

# Fighting the Digital Divide

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# Outline

- ❖ **The New Economy**
- ❖ **The Threat of a Digital Divide**
- ❖ **Embracing the New Economy: An Agenda for Action**
- ❖ **The WBG Agenda on Knowledge and ICT**



# ***The New Economy:***

**The concept and its implications for  
economic development**

# What do we mean by 'new economy'?

## ❖ **New Economy:**

- Association of non-inflationary sustained growth with high investment in ICT

## ❖ **Claims:**

- ICT are at the core of the productivity revival in industrialized countries
- Higher sustained economic trend growth
- Affect short-term trade-off between inflation and unemployment (affect business cycle...)
- New business models apply

# Hype vs. Reality: Good News

- ❖ Even Solow has declared obsolete his 1987 assertion (we can see the computer age everywhere but in productivity statistics...)
- ❖ Labor productivity growth rate in the US non-farm business sector: from 1.37 (74-90) to 1.53 (91-95) to 2.57 (96-99)
- ❖ ICT contribution: 0.44 (74-90) to 0.62 (91-95) to 1.10 (96-99). (Source: Oliner and Sichel, 2000)
- ❖ The ICT-related contribution to productivity growth is expected to continue in the future even though the overall growth trend has slowed down significantly in 2001.

# Hype vs. Reality: Bad News

- ❖ P-E ratios typically soar and then collapse in periods of significant technological change
- ❖ Share prices in early 2000 assumed not-sustainable rates-of-profits (from dot com euphoria to dot coma...)
- ❖ Consolidation is the typical pattern after periods of hyper-investment in technology-driven industries
- ❖ Macroeconomic variables (e.g., consumer confidence after September 11) continue to influence short-term economic trends
- ❖ In short, the business cycle is alive and well...

# E-Development: Challenging Development Theory

## Conventional wisdom:

- ❖ Distance matters (geography, economic distance: regulatory, trade barriers...)
- ❖ Knowledge-based development (building upon human capital) is more rewarding over the long-term than resource-based development
- ❖ There is a natural sequence in stages of development

# E-Development: Challenging Development Theory

## Impact of ICT

- ❖ Economic distance becomes even more relevant, but the role of geography diminishes
- ❖ Additional advantage for human-resources rich societies
- ❖ Opportunities for “leapfrogging” expand

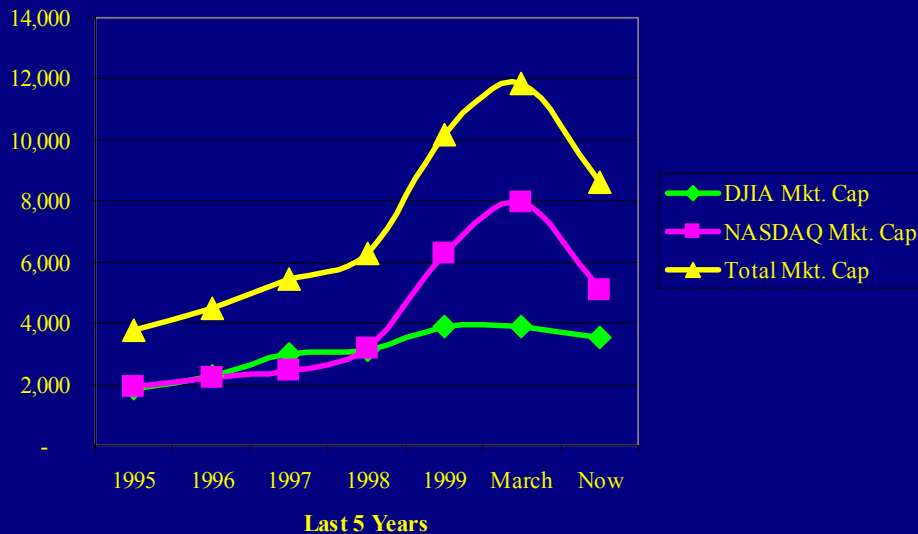


# ***The Threat of a Digital Divide***

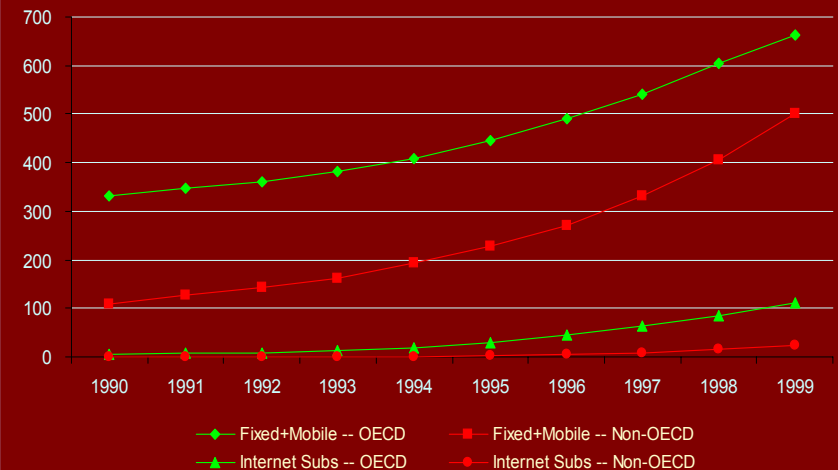
# Defining the Digital Divide: How serious an issue is it ?

Connectivity is  
only part of the story

## More Wealth Created



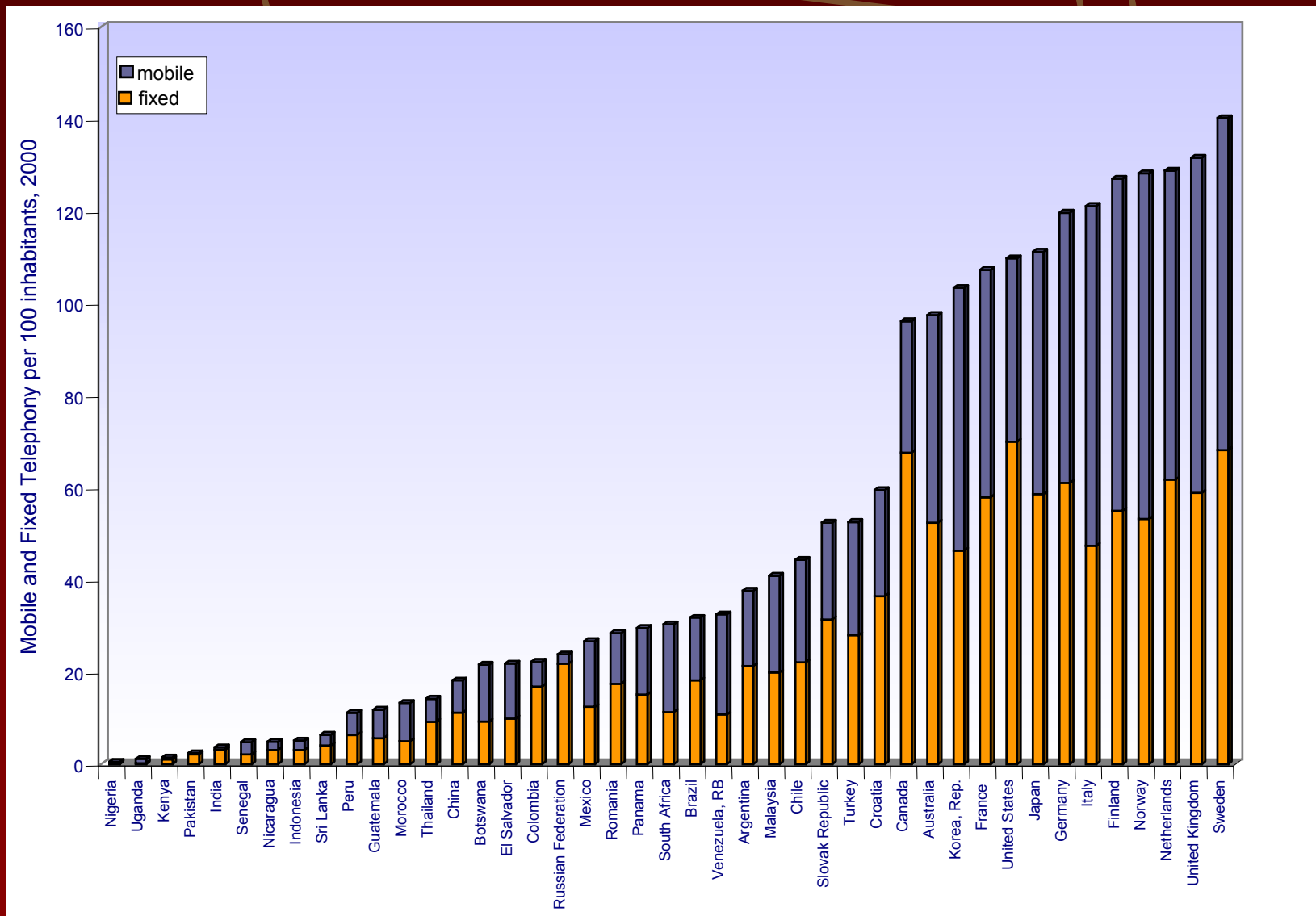
The situation in terms of Aggregate  
Connectivity level has been improving...



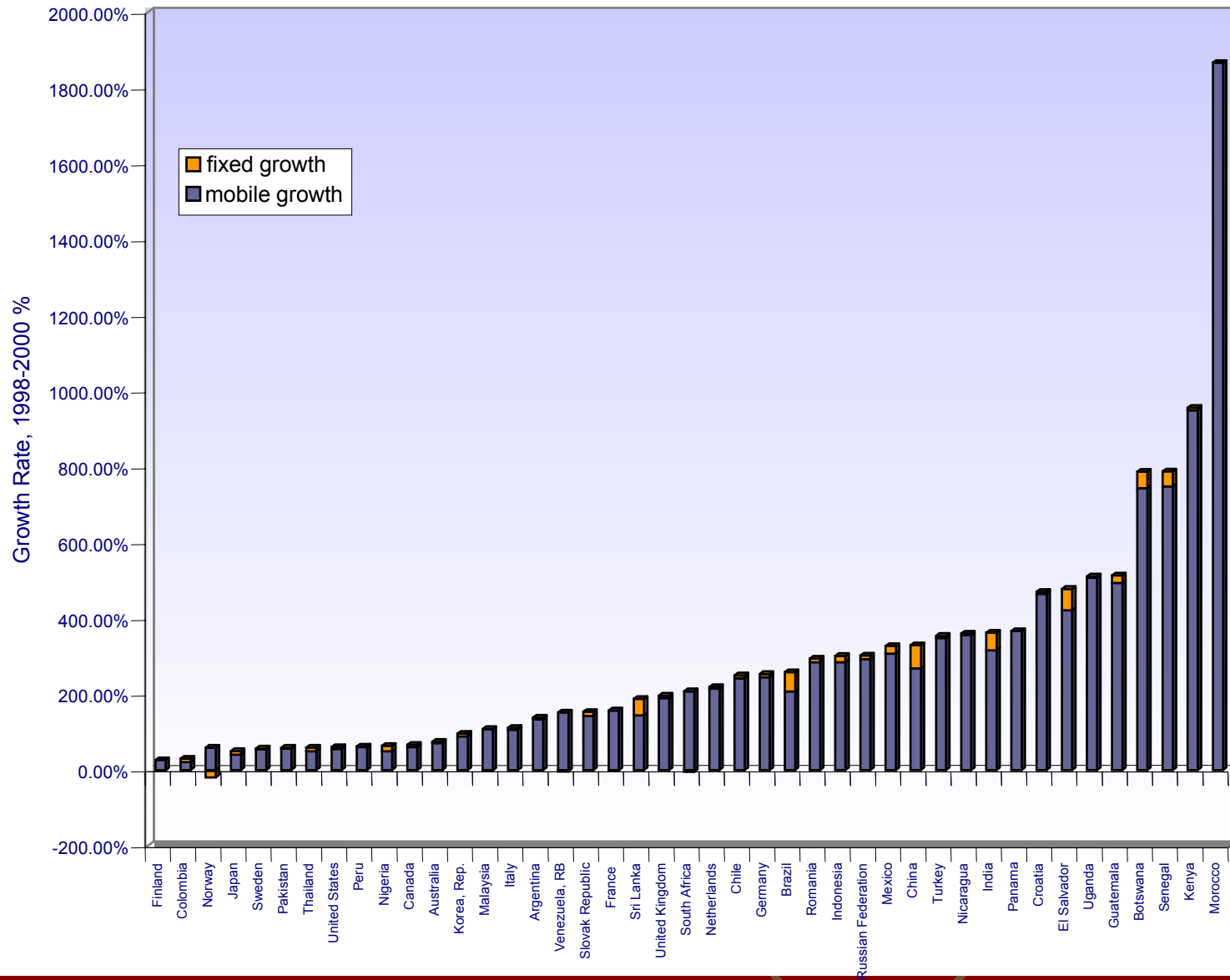
Source: Pyramid Research, 2000

Divergence in wealth  
creation is a major  
concern

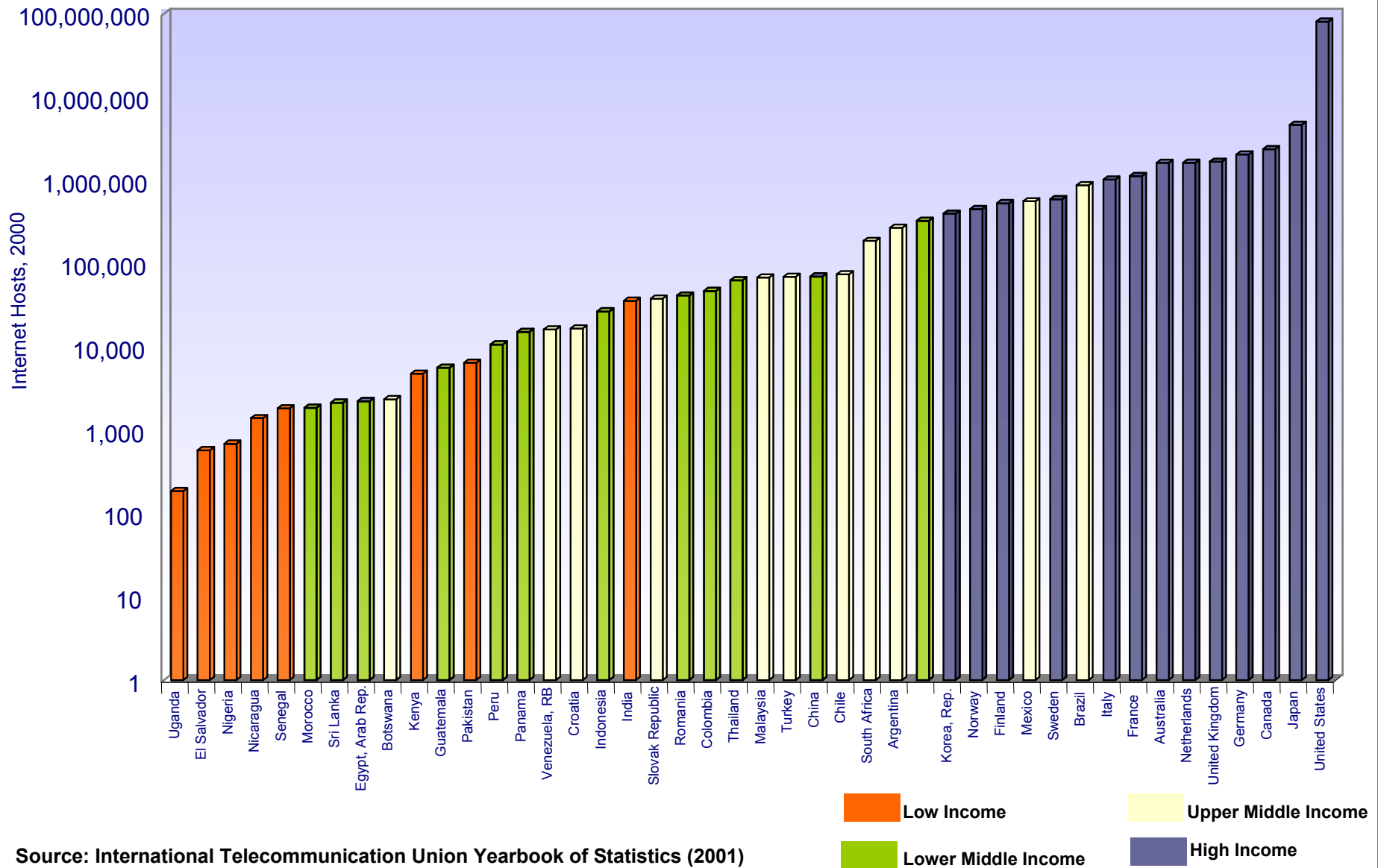
# Mobile & Fixed Telephony, 2000



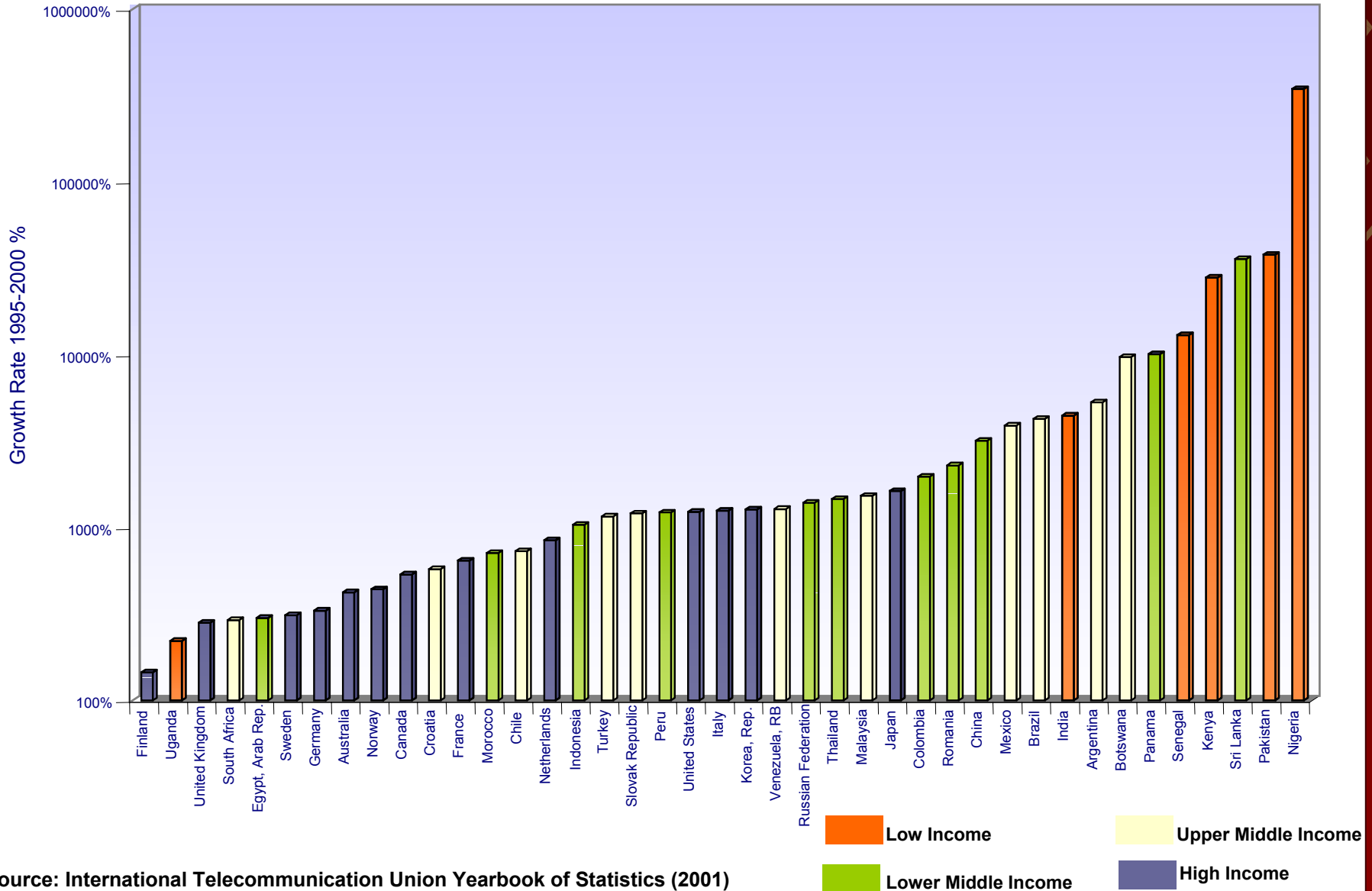
# Mobile & Fixed Growth Rate 1998-2000



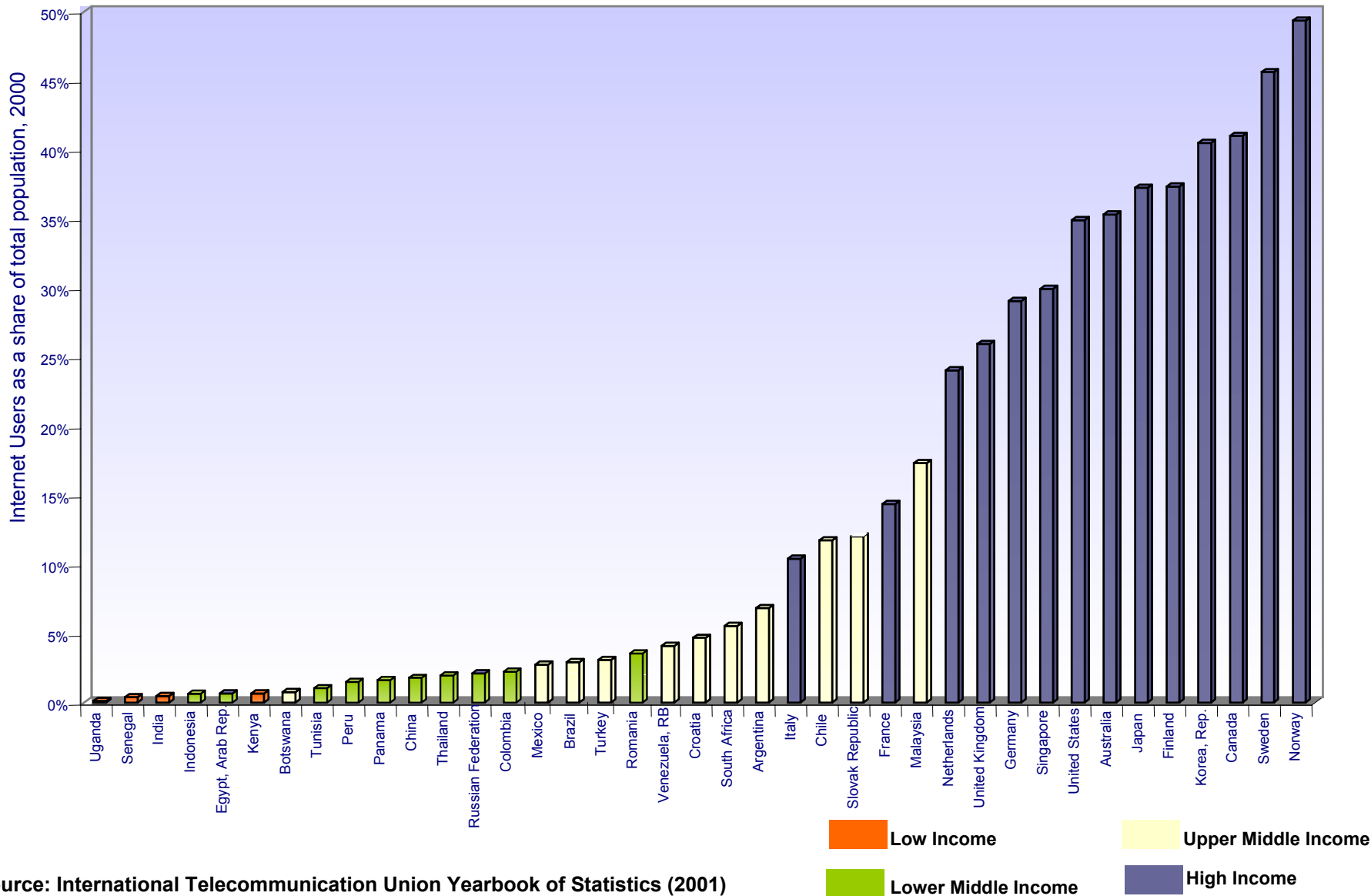
# Internet Hosts, 2000



# Internet Hosts Growth Rate 1995-2000

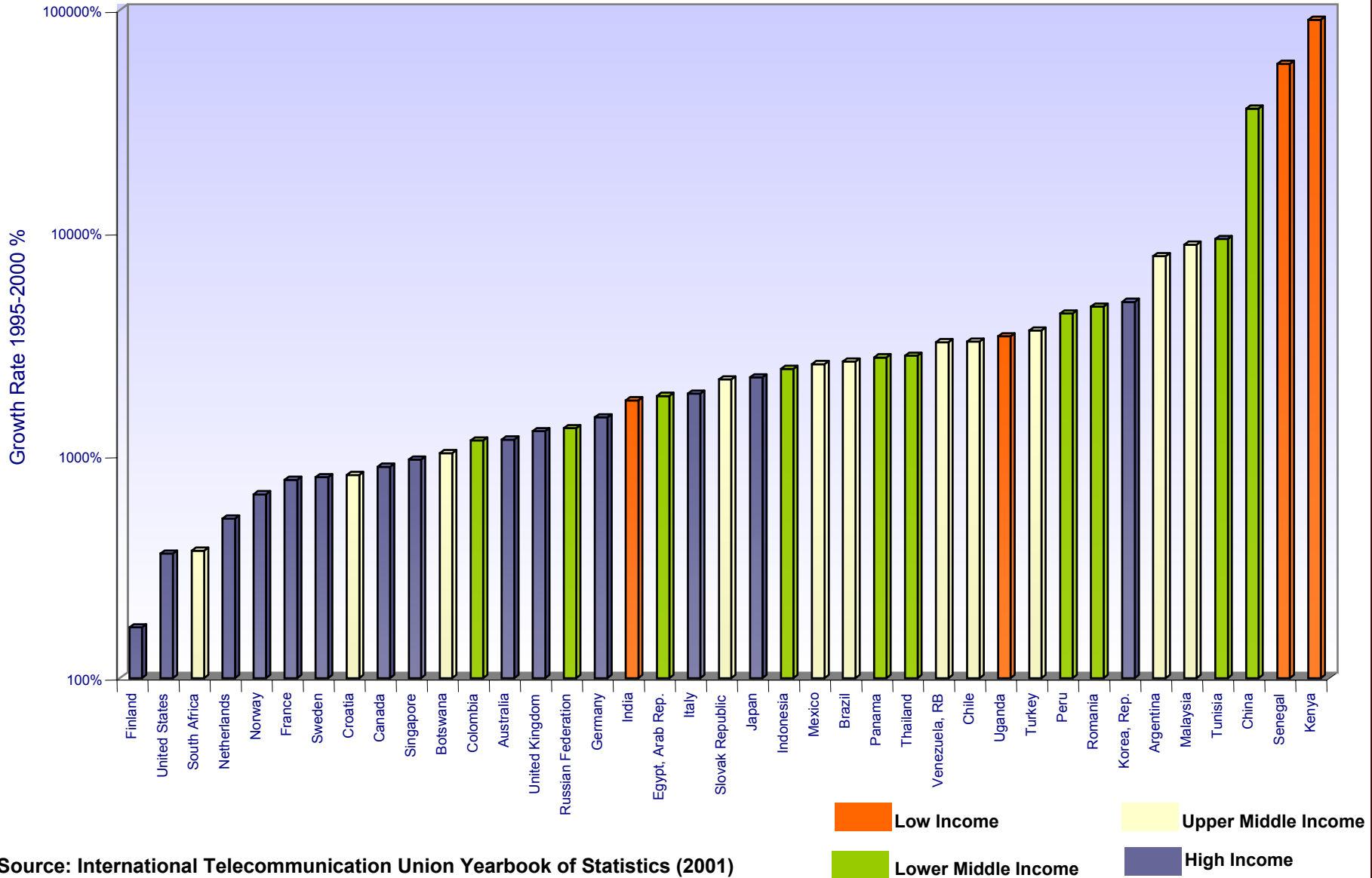


# Internet Users, 2000 (as a share of total population)

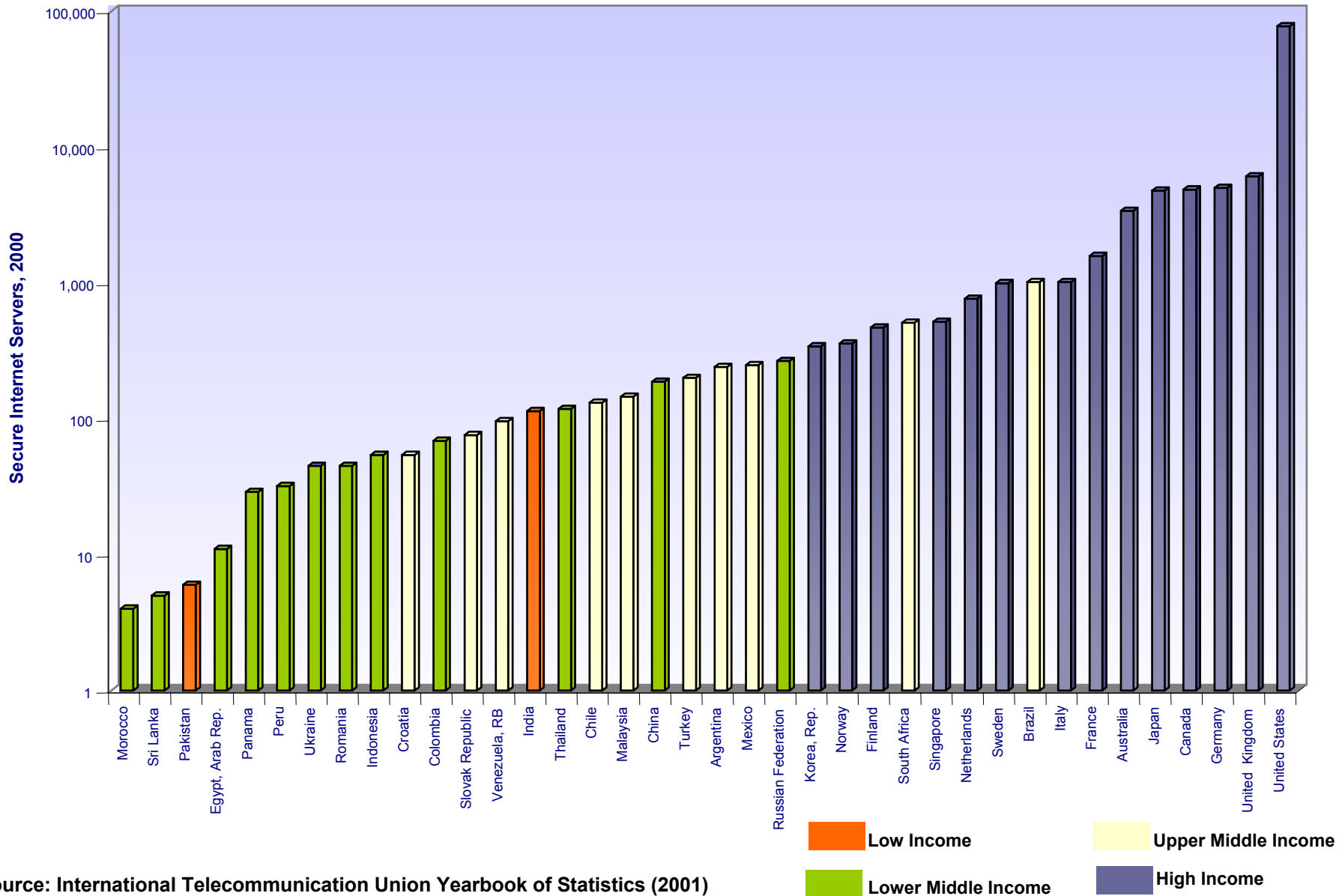


Source: International Telecommunication Union Yearbook of Statistics (2001)

# Internet Users Growth Rate 1995-2000

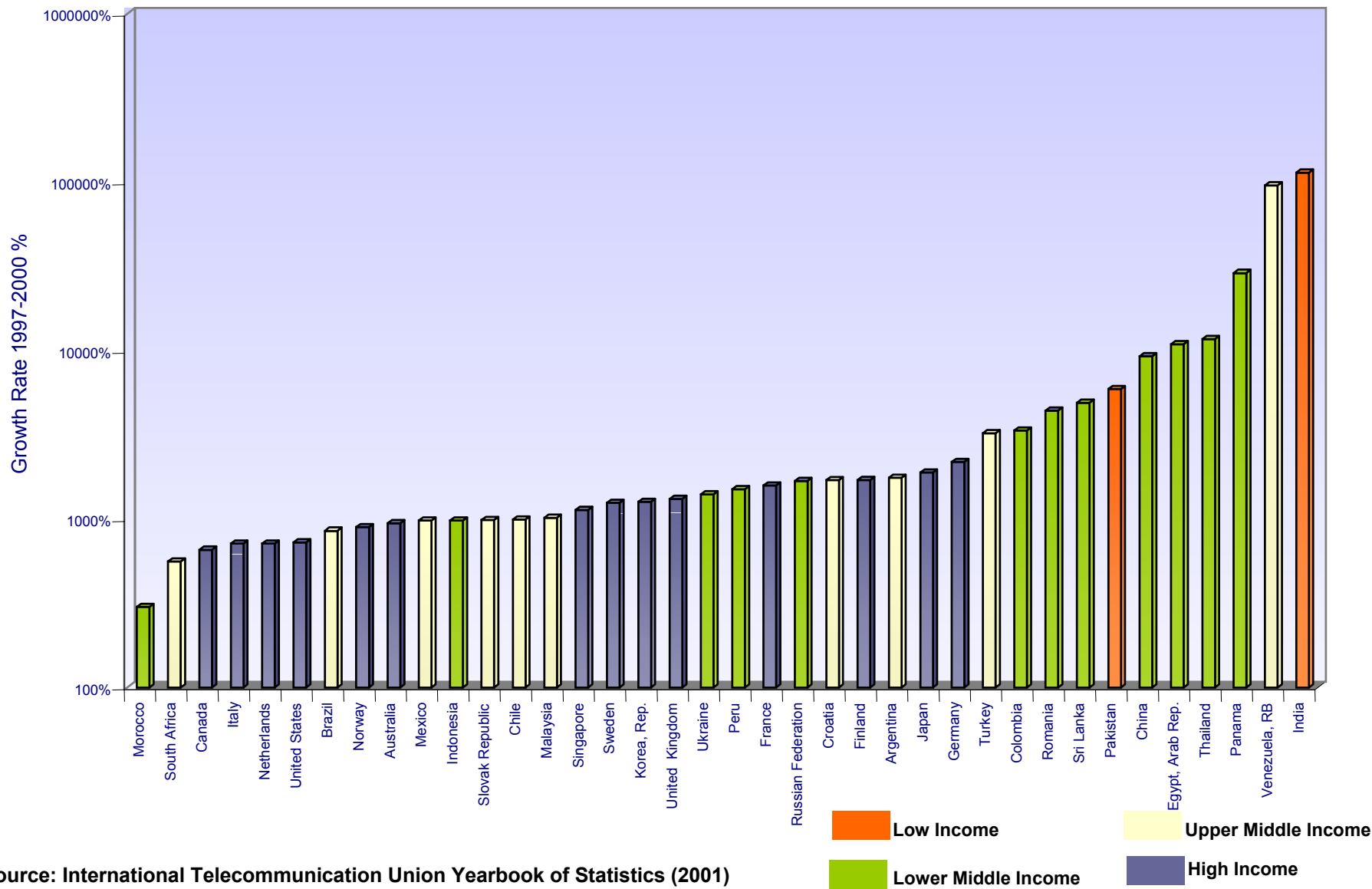


# Secure Internet Servers, 2000

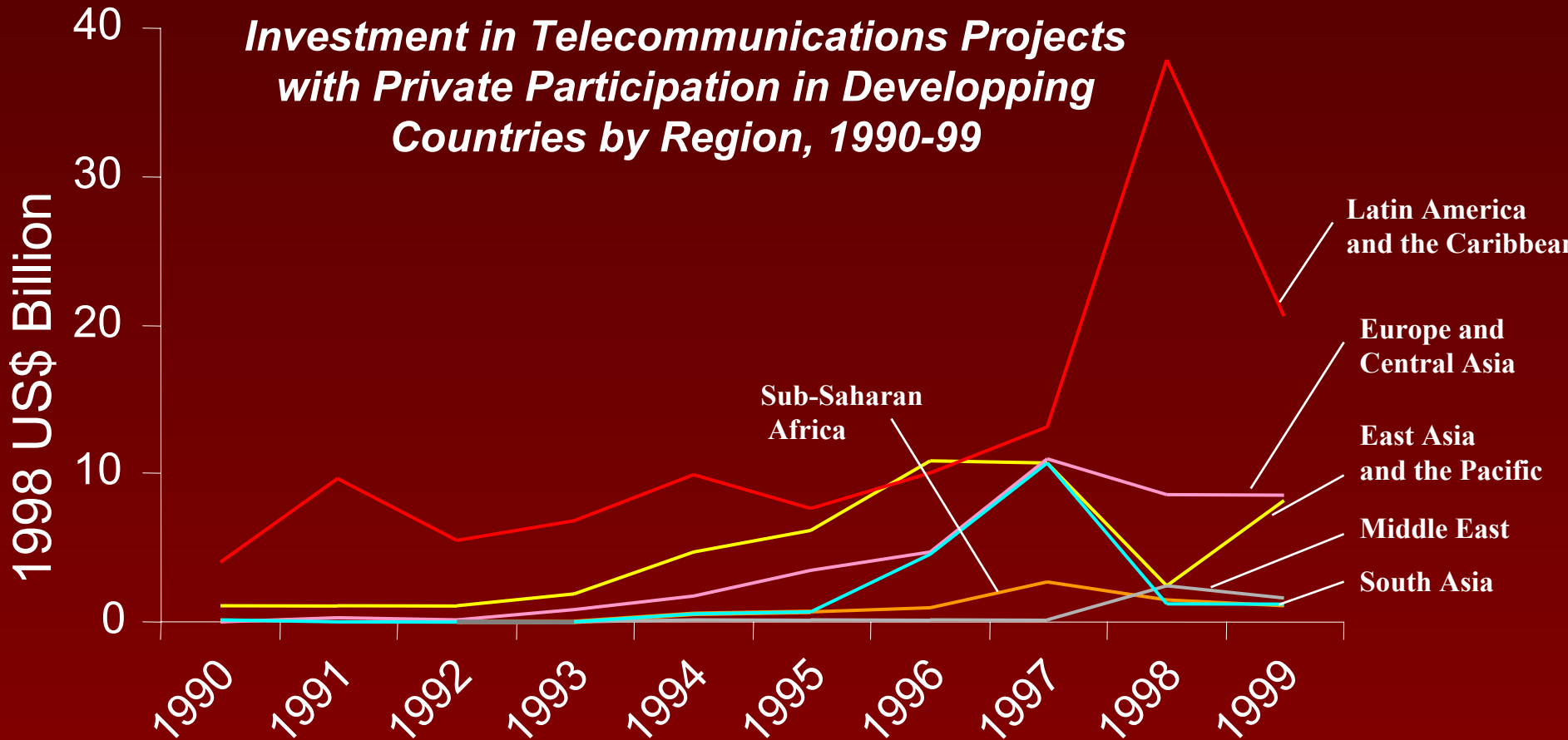


Source: International Telecommunication Union Yearbook of Statistics (2001)

# Secure Internet Servers Growth Rate 1997-2000



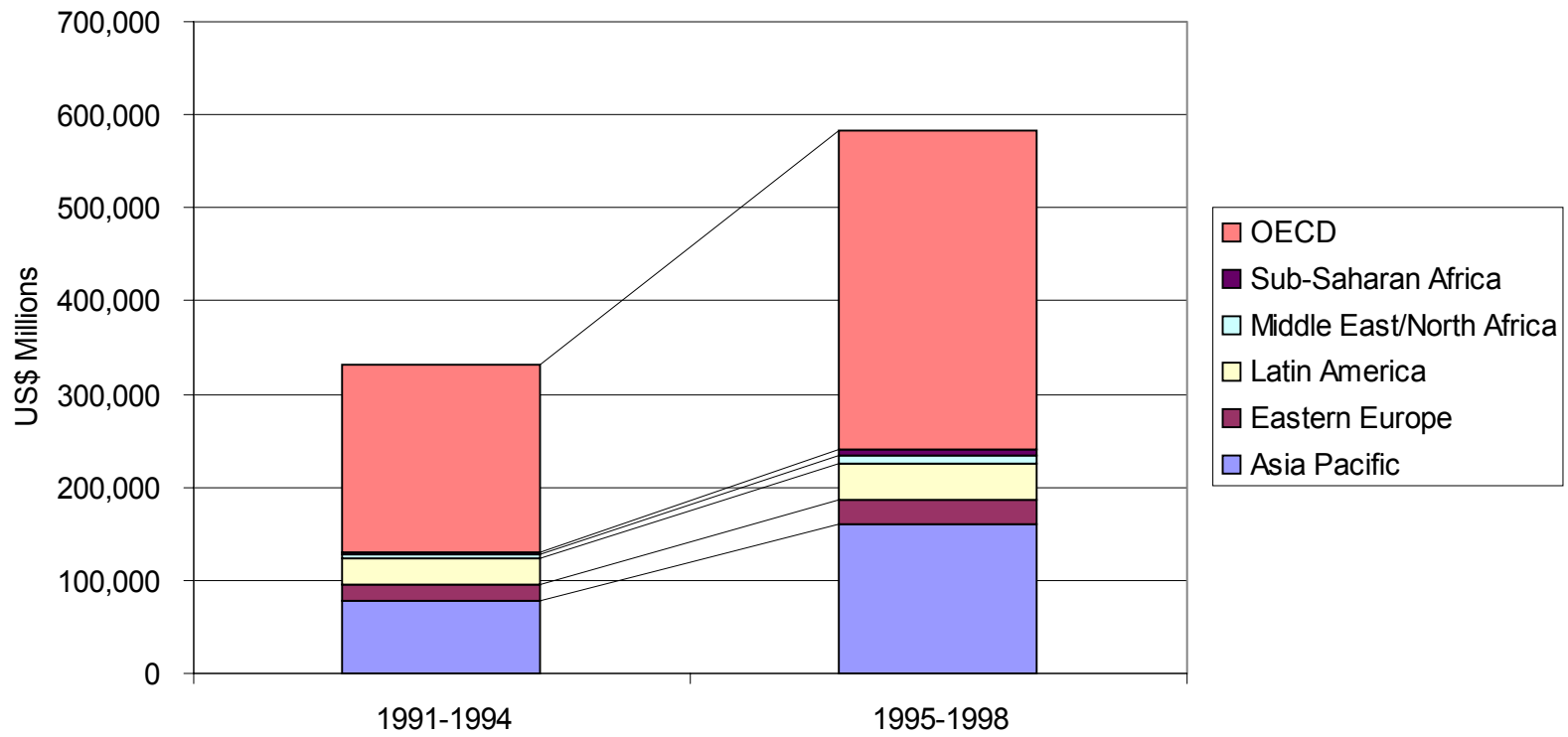
# Concentrated Investment



Total Investment: OECD - \$129 per capita; SSA - \$9 per capita.

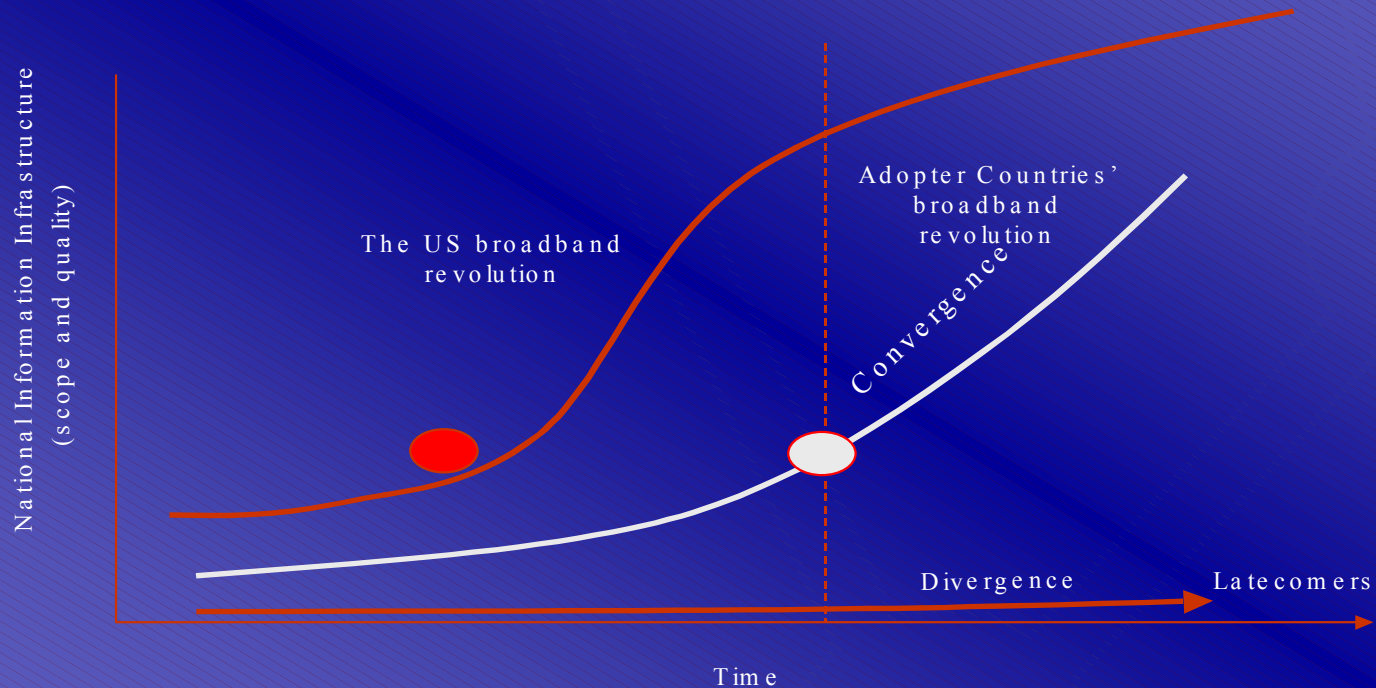
# Cross-Country Inequality: Information Infrastructure Investments Skewed toward Rich Countries

Information Infrastructure Investments, 1991 - 1998



Source: Pyramid Research, 2000

# The Promise and Peril of the Networking Revolution

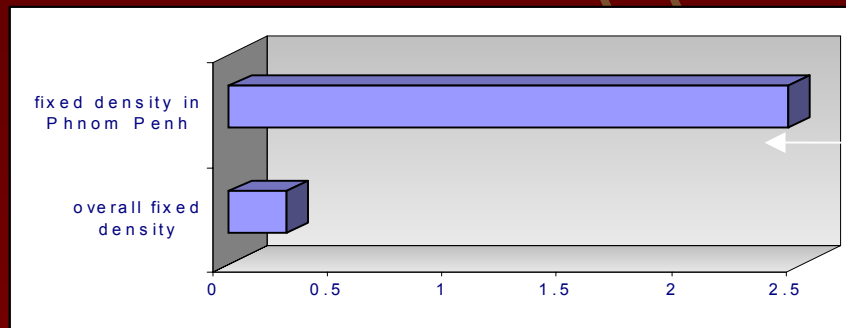


Source: Pyramid Research, 2000

# Within-Country Inequality

## I. Urban vs. Rural Divide

❖ In **Cambodia**, by end of 2000, 85% of the country's fixed telephone lines were in Phnom Penh even though it accounted for less than 10% of the country's population.



Source: ITU, 2000

The density in Phnom Penh is 60 times greater than provinces

❖ **Vietnam**, by 2000, Hanoi and HCMC accounted for 86% for all Internet subscribers and all the leased line accounts even though they only make up 10% of the population. (ITU, 2000)

❖ In **China**, the least connected provinces, with 600 million people, have only 4 million Internet users, while Shanghai and Beijing, with 27 million people, have 5 million users. (UNDP, 2001)

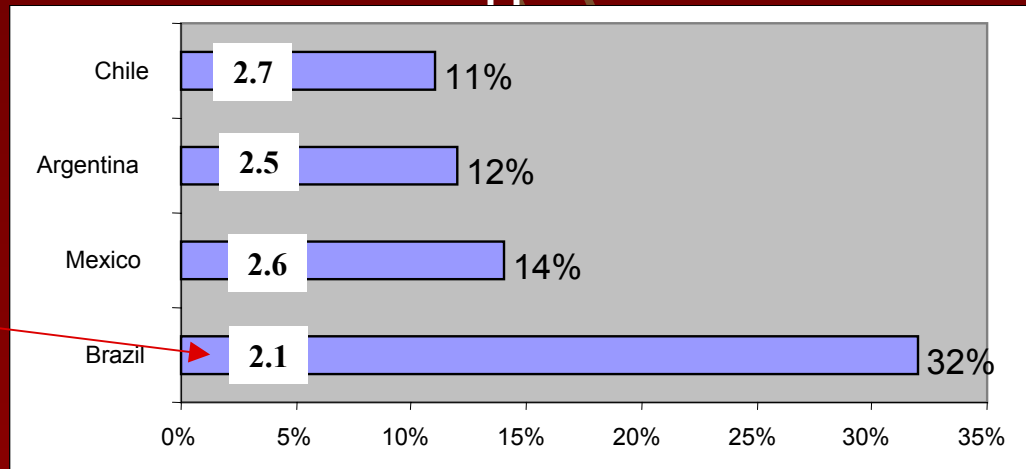
# Within-Country Inequality

## II. Gender Divide

- ❖ By 2001, in **Ethiopia**, men made up 86% of Internet users, 83% in **Senegal**, 70% in **China**, 67% in **France**.
- ❖ Some of these disparities are lessening. In **Brazil**, women account for 47% of Internet users, and in the **United States** for 51% of users. (UNDP, 2001)

## III. Income Divide

Internet Penetration in Upper & Middle Classes



Source: Boston Consulting Group

Penetration  
in total  
population



***Embracing the New Economy:  
An Agenda for Action***

# Strategies

## ❖ Connectivity is a requirement

It is next to impossible to envision markets with less than 5% voice penetration leapfrogging into Internet connectivity

## ❖ Competition is the Vehicle

Competition leads to decreased prices, subscriber growth & new technology development. We must promote competition, while supporting universal access via innovative government support, focusing on convergence issues

## ❖ Infrastructure Support Systems Are Critical

Systems and services that support and deliver information such as postal and financial services, are a vital component of public action

## ❖ Education is the Enabler

Internet has higher social entry barriers than voice, requiring literacy and ICT exposure at a minimum.

# Closing the Digital Divide: A Four-Part Program

- ❖ Support Competition and Privatization Policies (e.g., regulatory reform)
- ❖ Facilitate Infrastructure Financing by the Private Sector
- ❖ Invest in Digital Literacy
- ❖ Explore Digital Opportunities (e-government, support development of relevant content, public-private partnerships to expand access)



# ***The WBG Agenda***

# ICT and Poverty Reduction

## ❖ ICT and Economic Growth

- enhanced competitiveness
- increased business opportunities
- access to market for rural communities

## ❖ ICT and Improved Delivery of Social Services

- better health/education/environmental services
  - reducing vulnerability to natural disasters

## ❖ ICT for Greater Transparency

- improved efficiency on government procurement
- reduced corruption
- increased civil society participation

## ❖ ICT for Empowerment of the Poor

- allowing the poor to better communicate their concerns

# Role of the World Bank Group

Poverty Reduction

Sustainable Growth

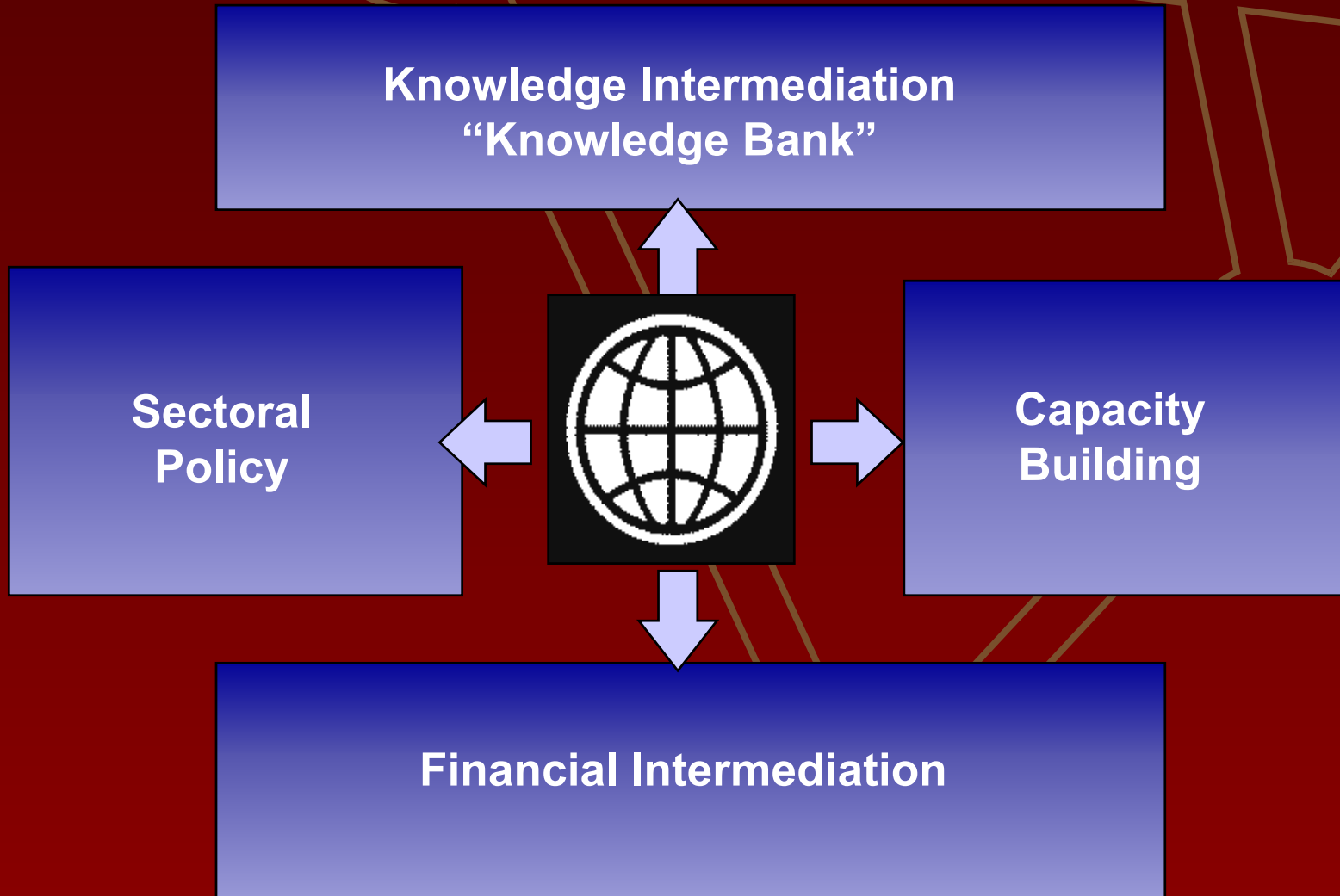
Knowledge Intermediation  
“Knowledge Bank”

Sectoral  
Policy



Capacity  
Building

Financial Intermediation



# Global ICT Instruments

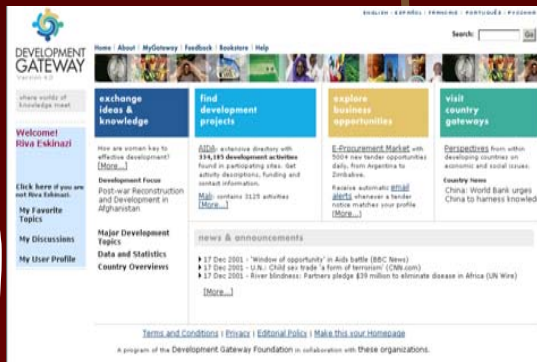


## Government Role

- ✓ Sovereign Loans
- ✓ Advisory Services
- ✓ Partial risk guarantees
- ✓ *infoDev* Grants
- ✓ Direct project loans
- ✓ Loan syndications
- ✓ Mezzanine financing
- ✓ Equity participation

## Private Sector Role

# The Knowledge Initiatives



Development Gateway

infoDev

Global Knowledge Partnership

Global Development Learning Network

WorldLinks

Global Development Network

African Virtual University



<http://www.worldbank.org/knowledgebank/>

# Development Gateway Foundation



## Development Gateway Foundation

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**The Development Gateway Foundation is a not-for-profit organization based initially in Washington DC. Its core objectives are to reduce poverty and support sustainable development through the use of information and communication technologies (ICT).**

The Development Gateway Foundation is still very young and the Board is currently being formed. On this site, you will find information about the proposed activities and programs. We encourage you to check back regularly for updates. If you have any questions or comments, don't hesitate to [Contact Us](#).

### Development Gateway News



[John McArthur, interim CEO of the Foundation](#) (10/25/2001)

[Collaboration with Indigenous People](#) (09/13/2001)

[Version 3.1 of the Development Gateway portal](#)  
([www.developmentgateway.org](http://www.developmentgateway.org)) (09/13/2001)

[Australia Becomes a Founding Member of the Gateway Foundation](#) (09/13/2001)

### Foundation Programs



The Development Gateway Foundation supports four major initiatives:

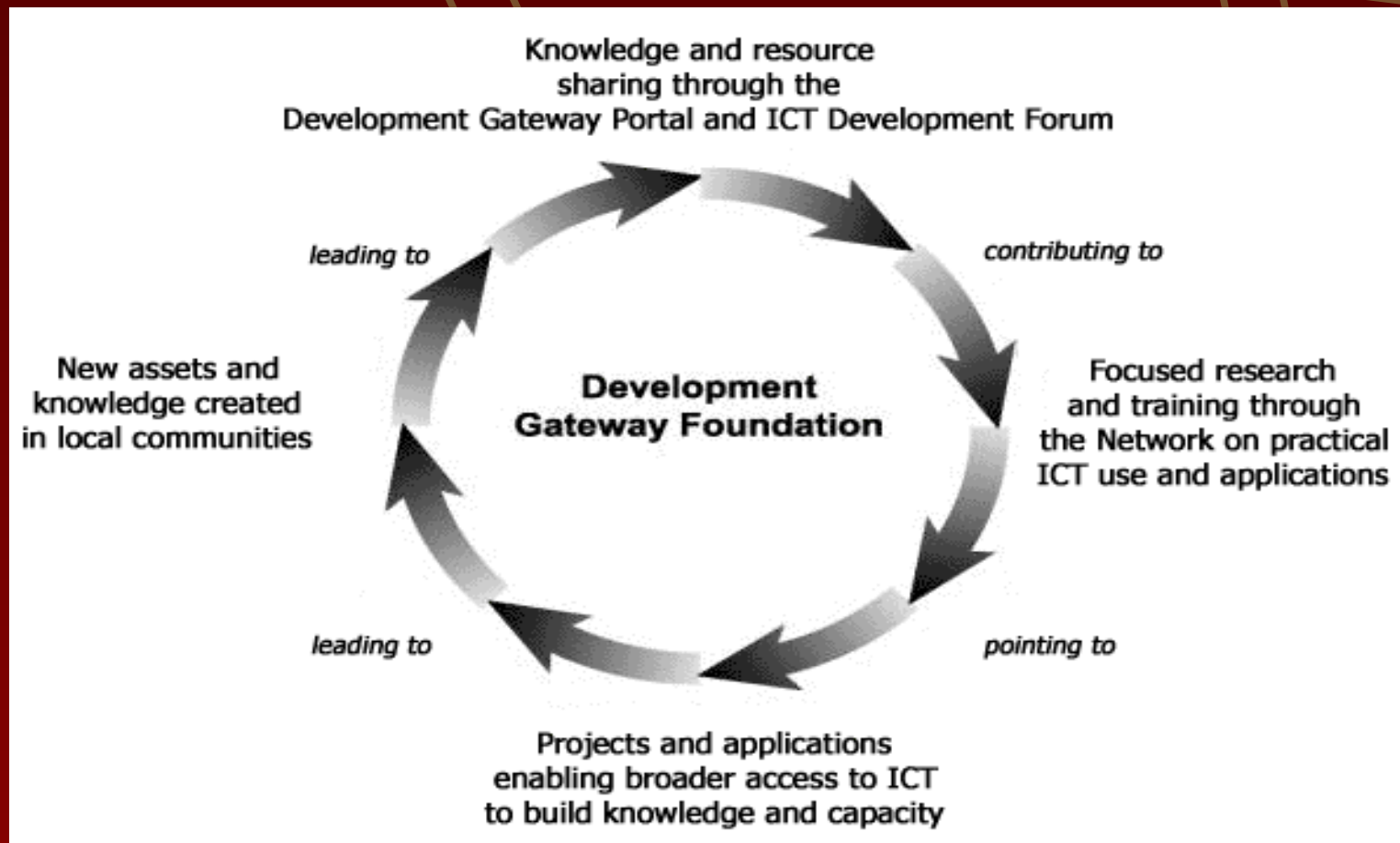
- **Development Gateway portal** - an Internet site to share information, products, and services focused on development issues.
- **ICT Development Forum** or debate and knowledge sharing for key information and communication technology issues, promoting synergies between civil society and the public and private sectors.
- **Research and Training Centers** in the developing world, where ideas can be exchanged and programs tested on the ground.
- **Grants and Investments** for innovative information and communication technologies (ICT) projects and programs at the local, national, regional, and global levels, aimed at reducing the digital divide.

<http://www.dgfoundation.org>

# The Foundation's Four Major Initiatives

- ❖ **The Development Gateway** — using the power of the Internet to connect people, knowledge, and poverty reduction
- ❖ **ICT Development Forum** — bringing people and ideas together for discussion
- ❖ **Research and Training Network** — creating opportunities in the developing world for good ideas and people to advance
- ❖ **Grants and Investments** — funding initiatives that narrow the Digital Divide

# Development Gateway Foundation



# Development Gateway



DEVELOPMENT  
GATEWAY  
Version 4.0

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knowledge meet

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## exchange ideas & knowledge

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effective development?  
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Post-war Reconstruction  
and Development in  
Afghanistan

### Major Development Topics

Data and Statistics  
Country Overviews

## find development projects

[AIDA](#): extensive directory with  
**334,185 development activities**  
found in participating sites. Get  
activity descriptions, funding and  
contact information.

[Mali](#): contains 3125 activities  
[\[More...\]](#)

## explore business opportunities

[E-Procurement Market](#) with  
500+ new tender opportunities  
daily, from Argentina to  
Zimbabwe.

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notice matches your profile  
[\[More...\]](#)

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[Perspectives](#) from within  
developing countries on  
economic and social issues.

### Country News

China: World Bank urges  
China to harness knowledge

## news & announcements

- ▶ 17 Dec 2001 - 'Window of opportunity' in Aids battle (BBC News)
- ▶ 17 Dec 2001 - U.N.: Child sex trade 'a form of terrorism' (CNN.com)
- ▶ 17 Dec 2001 - River blindness: Partners pledge \$39 million to eliminate disease in Africa (UN Wire)

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A program of the Development Gateway Foundation in collaboration with these organizations.

[www.developmentgateway.org](http://www.developmentgateway.org)

# Value Proposition of the Portal

- ❖ **Helping solve development problems by sharing high-quality information from local, national and global sources, tailored to users' needs.**
- ❖ **Providing a platform for establishing common standards for the exchange of information within the development community**
- ❖ **Supporting an electronic marketplace for government procurement information related to development agencies**
- ❖ **Leveraging capacity building and knowledge sharing via a network of Country Gateways**

**Thank you**

**Cbraga@worldbank.org**

**www.developmentgateway.org**

