



OECD Global Forum on Knowledge Economy

Human Capital and ICTs

Gabriel Casaburi

IERAL

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Human Capital & ICTs

They move in tandem. They complement each other in a fundamental and necessary way.

- ✓ Firms
 - ICTs without restructuring= lower productivity growth
- ✓ Schools:
 - 1) Access, content and hardware are a necessary condition, but not sufficient.
- ✓ Challenge: A change in organization and teaching practices to make full use of ICTs potential

Different studies show that:

- ✓ When firms combine ICTs with proper organizational and human resources changes, productivity grows much faster

Firms which:	Increase in productivity
Incorporate ICTs	4,0%
Incorporate ICTS <u>and</u> introduce organizational and human resources changes	6,6%

Source: Bresnahan, Brynjolfosson y Hitt (1999)

Technological change + internationalization of production: FASTER CHANGES

- ✓ Sudden changes in relative competitiveness
- ✓ Faster rate of obsolescence
- ✓ More market volatility
- ✓ Increased competitive pressure

How Dynamic Economies reacted to the new context:

✓ Flexibility to adopt changes

✓ Network organization

(firms, schools, universities, technological Institutions, public sector agencies)

• **Education**

• **Labor Market**

• **R&D**

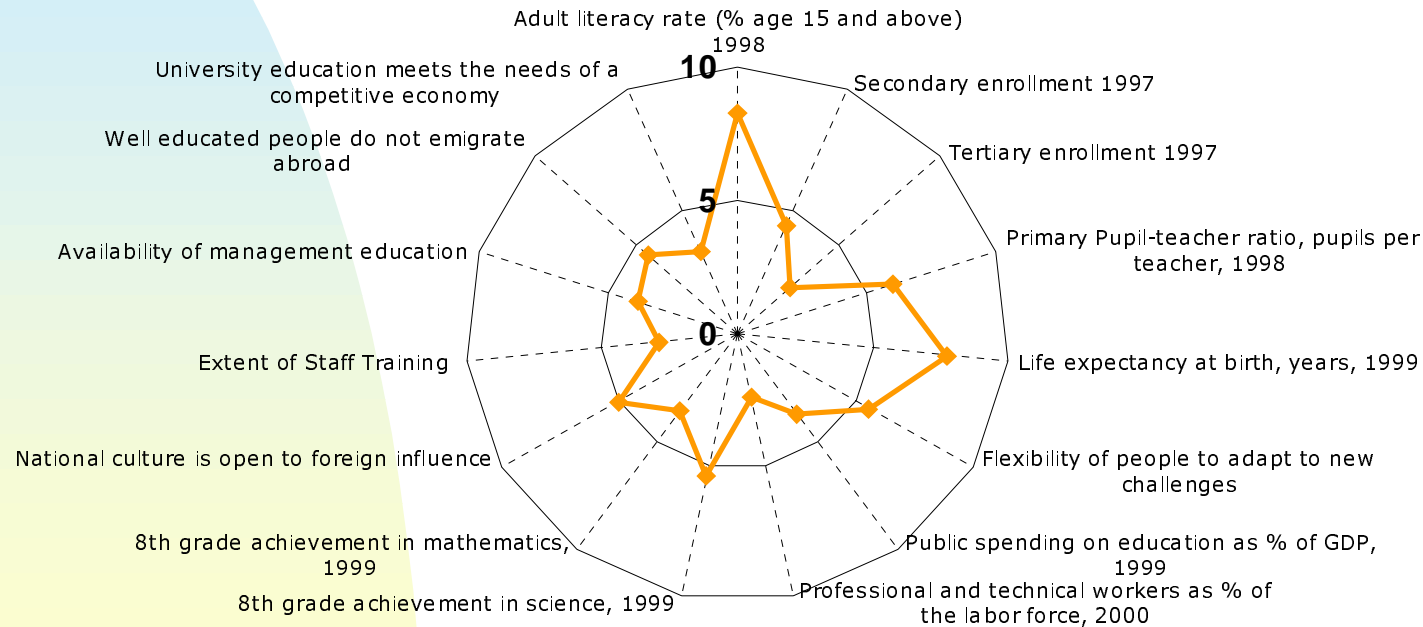
■ **Latin American Countries:**

Badly equipped to deal with these challenges in all three fields: Education, Labor Markets and R&D

- ✓ Rigidities in factor markets
- ✓ Resistance to change
- ✓ Institutional "Autism"
- ✓ Pervasive conflictive approach to problem-solving.

Key Indicators in Education *Latin America vis-à-vis World*

- Best scores in primary education and quantitative variables
- Worst performance: tertiary enrollment and quality variables
- Not enough to reduce digital divide



Source: WBI, 2002 Knowledge Assessment.

CURRENT PROBLEMS

- Low quality and low quantity (in some countries)
- Rigidity
- Over-centralization
- Adversarial unions-government relationship
- Heterogeneity
- Poor connexion among post-secondary education system and private sector

CONSEQUENCES for KBE

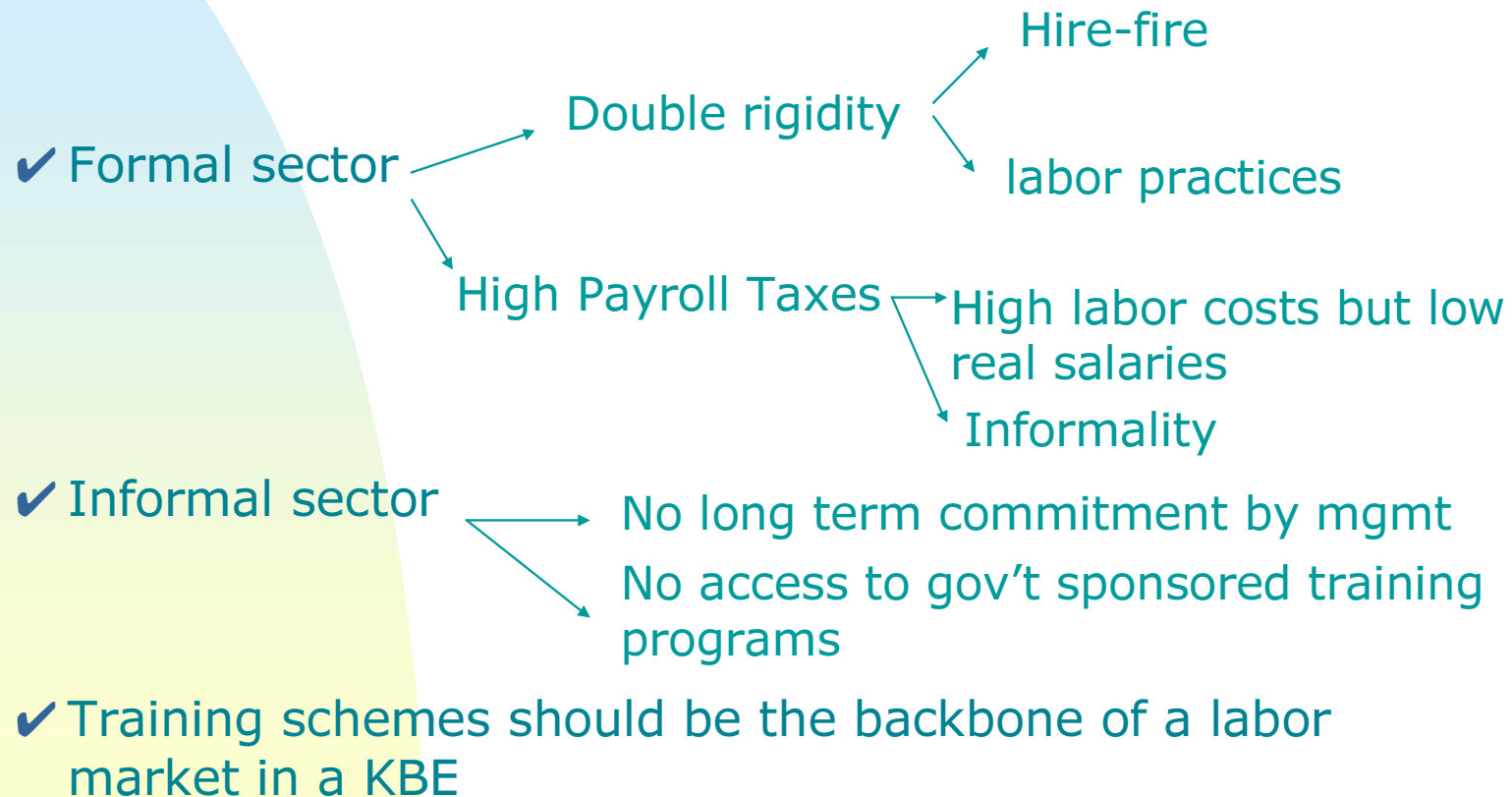
- Knowledge divide and poor educational base
- Resistance to change. Slow incorporation of ICTs. Even slower change in teaching practices
- Slow response to local demand
- Conflicts divert energy from potential collaboration for change
- Schools divide (elite schools vs. vast majority)
- No network effect, slow response to labor market demands. Little use of on-the-job training opportunities

Policy Recommendations

- Give individual schools/districts **more freedom** to experiment.
- Support policy innovations
 - ✓ Measure results, disseminate them, compensate mistakes to reduce risks
- Emphasize efforts on organizational changes and teachers' attitudes, rather than ICTs infrastructure
- Where necessary, de-regulate labor markets in education to facilitate changes
- Make schools & universities more open to local community organizations: NGOs, firms, business chambers

- Latin American Labor MKTs:
 - ✓ Formal sector: Rigid & heavily taxed
 - ✓ Informal sector: Flexible, poor labor conditions
 - ✓ Heterogeneity: Very low to very high skills in same country/region
 - ✓ Training:
 - ▣ Covers small % of total.
 - ▣ Tends to be supply-oriented rather than demand-driven.
 - ✓ Low levels of union – mgmt collaboration

■ Challenges in a KBE: Adapt & Upgrade.



Training Programs

Training and life-long learning are key to well-functioning labor markets working in a dynamic, open KBE.

- Facilitate restructuring to adopt new technologies and organizational paradigms.
- Tool to deal with rapid obsolescence of Human Capital.
- Smooth the cost of accomodating rapid shifts in comparative sectoral competitiveness.
- Diminish the social costs of (permanent) industrial restructuring.

- **Training & life-long learning: Policy Recommendations**
 - ✓ **Increase resources: Tap the state, firms and individual workers for financing**
 - ✓ **Middle-income LATAM countries: concentrate on lower skilled workers**
 - ✓ **Public-sponsored programs must remain strongly demand-driven, using private sector supply and cost-sharing with firms & individuals**
 - ✓ **Labor markets should be deregulated and payroll taxes drastically reduced to reduce gap between formal & informal labor markets**

- Latin American countries accumulated Human Capital in past decades and developed an acceptable ICTs infrastructure in the 1990s
- Along with resources scarcities, it is mostly organizational constraints that prevent the region from a better use of the possibilities offered by a KBE
- Flexibility to change and institutional interaction (networking) are the most important challenges that education, labor markets and the R&D sector face in Latin America

However, fiscal restraints remain a major obstacle in education and labor training to deal with the digital divide within our societies