

E-commerce in Developing Countries

Judy Young
School of Information Systems
University of Tasmania
jf_young@infosys.utas.edu.au

Gail Ridley
School of Information Systems
University of Tasmania
Gail.Ridley@utas.edu.au

Abstract

The aim of the following paper is to present a review of the United Nations Conference on Trade and Development (UNCTAD) report, *E-Commerce and Development Report 2002*, which focuses on progress towards e-commerce in developing countries. The Report presents valuable information and analysis within its nine chapters that will be of interest to many countries. However, it is argued that the Report would have been more useful if UNCTAD had considered how the chapters related to each other, and in particular, how the topics mapped against the entire scope of what is a complex issue. For illustrative purposes, a preliminary framework was developed from the literature and then used for comparison against the issues covered in the Report, revealing gaps. It is recommended that UNCTAD build on the leadership role it has taken in the area by developing a framework of the issues on e-commerce in developing countries that could be used for future publications in the area.

Introduction

Since its establishment in 1964, the United Nations Conference on Trade and Development (UNCTAD) has sought to integrate developing countries into the world economy. UNCTAD has published a range of annual and occasional reports and papers that relate to E-commerce in developing countries, as well as *The Least Developed Countries Report 2002*. The 252 page *E-Commerce and Development Report 2002* is a major UNCTAD publication that presents in its nine chapters factual information and analysis relating to issues that will impact on the uptake and development of e-commerce in developing countries. The aim of the following review is to consider the *E-Commerce and Development Report 2002* as a whole, rather than critique the content of one or more of the chapters in isolation.

Relationship Between the 2002 Report and Previous Related UN Reports

The *E-Commerce and Development Report 2002* is the third of a series of major United Nations (UN) reports that considered e-commerce and development in developing countries, although the first UNCTAD publication of this type, *Building Confidence: E-Commerce and Development* had a different title to the 2001 and 2002 reports.

Unlike the 2002 *E-Commerce and Development Report*, the 2001 Report of the same name commenced with a section entitled "Trends", that provided a context and identified the most important issues for the implementation of e-commerce in developing countries. These issues were then considered in the later chapters of the 2001 Report, along with a case study from China.

However, the *E-Commerce and Development Report 2002* did not incorporate any introduction or context, apart from four lines embedded into the Foreword by the Secretary-General of the UN, which stated that the Report:

...provides factual information and analysis covering a range of topics that will influence the expansion of e-commerce in developing countries... and identifies the policy and business options available to developing countries... (while) making practical proposals for maximising the contribution of e-commerce to economic and social development.

As a result, the valuable information and analysis in the 2002 Report does not stand alone, but has most value read in conjunction with the 2001 Report. Although reference was made to the previous 2001 Report in places in the 2002 Report, a justification for inclusion of the topics considered in the 2002 Report was not given, as was done in the 2001 Report. Consequently, the reader of the 2002 Report is left wondering why some aspects and sectors have been included while others omitted. As in the 2001 Report, China was also included as the case study nation for the 2002 Report. The reason for including China as a case study twice needed to be made explicit.

The *Least Developed Countries Report 2002* acknowledged a need for a broadly based understanding of issues, and the multidimensional nature of the problems that developing countries face. However, the presentation of issues and problems in independent chapters in the *E-Commerce and Development Report 2002*, without relating them together or linking them to the context provided for the 2001 report of the same name, acts against a broad understanding of the issues. The *E-Commerce and Development Report 2002* would have provided even greater utility if its contents had been related to the previous 2001 Report in a cohesive way. Future annual reports of a similar nature would benefit from being mapped against a comprehensive framework of all issues relevant to e-commerce in developing countries, to allow the reader to better understand the scope of the issues and their inter-related nature, and to facilitate future benchmarking of progress towards their achievement.

Introduction to the Report

The *E-Commerce and Development Report 2002* begins with a half page foreword by Kofi Annan, Secretary-General of the UN, followed by three paragraphs that acknowledged the contributions of the UN staff members and consultants who prepared or were involved in the Report. Annan's foreword pointed to the potential of Electronic Commerce (EC) to contribute to economic growth, and included an appropriate exhortation to the international community to overcome the digital divide by fostering the opportunities presented by the digital revolution. A detailed Table of Contents, List of Boxes, List of Charts, List of Tables and List of Abbreviations followed, with an Executive Summary next. The front matter of the Report suggests a need for additional editing. For example, the page numbering of the preliminary sections of the Report did not match that shown in its contents while the explanatory notes referred to in the Contents did not appear in the Report.

Explanatory notes were needed at the start of the Report to provide some context for the novice reader. For example, a reader of the Report would not be aware from the introductory material that another report with the same title had been published in 2001. Moreover, the relationship between the Report and the UN Conference on Trade and Development is not clear, just as the purpose of the Report was not articulated, apart from a few lines in the foreword.

The title of the Report did not identify clearly its focus on e-commerce in developing countries. Even though the title referred only to development in general, the Report included chapters entitled, *The domain name system and issues for developing countries* and *M-Commerce: Wireless communication opportunities for developing countries*, while almost all the other chapters focussed on developing countries.

The Relationship of the Chapters to Each Other

Part One of the Report, *E-Commerce and Development: Some Cross-Sectoral Aspects*, contains four chapters that each considered respectively, a worldwide status report, the domain naming system, gender and m-commerce. Part Two of the Report, *Impact of E-Commerce on Selected Sectors*, considered the Information Technology (IT) industry, e-finance, the publishing industry, e-insurance and the export of e-services.

It became apparent from an examination of its chapters that the *E-Commerce and Development Report 2002* was a challenging undertaking. The wide range of complex and interdependent issues involved make it difficult to establish the key aspects that need to be included and also to set the scope of what these should address. It also became evident through reading the report that there was little continuity in the content between the current and the previous report with the same title.

No attempt was made in the *E-Commerce and Development Report 2002* to link the chapters, and no introduction or conclusions were provided to draw the chapters together. Further, no explanation was provided for why these particular aspects and sectors were considered and presented in the 2002 Report, and others omitted. Consequently, the 2002 Report read like a collection of largely unrelated chapters rather than a coherent document that provides a comprehensive overview of e-commerce in developing countries.

However, it may be unreasonable to be too critical of the *E-Commerce and Development Report 2002* for presenting some of the major issues that impact on the development of e-commerce in developing countries as largely unconnected silos. It has been acknowledged that although the literature on e-commerce in early adopter countries is extensive and diverse, publications that relate to developing countries are “scarce and anecdotal” (Travica 2002).

An obvious omission in the 2002 Report is an explanation of the term “developing countries”, and whether it is intended to incorporate transition and least developed countries. In places UNCTAD uses one of the latter terms rather than another to distinguish between the countries, yet much of the Report uses the more generic term, developing countries. Although an acronym for Least Developed Countries is listed in the abbreviations section, an explanation of the manner in which the three terms were used would have improved the Report.

The Content of the Chapters in the Report

The lack of cohesion between the chapters in the 2002 Report suggests that there is a need to adopt a framework to provide a guide for future reports. This could provide a foundation that will enable progress in the adoption of e-commerce in developing countries to be reliably benchmarked. In particular it could provide a basis to revise the status of transitional and least developed countries. At the same time it will ensure there is continuity in the issues addressed in future reports. This will help to build a cohesive body of knowledge that reflects advancements over an extended period of time. The benefit of this approach is that it could create opportunity to review positive outcomes and determine where successful outcomes might be employed in similar situations. It is important that any such framework should be flexible enough to allow newly emerging key issues in relation to e-commerce in developing countries to be added.

To illustrate the benefit of the framework approach, for the purposes of reviewing the content of the chapters in this *E-Commerce and Development Report 2002*, five of the key areas commonly applied in the measurement tools of e-readiness will be used. E-readiness tools have been developed to gauge the extent to which a community is prepared to take part in the networked world. These were identified by the authors from tools established by research organisations with expertise in the area (Infodev.org, 2002; SADC e-Readiness Task

Force, 2002; Bridges.org, 2001; McConnell International, 2000) and the literature (Turban and King, 2003; Mansell, 2001). These key issues are shown in Figure 1. The key issues are not claimed to be a definitive list, but rather represent an initial attempt to formalise the measurement of progress of e-commerce in developing countries.

While these key issues provide a foundation it is necessary to recognise that differences are likely to occur between developing and least developed countries according to their stage of development.

Key issues
1. Access Infrastructure
2. E-commerce & Convergence
3. Promoting IT Enabled Industries
4. E-governance
5. Human Resources and Capacity Building

Figure 1: An initial reference framework for measuring the progress of developing and least developed countries toward e-commerce.

Chapter One, *E-Commerce around the world: A brief status report*, served to reinforce the need for a benchmark from a statistical perspective. This chapter tends to leave the reader without any clear understanding of the current status of e-commerce in developing countries. For example, in providing a worldwide e-commerce status report, a number of difficulties in the figures provided have been acknowledged. That is, the different focus and measures used mean that multiple results needed to be presented and average outcomes and predictions reported. Further, the authors made the comment that differences in the forecasts by Internet research firms for the growth of e-commerce were remarkable. The chapter was based on an assumption that while use of the Internet was a prerequisite for e-commerce it could not be taken as an indicator of e-commerce. It was then reported that Internet usage was on the increase in developing countries, although it was acknowledged that it was not possible to distinguish between children and adult Internet users.

While the focus of Chapter Two, *The domain name system and issues for developing countries*, is highly topical at the present time and is an issue that needed to be resolved, it is but one aspect of the regulatory environment policy within the broad issue category, E-commerce and Convergence. This does not mean to imply that the subject should be ignored, but rather that there are also a number of other issues where progress needs to be measured in moving towards the adoption of e-commerce in developing countries.

Chapter Three focuses on *Gender e-commerce and development*. Within the framework developed, this issue falls under the heading of Human Resources and Capacity Building. This chapter served to demonstrate the limited amount of knowledge available with respect to the experiences of women in e-commerce in developing countries. However, while it covered a range of issues, little information was given that directly related to e-commerce. More generally the information established the relatively low status of the positions women filled in various forms of work activity, even though these had no connection with e-commerce. For example, it reported statistics relating to women engaged in call centres, clerical positions and data entry.

The focus of Chapter Four, *M-commerce: Wireless communication opportunities for developing countries*, is important as it offers a means to overcome the problems posed by the absence or unreliability of a hard-wired telecommunications infrastructure. However, m-commerce does not eliminate infrastructure as a key issue in progress towards e-commerce in developing countries. For example, wireless and satellite services are necessary to facilitate the transmission of data or messages. This limits the benefits of m-commerce to areas where such facilities are available.

Chapter Five, *The IT industry, e-business and development*, reports issues related to the category, Promoting IT Enabled Industries. The chapter largely reported the involvement of multinational IT companies in developing countries. It covered the extent of their investments in a range of activities. This information is beneficial as it establishes a basis for review in future reports. However it is also necessary to focus on the situation for local IT industries in developing countries. While the exclusion of this perspective was acknowledged as an informed decision, it is none-the-less a highly important aspect as the growth of the local operations is the key to sustainability and a move towards economic independence. It is proposed that such information could also provide a source of detail about what has succeeded and also allow the identification of emerging niche areas of activity for local entrepreneurs in developing countries.

Chapter Six, *E-finance for development: Global trends, national experiences and SMEs* (Small to Medium Enterprises), clearly describes the wide diversity of the issues involved. With reference to the framework used for this review, the topic of this chapter falls within the category of E-commerce & Convergence. The inclusion of e-finance information is highly appropriate as this aspect of e-commerce is as yet in a preliminary stage of development. Consequently it is important that careful attention is given to the range of regulatory and policy issues that need to be put in place to effectively facilitate e-commerce.

Chapter Seven, *E-commerce and the publishing industry*, presents an issue that is a subset of what was defined in the 2001 Report as “back office services”. With reference to the framework this area falls within the broader classification of Promoting IT Enabled Services. However, the publishing industry is only one area where the application of e-commerce may be viable in developing countries.

Chapter Eight, *E-Insurance*, contributes a further dimension of knowledge in relation to Promoting IT Enabled Services. While the content of this chapter examines a large number of highly relevant issues, it does not clearly relate these to situations in developing countries.

Chapter Nine, *Export performance and E-services*, is also linked to the Promoting IT Enabled Services issue from the framework. This chapter highlights the increasing viability for developing countries to engage in the export of e-services. However, it also points out that while many developing countries have abundant cheap labour, there still remains the issue of developing IT literacy and education to ensure the quality and size of the IT workforce. IT literacy and education also need to be considered in a comprehensive review progress towards e-commerce in developing countries.

In summary, the application of the preliminary framework identified gaps in the scope of the information provided in the *E-Commerce and Development Report 2002*.

Conclusions

The *E-Commerce and Development Report 2002* is a valuable resource that will be of considerable benefit to many nations in arriving at a better understanding of the development of e-commerce in developing countries. However, UNCTAD may consider taking on an additional leadership role to complement the one it has already adopted, by developing a framework of the range of issues relating to e-commerce in developing countries. Each occasional and annual paper and report it produces in the area could then be mapped against the framework to derive even greater benefit from the information and analysis presented in its publications.

References

- Bridges.org. (2001) Comparison of E-Readiness Assessment Model. <http://www.bridges.org/ereadiness/compare.html>.
- Infodev.org. (2002) E-Readiness as a Tool for ICT Development. <http://www.infodev.org/library/WorkingPapers/Areready.pdf>.
- Mansell, R. (2001) OECD Emerging Market Economy Forum on Electronic Commerce. An issue paper presented to the Emerging Market Economy Forum, 16-17th July, Dubai.
- McConnell International (2000) Risk E-Business: Seizing the Opportunity of Global E-Readiness. <http://www.mcconnellinternational.com/ereadiness/EreadinessReport.html>.
- Southern African Development Community (2002) SADC e-Readiness Review and Strategy, [http://Inweb18.worldbank.org/ict/resources.nsf/a693f575e01ba5f385256b500062af05/21027a77915207d38525adb007077e6/\\$FILE/SADC%20report.pdf](http://Inweb18.worldbank.org/ict/resources.nsf/a693f575e01ba5f385256b500062af05/21027a77915207d38525adb007077e6/$FILE/SADC%20report.pdf).
- Travica, B. (2002) Diffusion of Electronic Commerce in Developing Countries: The case of Costa Rica, *Journal of Global Information Technology Management*, 5, 1, 4-24.
- Turban, E. and King, D. (2003) Introduction to Electronic Commerce. Prentice Hall. New Jersey.
- UNCTAD (2002) *E-Commerce and Development Report 2002*. Geneva.
- UNCTAD (2002) *Least Developed Countries Report 2002*. Geneva.
- UNCTAD (2001) *E-Commerce and Development Report 2001*. Geneva.

Author Bios

Judy Young gained her PhD from the School of Information Systems at the University of Tasmania where she works as an honorary research associate. Judy has a wide range of research interests. More recently these have focussed on EC in developing countries, community on-line access centres and customer relationship management.

Gail Ridley holds an appointment at the School of Information Systems at the University of Tasmania in Hobart, Australia, where she lectures mainly at the graduate level. She holds a PhD in Information Systems from the same institution. Dr Ridley's research interests include information systems in developing countries, the telecentre movement and the strategic use of Information Systems. Recently she completed a consultancy for the Tasmanian State Government that examined the whole-of-government benefits from strategic use of information systems.