# 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

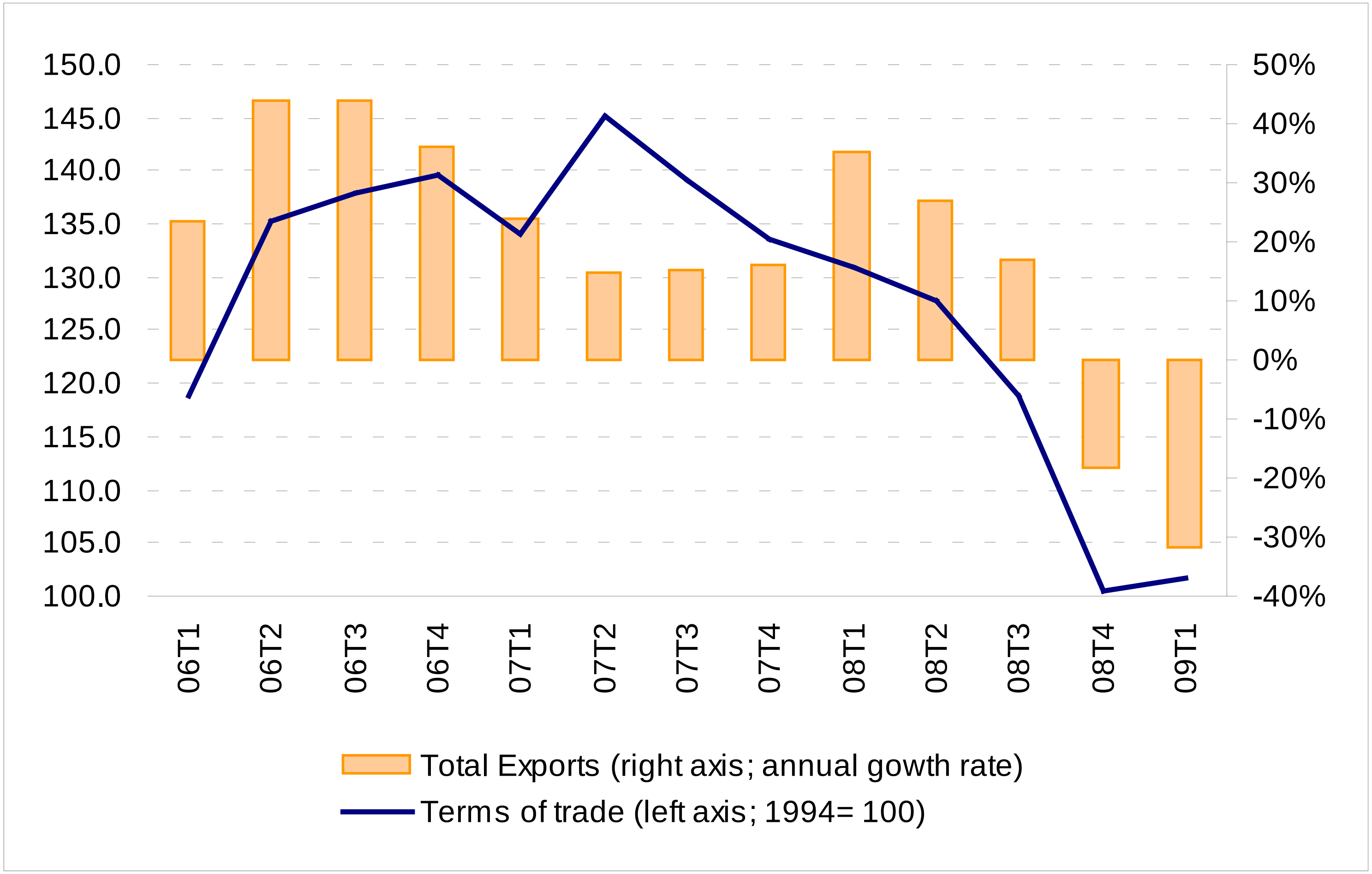
- ***What we want to do:***
  - Address the *impact* of the global financial crisis on the Peruvian labor market.
  - Evaluate different *policy choices*.
  - Their adequacy will depend on:
    - policy objectives
    - magnitude and duration of the external shock
    - the way the shock transpires into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

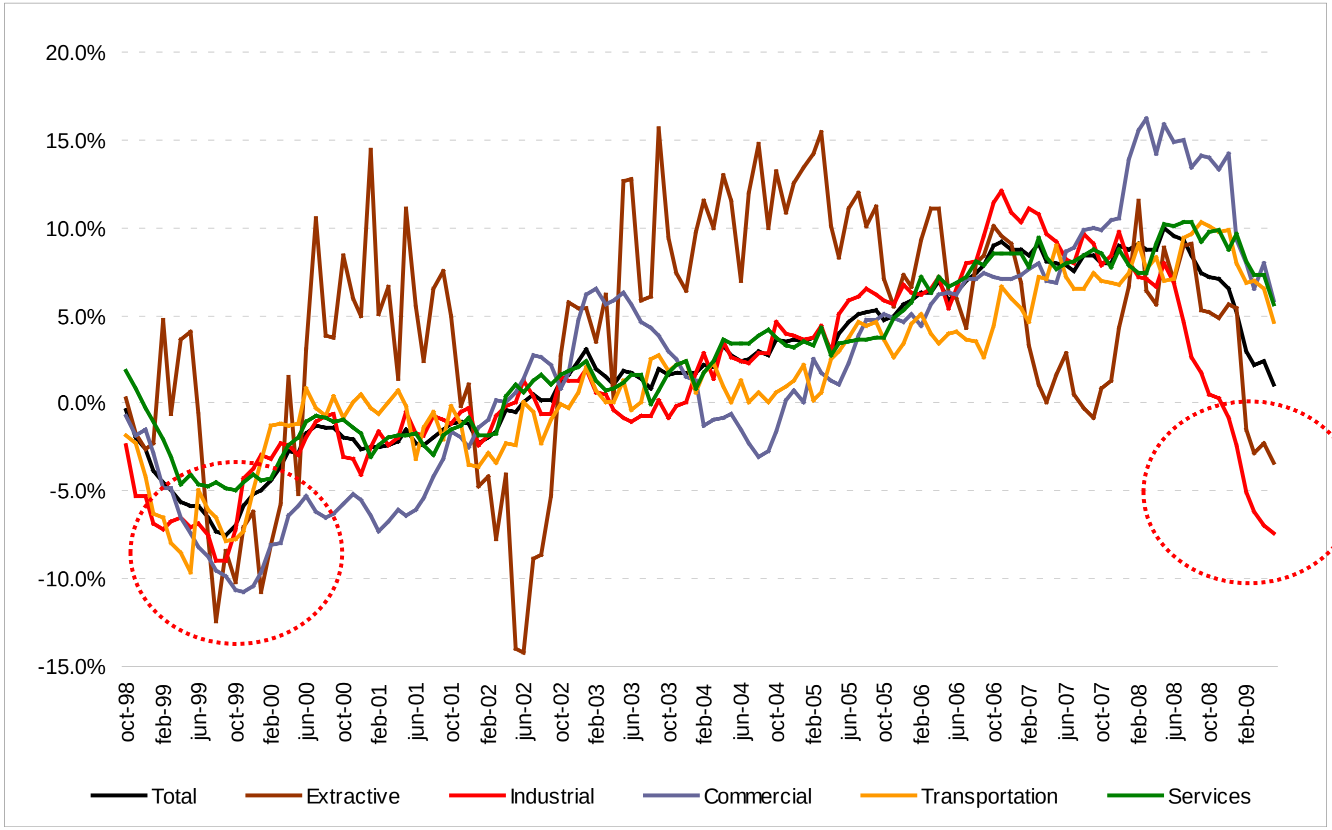
*A drop in global demand → a terms of trade shock...the crisis hit our economy mainly through a commercial channel*



# ▶ 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 → 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 → 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

<table>
<tr><td colspan="2"></td><td colspan="4">Policy objectives and crisis scenarios</td></tr>
<tr><td colspan="2"></td><td colspan="3">1. Prevent adequate employment loss<br>2. Prevent real income loss in vulnerable groups</td><td rowspan="3">3. Extend formal employment benefits</td></tr>
<tr><td colspan="2"></td><td colspan="2">A. Short- to-medium lived recession</td><td rowspan="2">B. Protracted and widespread recession</td></tr>
<tr><td colspan="2"></td><td>Focused on tradable sector</td><td>Transpires into non-tradable sector</td></tr>
<tr><td rowspan="3">Policy Options</td><td rowspan="2">Business cycle dependent<br>Transitory</td><td colspan="2">I. <u>Active labor market policies</u><br>(i) Job protection:<br>→ Temporary payroll tax holiday.<br>(ii) Worker protection:<br>→ Strengthened and better focalized re-employment service (Revalora Peru).</td><td colspan="2"></td></tr>
<tr><td></td><td colspan="2">II. <u>Income support policies</u><br>→ Strengthened demand-driven public works programs attracting low income-low opportunity cost workers<br>(ATU-Construyendo Peru)</td><td></td></tr>
<tr><td>Business cycle independent<br>Permanent</td><td colspan="2"></td><td colspan="2">III. <u>MILES framework</u><br>Macro policies<br>Investment climate, institutions, infrastructure<br>Labor market institutions and regulations<br><u>High formal labor costs</u><br>→ Promote progressive access to labor benefits for small and microenterprises and cut down firing costs<br>Education and skills<br><u>Low productivity</u><br>→ Integrate and extend successful training and labor market information programs<br>(Projoven – Propoli – RedCIL)<br>Social protection</td></tr>
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# 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…

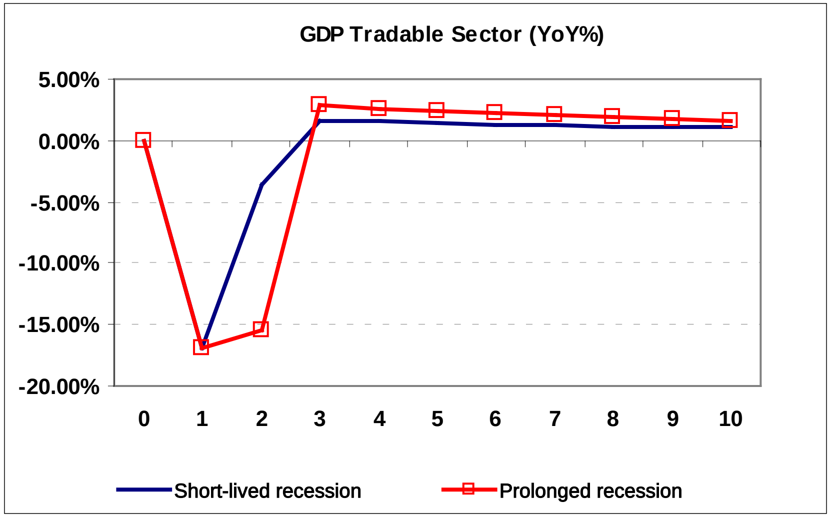
    → Our model can **also** tell a story about: (i) how does the long run allocation of resources respond to a new set of structural conditions; and (ii) what are the consequences (for policy) of dealing with agents that make decisions based on their expectations of the future.

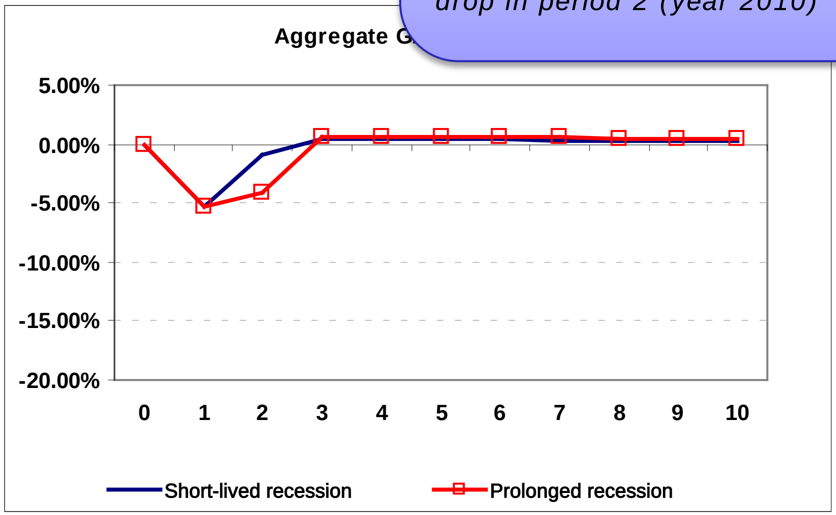
# DSGE model and results

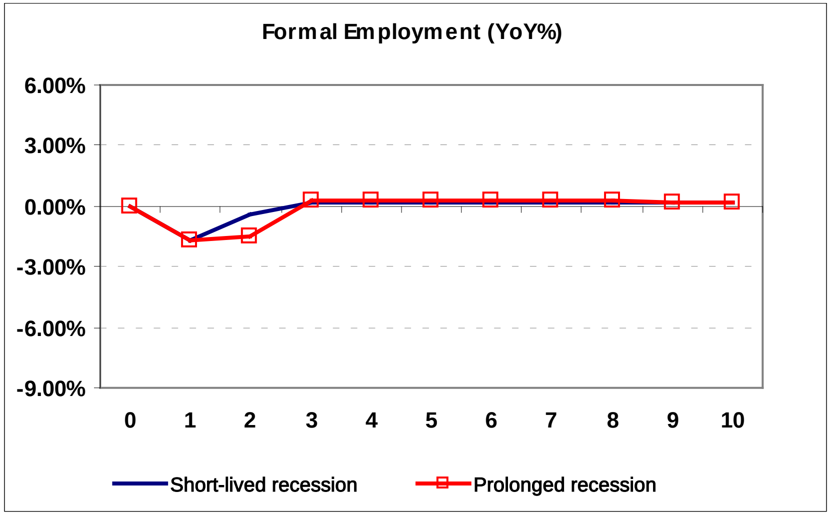
- *Main features (cont.):*
  - Limitation: we have avoided the introduction of nominal rigidities or other market imperfections that could have an amplifying effect on the initial shock → results that stem from our simulations should be understood as an upper boundary of the way our economy will react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

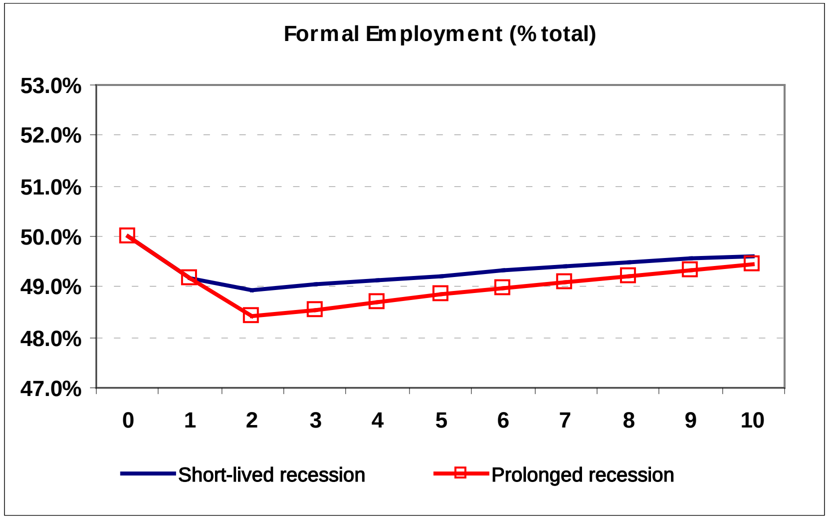
# ▶ V shaped vs. L shaped

- *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)*



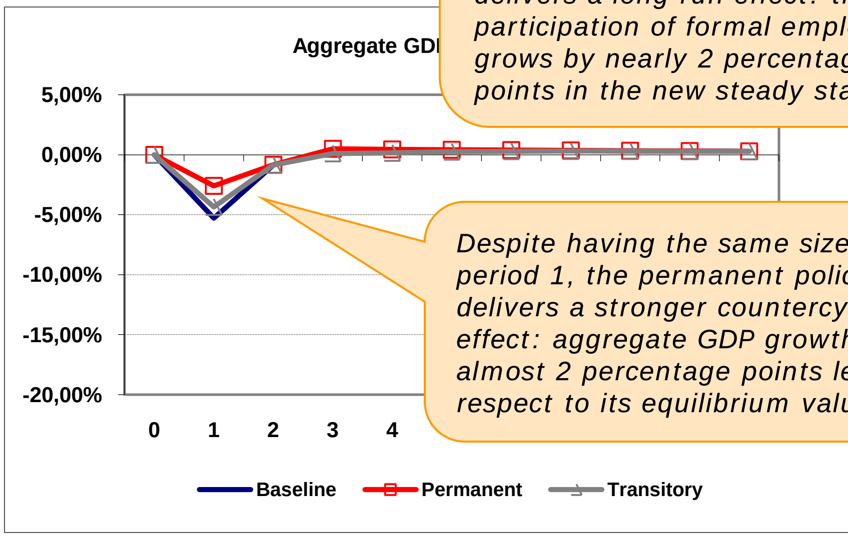



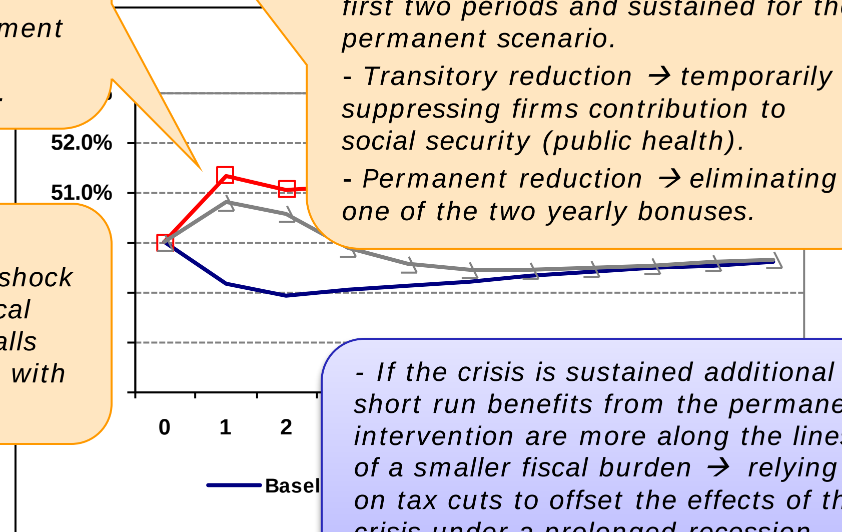
# Transitory … nt labor tax cut

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.

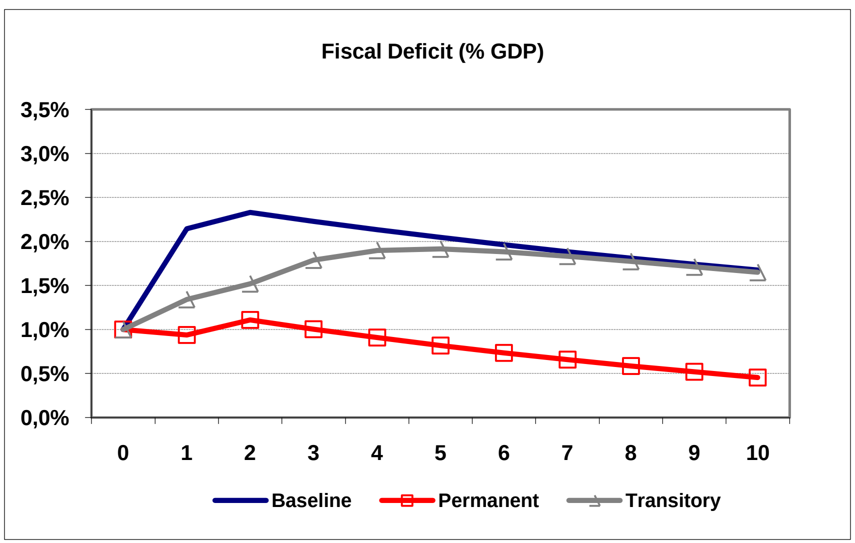
- Labor tax is reduced by 20% in the first two periods and sustained for the permanent scenario.
- Transitory reduction → temporarily suppressing firms contribution to social security (public health).
- Permanent reduction → eliminating one of the two yearly bonuses.

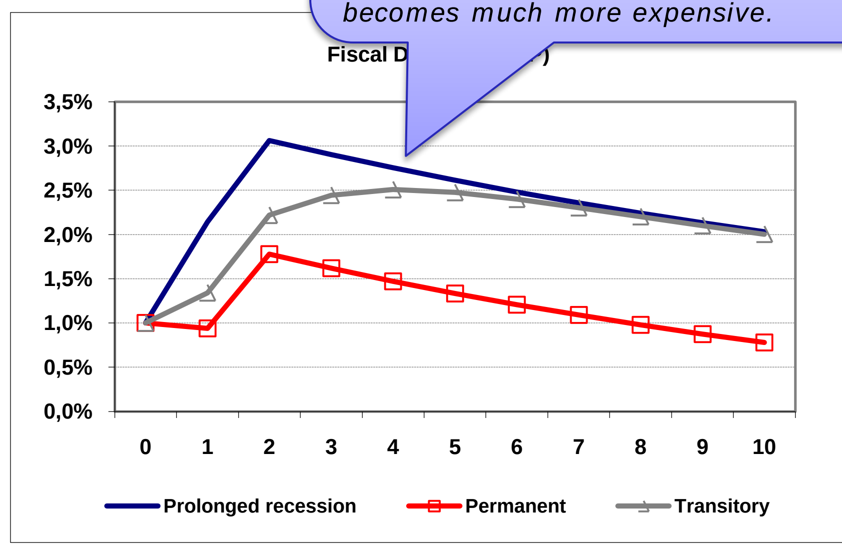



Despite having the same size in period 1, the permanent policy shock delivers a stronger countercyclical effect: aggregate GDP growth falls almost 2 percentage points less with respect to its equilibrium value.




- 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: *Projoven*, *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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