Impact on employment, skills and inequality – a view from and on Latin America

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WORKSHOP

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As in other regions: Concerns centered on risk of job destruction in Latin America

Wide range of projections!

- World Bank (2016): based on method Frey/ Osborne, 67% of jobs susceptible to automatization (versus 57% in OECD countries) – taking into account lags because of adaption problems: 49% (average of 11 LA countries)
- OECD/ CAF/ CEPAL (2016): until 2030, net loss of 3.38 million jobs
- Cadena et al (2017): half of worktime (76.4 million full-time jobs) can potentially be automatized
- McKinsey Global Institute (2017): base scenario for 2030 automatization of between 7% (Perú) and 14% (Brazil) of activities (not jobs!)
- IADB (2018): "The more developed the country, the smaller the percentage of occupations at risk of automation …"

In Latin America (and even more, Africa..) higher risk of technologically induced job destruction than in OECD countries?!

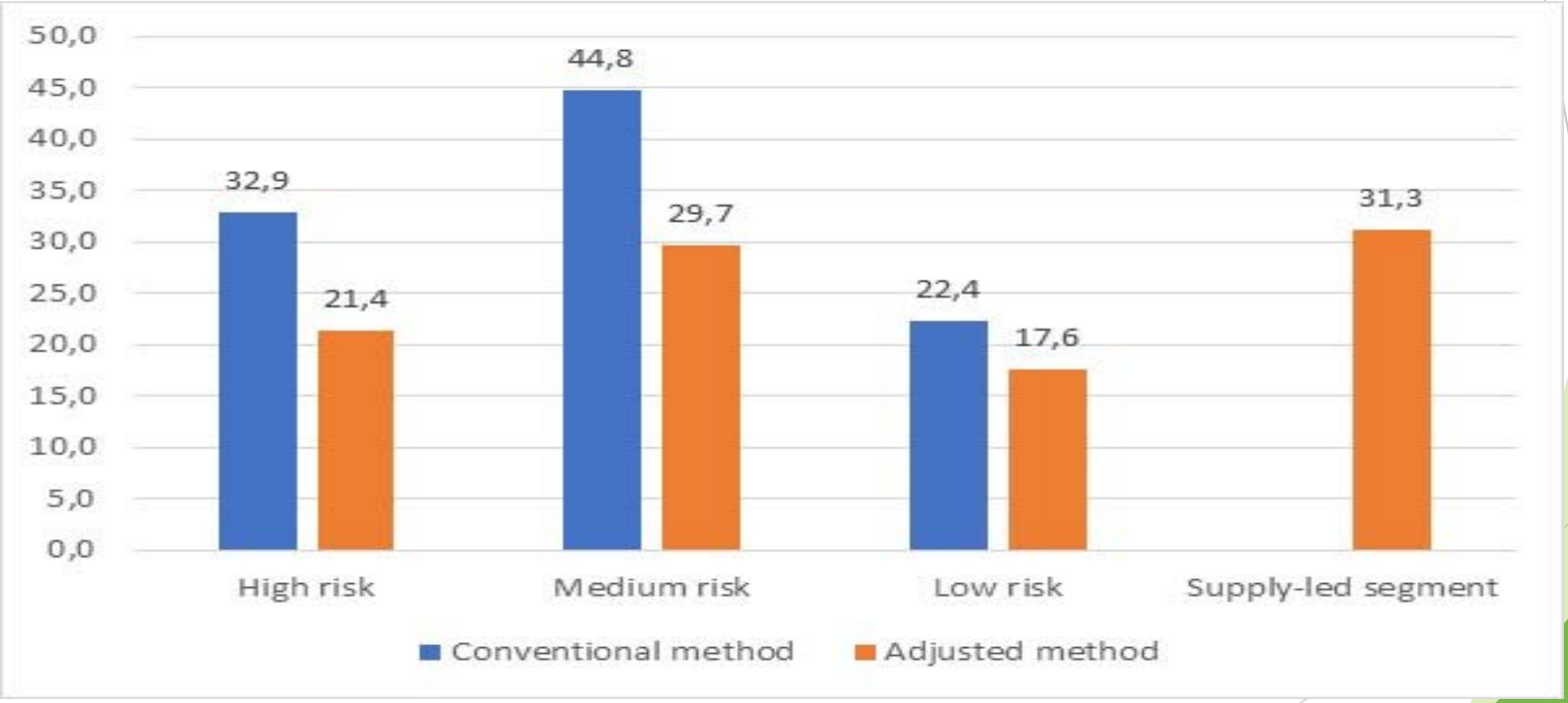
Misunderstanding of LA labor markets!

Latin America: which jobs are *not* in danger? First, the bad ones …..

- Latin American labor markets are segmented
  - A demand-driven segment (large, medium, small private enterprises; public sector), pro-cyclical job growth
  - A supply-driven segment (low income households), with counter-cyclical dynamics
- Supply-driven segment: subsistence needs, low productivity, low technological level (far from productive frontier), does not compete with demand-driven segment: movement of productive frontier without consequence
- => Technological change without (direct) impact in this segment, it might even grow

Taking into account structural differences affects estimates of risk of job destruction

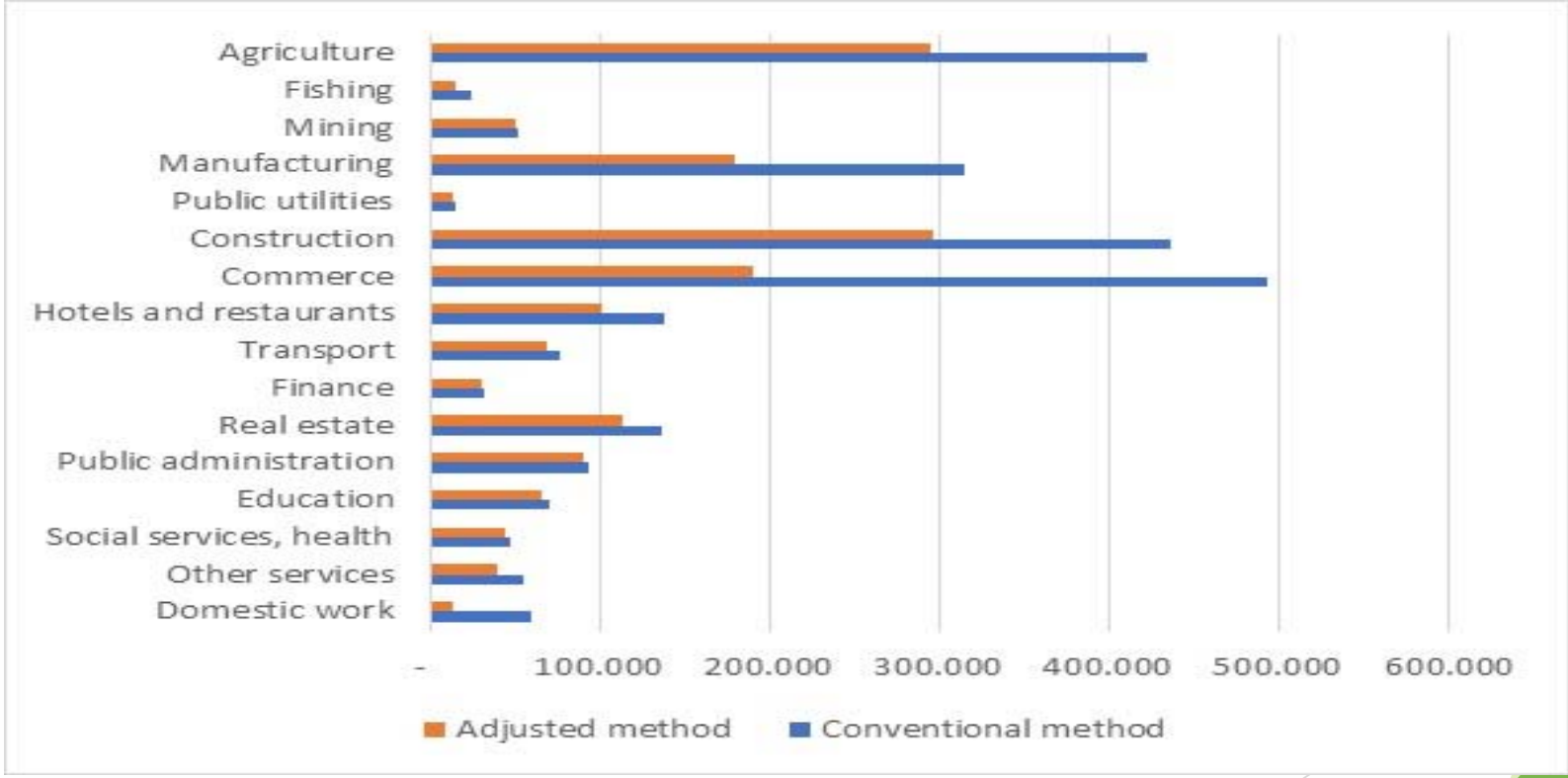
Chile: Risk of automatization of jobs, method Frey and Osborne, standard and adjusted method (preliminary results)
(percentages)



Source: ECLAC

… and on the sector level…

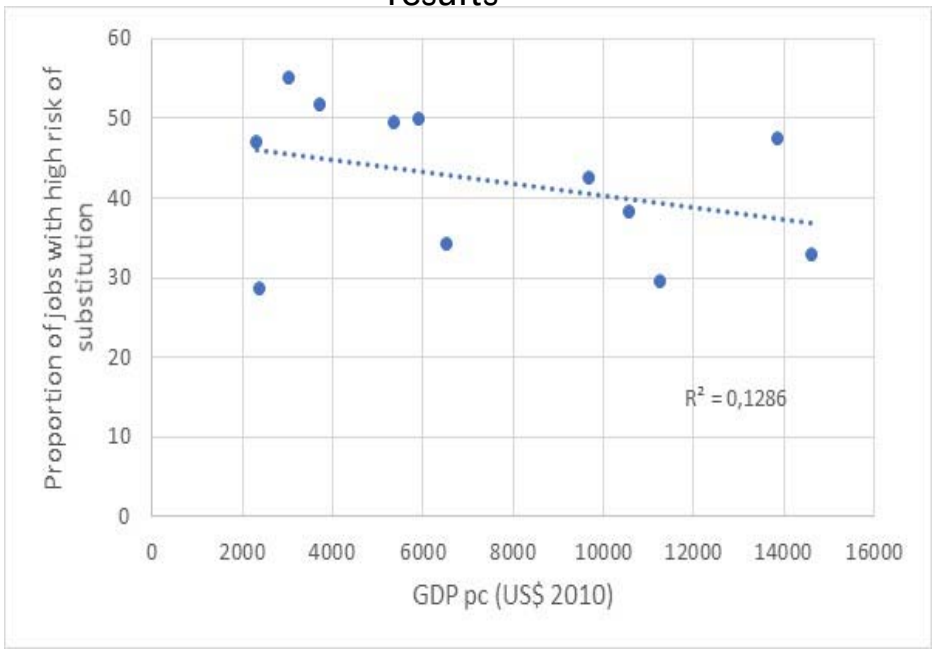
Chile: High risk of automatization of jobs by industry, method Frey and Osborne, standard and adjusted method (preliminary results)
(absolute numbers)



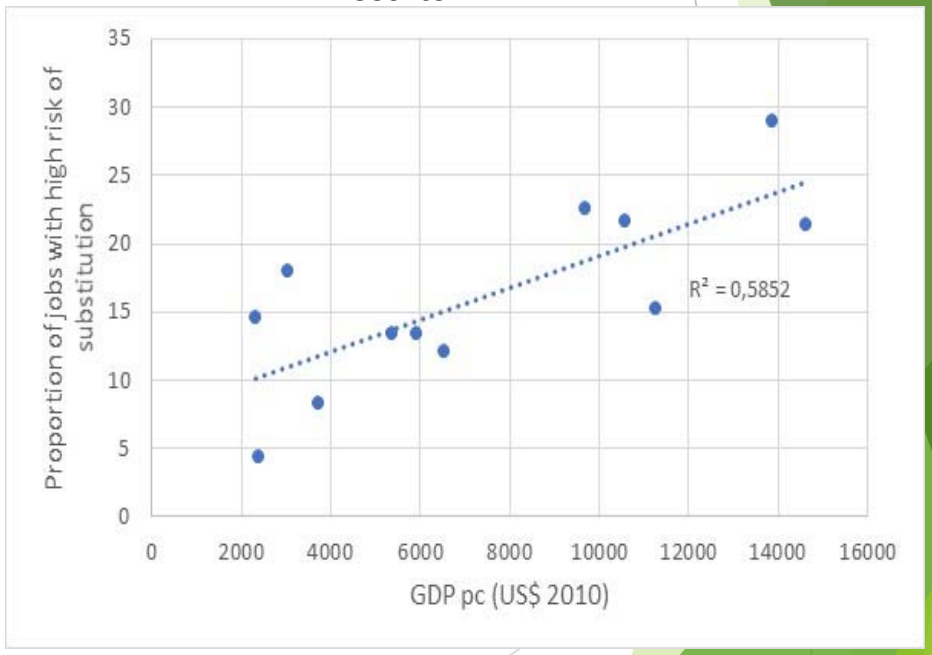
Source: ECLAC

… and regarding the argument that less developed countries have the highest risk of job substitution …

Latin America: GDP pc and risk of job substitution, Frey/ Osborne method, preliminary results



Latin America: GDP pc and risk of job substitution, adjusted method, preliminary results



Source: ECLAC

And in the formal sector?
Factors that influence the introduction of new technologies – and differences in Latin America

	General impact on introduction of new technologies	Potential relative impact in Latin America
Proportion of tasks that can be automatized	+	(+)
Labor productivity gains	+	+
Reduction of labor costs	+	-
Capacity of innovation and adjustment	+	-
Cost of implementation	-	-
Cost of maintenance and updating	-	-
Good general infrastructure	+	-
(Other) Sector & firm specific factors	+ / -	+ / -

Source: ECLAC

However: Risk of indirect impact on job destruction….: External competition, global value chains…!
… and also mayor obstacles for taking advantage of potential for job creation

Perspectives of job creation and transformation?

- In the short term, **firms** in 8 LA countries expect *increased* hiring because of digitalization (while in Europe in 7 out of 23 countries a *decrease* is expected – and increases are smaller than in LA) (Manpower, 2018) – effect of lags in introduction of new technologies!?
- Between 45% and 60% of surveyed **workers** in 4 LA countries consider that some of their tasks can be automatized (Randstad, 2016)
- … and between 70% -74% consider that this automatization would improve their job quality
- Dutz, Almeida and Packard (2018) find a positive employment impact of the introduction of ICT on firm level (4 LA countries), generally for high- **and** low-skilled workers; on the aggregate the result is less positive (case study Brazil), because of exit of lagged firms

Skill issues

- LA with important gaps in basic skills (around 15-20% regarding OECD average in reading, math and science) – but with important intra-regional differences and high levels of segmentation on the country level
- Inadequate workforce reported by more than a third of LA firms as obstacle for an improved performance (average of 18 countries) – region with highest proportion, and increasing (WB enterprise survey)
- Also in Manpower talent shortage survey reports that LA is the region with the biggest gap between skill supply and demand, technicians being the job type employers have most problems to fill in 5 out of 8 LA countries covered
- IT personnel globally on #2, in 2 (out of 8) LA countries not even under first 10, in the remaining 6 countries, on average #7 => reflect lag in introduction of IT !?!

Distributional issues

- Latin America among the most unequal regions – among others, related to heterogeneous production structure, weak institutions
- Skill supply characterized by strong segmentation of quality of education
- Threat of increased structural heterogeneity with widening technological gaps
- Recently, there has been a polarization of the occupational structure of most LA countries, albeit to a lesser degree than in OECD countries.
- On the firm level, Crespi and Tacsir (2012) find a skill-bias of product innovation, especially in high-tech sectors (4 LA countries)
- Santos, Monroy and Moreno (2015, cit. in Dutz et al, 2018) find that higher ICT intensity is related to higher demand for cognitive skills
- Dutz, Almeida and Packard (2018) find mixed results regarding the evolution of the wage gap between high- and low-skilled workers as a result of increased ICT use
- New options through platforms but threat of new informality in the context of already high (old) informality => challenges for labor market regulation and social security

Conclusions

- Risk of – direct and indirect – job destruction
- Estimates have to take into account LA labour market structure: Risk centered in (relatively) good jobs
- Opportunities for productive job transformation and job creation
- But multiple obstacles have to be faced => challenges for public policies and public-private cooperation
- Key areas: technology development/ adjustment and support of implementation, skill development (changing demand, lags, segmentation), labour regulation, social security