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The Global Crisis and the Peruvian Labor Market: Impact and Policy Options

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► Outline

- Motivation & objectives
- Stylized facts
- Alternative policy options
- DSGE model and results
- Wrap up

► Motivation and objectives

- Peru does not have automatic macroeconomic stabilizers in its economy.
- In the labor market:
 - No widespread unemployment insurance
 - Public jobs are not crisis-contingent
 - Even the minimum wage does not have a crisis-led trigger.
- In which aspects of labor market reform can we move forward while we discuss how to withstand the crisis?

► Motivation and objectives

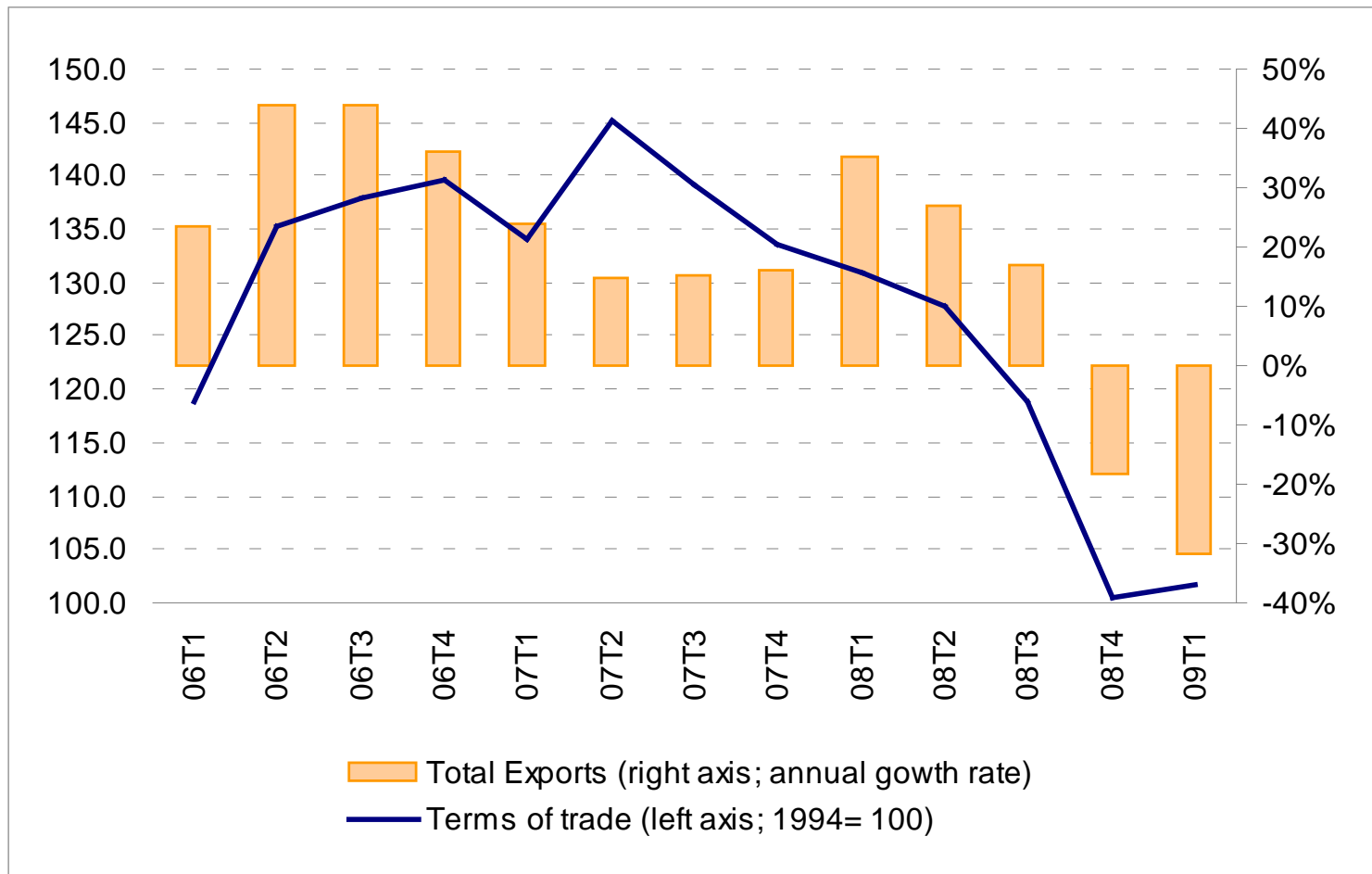
- ***What we want to do:***
 - Address the *impact* of the global financial crisis on the Peruvian labor market.
 - Evaluate different *policy choices*.
 - Their adequacy will depend on:
 - policy objectives
 - magnitude and duration of the external shock
 - the way the shock transpires into different sectors.

► Motivation and objectives

- ***How do we do it:***
 - Review stylized facts from this and previous crisis to account for potential transmission mechanisms and labor market outcomes.
 - Literature review to: (i) identify most relevant policy options; and (ii) assess the effects of past and existing interventions.
 - Quantitative exercise based on DSGE model to capture basic transmission mechanisms and compare the effects of transitory and permanent policy measures.

► Stylized facts

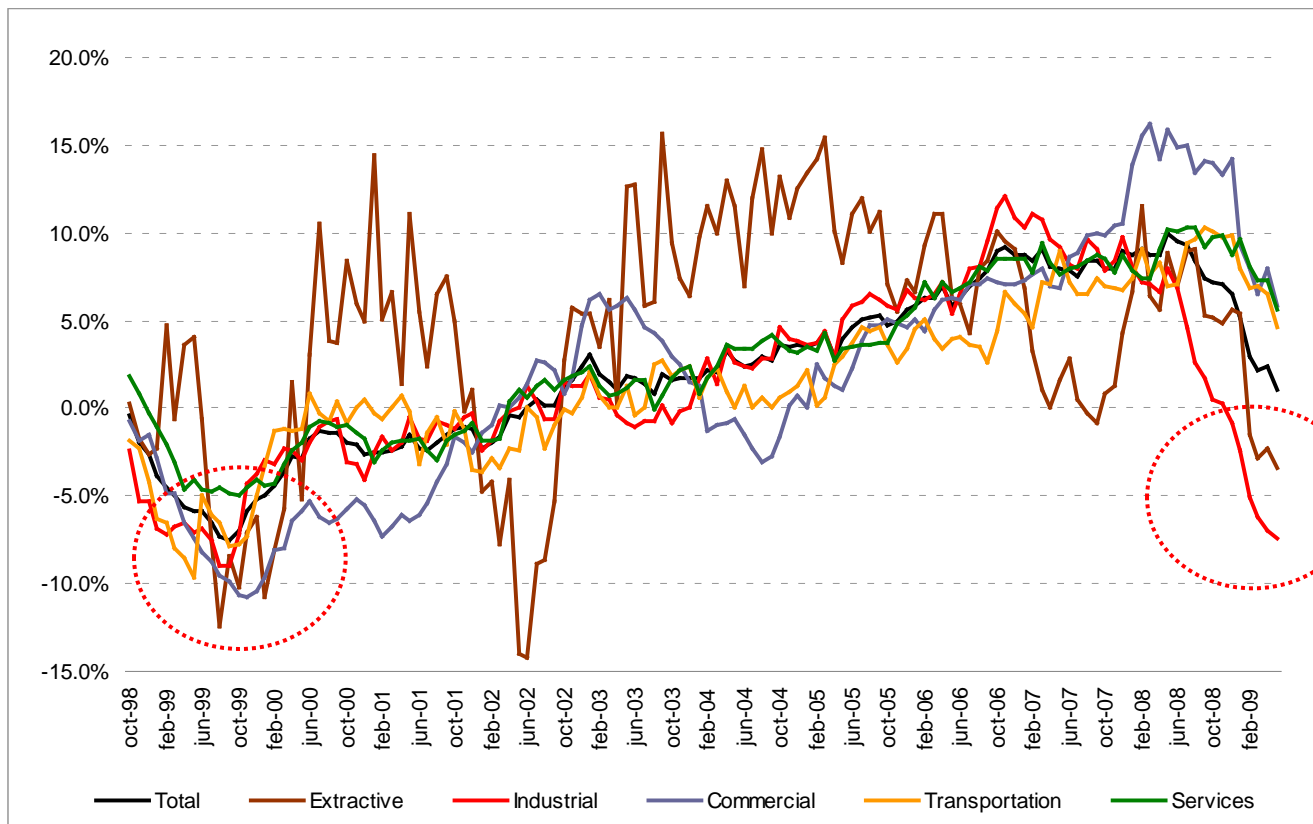
A drop in global demand → a terms of trade shock...the crisis hit our economy mainly through a commercial channel



► Stylized facts

Terms of trade shocks hit tradable sectors first... the manufacturing sector has taken the largest toll, followed by the extractive sector

Urban Employment; firms with 10 or more workers; annual growth rate



In the previous crisis (1998-2001), all five sectors experienced negative growth rates → the external shock triggered a domestic financial market crisis which affected aggregate investment and job creation rates throughout the economy.

► Stylized facts

During recessions, workers are more likely to move into underemployment than open unemployment

Panel A: Boom 2007/2008

$T \rightarrow T+1$	Adequately Employed	Under employed	Unpaid family worker	Unemployed	Inactive	Total 2007
Adequately Employed	69.4%	23.2%	2.3%	1.2%	3.9%	100.0%
Underemployed	19.8%	61.0%	7.6%	1.7%	10.0%	100.0%
Unpaid family worker	5.0%	19.7%	59.0%	1.5%	15.0%	100.0%
Unemployed	16.9%	28.8%	8.5%	11.9%	33.9%	100.0%
Inactive	6.1%	19.3%	10.7%	3.1%	60.8%	100.0%

Panel B: Bust 1998/1999

$T \rightarrow T+1$	Adequately Employed	Under employed	Unpaid family worker	Unemployed	Inactive	Total 2007
Adequately Employed	59.0%	32.1%	2.5%	2.5%	3.9%	100.0%
Underemployed	17.5%	61.3%	7.5%	1.9%	11.9%	100.0%
Unpaid family worker	4.8%	20.2%	58.2%	1.1%	15.7%	100.0%
Unemployed	16.3%	41.5%	6.6%	11.8%	23.9%	100.0%
Inactive	4.0%	18.5%	12.0%	3.5%	62.1%	100.0%

► Alternative policy options

- But first...the objectives!
 1. *Reduce adequate employment loss*
 2. *Prevent real income loss in vulnerable groups (young, unskilled, women).*
 3. *Extend formal job benefits.*
- The first two → closely related with the business cycle and, thus, will call for interventions of countercyclical nature.
- The third → structural phenomena that explain why our labor market exhibits a large informal sector as an equilibrium outcome.

► Alternative policy options

		Policy objectives and crisis scenarios			
		1. Prevent adequate employment loss 2. Prevent real income loss in vulnerable groups		3. Extend formal employment benefits	
		A. Short- to-medium lived recession			
		<i>Focused on tradable sector</i>	<i>Transpires into non-tradable sector</i>		
Policy Options	Business cycle dependent Transitory	I. <u>Active labor market policies</u> (i) Job protection: → Temporary payroll tax holiday. (ii) Worker protection: → Strengthened and better focalized re-employment service (<i>Revalora Peru</i>).			
		II. <u>Income support policies</u> → Strengthened demand-driven public works programs attracting low income-low opportunity cost workers (<i>ATU-Constuyendo Peru</i>)			
	Business cycle independent Permanent			III. <u>MILES framework</u> Macro policies Investment climate, institutions, infrastructure Labor market institutions and regulations <u>High formal labor costs</u> → Promote progressive access to labor benefits for small and microenterprises and cut down firing costs Education and skills <u>Low productivity</u> → Integrate and extend successful training and labor market information programs (<i>Projovent – Propoli – RedCIL</i>) Social protection	

► DSGE model and results

- Provide further insight regarding three key issues:
 1. The effects of the crisis on the evolution of aggregate GDP and formal employment;
 2. The countercyclical potential of selected policy interventions (with special emphasis on the distinction between transitory and permanent interventions);
 3. The potential effects of changes in labor regulation and productivity on the long run participation of the formal sector in terms of employment and output.

► DSGE model and results

- *Main features:*
 - Three sector open economy model.
 - Non-tradable sector: demands domestic capital and labor to produce goods consumed only in the local market.
 - Tradable sector: demands labor and imported capital to produce goods consumed both in the domestic and foreign markets.
 - Informal activity: has the lowest labor productivity and acts as a buffer for unemployed workers. Does not accumulate capital and its output is only for the domestic market.

► DSGE model and results

- *Main features (cont.):*
 - Two key attributes: it is based on behavioral relationships and that it includes a stochastic component when modeling families' decisions.
 - Other modeling exercises based on reduced form relations can capture the stylized facts of the shock but...
 - Our model can **also** tell a story about: (i) how does the long run allocation of resources respond to a new set of structural conditions; and (ii) what are the consequences (for policy) of dealing with agents that make decisions based on their expectations of the future.

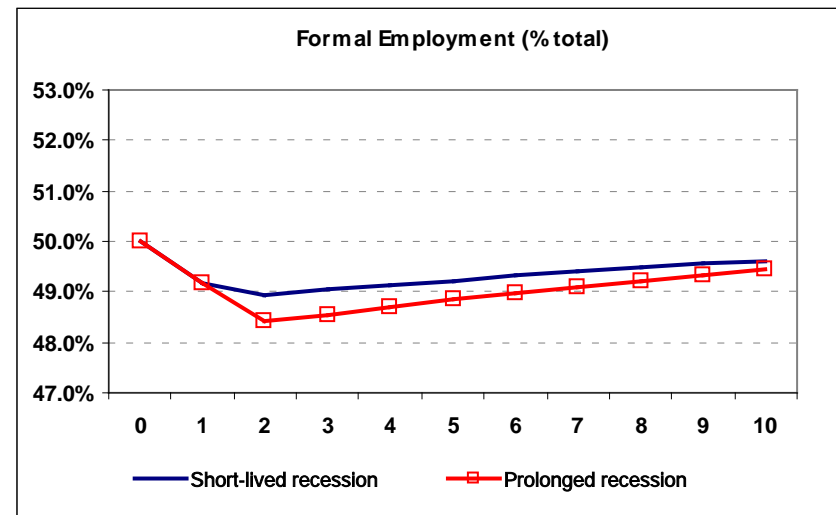
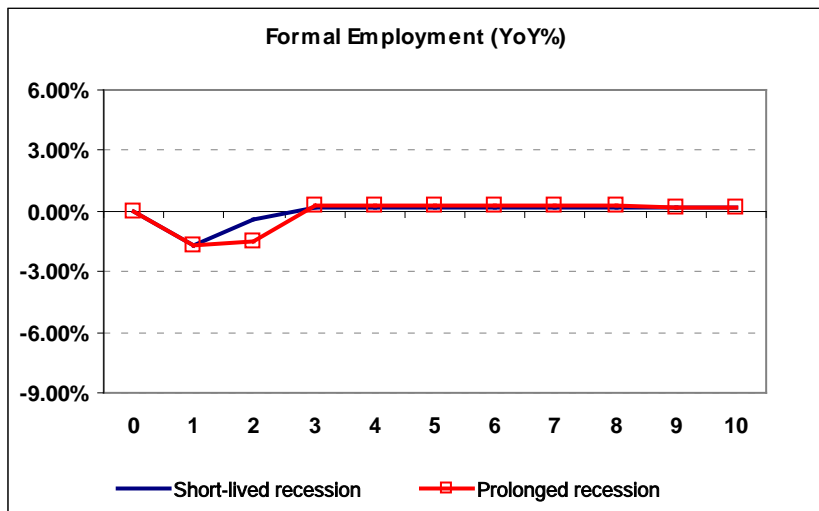
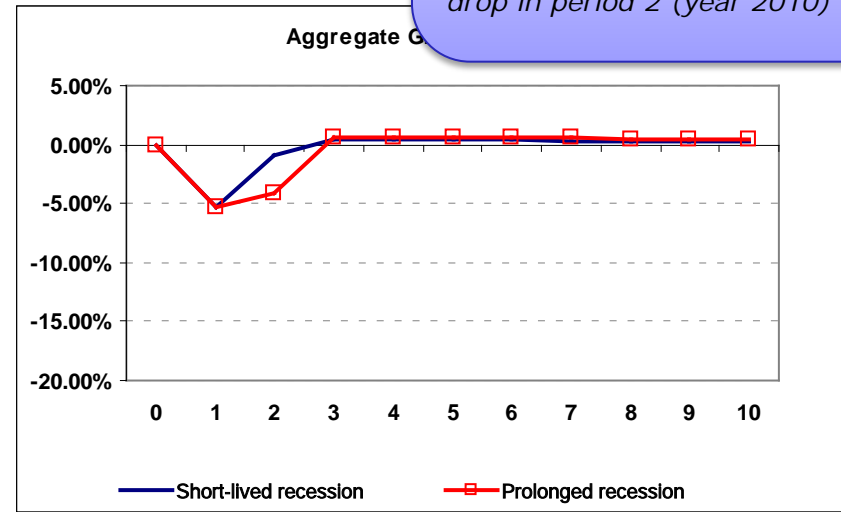
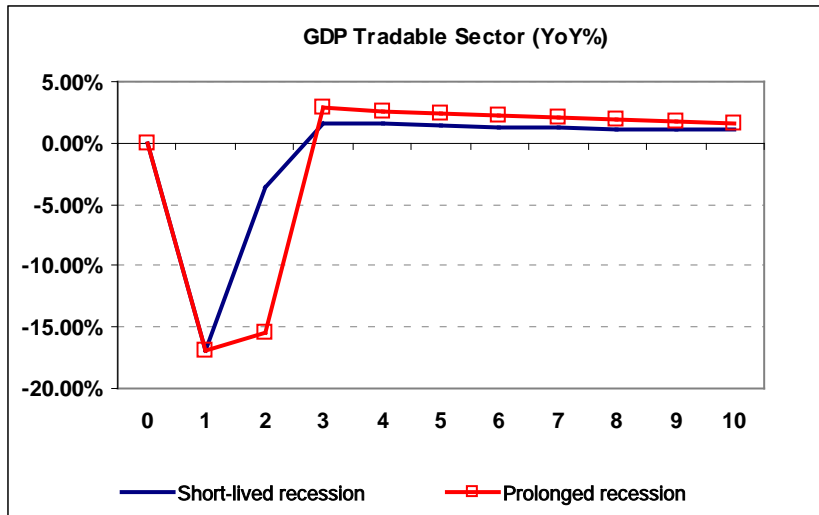
► DSGE model and results

- *Main features (cont.):*
 - Limitation: we have avoided the introduction of nominal rigidities or other market imperfections that could have an amplifying effect on the initial shock → results that stem from our simulations should be understood as an upper boundary of the way our economy will react to the crisis in the absence of a fiscal expansion other than the specific labor market policy measures we model.

▶ V shaped vs. L shaped

- Short-lived recession is triggered by a 20% drop in export prices in period 1 (year 2009).

- Prolonged recession scenario is also triggered by a 20% drop in export prices in the first period, accompanied by a further 10% drop in period 2 (year 2010)



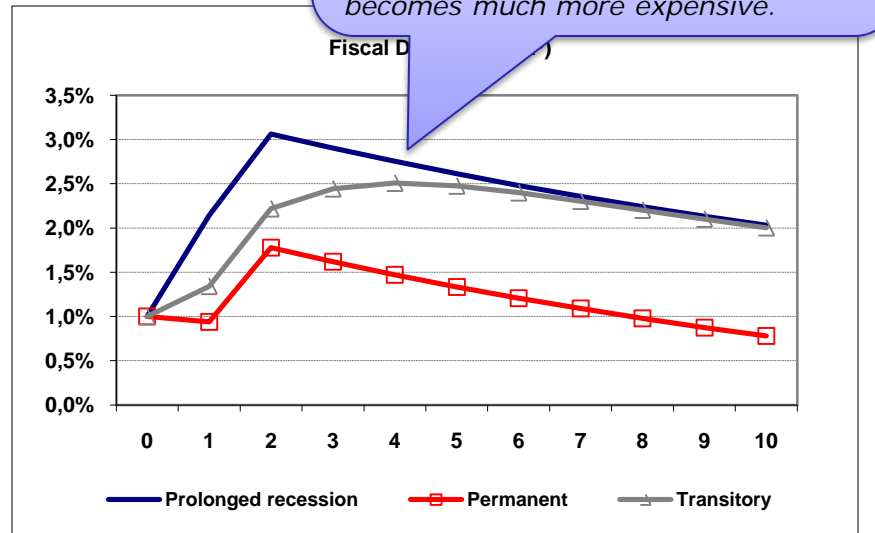
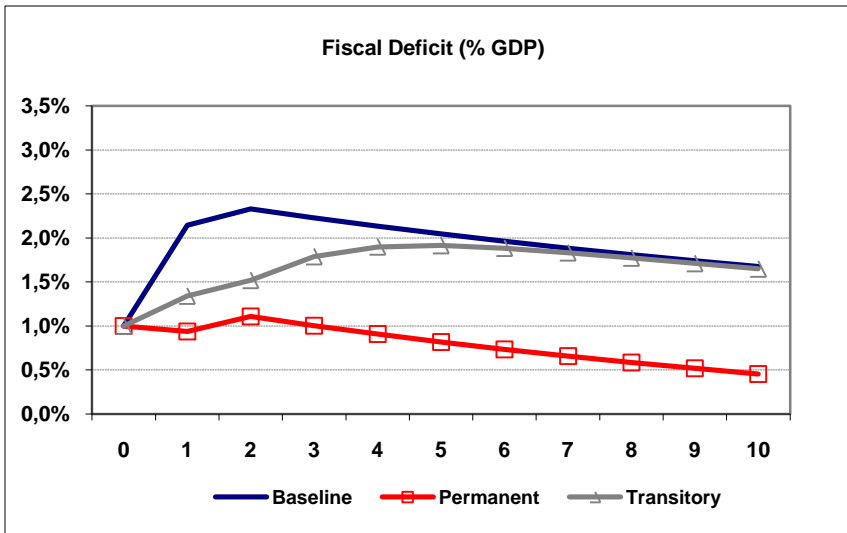
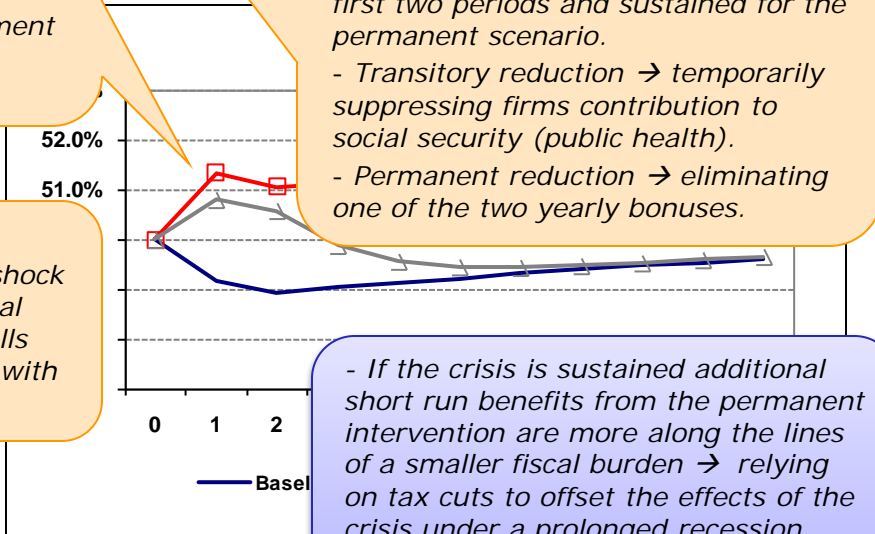
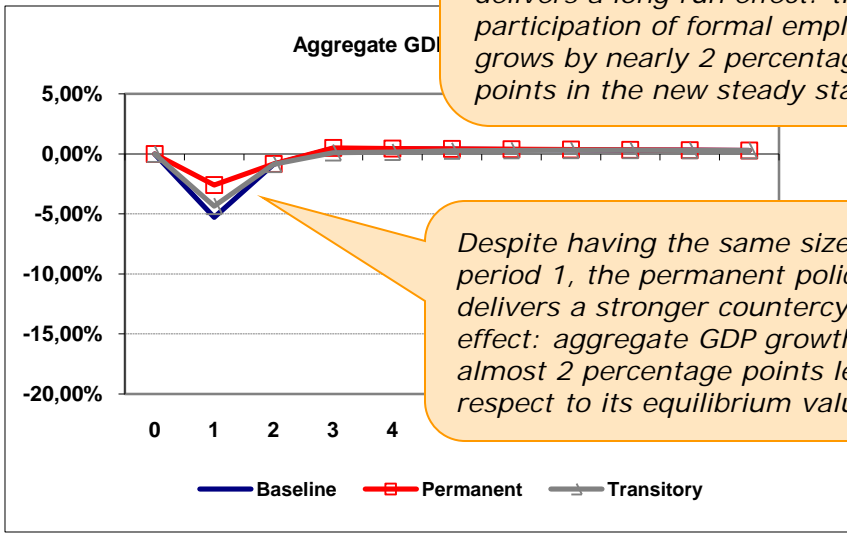
► Transitory vs. permanent labor tax cut

The permanent policy shock, not only delivers a larger growth in formal employment participation on impact but, more importantly, it delivers a long run effect: the participation of formal employment grows by nearly 2 percentage points in the new steady state.

Despite having the same size in period 1, the permanent policy shock delivers a stronger countercyclical effect: aggregate GDP growth falls almost 2 percentage points less with respect to its equilibrium value.

- Labor tax is reduced by 20% in the first two periods and sustained for the permanent scenario.
- Transitory reduction → temporarily suppressing firms contribution to social security (public health).
- Permanent reduction → eliminating one of the two yearly bonuses.

- If the crisis is sustained additional short run benefits from the permanent intervention are more along the lines of a smaller fiscal burden → relying on tax cuts to offset the effects of the crisis under a prolonged recession becomes much more expensive.



► Wrap up!

- Falling external demand for our exports has reduced real returns in the tradable sector.
- Job separations in extractive and manufacturing activities with a strong tradable component imply that employment loss is concentrated in formal jobs which, in turn, can be largely classified as adequate.
- A surge in informality and underemployment is the main risk that the policymaker should aim to mitigate through the cycle.

► Wrap up!

- Formal job separations can be reduced if the burden of keeping the job is shared with the government. Simulations → temporary payroll tax holidays have a countercyclical potential.
- But fiscal costs can be particularly high, especially if the world economy takes more time to recover → further temporary but generalized exonerations will be difficult to implement.
- Need to resort to additional measures that can still have an impact on the second year of the crisis, with a more focalized nature: retraining and temporary public works programs.

► Wrap up!

- On the more structural side: simulations → permanent non-wage labor cost reductions can increase formal employment and formal GDP by 2 percentage points.
- Policies were modeled as halving bonuses or vacations in a way similar to that already implemented in the special labor regime for small and micro enterprises.
- Special regime → progressive access to labor benefits for low productivity firms. Can be complemented by introducing minimum wage levels according to firm size for new contracts, and a generalized reduction in firing costs.

► Wrap up!

- Formal employment participation can rise 0.5 percentage points for every 3% increase in total factor productivity.
- No silver bullet to accomplish this → promising experiences that can be strengthened and integrated into a single intervention package: *Projovent, Propoli* and *Red CIL*.
- Simulations → stronger case for policy interventions that stem from a structural reform agenda and imply that we should not wait for the crisis to be over to start their implementation.



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