Small businesses are important for employment creation and growth in Chile. They provide 73 percent of all private sector employment; half in microbusinesses (own account and firms employing fewer than 10 employees). But small business average growth was only 2.8 percent from 1994-2000, less than half the 6.4 percent of large businesses.

President Ricardo Lagos considers Chile’s incorporation into the global and digital economy a top priority: “... we are discovering that technology will enable us to surmount the geographical disadvantages of our nation. It is our obligation to take advantage of it to the fullest.” (Inauguration speech, Santiago Times, November 24, 2000) The national strategy, “Chile: Toward the Information Society” lays out five key areas for digital development: technology infrastructure, community and business access; the legal framework for electronic transactions, education; and government services.

Responding to this agenda, the World Bank’s “Chile: Accelerating E-Business For Small Business Innovation and Growth” (November 2002) profiles Chile’s small business sector, benchmarks e-business progress in Chile in relation to OECD countries, reviews public policies and programs emerging in Chile to promote e-business among small firms, and identifies some lessons from experience. Finally, it suggests measures that might accelerate and deepen e-business adoption in Chile. This work is a part of a larger forthcoming sector report by the Bank on Chile’s new economy.

E-Business: Catalyzing Competitiveness

‘E-business’ refers to the progressive process (see Figure 1) of (1) investment in information and communications technologies (ICTs) such as personal computers, software, Internet connectivity, and networking; (2) their application to business processes like market research, production, finance and management; and (3) transactions between businesses and other businesses, households, and/or governments over computerized networks. According to studies in Chile (see

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**Figure 1 - Model of E-Adoption Ladder**

- **e-mail**
  - e-mail
  - place in worldwide market
  - efficient internal-external communications

- **website**
  - sales/promotions and receiving sales orders using ICT, often from the consumer sector, and payments for on and off-line activities

- **e-commerce**
  - ordering of production inputs from other businesses, sales to businesses and consumer, order fulfillment, internal management processes, and management of inbound and outbound logistics

- **e-business**
  - open systems of information for customers, suppliers and partners / new business models based on inter-working between organizations and individuals

- **transformed organizations**
  - Extent of organizational change & sophistication

Adapted from CISCO Led Information Age Partnership Study on E-commerce in Small Business

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catalyze increased business process innovation and productivity, leading to higher competitiveness and growth.

Small businesses typically adopt digital solutions in stages. The first stage involves introducing email as a basic communication tool and the Internet for information searches, followed by development of websites for more focused information-sharing related to marketing, product design, etc. It is usually from this point that the re-engineering of business processes begins. The third step involves active online sales promotion and taking sales orders and payments on-line. The fourth stage incorporates digital applications for ordering production inputs, filling orders, logistics and internal management improvements. OECD research shows that more small business entrepreneurs climb the e-business ladder to improve productivity than to expand their markets (see Figure 2).

In Chile, a Ministry of Economy survey of 3,134 firms in March-May 2002 reflects a similar finding: small businesses perceive the strongest contribution of the Internet to their businesses as increased competitiveness, followed by improved market information on clients. Preliminary results from OECD cross-country analysis show that e-business reduces the costs of transactions linked to production and distribution, and enables firms to manage their supply chains more effectively. In Chile, recent regression analyses done by the Santiago Chamber of Commerce also found a positive and significant relationship between sales and operational profitability with respect to both ICT intensity and digital functionality.

| Table 1. Chile E-business Frequency (Percentage of all firms) |
|-----------------|-----------------|-----------------|
| Size            | Sell on Internet | Buy on Internet | % Purchases on Internet |
| Micro           | 4               | 10              | 20                        |
| Small           | 14              | 16              | 8                         |
| Medium          | 20              | 20              | 8                         |
| Large           | 29              | 27              | 5                         |
| Total           | 6               | 11              | 18                        |

Source: Centro Economia Digital, Santiago Chamber of Commerce, 2002

Chile’s Internet access rates and access growth are comparable to OECD country averages, except among microbusinesses. There are more pronounced gaps in web site use, which is markedly lower among micro, small and medium businesses in Chile (9-36% of all firms) than in digitally advanced countries like Denmark, Germany and the United Kingdom (50-60%). Shallow digital integration in business processes is also reflected in low use of specialized software applications for data and business management, and the lower incidence of online transactions.

Constraints on e-business development by small business in Chile are generally similar to many OECD countries. The predominant constraints involve awareness-building, skills development, access to ICT-based business services, and financing e-business innovation. Network infrastructure services and the security of electronic transactions are significant factors as well. The complexity of mainstream ICT systems also presents substantial barriers to e-business adoption in Chile, as in many other countries, especially for the low-income microbusiness sector.

 Awareness and Training

In late 1999, the University of Chile studied businesses that were not using the Internet. One third said it was because of costs, but 23 percent did not perceive its utility, and 38 percent said they had no particular reason to use it, had no interest, or were not knowledgeable about the subject—a full 61 percent who could not identify the business benefits of digital technology (Saenz 2000).

While Chile is making significant efforts downstream to build access to digital tools through facilities and portals, its current efforts upstream to generate basic e-business awareness among the very large number of small businesses need strengthening. In OECD countries, this is the most common e-business promotion activity. Design of awareness-raising programs could benefit from benchmarking of programs in leading OECD countries in this field, such as UK, Scotland, Sweden and Ireland. These programs should include:
• expanded information campaigns and workshops for business clusters and trade associations that facilitate “peer-to-peer” exchanges of experience among small business entrepreneurs;

• development of cases successful e-business adoption by Chilean small businesses; and

• training content focused on specific business requirements rather than on technology use that emphasizes business value-added instead of simply information search, and helps entrepreneurs to integrate digital tools into their businesses.

Access and networking

Given the breadth of the small business sector in Chile, their limited purchasing power, and the technical requirements of doing e-business, sustainable and effective intermediaries are critical to accelerate e-business development. Telecenter models which emphasize connectivity have been the favored approach, particularly in Latin America; yet they have offered minimal added value to entrepreneurs and have poor records of financial sustainability. Continued efforts are needed in Chile to expand their use to a larger segment of the sector, with greater emphasis on sustainability and services that yield higher business value-added. Specifically, Infocenters for small business need to:

• develop more local and regional content relevant to small business, and training programs that promote entrepreneurs’ use of good business practices;

• adapt software functionality and develop e-marketplace tools that focus on specific small business sectors; and

• improve feedback mechanisms on client needs and satisfaction, and better measure the performance of operators and managers of Infocenters.

Financing e-business innovation

Chile has many programs to support business innovation in general and digital development in particular. Four main programs encourage technological innovation and are generally well received, although many small firms are unaware of them. Better dissemination of these programs should be incorporated into awareness-raising and training programs to better support building e-business capacity. In addition, more diversified private sector financing of new e-business adoption initiatives by small businesses should be encouraged. This should include consideration of (i) incentives for mobilizing private venture capital for individuals, early stage growth firms and spin-off companies to improve their potential for successful commercialization; and (ii) promoting online diagnostic and advisory tools that help financial institutions to assess the potential benefits of e-business, determine a firm’s e-readiness, develop and implement customized e-business strategies, and help assess financing requests.

Legal Framework

Chile was the first Latin American country to privatize its telecommunications sector, and the sector is quite competitive. Basic telecommunications infrastructure has improved network access since privatization. The fixed telephone network has been fully digitized since 1993 and Chile’s ICT trade policy is the best in the region, with free market access to ICT goods and services thanks to zero tariffs on PCs and peripherals and a uniform 7 percent tariff on telecommunications equipment. In January 2002, Chile’s Congress approved a bill establishing a framework for electronic transactions. The new law recognizes digital signatures, e-documents and e-contracts, and defines the obligations of institutions providing electronic certification. Still, additional steps are needed to help accelerate e-business adoption by small business, including:

• adopting and disseminating simplified implementing regulations for electronic transactions to promote understanding and maximum uptake by small business;

• helping to deepen the market for certifying identity and confidentiality of a variety of electronic communications and transactions, using trust seals, quality labels and other mechanisms that complement Government’s recently launched “e-certchile”; and

• expediting amendments to Chile’s privacy act covering the use of personal data which make specific reference to e-business.

Lowering the ICT Complexity Barrier

Most mainstream ICT systems have been designed in OECD markets, and generally do not well suit the capital and skills
mix of lower income groups in emerging markets. This presents major barriers to e-business adoption by small businesses. Although Chile is not a large market, it would provide a very good environment for developing and testing simplified software (to facilitate business planning, market research, marketing, financial analyses, etc.) and new devices, such as applications driven by voice and touch screen recognition, that micro-businesses could learn readily and use easily.

The Government, in cooperation with the local ICT industry and small business groups, should launch a research and development program for its own market (and potentially others) to develop commercially viable applications and delivery systems particularly adapted to micro and small business needs.

E-Government for Small Business

Existing business-related activities supported by the Chilean government’s electronic services can be grouped into 4 major types: (i) transactions, such as business registration and other interactive forms, taxation and social security-related transactions; (ii) information collection and provision of information, such as business and corporate legislation, local government information and building zoning; (iii) government procurement; and (iv) government consultation activities, such as calling for inputs into new planning or zoning initiatives. Part of this e-government effort supports small business development, for example, through:

- www.compraschile.cl - a system of information on public purchases and contracting which covers more than 100 public services in Chile. Companies that wish to do business with the public sector need register only once.

- www.sii.cl - the tax collection agency web site distributes free software for preparing annual tax returns. Nearly 50 percent of taxpayers have paid income tax via the Internet, and 26 percent of all returns for 1999 were submitted through the Internet.

- www.redserotec.cl - SERCOTEC’s portal aims to support small business management, facilitate new business opportunities and encourage business networks by providing access to training courses, consulting services, and management support; and

- “VideoNegocios” and “Inter-PYME” - ProChile’s export development programs oriented toward providing better understanding of markets and management support and training.

Overall Conclusions

Although the policies and legal framework governing network access and electronic transactions in Chile are relatively advanced, the focus, approach and dimensions of existing programs need to be improved to fully tap e-business adoption as a tool for small business innovation and growth. Much greater effort is needed to generate basic e-business awareness and e-business skills among the many small businesses in a sector- and location-specific manner. More emphasis should be given to building and networking the capacity of intermediaries—trade associations, NGOs, banks, universities and the ICT industry—to deliver e-business support services. Small business-dedicated Infocenters need to reach out to a larger segment of the sector, adapt applications to individual client needs, and improve financial sustainability of services provision. A much stronger effort is also merited in R&D to help lower the ICT complexity barrier faced by small businesses.

References


Learn more about this program

The full report:

“Chile: Accelerating E-Business for Small Business Innovation and Growth” by the Private Sector Development Cluster Finance, Private Sector and Infrastructure Management Unit Latin American & Caribbean Region The World Bank Group

is available for download at http://www.worldbank.org/lac, or by email request to en_breve@worldbank.org.

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