Online supplement to "Identifying Global and National Output and Fiscal Policy Shocks Using a GVAR"

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This online supplement is organized in two sections. Section S1 presents figures for the prior and posterior distributions of country-specific parameters $\alpha_i$ and $\beta_i$, for $i = 1, 2, ..., N$, and summary measures of posterior distribution of the effects of technology and fiscal policy shocks. Section S2 provides figures for the comparison of the effects of national technology and fiscal policy shocks in models with and without global shocks.

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The prior and posterior distributions of parameters $\alpha$ and $\beta$, and summary measures of posterior distribution of the effects of technology and fiscal policy shocks

Figure S1: Posterior distributions of parameters $\alpha$ and $\beta$, and the effects of 1 percent technology and fiscal policy shocks for Argentina

Posterior distributions of parameters $\alpha$ and $\beta$

Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks
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Posterior distributions of parameters $\alpha$ and $\beta$

Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks
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Posterior distributions of parameters $\alpha$ and $\beta$

Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks
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Posterior distributions of parameters $\alpha$ and $\beta$

![Prior and posterior for $\alpha$](image1.png)
![Prior and posterior for $\beta$](image2.png)

Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks

![Response of debt-to-gdp growth to fiscal shock](image3.png)
![Response of debt-to-gdp growth to technology shock](image4.png)
![Response of output growth to fiscal shock](image5.png)
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Posterior distributions of parameters $\alpha$ and $\beta$

Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks
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![Prior and posterior for $\beta$](image2)

Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks

![Response of debt-to-gdp growth to fiscal shock](image3)

![Response of debt-to-gdp growth to technology shock](image4)

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Posterior distributions of parameters $\alpha$ and $\beta$

![Prior and posterior for $\alpha$](image1)

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Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks

![Response of debt-to-gdp growth to fiscal shock](image3)

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Response of debt-to-gdp growth to technology shock

Response of output growth to fiscal shock

Response of output growth to technology shock
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Posterior distributions of parameters $\alpha$ and $\beta$

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Posterior distributions of parameters $\alpha$ and $\beta$

![Prior and posterior for $\alpha$](image1)

![Prior and posterior for $\beta$](image2)

Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks

![Response of debt-to-gdp growth to fiscal shock](image3)

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Posterior distributions of parameters $\alpha$ and $\beta$

![Posterior distributions of parameters $\alpha$ and $\beta$](image)

Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks

![Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks](image)
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Posterior distributions of parameters $\alpha$ and $\beta$

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Posterior distributions of parameters $\alpha$ and $\beta$

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Posterior distributions of parameters $\alpha$ and $\beta$

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Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks
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Posterior median (solid line) and 80 percent credible sets for the effects of 1 percent technology and fiscal policy shocks
S2 Effects of national technology and fiscal policy shocks in models with and without global shocks

Figure S40: IRFs for Argentina in models with and without global shocks (median of posterior distribution)

- Response of debt-to-gdp to fiscal shock
- Response of debt-to-gdp to technology shock
- Response of output to fiscal shock
- Response of output to technology shock

With global shocks
Without global shocks
Figure S41: IRFs for Australia in models with and without global shocks
(median of posterior distribution)

Response of debt-to-gdp to fiscal shock
Response of debt-to-gdp to technology shock

Response of output to fiscal shock
Response of output to technology shock

Figure S42: IRFs for Austria in models with and without global shocks
(median of posterior distribution)

Response of debt-to-gdp to fiscal shock
Response of debt-to-gdp to technology shock

Response of output to fiscal shock
Response of output to technology shock
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- Response of debt-to-gdp to fiscal shock
- Response of debt-to-gdp to technology shock

- Response of output to fiscal shock
- Response of output to technology shock

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- Response of debt-to-gdp to fiscal shock
- Response of debt-to-gdp to technology shock

- Response of output to fiscal shock
- Response of output to technology shock
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Response of debt-to-gdp to fiscal shock  Response of debt-to-gdp to technology shock

Response of output to fiscal shock  Response of output to technology shock

Figure S46: IRFs for Chile in models with and without global shocks
(median of posterior distribution)

Response of debt-to-gdp to fiscal shock  Response of debt-to-gdp to technology shock

Response of output to fiscal shock  Response of output to technology shock
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(median of posterior distribution)

- Response of debt-to-gdp to fiscal shock
- Response of debt-to-gdp to technology shock

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(median of posterior distribution)

- Response of debt-to-gdp to fiscal shock
- Response of debt-to-gdp to technology shock

Response of output to fiscal shock
Response of output to technology shock
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Response of debt-to-gdp to fiscal shock
Response of debt-to-gdp to technology shock

Response of output to fiscal shock
Response of output to technology shock

Figure S50: IRFs for Finland in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock
Response of debt-to-gdp to technology shock

Response of output to fiscal shock
Response of output to technology shock
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Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock

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Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock
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Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock

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Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock
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Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock

Figure S56: IRFs for Italy in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock
Figure S57: IRFs for Japan in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock  
Response of debt-to-gdp to technology shock

Response of output to fiscal shock  
Response of output to technology shock

Figure S58: IRFs for Korea in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock  
Response of debt-to-gdp to technology shock

Response of output to fiscal shock  
Response of output to technology shock
Figure S59: IRFs for Malaysia in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock

Figure S60: IRFs for Mexico in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock

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(median of posterior distribution)

Response of debt-to-gdp to fiscal shock  Response of debt-to-gdp to technology shock

Response of output to fiscal shock  Response of output to technology shock

Figure S62: IRFs for Netherlands in models with and without global shocks 
(median of posterior distribution)

Response of debt-to-gdp to fiscal shock  Response of debt-to-gdp to technology shock

Response of output to fiscal shock  Response of output to technology shock
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Response of debt-to-gdp to fiscal shock  
Response of debt-to-gdp to technology shock  
Response of output to fiscal shock  
Response of output to technology shock

Figure S64: IRFs for Nigeria in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock  
Response of debt-to-gdp to technology shock  
Response of output to fiscal shock  
Response of output to technology shock
Figure S65: IRFs for Norway in models with and without global shocks
(median of posterior distribution)

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Figure S66: IRFs for Peru in models with and without global shocks
(median of posterior distribution)

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Response of debt-to-gdp to fiscal shock  
Response of debt-to-gdp to technology shock

Response of output to fiscal shock  
Response of output to technology shock

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(median of posterior distribution)

Response of debt-to-gdp to fiscal shock  
Response of debt-to-gdp to technology shock

Response of output to fiscal shock  
Response of output to technology shock
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Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock

Figure S70: IRFs for Spain in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock
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(median of posterior distribution)

Response of debt-to-gdp to fiscal shock  Response of debt-to-gdp to technology shock

Response of output to fiscal shock  Response of output to technology shock

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(median of posterior distribution)

Response of debt-to-gdp to fiscal shock  Response of debt-to-gdp to technology shock

Response of output to fiscal shock  Response of output to technology shock
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Response of debt-to-gdp to fiscal shock
Response of debt-to-gdp to technology shock

Response of output to fiscal shock
Response of output to technology shock

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Response of debt-to-gdp to fiscal shock
Response of debt-to-gdp to technology shock

Response of output to fiscal shock
Response of output to technology shock
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- Response of debt-to-gdp to technology shock
- Response of output to fiscal shock
- Response of output to technology shock

Figure S76: IRFs for UK in models with and without global shocks (median of posterior distribution)

- Response of debt-to-gdp to fiscal shock
- Response of debt-to-gdp to technology shock
- Response of output to fiscal shock
- Response of output to technology shock
Figure S77: IRFs for USA in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock

Figure S78: IRFs for Venezuela in models with and without global shocks (median of posterior distribution)

Response of debt-to-gdp to fiscal shock

Response of debt-to-gdp to technology shock

Response of output to fiscal shock

Response of output to technology shock