E-Commerce Infrastructure in Developing Countries

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Abstract

This chapter provides an overview of the existing e-commerce infrastructure in Developing Countries. A comprehensive survey of all the technologies used in e-commerce is introduced at the beginning of the chapter followed by a description of e-commerce infrastructure components. This chapter groups e-commerce infrastructure into three difference categories, namely: technological infrastructure, financial infrastructure, and the legislative infrastructure. An overview of the current technological, financial, as well as legislative e-commerce infrastructure in Developing Countries is provided which shows that many developing countries do not have the infrastructure required to provide e-commerce services. The author acknowledges the importance of e-commerce and its impact on the economy of any country and hopes that a clear understanding of the entire underlying infrastructure can help the Developing Countries to accelerate the growth of its e-commerce services.
Introduction

As electronic commerce (e-commerce) growth becomes more and more significant, it will not be enough for developing countries to understand it, but in fact to engage in it. This engagement is not only for realizing its potential of growth for their trade and industry but also as a means of survival in the new world of e-commerce-based trade and business. Their ability to do so will depend on several factors, most important of which will be their infrastructure, both physical (the telecommunication network), as well as their financial and legal framework. It will also depend on the availability and price of hardware (computers, routers, switches, etc.) and software, as well as the human resources and education standards of the country. E-commerce activities in the developing counties are still far behind that in industrial countries. Table 1 shows the projected business-to-business (B2B) e-commerce by region.

Due to the existing development gap and differences between the developing and the industrial countries, developing countries face a distinct challenge in order to realize the promises inherent in this new technological development. The first challenge is how to equip the developing countries to benefit from and use the Internet as a tool for development, and secondly, how to ensure and manage the growth and development of the Internet as a utility that would promote development. The former is a developmental challenge and requires investments in the infrastructure of telecommunications sector to ensure the easy and affordable availability of required equipment and software, and in training and Internet literacy. The latter is more of a global regime challenge which involves the growth and regulation of the Internet and its facilities on a universal scale.

E-commerce for developing countries should not be only a vision. It is actually a fact, since the international trade and business are moving in this direction. Most developing countries are unfortunately far behind and unsure of the path forward. To appreciate the issues involved, this chapter highlights the technologies required to establish e-

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Table 1. Projected B2B e-commerce by region, 2000-2004 ($Billions)

<table>
<thead>
<tr>
<th>Region</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>As a % of worldwide B2B commerce, 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>159.2</td>
<td>316.8</td>
<td>563.9</td>
<td>964.3</td>
<td>1,600.8</td>
<td>57.7</td>
</tr>
<tr>
<td>Asia/Pacific Rim</td>
<td>36.2</td>
<td>68.6</td>
<td>121.2</td>
<td>199.3</td>
<td>300.6</td>
<td>10.8</td>
</tr>
<tr>
<td>Europe</td>
<td>26.2</td>
<td>52.4</td>
<td>132.7</td>
<td>334.1</td>
<td>797.3</td>
<td>28.7</td>
</tr>
<tr>
<td>Latin America</td>
<td>2.9</td>
<td>7.9</td>
<td>17.4</td>
<td>33.6</td>
<td>58.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Africa/Middle East</td>
<td>1.7</td>
<td>3.2</td>
<td>5.9</td>
<td>10.6</td>
<td>17.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>226.2</td>
<td>448.9</td>
<td>841.1</td>
<td>1,541.9</td>
<td>2,774.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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