

# **THE INTERNATIONAL ECONOMIC CRISIS AND THE COLOMBIAN ECONOMY**

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Analysing the Impacts of the World Financial  
and Economic Crisis on Developing  
Countries

A PEP-AUSAID-IFPRI Project

# The International Economic Crisis and the Colombian Economy

- Motivation
- Context
- Methodology
- Data
- Results
- Conclusions

# The International Economic Crisis and the Colombian Economy

## Motivation:

- Relatively small impact on the financial dimension
- Increased importance of real sector transmission channels
- First serious slow down of the economy after a high growth period

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## Context (1):

- High economic growth:
  - 2005: 5.7%, 2006: 6.9%, 2007: 7.5%
- Increasing FDI:
  - 2001-4: 2.4%, 2005-07: 5.2%
- Exposure to international trade:
  - around 30% along the 2000's
- Persistent unemployment:
  - 2001-4: 14.5%, 2005-7: 11.7%

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## Context (2): transmission channels (US\$million)

	2005	2006	2007
International aid	311 (0.2)	315 (0.2)	348 (0.2)
Remittances	3,314 (2.3)	3,890 (2.4)	4,493 (2.2)
FDI	10,252 (7.1)	6,656 (4.1)	9,049 (4.4)
Exports	21,190 (14.7)	24,391 (15.0)	29,991 (14.4)
Imports	21,204 (14.7)	26,162 (16.1)	32,897 (15.8)

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## Methodology (1):

- Use of PEP-1-1 CGE model
- 2005 SAM
- Scenarios:
  - Impact of the crisis: drop in remittances, drop in trade volumes and values
  - Adopted policies: increased government expending in infrastructure and higher indebtedness

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## Methodology (2):

- Closure:
  - Capital: sector specific
  - Labor: fully mobile
  - CAB: exogenous but enlarged to account for higher government indebtedness
  - Investment in infrastructure: enlarged to account for increased expending

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Data (1):

- SAM:
  - 12 activities, 12 commodities
  - four labor types (rural/urban, skilled/unskilled)
  - Households disaggregated by income deciles



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## Data (2):

- Shocks:

- Remittances:

- decrease of about US\$700 million between 2008 and 2009 (14.4%), assumed even across household deciles

- Trade:

- total exports: 9.2% increase in volume, 12.7% decrease in value

- total imports: 6.6% decrease in volume, 17.1% decrease in value

# Trade shocks

Sector	Exports		Imports
	Change in Volume	Change in Price	Change in Price
Agriculture	3,1	-13,9	-27,0
Chemical products	14,0	-25,6	-10,9
Coal	8,1	-0,7	-24,5
Coffee	-23,7	6,8	5,1
Machinery and equipment	-19,6	5,7	14,9
Manufactures	-1,9	-31,8	-11,4
Minerals	-30,3	38,5	-35,2
Oil	32,1	-52,7	76,8
Processed oil	-14,1	-12,7	-57,2
Transport equipment	-43,2	-11,6	-2,3

## Results –Impact of the crisis (1):

Sector	Quantity exported	Export value	Quantity imported	Import value
Agriculture	-1.1	-13.0	18.3	-11.9
Chemical products	-3.8	-22.1	-5.2	-16.1
Coal	6.6	6.6	21.8	-6.9
Coffee	20.1	2.2	-26.3	-22.2
Machinery and equipment	10.2	-0.5	-29.6	-22.8
Manufactures	-11.9	-36.6	-8.3	-19.3
Minerals	26.2	29.9	-22.0	-47.9
Oil	-16.0	-50.2	-80.4	-67.0
Processed oil	-10.2	-23.3	83.7	-16.6
Services	9.4	4.6	-26.8	-26.8
Transport equipment	-26.3	-42.8	-21.1	-23.9

## Results –Impact of the crisis (2):

Sector	Quantity domestically supplied	Value
Agriculture	-4.4	-24.1
Chemical products	-0.2	-14.5
Coal	-2.3	-5.8
Coffee	18.7	14.9
Infrastructure	-16.5	-44.9
Machinery and equipment	8.8	-0.9
Manufactures	-2.6	-18.6
Minerals	-6.1	-16.1
Oil	-3.5	-35.5
Processed oil	-20.0	-54.8
Services	2.8	-7.6
Transport equipment	-17.8	-31.9

## Results –Impact of the crisis (3):

Sector	Percentage changes in labor demand by sector			
	Rural skilled	Rural unskilled	Urban skilled	Urban unskilled
Agriculture	<b>-5.8</b>	<b>-7.5</b>	-5.8	<b>-6.6</b>
Chemical products	-4.7	-6.4	-4.7	-5.4
Coal	53.7		53.6	52.4
Coffee	25.7	<b>23.4</b>	25.7	24.7
Infrastructure	-29.3	-30.6	-29.3	-29.8
Machinery and equipment	12.9		12.8	12.0
Manufactures	-6.8	-8.5	-6.9	<b>-7.6</b>
Minerals	18.9		18.8	17.9
Oil	-58.5		-58.5	-58.8
Processed oil			-39.0	-39.4
Services	<b>5.1</b>	<b>3.2</b>	<b>5.0</b>	<b>4.2</b>
Transport equipment	-43.1		-43.1	-43.5

## Results –Impact of the crisis (4):

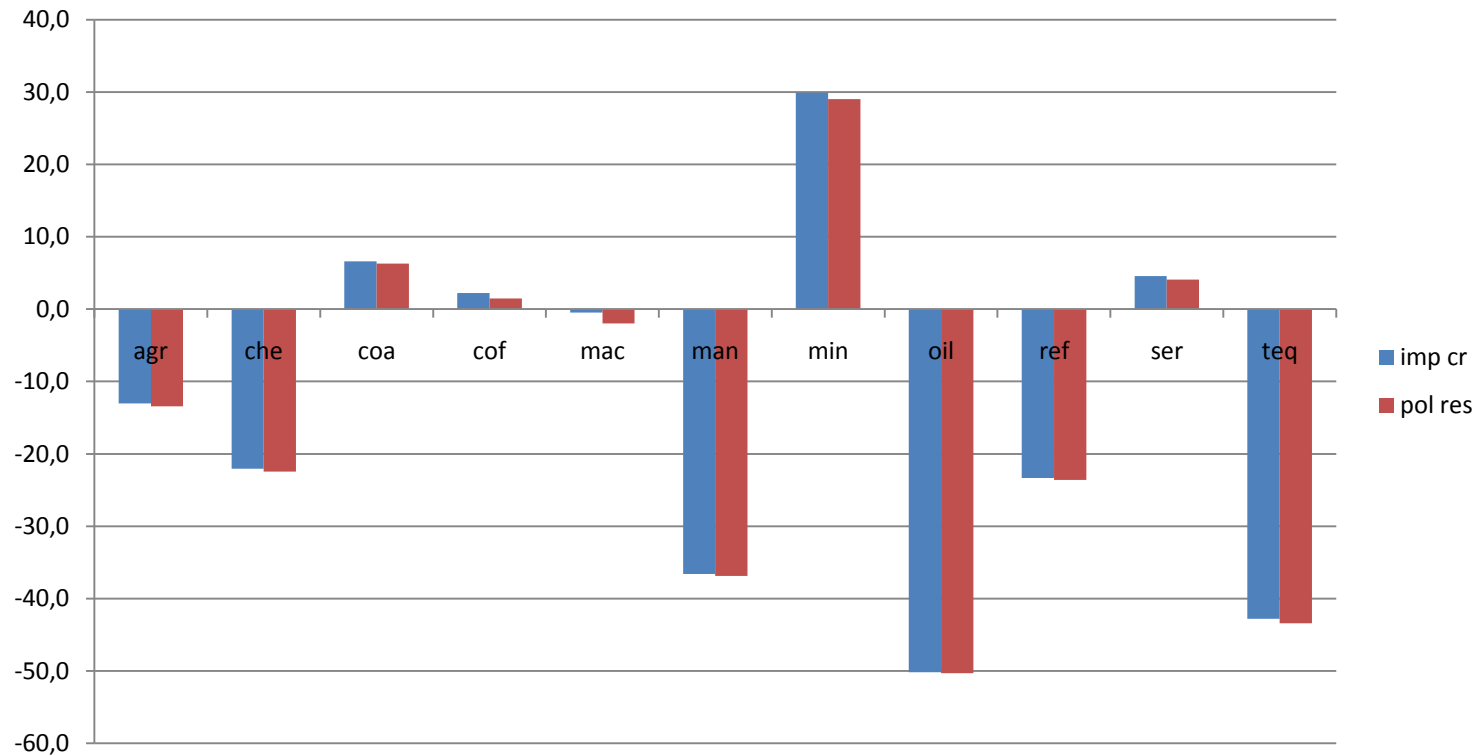
Household type	Percentage changes in nominal income			
	Total income	Capital income	Labor income	Transfer income
hh1	-17.5	-18.9	-17.7	-15.9
hh2	-17.4	-18.9	-17.7	-15.8
hh3	-17.4	-18.9	-17.6	-16.1
hh4	-17.2	-18.9	-17.5	-15.7
hh5	-17.1	-18.9	-17.4	-15.8
hh6	-17.0	-18.9	-17.3	-16.0
hh7	-16.8	-18.9	-17.0	-16.1
hh8	-16.4	-18.9	-16.7	-15.6
hh9	-16.1	-18.9	-16.0	-15.9
hh10	-15.7	-18.9	-15.0	-16.2

## Results –Impact of the crisis (5):

Household type	Percentage changes in real total income	
	Deflated by general price index	Deflated by own decile price index
hh1	-3.0	-1.0
hh2	-2.9	-1.7
hh3	-2.8	-2.0
hh4	-2.6	-1.9
hh5	-2.5	-1.9
hh6	-2.5	-1.9
hh7	-2.3	-2.0
hh8	-1.9	-1.8
hh9	-1.6	-1.6
hh10	-1.2	-1.4

# Results –Adopted policies (6):

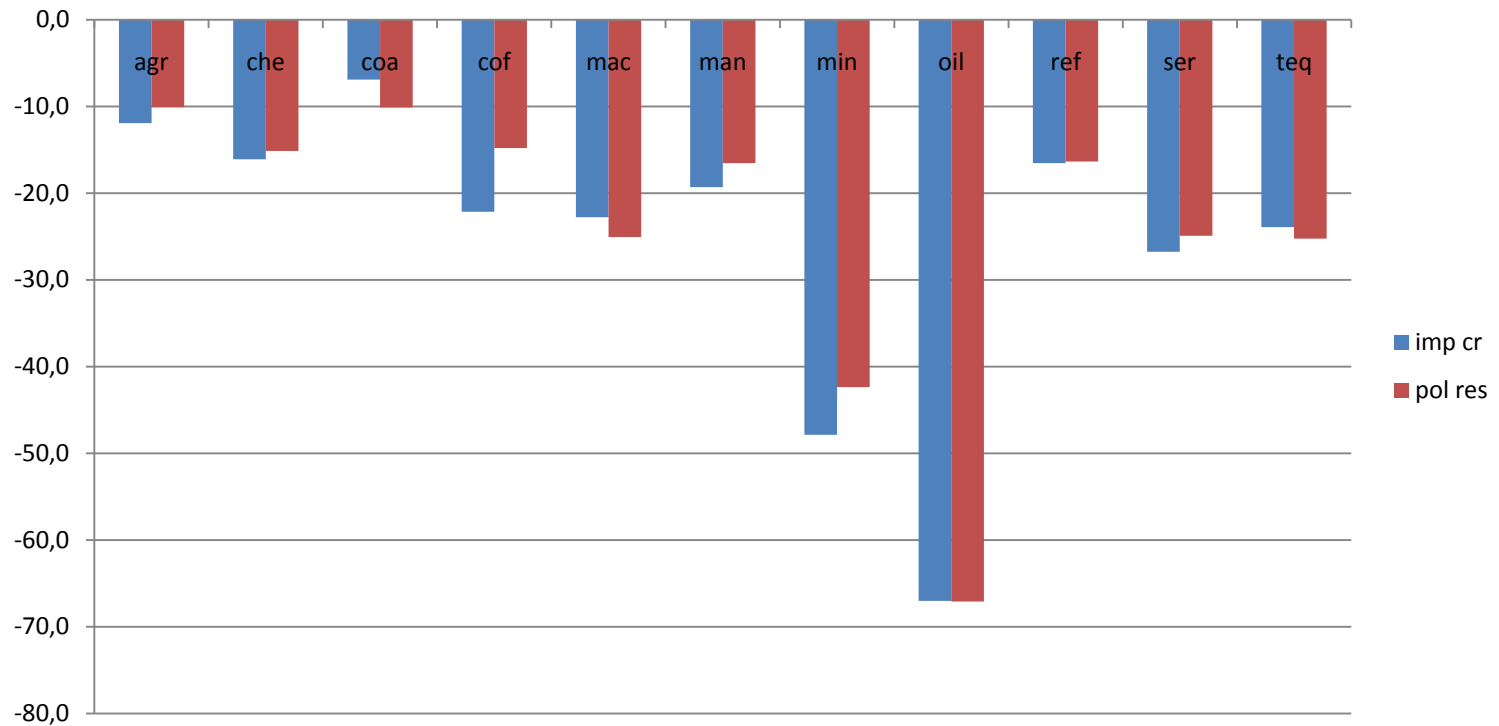
Percentage changes in export values





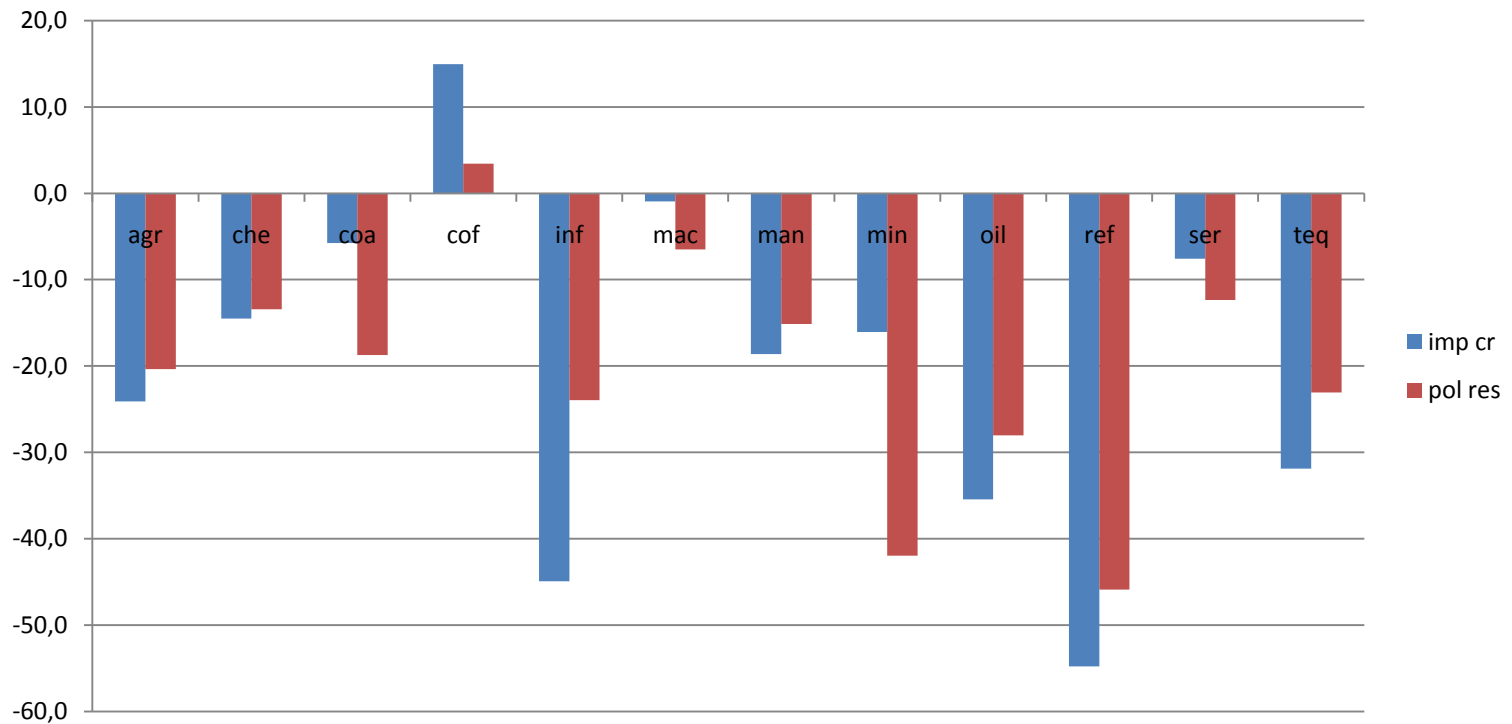
# Results –Adopted policies (7):

## Percentage changes in import values



# Results –Adopted policies (8):

Percentage changes in value of domestically supplied goods

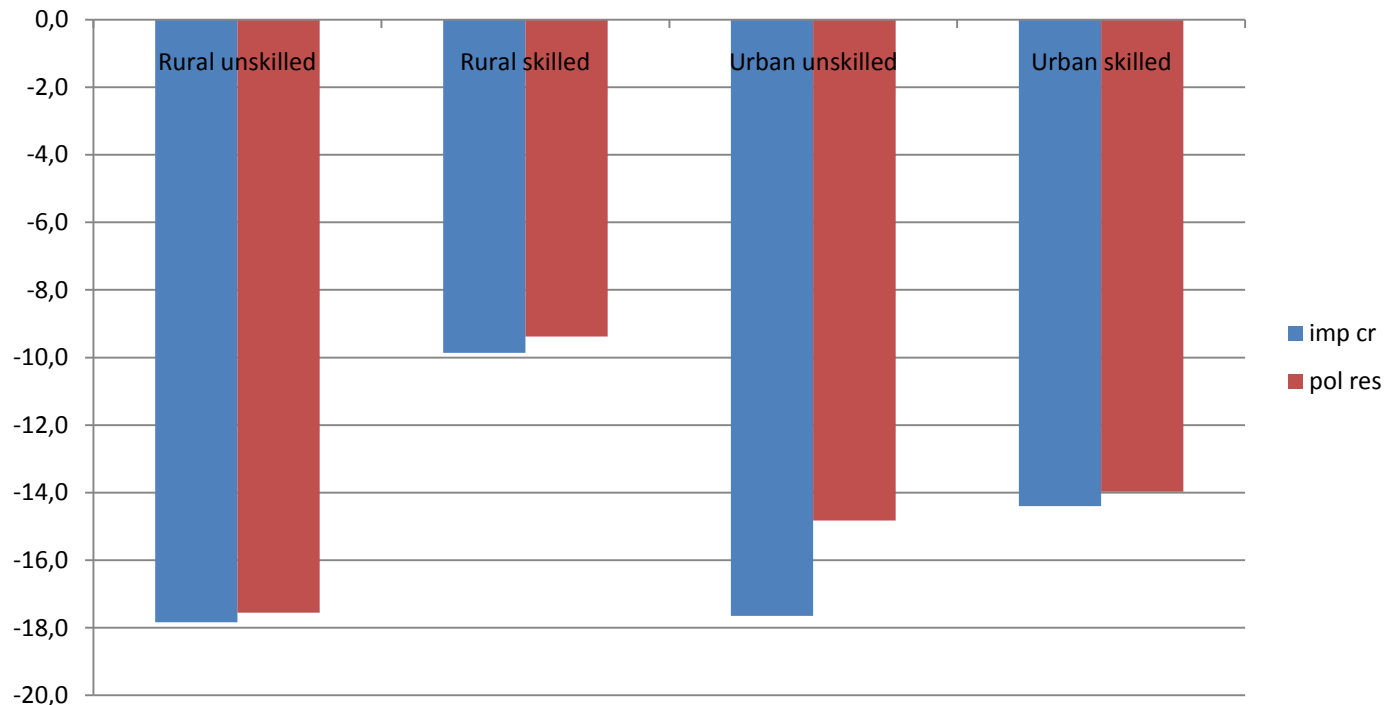


## Results –Adopted policies (9):

Sector	Percentage changes in labor demand by sector			
	Rural skilled	Rural unskilled	Urban skilled	Urban unskilled
Agriculture	<b>-5.8</b>	<b>-7.6</b>	-6.4	<b>-6.6</b>
Chemical products	-6.6	-8.3	-7.2	-7.4
Coal	48.3		47.3	47.0
Coffee	24.4	<b>22.1</b>	23.6	23.3
Infrastructure	-16.1	-17.7	-16.7	-16.9
Machinery and equipment	6.6		5.9	5.7
Manufactures	-6.6	-8.3	-7.2	<b>-7.4</b>
Minerals	18.1		17.3	17.1
Oil	-60.2		-60.4	-60.5
Processed oil			-40.3	-40.4
Services	<b>4.6</b>	<b>2.6</b>	<b>3.9</b>	<b>3.7</b>
Transport equipment	-46.1		-46.4	-46.5

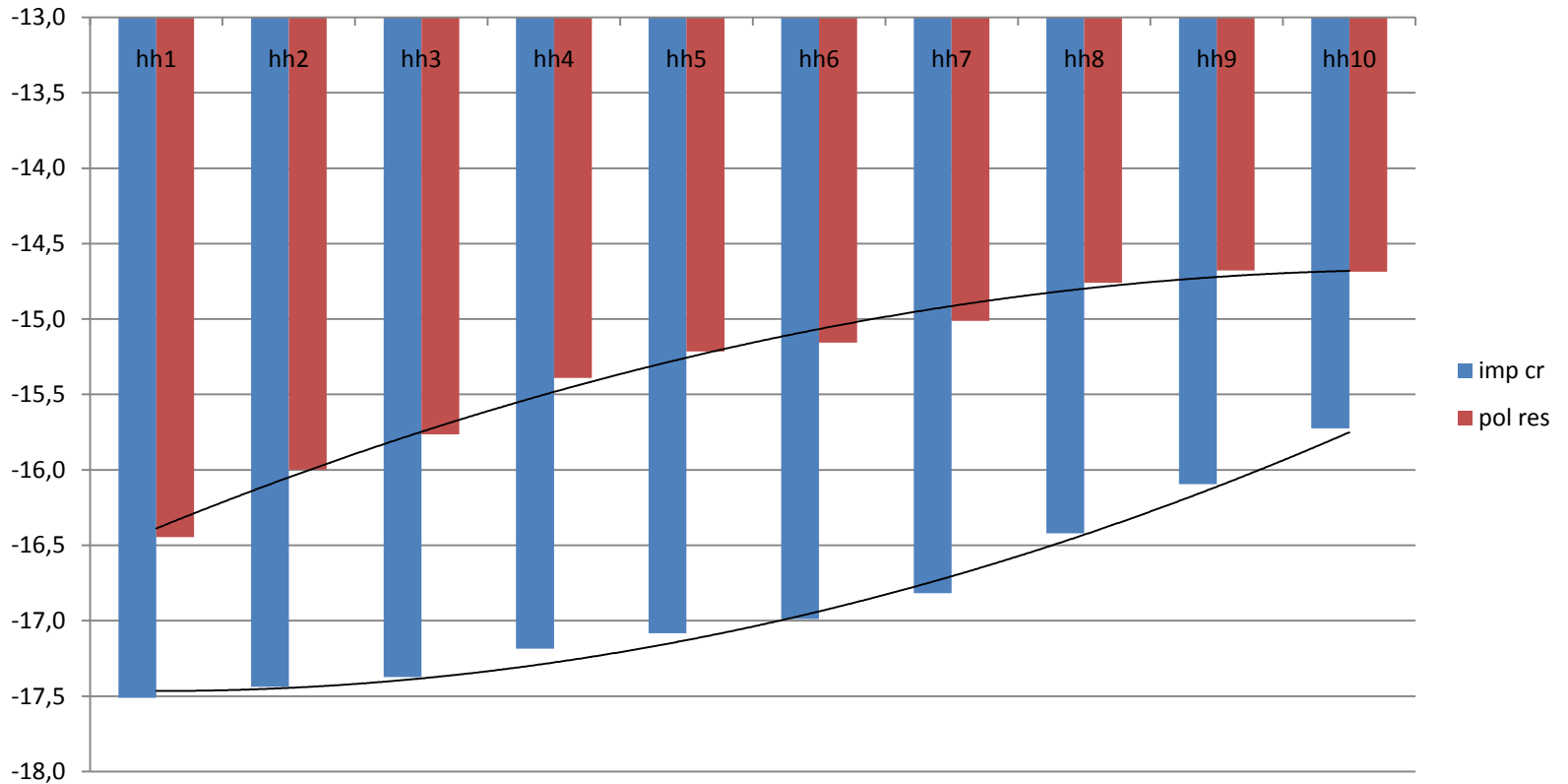
# Results –Adopted policies (10):

## Percentage changes in wages by labor type



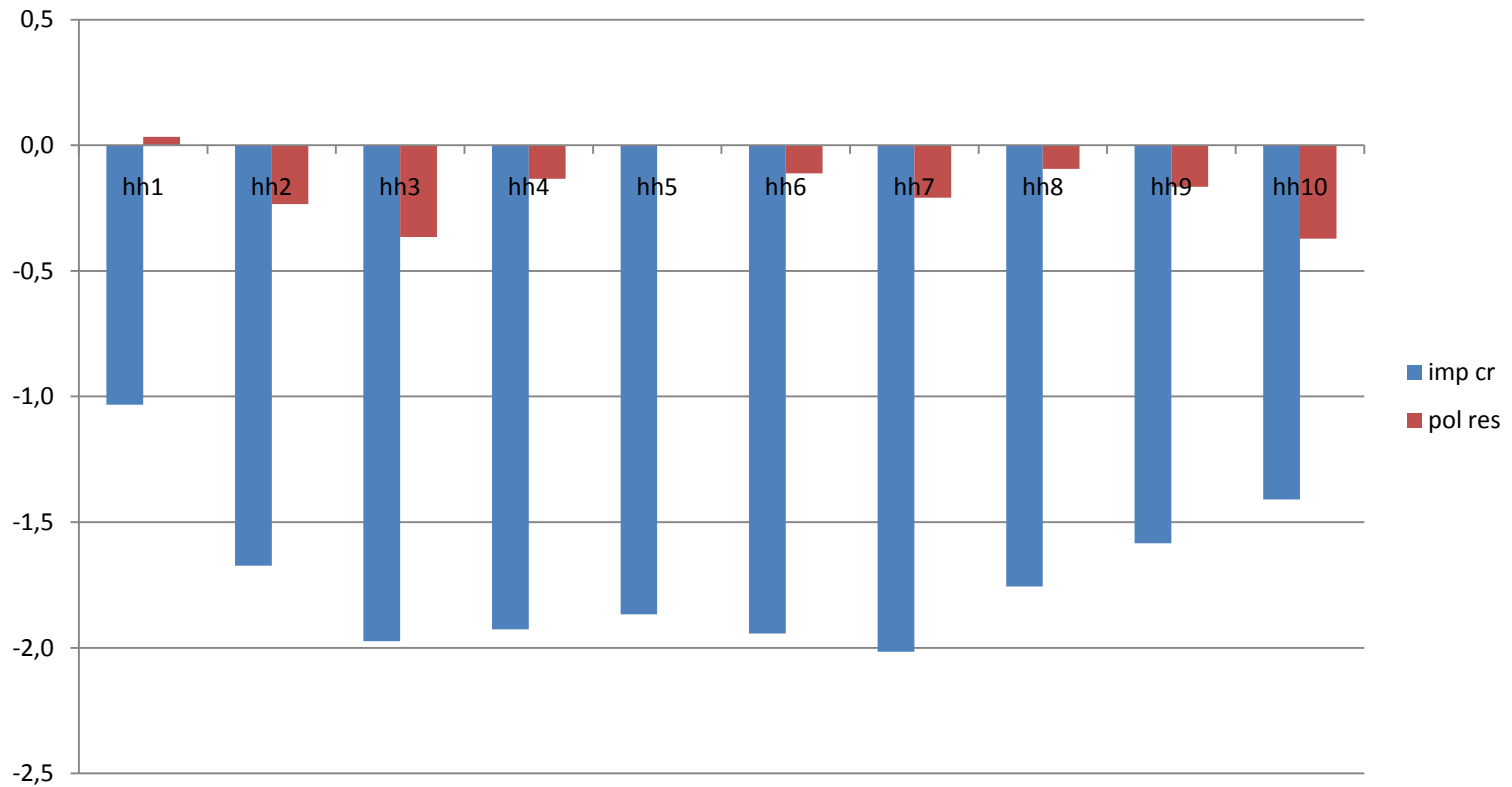
# Results –Adopted policies (11):

## Percentage changes in households' total nominal income



# Results –Adopted policies (12):

Percentage changes in households' total real income (own-decile)



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## Conclusions (1):

- Lower remittances and trade changes do have a negative impact on the economy
- Most export sectors experience shrinkages
- All sectors show decreases in imports
- Production destined to the domestic market shrinks too

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## Conclusions (2):

- Labor demand decreases in most sectors and wages decrease for all labor types (specially unskilled workers)
- Real household income falls for all households
- Governmental intervention plays a positive role in smoothing price response, including wages (specially for urban unskilled workers)



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## Conclusions (3):

- However, the impact of policy intervention on GDP growth is nil.