

## Overcoming the Digital Divide through Electronic Commerce: Harnessing opportunities in IT for Development

Sajda Qureshi

*Department of Information Systems &  
Quantitative Analysis  
College of Information Science & Technology  
University of Nebraska at Omaha  
[squreshi@mail.unomaha.edu](mailto:squreshi@mail.unomaha.edu)*

Alanah Davis

*College of Information Science & Technology  
University of Nebraska at Omaha  
[alanahdavis@mail.unomaha.edu](mailto:alanahdavis@mail.unomaha.edu)*

### Abstract

*The disparities in access to and use of information and communication technologies (ICTs) comprise a divide between those who can and cannot reap the benefits of the information superhighway. Electronic commerce appears to enable this divide to be overcome. This paper provides insight into the ways in which development is brought about through ICTs. Following an analysis of the key factors effecting development through e-commerce, the contribution of this paper is in a framework that describes the relationship between the tools and benefits of e-commerce and its effect on development.*

### 1. Introduction

The growth of the Internet is opening up new opportunities for businesses worldwide. Research suggests that the growth of e-commerce is to the Information Revolution what the railroad was to the Industrial Revolution (Drucker, 1993). E-commerce has the ability to eliminate distance in one's mental geography, leading to one economy and one market. This global society suggests that governments can no longer control economic life (Gidden, 2003). The same research suggests that globalization is a political, social, and cultural phenomenon as well as an economic phenomenon that is revolutionizing the way in which we live.

Sciadas (2004) confirms that the magnitude of the global digital divide is considerable but finds that the gap is slowly narrowing. Additional research adds that while information technology has wrought fundamental changes throughout society, it has also both benefited and hindered the progress of social and economic development (Servon, 2002). In addition to altering commerce, education, government, and communications, information and communication technology (ICT) affects the construction of and

response to social problems such as poverty and inequality.

The lack of access to ICT among certain segments of the population (otherwise referred to as the "digital divide") exacerbates inequalities among populations (Servon, 2002). However, at the same time ICT can bring education to people, healthcare to disadvantaged communities, promote civic engagement, and better management of natural resources. Norris (2001) suggests that the digital divide is a multidimensional phenomenon that encompasses three distinct aspects. The global divide refers to the divergence of Internet access between industrialized and developing societies. The social divide refers to the gap between the information rich and information poor in each nation. Finally, the democratic divide signifies the difference between those who do and those who do not use digital resources to engage, mobilize, and participate in public life. Sciadas (2005) recognizes that the digital divide is large, however, suggests that the gap is decreasing rapidly.

This research builds on earlier work from Qureshi and Davis (2006) further addressing the question of how the digital divide can be overcome through access to electronic commerce activities. Following an analysis of the key factors effecting development through e-commerce, the contribution of this paper is in a framework that describes the relationship between the tools and benefits of e-commerce and its effect on development.

### 2. Theoretical Background

Development is most often studied as a macro-economic phenomenon with static and well defined parameters. Economic development assumes that the behavior of people and production processes is predictable and only adjusts to constant changes in the environment in a purely passive manner (Schumpeter, 2002). However, the reality of nations and regions is that they are constantly changing in response to

predictable as well as unpredictable changes in their environments.

The nature of development is that its effects are wide ranging with social, organizational, and political consequences. This suggests that in order for development research to realistically inform the practice of development policy and implementation, there needs to be a greater analysis of the social processes effecting development. Apthorpe (1994) argues that development economics grapples with institutional building and rebuilding of organizations. In particular the concept of development in social science explores how reality is constituted in the development process (Arce, 2003). The social development perspective enables a broader understanding of development to be achieved through top down national policy making processes as well as bottom up, “micro level” traditions like the actor oriented approach, which works upwards from individual level actions (Arce, 2003; Braa, Monteiro, and Sahay, 2004; Walsham and Sahay, 1999). Such research has a direct relationship to practice.

A model for information technology for development from Qureshi (2005) summarizes the relationships between IT and Development (Figure 1). The model identifies the ways in which ICTs bring about development. A number of case studies have been used to illustrate how ICTs enable access to information, knowledge and expertise. For example, in their study of information systems for rural micro-enterprise in Botswana, Duncombe and Heeks (2003) suggest that the role of ICT in enabling information and knowledge is important for both social and economic development. They found that there was a reliance on localized, informal social networks for their information for rural micro-enterprise. Information from these networks was of poor quality and not readily available; it appeared to fail the poorest and most disadvantaged entrepreneurs.

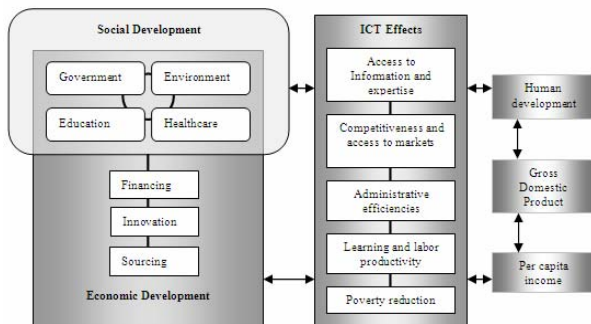


Figure 1. Model of IT for Development (Source: Qureshi, 2005)

Qureshi’s model (2005) was later used as the basis of data collected on how e-commerce activities enable the digital divide to be bridged (Qureshi and Davis, 2006).

From the original model the key ICT effects were used to identify the ways in which e-commerce factors relate to each other as they enable the digital divide to be bridged. Additionally, these factors were related to the benefits of e-commerce. These benefits have the potential to help bridge the digital divide by enabling a reduction in the costs of doing business, reduction in intermediaries, price transparency and negotiation. E-commerce is rising and presents a number of opportunities (UNCTAD Report, 2003). The research also includes possible tools and techniques for e-commerce in developing countries including: communities, auctions, portals, e-markets, web retailing, online catalogs, search and retrieval capabilities, electronic payments, e-collaboration, and cyber cafés. The complete model from Qureshi and Davis (2006) is shown in Table 1.

Table 1. E-Commerce Capabilities for Development (Extracted from Qureshi and Davis, 2006).

<i>Benefits of E-commerce</i>	<i>Effects of IT on Development</i>				
	<i>Access to Information &amp; expertise</i>	<i>Competitiveness &amp; access to markets</i>	<i>Administrative efficiencies</i>	<i>Learning &amp; labor productivity</i>	<i>Poverty reduction</i>
<b>Reduced costs</b>	<i>Communities, Auctions, Portals, E-markets</i>	<i>Communities, Auctions, Portals, E-markets</i>	<i>Web retailing, Online catalogs</i>	<i>Web retailing, Search &amp; retrieval capabilities</i>	<i>Auctions, Portals, E-markets</i>
<b>Reduced or transformed use of intermediaries</b>	<i>Portals, Search &amp; retrieval capabilities</i>	<i>Search &amp; retrieval capabilities</i>	<i>Portals, Search &amp; retrieval capabilities</i>	<i>Search &amp; retrieval capabilities</i>	<i>Web retailing</i>
<b>Price transparency &amp; formation</b>	<i>Electronic payments</i>	<i>Electronic payments, Online catalogs</i>	<i>Electronic payments</i>	<i>Online catalogs, Search &amp; retrieval capabilities</i>	<i>Web retailing</i>
<b>Negotiation</b>	<i>Communities, E-collaboration</i>	<i>Cyber Café, Communities</i>	<i>Cyber Café, Communities</i>	<i>Communities</i>	<i>Communities</i>

In the following section a methodology is developed to mine studies in which electronic commerce has been used to bridge the digital divide.

### 3. Methodology

As this investigation first aims to discover what is known about the relationship between e-commerce and development, descriptions are generalized into concepts and relationships between these concepts. This results in the development of a new model highlighting the relationships between the effects of e-commerce on development, the benefits of e-commerce, and the tools and techniques available. In order to establish the relationships between these factors, a review is carried

out of what is known about the relationship between e-commerce and development. These descriptions are then categorized into concepts and relationships between these concepts. Finally, this will result in the development of a conceptual model that is triangulated against vignettes and illustrates the relationships discovered through the literature review.

In developing the criteria for selection of case studies, the work of (Schultz and Leidner, 2002) was drawn upon. The studies were selected based on the following criteria 1) case studies that were informed by real need, 2) they had rich empirical findings, and 3) explored pragmatic, practical organizational applications. This criteria lead to two types of findings. The first are case studies that highlight the relationship between the e-commerce factors that bring about development as they enable the digital divide to be bridged. These findings were then ordered according to Table 1 (Qureshi and Davis, 2006). These results are illustrated in Appendix 1 as a table with the effects of IT on development across the top and the benefits of e-commerce across the side. The second set of findings relate to examples of ways in which these relationships take place in practice. Both sets of findings are illustrated in the following section.

## 4. Results and Analysis

In this section the results of the review on case studies as they relate to the effects on e-commerce on development are analyzed.

### 4.1. Effects of IT on Development

As it was mentioned before, earlier papers have argued that e-commerce has enabled development to take place by bringing about greater access to information and expertise, increasing competitiveness and access to new markets, administrative efficiencies through e-government, learning and labor productivity which lead to poverty reduction (Qureshi, 2005; Qureshi and Davis, 2006). Further support includes an exploratory, qualitative study which used interviews to identify factors influencing the adoption of e-commerce in Mexico and solutions that some companies have used to overcome the factors (García-Murillo, 2004). García-Murillo concluded lack of credit, lack of adequate infrastructure, limited understanding of e-commerce technology, lack of patience from entrepreneurs, and poor website quality were all obstacles that were faced in the adoption of e-commerce.

Once the obstacles have been overcome IT has been shown to have a positive effect on development. For example, some case studies suggest that ICTs enable access to both global and local markets. On study based

in Kenya found a rural farming cooperative established a relationship through e-mail with EarthMarketplace, a US organization, to sell local produce directly to the American market (Kenney, 2000). This relationship enabled the farming cooperative to by-pass the distributor and overall increase their revenue. The same research from García-Murillo (2004), mentioned above, related infrastructure and information; however her research also addresses competitiveness and access to markets. Factors in this category would include lack of credit, limited understanding of e-commerce technology, lack of patience from entrepreneurs, and poor website quality. Also, related to the lack of credit factor, research from Hawk (2004) attempts to identify some of the challenges of conducting B2C e-commerce in developing countries. He uses an exploratory study of Russia, India, and Latin America, and concludes with a discussion of two problems; low credit card penetration and poor delivery systems. The author mentions that most developing countries are in the state the U.S. was in, in the 90s in terms of e-commerce and Internet establishment.

Further cases illustrate how ICTs enable a reduction in learning and labor. Chen and Ning (2002) develop a framework and test it against a case study in China. The goal of their research was to suggest a revised framework on Porter's Diamond of National Competitive Advantage and to apply it to the development of e-commerce in less developed countries. In conclusion they found an issue with there not being many banks in China, and only 11% have their own bank cards. Duncombe and Heeks (2002) specifically mention a lack of education and literacy as well as poor business skills as contributing factors. Hawk (2004) cites low credit card penetration and poor delivery systems as effecting labor.

Purcell and Toland (2004) mention human capacity, which also relates to Salman's discussion (2004) of the human condition. Jennex, Amoroso, and Adalakun (2004) identify people factors, technical infrastructure, client interface, business infrastructure, and regulatory interface as success factors in their e-business research model. They use action research and case study of two organizations to validate their research. In conclusion, they identify worker's skills, client's interface (i.e. trust), and technical infrastructure as the most important factors to the success of a B2C e-commerce relationship. Trust is also mentioned by Mansell (2001). Sarkar and El Sawy (2003) mention willingness of organizations to redesign business processes.

**4.1.1. Vignette.** It appears that e-commerce is most effective when carried out through mobile technologies in developing countries. An example of this is Grameen Phone Company in Bangladesh which provides low cost

access to phones and credit for the purchase of good and services (<http://www.grameenphone.com/>).



Figure 2. Screenshot of Grameenphone.com

Here is a vignette to help illustrate the benefit provided by Grameen Phone: *A poor man in rural Bangladesh can't afford telecommunications technology for his small business, but desperately wants to be connected to the urban areas around him and even foreign countries to help increase his business. Right from his home Grameen Phone can connect him to the areas he has been trying to reach for a very low price. This access has helped him to increase the income of his small developing company.*

#### 4.2. Access to E-commerce Technologies and Tools

A number of studies suggested that access to networks, hardware, software, and telecommunications infrastructure was the main factor that prevented emerging economies from accessing information and expertise (Lund and McGuire, 2005; Mansell, 2001; Panagariya, 2000; Purcell and Toland, 2004; Rao, 2003; Sarkar and El Sawy, 2003; Wresch and Fraser, 2005). Additional common factors mentioned site development and hosting, visibility on search engines, logistics, and banking and security (Wresch and Fraser, 2005). Wresch and Fraser (2005) used case studies and interviews from CEOs in five Caribbean countries to understand how these successful businesses in small countries have overcome the five barriers (telephony and Internet access, site development and hosting, site visibility on search engines, logistics, and banking and security) presented in earlier research. In their conclusion the researchers did find that the managers interviewed did struggle with each of the barriers.

Le and Koh (2002) studied e-commerce development in Malaysia and identified web-presence, e-commerce initiatives, management, capabilities, and performance

as access issues. Okoli and Mbarika (2003) mentioned sophistication of Internet use, telecommunications/Internet environment, and traditional commerce infrastructure. Lund and McGuire (2005) discuss tertiary education and illiteracy rates, trade by sector in terms of agricultural, industrial, and services value. The purpose of their research was review e-commerce trade in less developed countries (LDCs). They wanted to identify the causes of the absence of any role for the state; the underestimation of polarization in society and its effect on economic growth; and the failure to distinguish between types of e-commerce and determine whether developing countries are ready for the participation phase of e-commerce, if developing countries have the kinds of industries that might act as demand-pull sectors for e-commerce growth, and whether social, political and institutional arrangements are in place to encourage and sustain e-commerce. In their conclusion they suggest that by measuring participation and infrastructure, the authors used three indicators that most closely matched those employed by the WTO; access to personal computers (PCs), telephone usage, in terms of fixed-line and mobile phone subscribers, and the average cost of a local telephone call. Their evidence suggests only a small minority of people in developing countries, less than 10% of the population, and far fewer in LDCs, could be ready for the participation phase of e-commerce.

In a second study, Barclay and Domeisen (2001) conducted three surveys to find out if developing countries are ready for e-trade. Their research led them to present the following stages for e-competency in developing countries; effective individuals, basic web presence, info-structure, the extended organization, business transformation, and strategic transformation. Khalifa, Banerjee, and Ma (2003) also looked at trade processes and strategic processes as factors that can allow access to markets in emerging economies.

Certain ICT implementations have a direct contribution to poverty reduction. Cecchini and Scott (2003) found that while microfinance is crucial in helping poor villagers mitigate and cope with risk, it is also the most costly model of service delivery for banks. Smart cards with an embedded microchip containing information on clients' credit histories and software providing loan tracking, financial projections and branch management information helped a microfinance institution in Andhra Pradesh reduce transaction costs and reach a greater number of poor people and their micro-businesses more efficiently. In his descriptions of country experiences, Kenney (2000) expects that as the costs of Internet service provision reduce through privatization, the greater the impact of ICTs will be on poverty reduction.

**4.2.1. Vignette.** E-commerce is most effective when developing countries can gain access to the tools and technologies that enable it. An example of this is the UNDP, which is the United Nation's global development network. Their organization advocates for change and connects countries to knowledge and resources in order to help them build a better life (<http://www.undp.org/>).

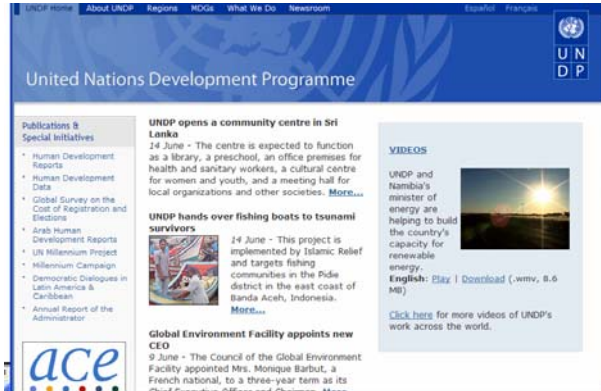


Figure 3. Screenshot of UNDP.org

Here is a vignette to help illustrate the benefit provided by the United Nation's global development network: *A fisherman in Sri Lanka has not been able to meet with the local Fisheries Cooperative Societies because they have no where to go. Assistance from the UNDP has allowed the community to build a Community Centre which can be utilized for the groups meetings as well as other socioeconomic activities. This meeting hall will not only help them meet their objectives, but thousands of other community members will benefit from this central meeting location.*

**4.3. Degree of e-commerce benefits and opportunities**

According to the United Nation's 2003 report on e-commerce and development there are three main benefits from e-markets and online auctions that can be achieved by developing countries (UNCTAD Report, 2003). These benefits include reduced costs, reduced or transformed use of intermediaries, and price transparency and formation. The report suggests that agriculture (i.e. tea and coffee) could provide a viable market for developing country markets online. Already these countries can benefit from the reduced costs of their agricultural products. The Internet makes it possible to bypass some of the intermediaries, again reducing costs. Online auctions are similar to offline auctions; however, they provide benefits in terms of convenience, flexibility, and cost reduction (UNCTAD Report, 2003).

Sulaiman (2000) used a survey about e-commerce in Malaysia to conclude that insufficient security, sales and marketing require high human interaction, and cost of setting up e-commerce is high. The research mentions that organizations are reluctant to use e-commerce because they feel that the electronic transactions are open to hackers and viruses. The organizations from the study were also skeptical about the security measures that need to be implemented in order to safeguard online payment transactions.

For the most part the case studies that mention administrative efficiencies relate to government issues; government support in terms of social, technological, financial, and legal factors (Kamel and Hussein, 2002; Khalifa, Banerjee, and Ma, 2003; Sarkar and El Sawy, 2003). Others mention environmental factors, including environmental and organizational readiness and the political environment and aspects (Khalifa, Banerjee, and Ma, 2003; Molla and Licker, 2005; Purcell and Toland, 2004; Salman, 2004).

Mansell (2001) discusses international trade rules. Panagariya (2000) mentions negotiating access to developing markets (this might fit better above). Pare (2003) mentions transaction costs as an administrative efficiency and concludes that access to the Internet and World Wide Web is not going to decrease the transaction costs that companies have to pay in a global market. Finally, Sulaiman (2000) mentions marketing, advertising, customer service and support, order and delivery, and payment.

This analysis suggests that if ICTs are to enable people to reap the benefits of e-commerce, literacy is essential. At the same time certain types of technologies may enable development efforts to be realized through e-commerce. These include the provision of low cost technologies for services such as financing for micro loans. This is has implications for further research in this area and the practice of using e-commerce to bridge the digital divide.

**4.3.1. Vignette.** While online payments appear to be a challenge, e-commerce services provided by World Vision allow for gifts, such as goats, to be made to people in developing countries (<http://www.worldvision.org/>).



Figure 4. Screenshot of WorldVision.org

Here is a vignette to help illustrate the benefit provided by World Vision: *A young child in Kenya desperately wants to attend school but does not have the funds necessary for tuition, supplies, and a uniform. A woman from the United States logs onto the Internet ([www.worldvision.org](http://www.worldvision.org)) and pays only \$75 to make the wish of that child come true for one year. A year of school for that young child increases their knowledge and aids in breaking the cycle of poverty that could have continued.*

**4.4. Relationship Model**

Together a framework that describes the relationship between the tools and benefits of e-commerce and its effect on development has been put together (Figure 5).

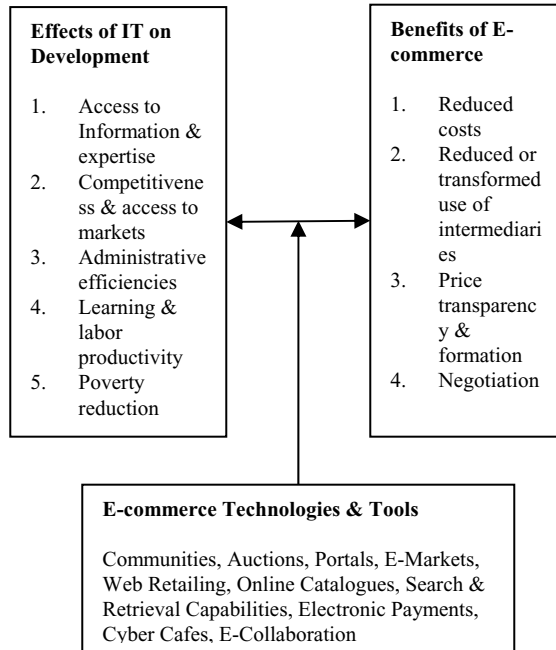


Figure 5. Relationship between E-Commerce and Development.

Figure 5 shows that the effects of IT on development and the benefits of e-commerce have a two way relationship, while the e-commerce technologies and tools available only aid in this relationship.

**6. Implications for Research and Practice: E-commerce Capabilities for Development**

The analysis in this paper suggests that ICTs may reduce costs and enable access to information and expertise, competitiveness and access to markets, administrative efficiencies, learning and labor, and poverty reduction. A reduced or transformed use of intermediaries relates to competitiveness and access to markets, and poverty reduction. It was mentioned above that online payments remain to be a challenge; however, despite that difficulty small businesses in cottage industries producing arts and crafts have been able to sell their products directly to consumers in different parts of the world through web retailing. The rise of auctions and electronic markets to support farmers have also reduced the use of intermediaries and thus increased incomes (UNCTAD Report, 2003).

Price transparency and formation relates to access to information and expertise, learning and labor, and poverty reduction. It appears that access to e-commerce capabilities could be increased through the provision of low cost mobile and cyber café technologies.

**5. Conclusion**

While the growth of the Internet is opening up new opportunities for e-commerce, the digital divide keeps the poorest nations from reaping the benefits of e-commerce. This paper has illustrated how information technologies bring about development and how e-commerce has the potential to bridge the digital divide by providing new opportunities for development. Following an analysis of the key factors effecting development through e-commerce, the contribution of this paper is in a framework that describes the relationship between the tools and benefits of e-commerce and its effect on development.

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## 8. Appendix

	<b>Access to Information and expertise</b>	<b>Competitiveness and access to markets</b>	<b>Administrative efficiencies</b>	<b>Learning and labor productivity</b>	<b>Poverty reduction</b>
<b>Reduced costs</b>	<i>Communities, Auctions, Portals, E-markets</i>	<i>Communities, Auctions, Portals, E-markets</i>	<i>Web retailing, Online catalogs</i>	<i>Web retailing, Search and retrieval capabilities</i>	<i>Auctions, Portals, E-markets</i>
	<p><a href="http://www.eldis.org/ict/">http://www.eldis.org/ict/</a>; Provides a gateway for knowledge development.</p> <p><a href="http://www.undp.org/">http://www.undp.org/</a>; UNDP is the UN's global development network, an organization advocating for change and connecting countries to knowledge, experience and resources to help people build a better life.</p>	<p><a href="http://www.developmentgateway.com.au/jahia/Jahia/pid/8">http://www.developmentgateway.com.au/jahia/Jahia/pid/8</a>; Supports new and experienced computer and internet users.</p> <p><a href="http://www.uneca.org/aisi/picta/">http://www.uneca.org/aisi/picta/</a>; Partnership for ICTs in Africa (PICTA) is an informal group of donors and executing agencies committed to improving information exchange and collaboration around ICT activities in Africa.</p>	<p><a href="http://www.worldbank.org/">http://www.worldbank.org/</a>; The World Bank is a vital source of financial and technical assistance to developing countries around the world.</p> <p><a href="http://www.grameenphone.com/">http://www.grameenphone.com/</a>; Brings electronic connectivity to rural Bangladesh and delivers the digital revolution to the doorsteps of the poor and unconnected.</p>	<p><a href="http://www.eldis.org/ict/">http://www.eldis.org/ict/</a>; Provides a gateway for knowledge development.</p>	<p><a href="http://childrenoffthestreets.org/">http://childrenoffthestreets.org/</a>; Children Off the Streets is a non profit organization, dedicated to providing Nepalese orphan children with food, shelter, and education in a loving, supportive environment.</p> <p><a href="http://worldvision.org/">http://worldvision.org/</a>; World Vision is a Christian relief and development organization dedicated to helping children and their communities worldwide reach their full potential by tackling the causes of poverty.</p>
<b>Reduced or transformed use of intermediaries</b>	<i>Portals, Search and retrieval capabilities</i>	<i>Search and retrieval capabilities</i>	<i>Portals, Search and retrieval capabilities</i>	<i>Search and retrieval capabilities</i>	<i>Web retailing</i>
	<p><a href="http://www.eldis.org/ict/">http://www.eldis.org/ict/</a>; Provides a gateway for knowledge development.</p> <p><a href="http://www.undp.org/">http://www.undp.org/</a>; UNDP is the UN's global development network, an organization advocating for change and connecting countries to knowledge, experience and resources to help people build a better life.</p>	<p><a href="http://www.developmentgateway.com.au/jahia/Jahia/pid/8">http://www.developmentgateway.com.au/jahia/Jahia/pid/8</a>; Supports new and experienced computer and internet users.</p> <p><a href="http://www.uneca.org/aisi/picta/">http://www.uneca.org/aisi/picta/</a>; Partnership for ICTs in Africa (PICTA) is an informal group of donors and executing agencies committed to improving information exchange and collaboration around ICT activities in Africa.</p>	<p><a href="http://www.worldbank.org/">http://www.worldbank.org/</a>; The World Bank is a vital source of financial and technical assistance to developing countries around the world.</p> <p><a href="http://www.grameenphone.com/">http://www.grameenphone.com/</a>; Brings electronic connectivity to rural Bangladesh and delivers the digital revolution to the doorsteps of the poor</p>	<p><a href="http://www.eldis.org/ict/">http://www.eldis.org/ict/</a>; Provides a gateway for knowledge development.</p>	<p><a href="http://childrenoffthestreets.org/">http://childrenoffthestreets.org/</a>; Children Off the Streets is a non profit organization, dedicated to providing Nepalese orphan children with food, shelter, and education in a loving, supportive environment.</p> <p><a href="http://worldvision.org/">http://worldvision.org/</a>; World Vision is a Christian relief and development organization dedicated to helping children and their communities worldwide reach their full potential by tackling the causes of poverty.</p>

			and unconnected.		
<b>Price transparency and formation</b>	<i>Electronic payments</i>	<i>Electronic payments, Online catalogs</i>	<i>Electronic payments</i>	<i>Online catalogs, Search and retrieval capabilities</i>	<i>Web retailing</i>
	<p><a href="http://www.eldis.org/ict/">http://www.eldis.org/ict/</a>; Provides a gateway for knowledge development.  <a href="http://www.undp.org/">http://www.undp.org/</a>; UNDP is the UN's global development network, an organization advocating for change and connecting countries to knowledge, experience and resources to help people build a better life.</p>	<p><a href="http://www.developmentgateway.com.au/jahia/Jahia/pid/8">http://www.developmentgateway.com.au/jahia/Jahia/pid/8</a>; Supports new and experienced computer and internet users.  <a href="http://www.uneca.org/aisi/picta/">http://www.uneca.org/aisi/picta/</a>; Partnership for ICTs in Africa (PICTA) is an informal group of donors and executing agencies committed to improving information exchange and collaboration around ICT activities in Africa.</p>	<p><a href="http://www.worldbank.org/">http://www.worldbank.org/</a>; The World Bank is a vital source of financial and technical assistance to developing countries around the world.  <a href="http://www.grameenphone.com/">http://www.grameenphone.com/</a>; Brings electronic connectivity to rural Bangladesh and delivers the digital revolution to the doorsteps of the poor and unconnected.</p>	<p><a href="http://www.eldis.org/ict/">http://www.eldis.org/ict/</a>; Provides a gateway for knowledge development.</p>	<p><a href="http://childrenoffthestreets.org/">http://childrenoffthestreets.org/</a>; Children Off the Streets is a non profit organization, dedicated to providing Nepalese orphan children with food, shelter, and education in a loving, supportive environment.  <a href="http://worldvision.org/">http://worldvision.org/</a>; World Vision is a Christian relief and development organization dedicated to helping children and their communities worldwide reach their full potential by tackling the causes of poverty.</p>
<b>Negotiation</b>	<i>Communities, E-collaboration</i>	<i>Cyber Café, Communities</i>	<i>Cyber Café, Communities</i>	<i>Communities</i>	<i>Communities</i>

<p><b>n</b></p>	<p><a href="http://www.eldis.org/ict/">http://www.eldis.org/ict/</a>; Provides a gateway for knowledge development.  <a href="http://www.undp.org/">http://www.undp.org/</a>; UNDP is the UN's global development network, an organization advocating for change and connecting countries to knowledge, experience and resources to help people build a better life.</p>	<p><a href="http://www.developmentgateway.com.au/jahia/Jahia/pid/8">http://www.developmentgateway.com.au/jahia/Jahia/pid/8</a>; Supports new and experienced computer and internet users.  <a href="http://www.uneca.org/aisi/picta/">http://www.uneca.org/aisi/picta/</a>; Partnership for ICTs in Africa (PICTA) is an informal group of donors and executing agencies committed to improving information exchange and collaboration around ICT activities in Africa.</p>	<p><a href="http://www.worldbank.org/">http://www.worldbank.org/</a>; The World Bank is a vital source of financial and technical assistance to developing countries around the world.  <a href="http://www.grameenphone.com/">http://www.grameenphone.com/</a>; Brings electronic connectivity to rural Bangladesh and delivers the digital revolution to the doorsteps of the poor and unconnected.</p>	<p><a href="http://www.eldis.org/ict/">http://www.eldis.org/ict/</a>; Provides a gateway for knowledge development.</p>	<p><a href="http://childrenoffthestreets.org/">http://childrenoffthestreets.org/</a>; Children Off the Streets is a non profit organization, dedicated to providing Nepalese orphan children with food, shelter, and education in a loving, supportive environment.  <a href="http://worldvision.org/">http://worldvision.org/</a>; World Vision is a Christian relief and development organization dedicated to helping children and their communities worldwide reach their full potential by tackling the causes of poverty.</p>
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