www.thegreenitreview.com, retrieved September 11, 2009.

Garud, R., Kumaraswamy, A. and Sambamurthy, V. "Emergent by Design: Performance and Transformation at Infosys Technologies", *Organization Science* (17:2), March April 2006, pp. 277-286.

Global e-Sustainability Initiative, "Smart 2020: Enabling the low carbon economy n the information age", available at http://www.gesi.org/ReportsPublications/tabid/60/Default.aspx, retrieved September 11, 2009.

Global Reporting Initiative, 2006. *Sustainable Reporting Guidelines*. Available at: http://www.globalreporting.org/ReportingFramework/ReportingFrameworkDownloads, retrieved September 11, 2009.

Hirschheim, R., and Lacity, M., "The Myths and Realities of Information Technology Insourcing", *Communications of the ACM* , (43:2), February 2000, pp. 99-107.

Homer-Dixon, T., *The Upside of Down.* Toronto: Alfred A. Knopf, Canada, 2006.

IBM Global Business Services. "Attaining sustainable growth through corporate social responsibility", 2008.

Institute for Energy, European Commission. "Code of Conduct on Data Centres Energy Efficiency, Version 1.0". European Commission, Directorate-General Joint Research Centre, 2008.

Intergovernmental Panel on Climate Change, " IPPC Fourth Assessment Report: Climate Change 2007", available at www.ipcc.ch/publications_and_data/publications_and_data_reports.htm, retrieved September 11, 2009.

International Organization for Standardization. "Guidance on Social Responsibility, ISO26000, Working Draft 4.2", 2008.

Jarvenpaa, S.L. and Mao, J.-Y., "Operational capabilities development in mediated offshore software service models", *Journal of Information Technology,* (23:1), 2008, pp. 3-17.

Kern, T., and Willcocks, L., *The Relationship Advantage: Information Technologies, Sourcing and Management*, Oxford UK, Oxford University Press, 2001.

King, W.R., and Malhotra, Y., "Developing a framework for analyzing IS sourcing", Information & Management, (37), 2000, pp. 323-334.

Lacity, M. and Hirschheim, R., *Information Systems Outsourcing: Myths Metaphors and Realities*. West Sussex, England: John Wiley & Sons Ltd., 1993.

Lacity, M. and Hirschheim, R., "The Information Systems Outsourcing Bandwagon", *Sloan Management Review,* (35:1) Fall 1993, pp. 73-86.

Lacity, M., Willcocks, L. and Feeny, D. "The Value of Selective IT Sourcing", *Sloan Management Review*, (7:3), Spring 1996, pp. 13-25.

Lacity, M., and Willcocks, L. "Information systems sourcing: examining the privatization option in USA public administration", *Information Systems Journal*, (7:2),) April 1997, pp. 85-108.

Lacity, M., and Willcocks, L. "An empirical investigation of information technology outsourcing practices: lessons from experience", *MIS Quarterly*, (22:3), September 1998, pp. 363-408.

Lacity, M. and Willcocks, L., *Global Information Technology Outsourcing: In Search of Business Advantage*. West Sussex, England: John Wiley & Sons Ltd., 2001.

Lacity, M. and Willcocks, L., *Global Sourcing of Business & IT Services.* Hampshire, England: Palgrave MacMillan, 2006.

Loh L., and Venkatraman N. "Diffusion of Information Technology Outsourcing: Influence Sources and the Kodak Effect", *Information Systems Research*, (3:4), December 1992.

Levina, N. and Ross, J. "From the Vendor's Perspective: Exploring the Value Proposition in Information Technology Outsourcing" *MIS Quarterly*, (27:3), September 2003, pp. 331-364.

Matten, D., and Moon, J. "Implicit and Explicit CSR: A conceptual framework for understanding CSR in Europe", *ICCSR Research Paper Series*, 29-2004, University of Nottingham

Oshri I., Kotlarsky J. and Willcocks, L. "Managing dispersed expertise in IT offshore outsourcing, lessons from Tata Consulting Services", *MIS Quarterly Executive*, (6:2), June 2007, pp. 53-65.

Oshri I., Kotlarsky J., and Willcocks, L. *The Handbook of Global Outsourcing and Offshoring*, Palgrave Macmillan, New York, 2009;   and *MIS Quarterly Special Issue on Information Systems Offshoring*, Vol. 32, No.2, June 2008.

Prahalad, C. and Hamel, G. "The Core Competence of the Corporation", *Harvard Business Review*, (90:3), May June 1990, pp. 79-91.

Rifkin, J., Foundation on Economic Trends (FOET) at www.foet.org, retrieved August 24, 2009

Rubin, J., *Why Your World is About to Get a Whole Lot Smaller: Oil and the End of Globalization*, Toronto, Canada, Random House, 2009.

Sahay, S., Nicholson, B. and Krishna, S., *Global IT Outsourcing: software development across borders*. Cambridge UK: Cambridge University Press, 2003.

Walsham, G., *Interpreting Information Systems in Organizations*, Wiley, Chichester, 1993.

Walsham, G., "Doing Interpretive Research", *European Journal of Information Systems*, (15) 2006, pp.320-330.

Willcocks, L. and Kern, T., "IT outsourcing as strategic partnering: The case of the UK Inland Revenue", *European Journal of Information Systems*, (7:1), March 1998, pp. 29-45.

Yasin, R., "Power Management", *Government Computer News*. November 13, 2008.   Available at http://www.gcn.com, retrieved September 11, 2009.