Foreword

The rapid development and spread of information and communication technologies (ICT) can bring about major economic and social progress. ICT represents a breakthrough both as a general purpose technology and as a techno-economic paradigm characterized by falling prices of microelectronics, computers, software, telecom devices, control instruments, computer-aided biotechnology and new materials. This paradigm has the potential to foster structural change, productivity growth and economic and social development.

However, the benefits of ICT for Latin America and the Caribbean may be small owing to the ‘digital gap’ and to the large internal divides that exist within the Latin American and Caribbean region as compared with advanced countries. This is illustrated by underdeveloped infrastructures and the resulting gaps in access to, and use of, ICT, in particular by those with low incomes and little education, those living in rural areas and small and micro-enterprises. Low skills levels and the lack of training and programmes adapted to local needs and conditions, poor legislation and inadequate regulation and use of multiple technical standards are also manifestations of the digital gap. These shortcomings may reduce the potential of ICT and dilute its contribution to development in the region.

Following the Summit of Heads of State and Government from Latin America and the Caribbean and from the European Union in Rio de Janeiro in 1999, and based on its own experience in promoting convergence of regulation and policies among the European Union member states, the European Commission created the Alliance for the Information Society (@LIS) under its external cooperation programmes. @LIS aims to extend the benefits of the information society to all and reduce the digital divide throughout Latin America and the Caribbean. The first @LIS programme ran from 2002 to 2007, and was executed in part by the Economic Commission for Latin America and the Caribbean (ECLAC), after countries in the region requested support in the definition and adoption of strategies for the construction of the information society.

Within @LIS, ECLAC has coordinated the Plan of Action for the Information Society in Latin America and the Caribbean (eLAC) (2005–07 and 2008–10), which is geared towards promotion of the information society in Latin America and the Caribbean. eLAC is a ‘metaplatform’
Innovation and economic development

from which to coordinate public and private initiatives, build national strategies in specific areas and deepen knowledge on key issues in order to improve the design, implementation and evaluation of policies. As part of this effort, ECLAC coordinated an ambitious research effort designed to shed more light on the economic impact of ICT in the region. The present book is the fruit of that research.

This book analyses the relationship between ICT diffusion patterns, productivity and economic growth in Latin America after 1990 using two different conceptual approaches: growth accounting and evolutionary economics. It incorporates contributions from ECLAC analysts and distinguished international scholars representing both perspectives.

The two approaches have different theoretical backgrounds. Growth accounting is based on neoclassical growth theory and analyses whether economic growth is attributable to the accumulation of labour, ICT capital and non-ICT capital, or technological advances and improvements in the organization of production, also referred to as multi-factor productivity. Evolutionary economics is based on evolutionary and heterodox perspectives and captures a broad set of factors affecting growth patterns and the role of ICT, such as technological paradigms, firm and sector heterogeneity and cumulative learning. The evolutionary approach delves into the ‘black box’ of technical progress, explaining its development and the characteristics of technological learning. It starts from a historical interpretation of technical and organizational change, and considers persistent asymmetries among countries in the production system to account for stubborn technological gaps and national institutional diversities.

The book concludes that the two approaches are complementary in their analysis of the role of ICT in economic growth, productivity and structural change in Latin America. Although they start from different premises, both arrive at similar conclusions: ICT has had a positive impact on economic growth and productivity since 1990 in Latin America, but its contribution is indeed smaller than in industrialized economies. The book also emphasizes the marked heterogeneity among Latin American countries as regards the incorporation of technology and ICT into the economic structure. The countries’ uneven progress is partly attributable to path dependence (that is, differences in their initial stock of resources, capabilities and institutions) and to rates of investment in ICT and other physical and human capital.

The book identifies several opportunities for affording ICT a more dynamic role in structural change and productivity growth, as well as challenges in this regard. Expediting the adoption of ICT and fostering more efficient use of these technologies should be an essential ingredient in any
development strategy aimed at promoting structural change and productivity growth in the region.

In 2009, the European Union launched the @LIS2 programme (2009–12) for Latin America and the Caribbean, with three goals: to stimulate research within the region and with Europe; to support the harmonization of regulatory processes; and to promote an inclusive political dialogue and exchange of experiences. ECLAC is coordinating this effort in five strategic areas: e-Government, e-Health, e-Inclusion, e-Government and regional integration, and productivity impact and innovation for growth. In this last area, ECLAC is building a detailed, sector-by-sector database for the largest economies in the region. Known as LA-KLEMS, this database is intended to contribute to refining policy evaluation of the contribution made by ICT to economic growth and development.

Alicia Bárcena, Executive Secretary
Economic Commission for Latin America and the Caribbean (ECLAC)