

Impact of information technologies on SMEs business development.

Introduction

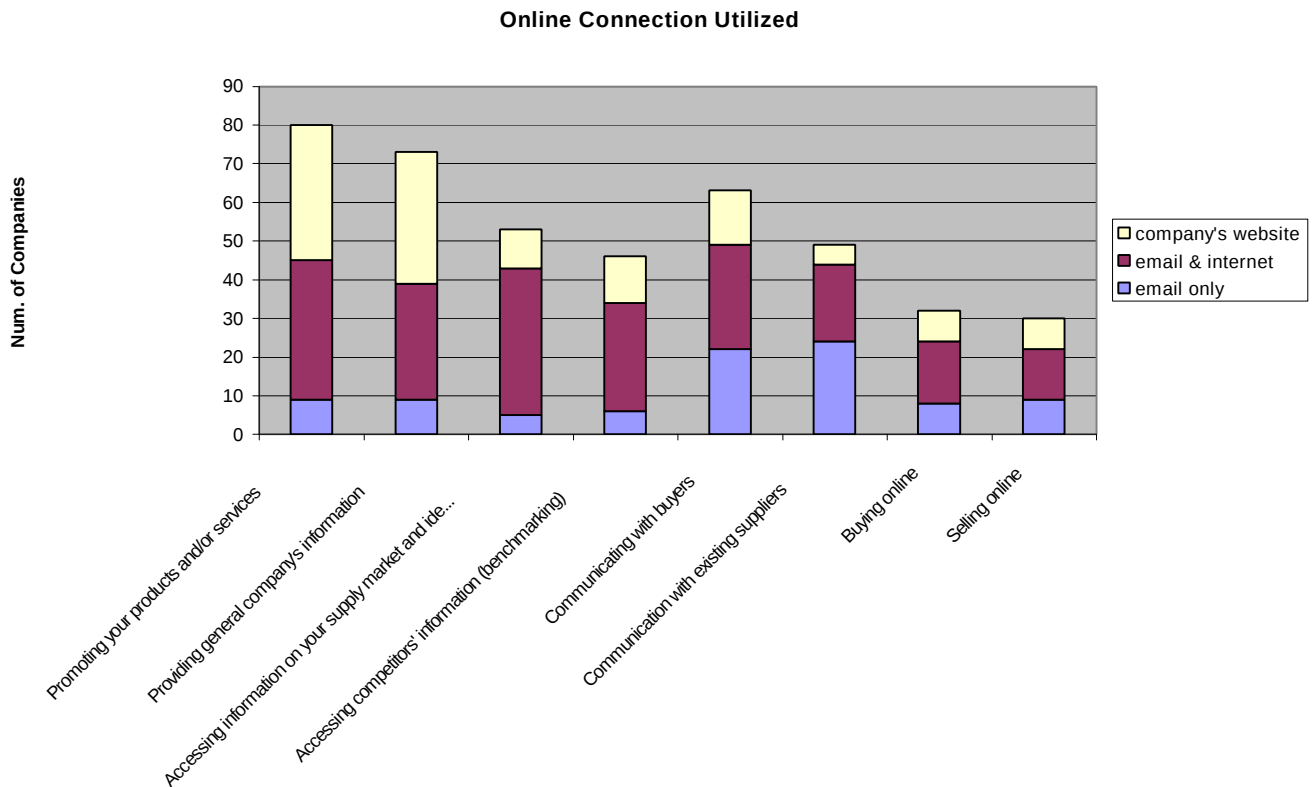
E-commerce presents new business development opportunity for SMEs in developing countries. The Internet reduces marketing and transaction costs, it enables companies of any size to reach the global world. Thanks to comprehensive software applications, companies can actually track detailed customer information and customise their services to create a one-to-one relationship. This in the long run increases customer loyalty, strengthening competitiveness of the company in the international market.

A survey was conducted with SMEs in developing countries to assess their use of information and communication technologies and evaluate the impact of such technology on international business development of the company. Using various online sources and the network of trade support institutions in developing countries, 460 companies were identified from around the world, which have at least an e-mail address. These companies were selected as a sample for this survey. A questionnaire, designed to assess the impact of ICTs on business development, was sent to all 460 companies via e-mail only (questionnaire included in Annex 1). We received answers to our survey from 60 companies. Ten companies provided no assessment to various questions as they have not been using their online connection for a long period of time to assess its impact on the business. Therefore the survey results are based on 50 completed questionnaires, which provide an assessment of the impact of the technology.

All the companies that were surveyed had access to e-mail and the Internet. A large number of them (38 out of 50) were already running their own web site. This shows that SMEs in developing countries are adopting more sophisticated ways of using the Internet other than just its e-mail function.

1. What do SMEs use their online connection for?

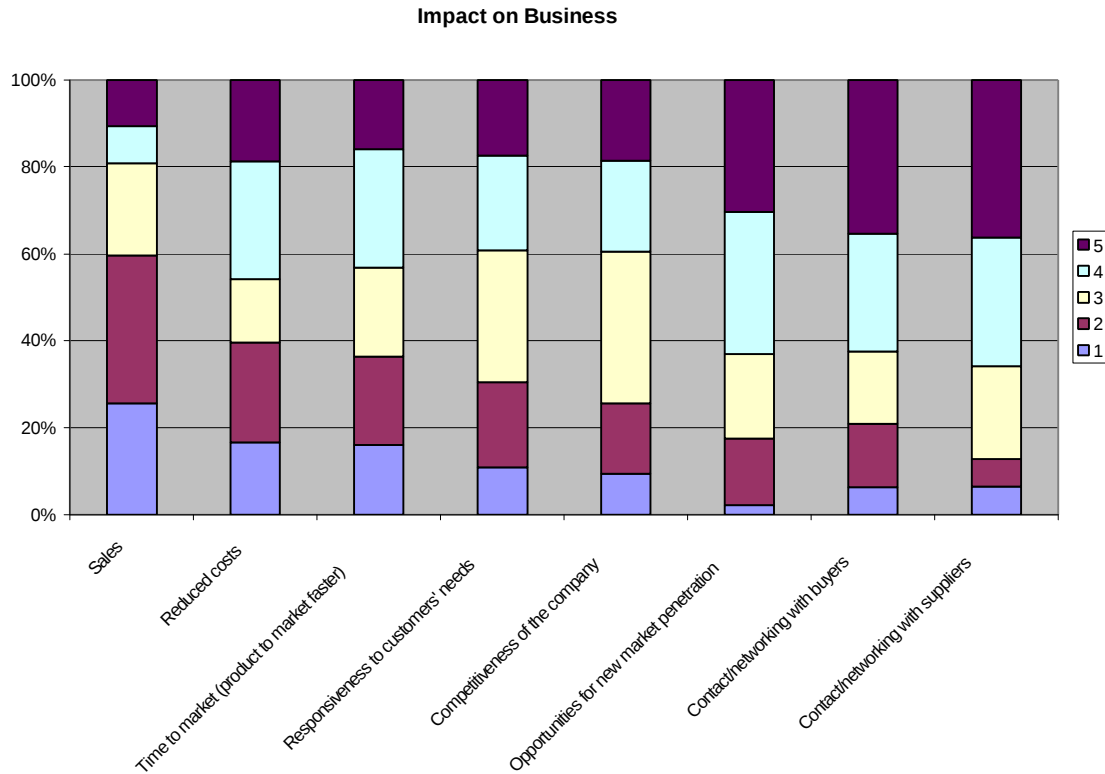
figure 1



Despite the fact that most companies have their own web site, very few of them are using it to sell or buy products online. Online connection is mostly used to search for information and provide company's information. As for companies in developed countries, SMEs that participated in our survey confirm that they use their web site mainly to promote their products and services and to provide company's information. The Internet provides those companies with access to market information. It helps them identify new market opportunities and enables them access competitors' information. Finally, the e-mail is mostly used as a communication tool to communicate with buyers as well as with suppliers.

2. Impact on SMEs business operations:

Figure 2



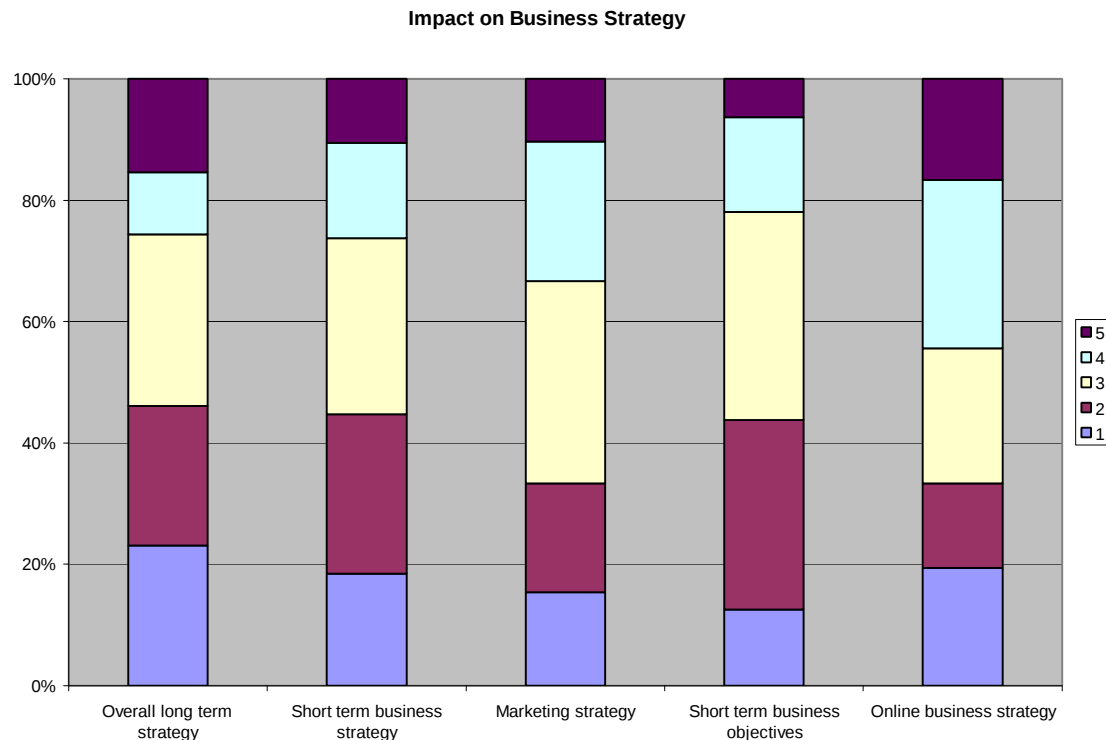
Participants to the survey were asked to apply their own experience to rank the impact of using ICTs on the various business operations. The ranking varies from 1 to 5, where 1, the lowest grade, represents instances where the use of ICTs has no impact or minimal impact on the business operation, and 5, the highest grade, represents the case where the use of ICTs has a significant impact on the business operation.

In terms of networking and communicating, respondents felt that the technology has a significant impact. It enables them to network with their existing and potential buyers and with their existing and potential suppliers. The technology also enables them to access new market opportunities. Consistent with the results shown on table 1, the use of ICTs has no or a minimal impact on sales. SMEs that participated in this survey are not yet using their online connection to buy or sell online.

However, the use of information technology seems to have a moderate impact on SMEs' responsiveness to customers' needs and improvement of their competitiveness. Although in table 1, respondents confirmed that the online connection enables them to access competitors' information, the information is not processed in a way to enable SMEs in developing countries to improve their responsiveness to customers' needs or enhance their competitiveness. This leads us to assume that SMEs are still not processing and using online information in the most effective way to strengthen their competitive edge.

3. Impact on business strategy:

Figure 3

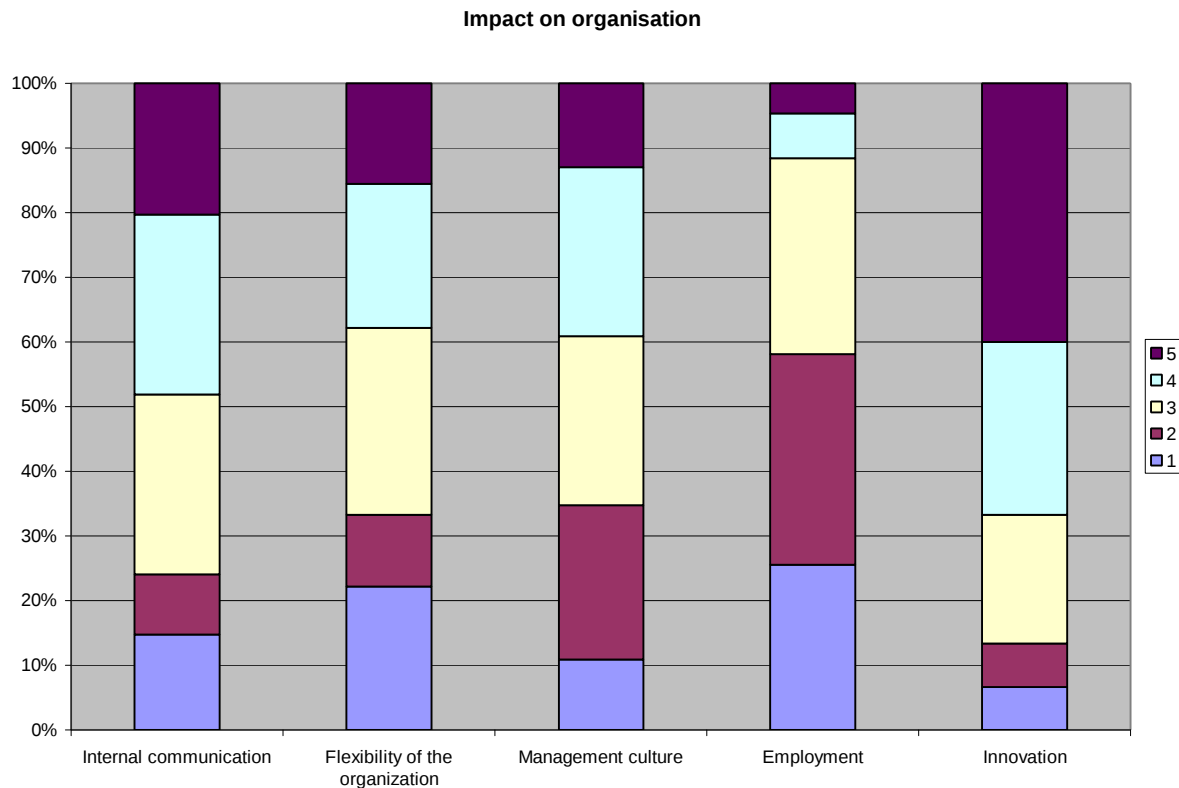


Few SMEs thought that the use of ICTs had an important impact on their online business strategy and on their long-term strategy. This might confirm the fact that SMEs in developing countries have not been online for along period of time and have not fully integrated the online dimension in their strategy as a whole. Most companies seem to be running two parallel strategies: one for their “traditional” business and the other for their online presence to enhance information dissemination.

Even from the communication perspective, it seems surprising that most SMEs thought their marketing strategy is not really affected by their online presence. As the Internet is take advantage of to promote the company’s products and the company’s image, one expects online communication to be part of the overall promotion and marketing strategy. However, table 3 shows that again companies in developing countries seem to have two parallel processes: an overall marketing strategy on one side, and an online communication policy on the other. As the first does not provide the framework for the second, companies are not fully taking advantage of their online presence to enhance their image and gain a competitive advantage over their competitors.

4. Impact on the organisation's structure:

figure 4



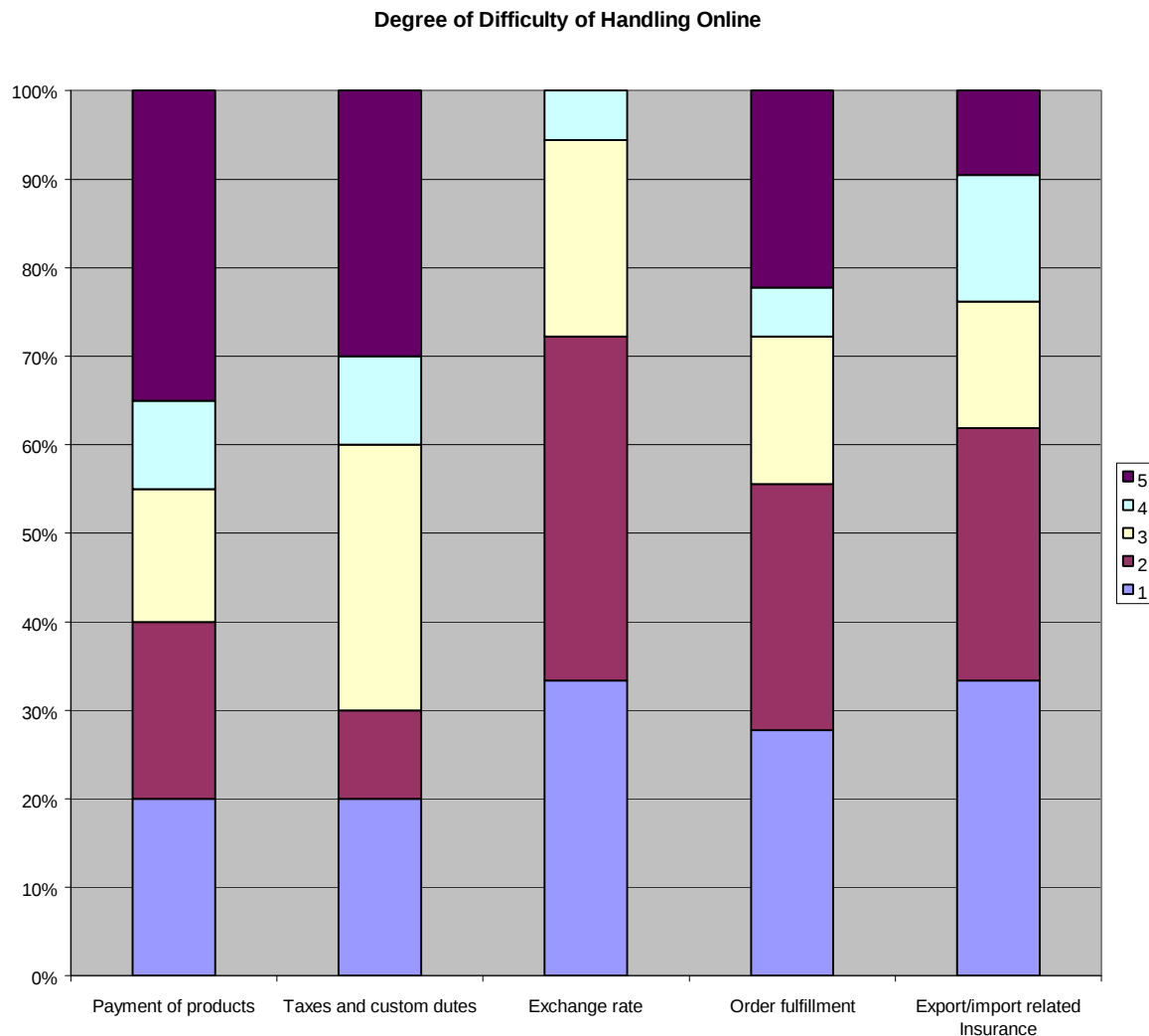
Information and communication technologies are assisting SMEs in developing countries in being more innovative. Most companies thought that using these technologies had a great impact on innovation (fig. 4). Many examples of innovative use of these technologies are provided. These new approaches were developed by SMEs to overcome some limitations imposed by their national environment such as lack of access to credit cards, or lack of access to encryption software, etc.

In addition, ICTs helped SMEs improve their internal communication and their management culture. More than 40% of the companies that responded to the questionnaire expressed that the use of ICTs has had an important impact on these two areas. However, the impact is not as strong as for innovation, and this might be due to the fact that it takes more time to see changes taking place at cultural level.

What is interesting in table 4, is that most SMEs think that the use of technology has had no or minimal impact on employment. Most experts predicted that the introduction of the new technologies at the business level would create new job opportunities. It would encourage hiring young people with new skills particularly, using information technologies. This trend is not confirmed by our survey.

5. Degree of difficulty of handling different aspects of the online transaction

figure 5



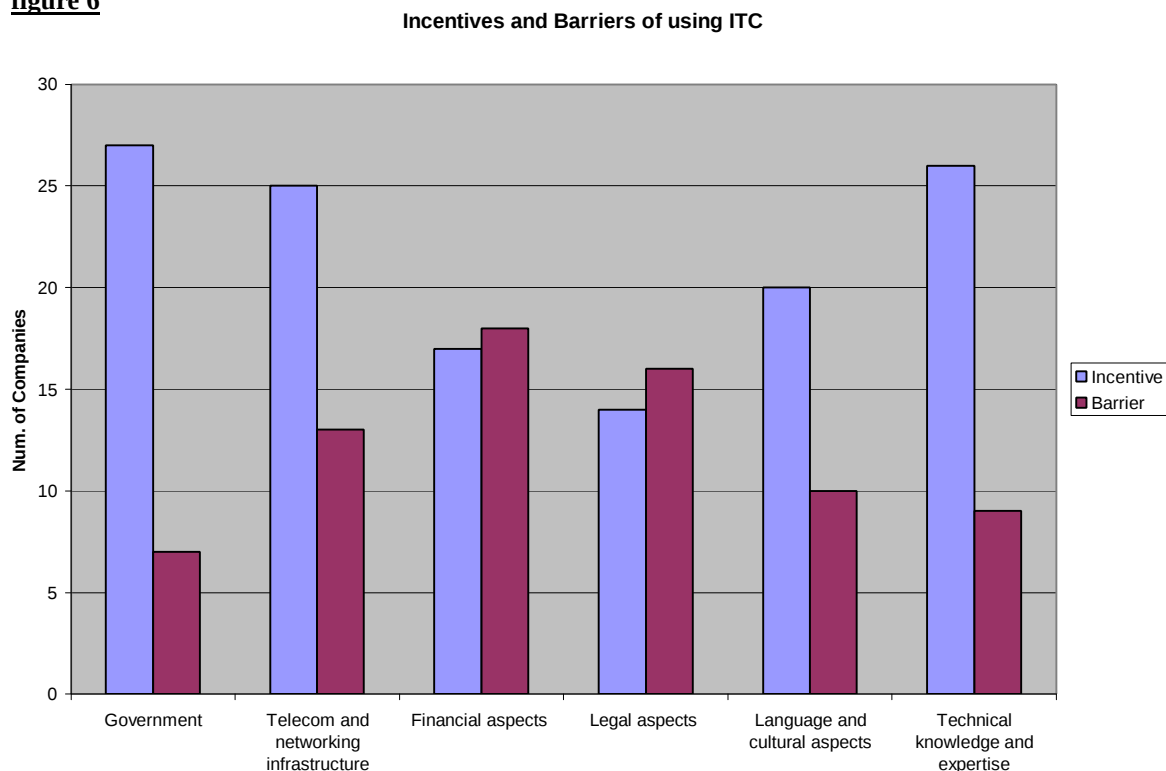
SMEs found payment online, taxes and custom duty payment most difficult to handle for online business (fig. 5). The lack of reliable online financing system and appropriate credit system makes it difficult for companies in developing countries to start trading online. In addition, taxes and customs issues are also very important for the government. It is mostly felt that online trading would prevent governments from collecting customs duties and taxes, which represent their main funding resource for public sector expenditure. Given such an environment, SMEs face a number of barriers and constraints to start their online business. Therefore and to overcome those barriers, many SMEs came up with innovative solutions to enable online payment. For instance, pre-paid “credit” cards are now institutionalised in several developing countries. Other countries have defined a clear framework to enable taxes and customs payment electronically. However, these solutions have only been adopted by a few countries so far and need to be overspread more.

The third element that companies found difficult to handle for online transactions is order fulfilment. The transport and shipping infrastructure in developing countries remains very weak

and expensive. The high transportation and shipping cost offsets the price advantage a company could have for its online products. In addition, the inability of companies in developing countries to deliver on time affects their image as a reliable supply source. In this case again, many SMEs in developing countries have come up with innovative solutions that are adapted to the existing environment. But order fulfilment still remains a constraint for most of the companies.

6. Incentives and barriers:

figure 6



Respondents to our survey found financial aspects and legal aspects to be the most important barriers to the development of e-commerce. The financial and legal frameworks provide companies with a clear idea of the rules of the game. This seems to be an important step in creating an environment conducive for e-trade development (fig 6).

It is interesting to note that for most respondents, the telecom infrastructure is considered more as an incentive than a barrier to online trading. This does not necessarily mean that SMEs have access to the right infrastructure but if they do it would help boost their online business development.

Government was felt to be an incentive to online trading. This might translate recent initiatives undertaken by many governments in developing countries to create the right environment to encourage the development of e-trading.

Conclusion:

Despite the small size of the sample, the results of the survey show a clear trend in the use of information and communication technologies by SMEs in developing countries. It is interesting to note that SMEs are trying to use the technology in a more effective way to answer their needs of promotion and outreach to the global market. Some efforts remain to be made in terms of taking advantage of the information gathered online to improve responsiveness to customers needs and to improve response time to new opportunities that are made available. Very few SMEs in developing countries have an online trading activity. It seems that the constraints in terms of their national environment are still very important and prohibit expansion of e-commerce applications.