BRIDGING THE GAP THROUGH PUBLIC INTERVENTION: EVIDENCE FROM THE CASSA PER IL MEZZOGIORNO

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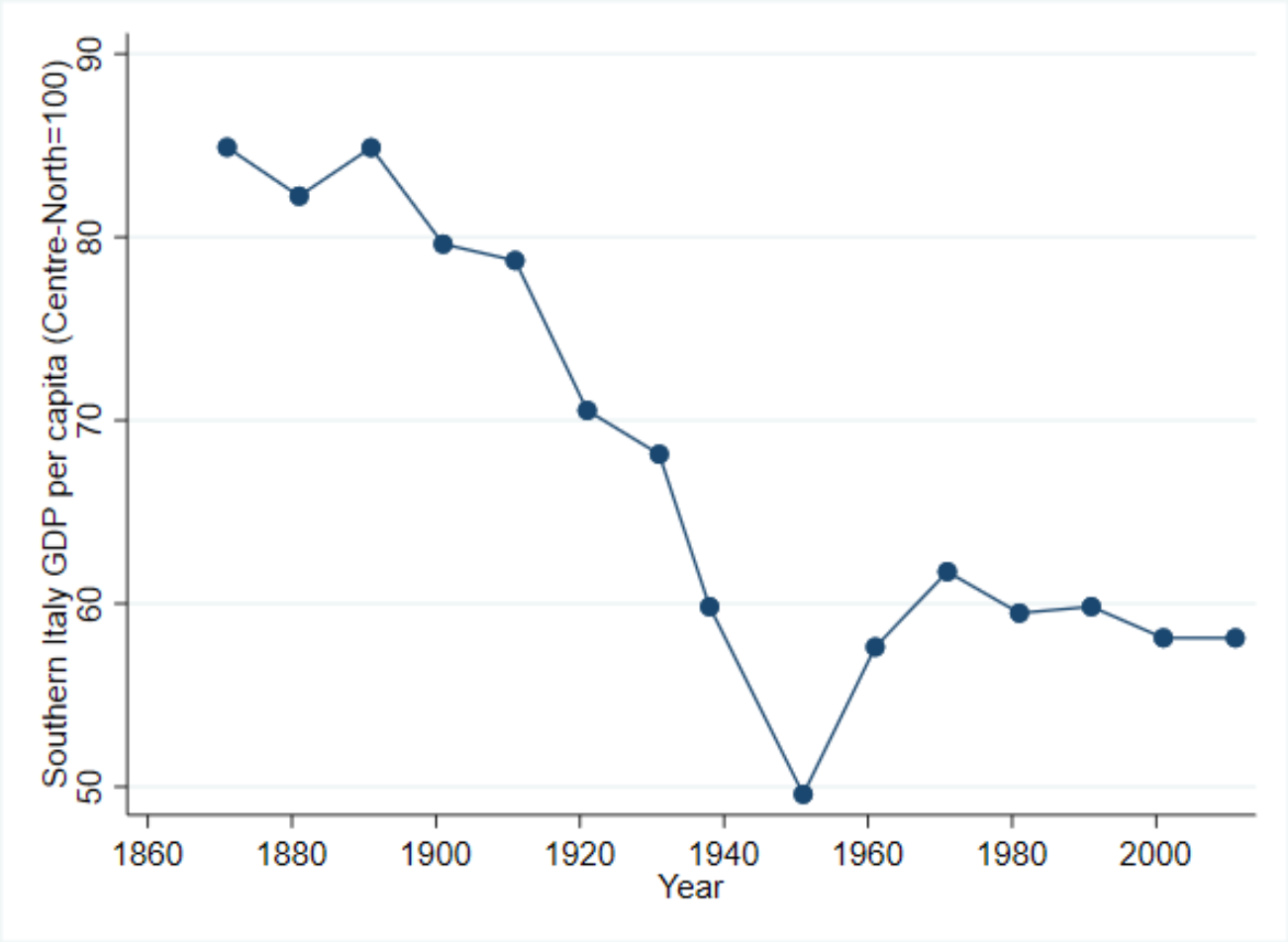


AFTER WWII

- The idea of the recovery of European countries through a system of planned programs
- The birth of Svimez
- Public intervention: an opportunity to bridge the gap?
- The experience of the Tennessee Valley Authority

THE BIRTH OF CASSA PER IL MEZZOGIORNO

1950, birth of Cassa per il Mezzogiorno

- Autonomous board until 1971
- Three types of intervention:
  - Public works
  - Non-refundable grants
  - Concessional financing (in the final years)

THE MAIN OBJECTIVES OF THE CASSA

- Eliminate land inequality through an increase in productivity
- Build infrastructures to create the conditions for industrialization
- Push on industrialization through firms' grants

MODEL, DATA AND METHODS

Acronym	Description	Timespan
Lncassa	Annual funding of public works and grants	1960-1992
Lnopere	Annual funding of public works	1960-1992
Lnfondo	Annual funding of grants	1960-1992
Lnvami	Value Added in manufacturing industry	1963-1992
Shareva	Share of manufacturing value added in the total	1963-1992
Sharel	Share of workers in the manufacturing sector in the total	1960-1992
Llmi	Units of labour in manufacturing industry	1960-1992
Linvmi	Investment in manufacturing industry	1970-1992
Shareinvmi	Share of investments in the manufacturing sector in the total	1970-1992
Lvanbs	Value Added at factor prices, net of bank services	1960-1992
Prodl	Labour productivity	1960-1992
Lvaag	Value Added in agriculture	1960-1992
Prodag	Labour productivity in agriculture	1960-1992
Lvami	Value Added in manufacturing industry	1963-1992
Prodmi	Labour productivity in manufacturing industry	1963-1992

Ten regions covered by the study:

Abruzzo
Basilicata
Calabria
Campania
Lazio
Marche
Molise
Puglia
Sardegna
Sicilia

MODEL, DATA AND METHODS

To study the effect of the 'Cassa del Mezzogiorno' on the structural change in Southern Italy and on aggregate and sectoral labour productivity, we make use of a Panel VAR with fixed effects and specific time trends (Goodhart and Hoffman, 2008) and estimate the following models:

Model 1: lncassa-lnvami-shareva

Model 2: lncassa-llmi-sharel

Model 3: lncassa-linvmi-shareinvmi

Model 4: lncassa-lvanbs-prodl

Model 5: lncassa-lvaag-prodag

Model 6: lncassa-lvami-prodmi

We recalculate each model by splitting the total expenditure into two components: funding for public works (lnopere) and funding for grants (lnfondo)

Model, data and methods

A Panel VAR (Goodhart and Hoffman, 2008) is represented as follows in equation (1):

$$B_0 y_{i,t} = \alpha_i + \sum_{i=1}^{p} B_i \, y_{i,t-p} + \tau_i + w_t \; (1)$$

Where $u_t = B_0^{-1} w_t$. $\boldsymbol{B_0}$ represents the matrix of **contemporaneous relationships** and w_t is the vector of exogenous structural shocks. To isolate an **exogenous** fiscal policy **shock,** we need to impose restrictions on the B_0 matrix which derive from economic theory. Identification is based on zero restrictions **Cholesky factorisation** (Perotti, 2004).

We assume that Cassa's expenditures are the most exogenous variable and that they do not respond simultaneously to other macroeconomic variables considered in the model.

Dealing with annual data, we include **1 lag** in every model.

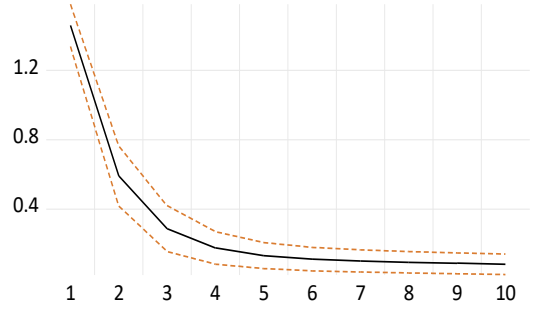
To take regional specificities into account, we include fixed effects in our model (α_i) and make use of specific time trends (τ_i) to address the problem of stationarity. In addition, we also include a temporal dummy to control for the 1971 reform of the regions.

Then impulse response functions (**IRFs**) will be calculated to detect the effect of a fiscal expansion of the Cassa del Mezzogiorno on the variable of our interest.

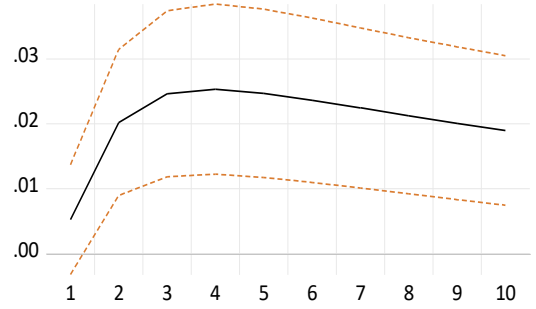
Effect of the Cassa del Mezzogiorno on the share of manufacturing value added in the total

Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

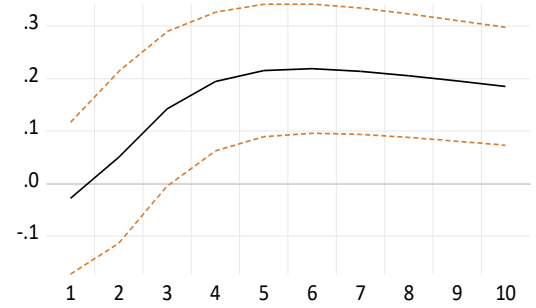
Response of LNCASSA to LNCASSA



Response of LVAMI to LNCASSA

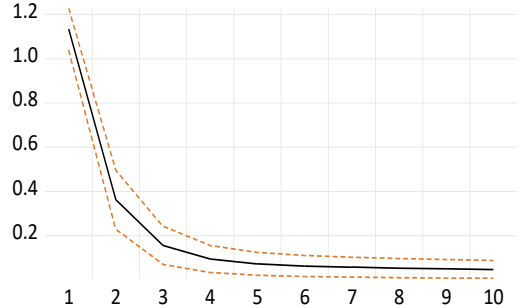


Response of SHAREVA to LNCASSA

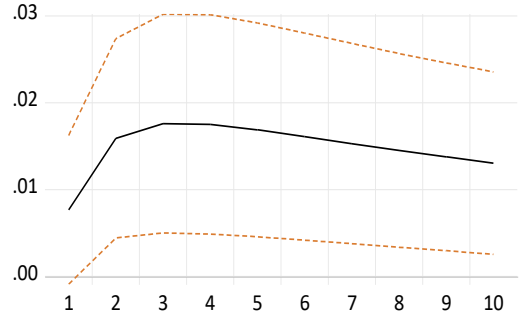


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

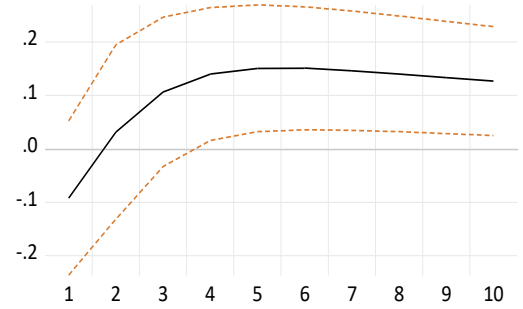
Response of LNOPERE to LNOPERE



Response of LVAMI to LNOPERE

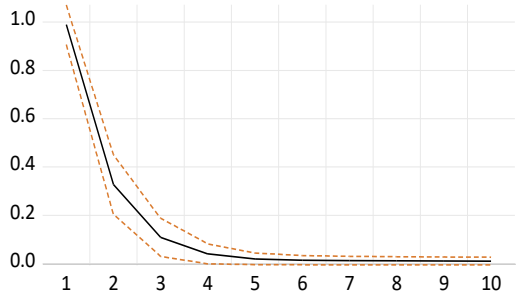


Response of SHAREVA to LNOPERE

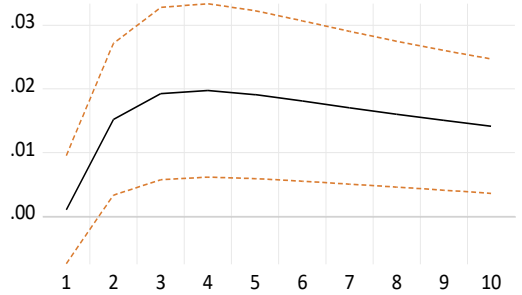


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

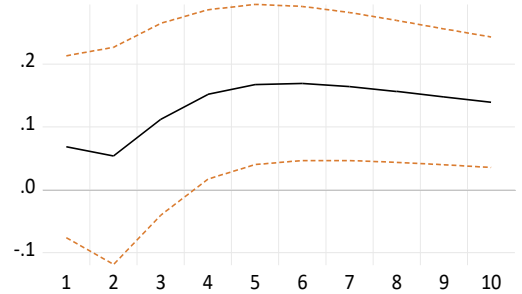
Response of LNFONDO to LNFONDO



Response of LVAMI to LNFONDO



Response of SHAREVA to LNFONDO



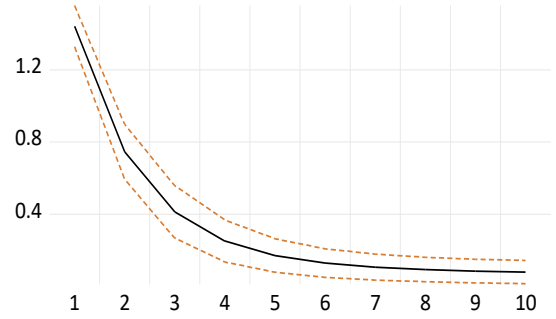
EFFECT OF THE CASSA DEL MEZZOGIORNO ON THE SHARE OF MANUFACTURING VALUE ADDED IN THE TOTAL

	Effects on SHAREVA					
	LNCASSA		LNOPERE		LNFONDO	
	IRF	CUM	IRF	CUM	IRF	CUM
1	-0,020	-0,020	-0,081	-0,081	0,069	0,069
2	0,034	0,010	0,027	-0,041	0,055	0,093
3	0,097	0,070	0,094	0,028	0,113	0,164
4	0,133	0,142	0,123	0,107	0,153	0,263
5	0,147	0,216	0,133	0,185	0,169	0,332
6	0,150	0,286	0,133	0,259	0,171	0,429
7	0,147	0,351	0,130	0,328	0,166	0,523
8	0,141	0,409	0,123	0,389	0,158	0,612
9	0,134	0,461	0,118	0,445	0,149	0,694
10	0,127	0,508	0,112	0,496	0,140	0,771
Average	0,121	0,243	0,091	0,212	0,134	0,395

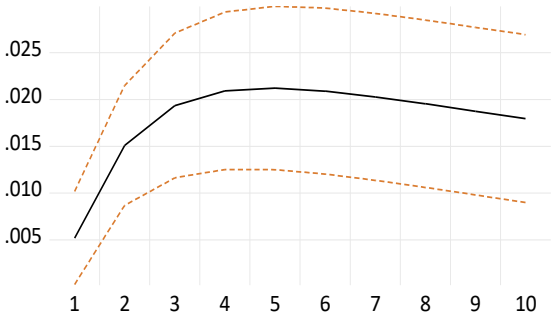
Effect of the Cassa del Mezzogiorno on the share of manufacturing workers in the total

Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

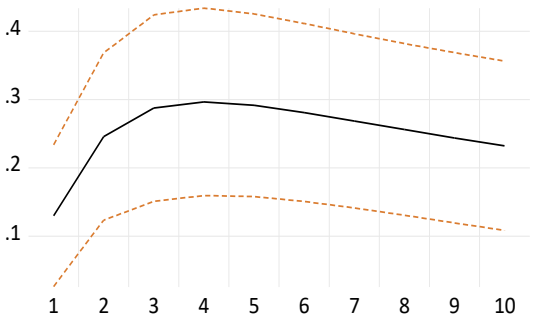
Response of LNCASSA to LNCASSA



Response of LLMI to LNCASSA

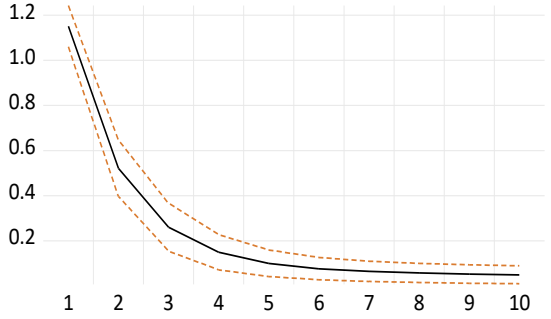


Response of SHAREL to LNCASSA

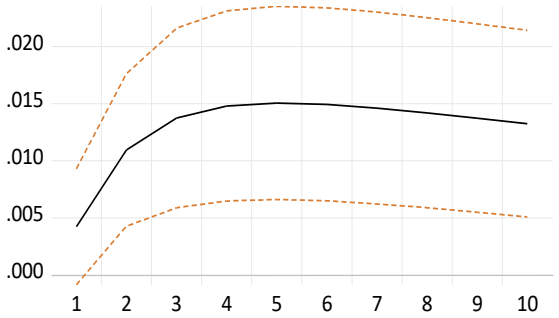


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

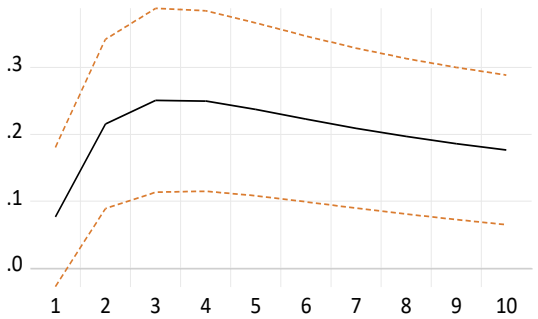
Response of LNOPERE to LNOPERE



Response of LLMI to LNOPERE

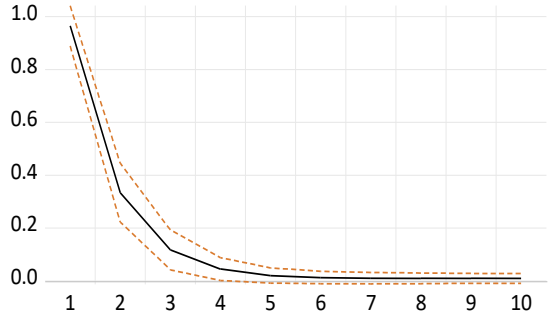


Response of SHAREL to LNOPERE

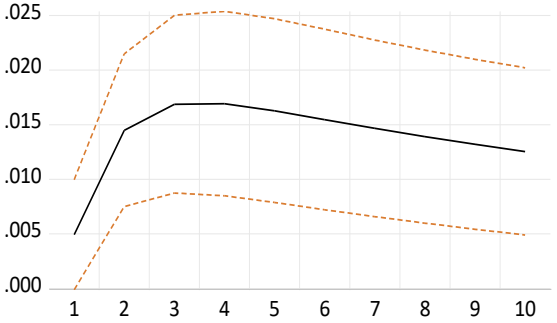


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

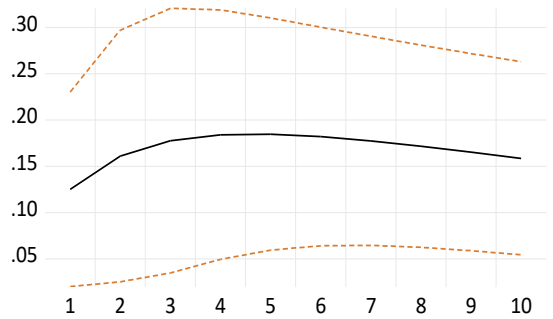
Response of LNFONDO to LNFONDO



Response of LLMI to LNFONDO



Response of SHAREL to LNFONDO



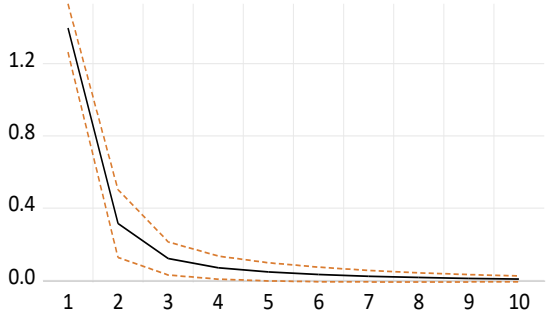
EFFECT OF THE CASSA DEL MEZZOGIORNO ON THE SHARE OF MANUFACTURING WORKERS IN THE TOTAL

	Effects on SHAREL					
	LNCASSA		LNOPERE		LNFONDO	
	IRF	CUM	IRF	CUM	IRF	CUM
1	0,090	0,090	0,067	0,067	0,093	0,130
2	0,171	0,172	0,188	0,175	0,178	0,220
3	0,200	0,255	0,218	0,281	0,265	0,327
4	0,206	0,337	0,217	0,381	0,350	0,444
5	0,203	0,415	0,206	0,472	0,430	0,562
6	0,195	0,487	0,194	0,555	0,505	0,679
7	0,187	0,554	0,182	0,629	0,574	0,793
8	0,178	0,615	0,171	0,697	0,637	0,902
9	0,169	0,671	0,162	0,758	0,696	1,005
10	0,161	0,722	0,154	0,814	0,749	1,102
Average	0,176	0,432	0,176	0,483	0,448	0,616

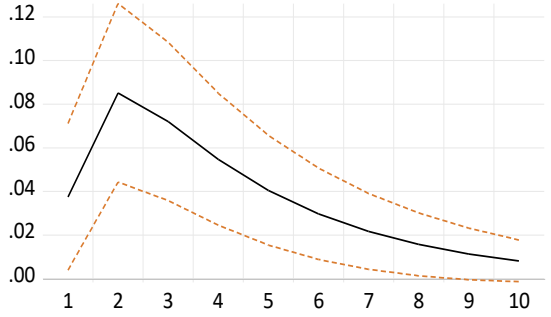
Effect of the Cassa del Mezzogiorno on the share of manufacturing investments in the total

Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

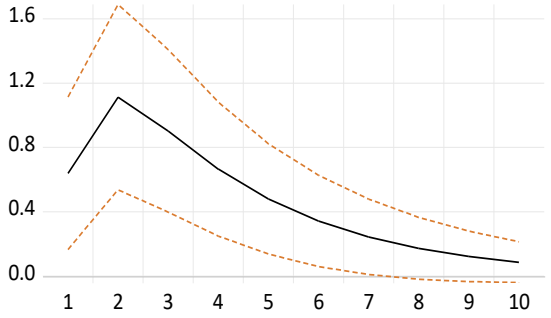
Response of LNCASSA to LNCASSA



Response of LINVMI to LNCASSA

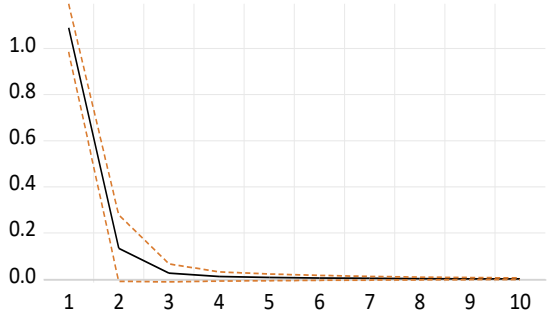


Response of SHAREINVMI to LNCASSA

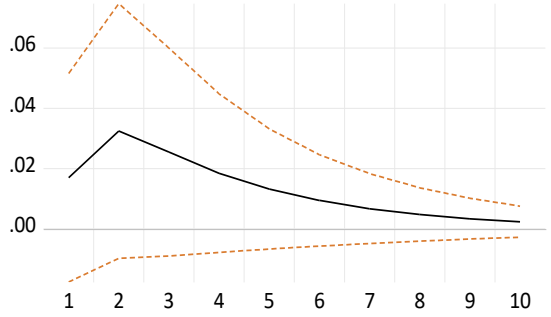


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

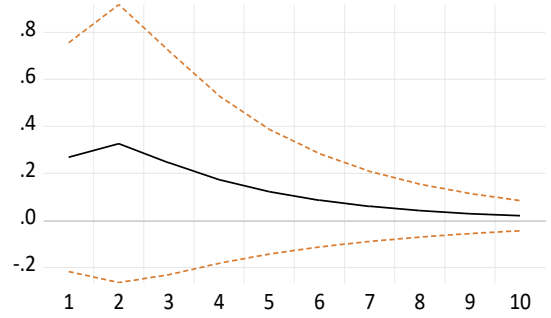
Response of LNOPERE to LNOPERE



Response of LINVMI to LNOPERE

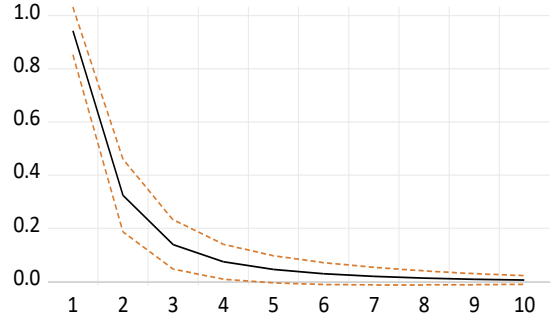


Response of SHAREINVMI to LNOPERE

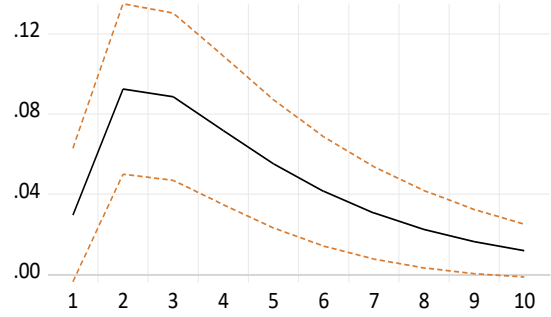


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

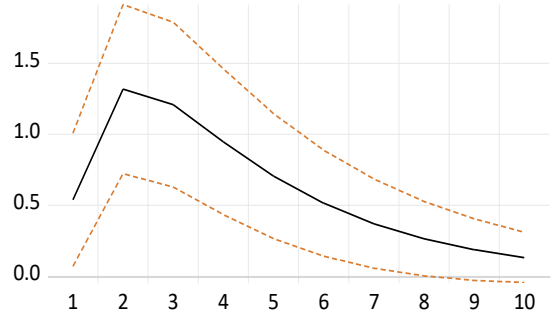
Response of LNFONDO to LNFONDO



Response of LINVMI to LNFONDO



Response of SHAREINVMI to LNFONDO



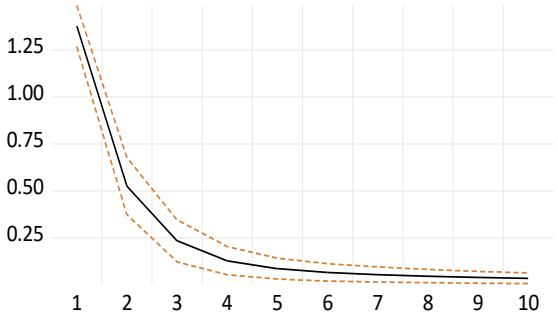
EFFECT OF THE CASSA DEL MEZZOGIORNO ON THE SHARE OF MANUFACTURING INVESTMENTS IN THE TOTAL

	Effects on SHAREINVMI					
	Cassa		Opere		Fondo	
	IRF	CUM	IRF	CUM	IRF	CUM
1	0,458	0,458	0,247	0,247	0,572	0,572
2	0,795	1,023	0,300	0,487	1,398	1,467
3	0,645	1,449	0,225	0,673	1,281	2,181
4	0,476	1,745	0,160	0,805	1,004	2,713
5	0,343	1,949	0,112	0,897	0,748	3,095
6	0,245	2,091	0,079	0,961	0,545	3,368
7	0,175	2,189	0,055	1,005	0,393	3,564
8	0,124	2,257	0,039	1,035	0,281	3,702
9	0,087	2,305	0,027	1,056	0,199	3,801
10	0,062	2,339	0,018	1,071	0,140	3,872
Average	0,341	1,780	0,126	0,824	0,656	2,833

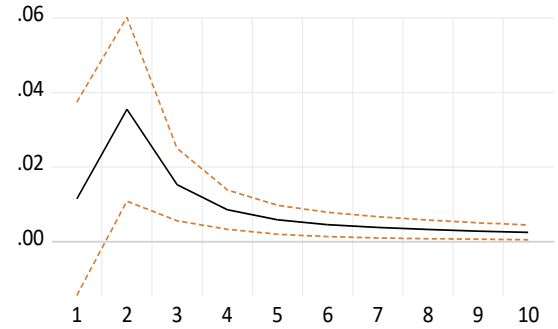
Effect of the Cassa del Mezzogiorno on the labour productivity

Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

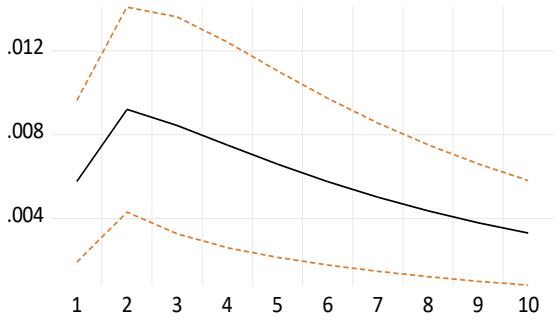
Response of LNCASSA to LNCASSA



Response of LVANBS to LNCASSA

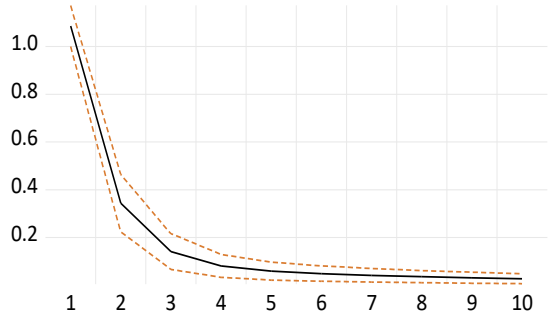


Response of LPRODL to LNCASSA

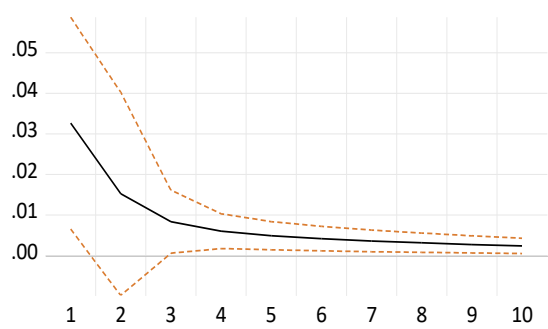


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

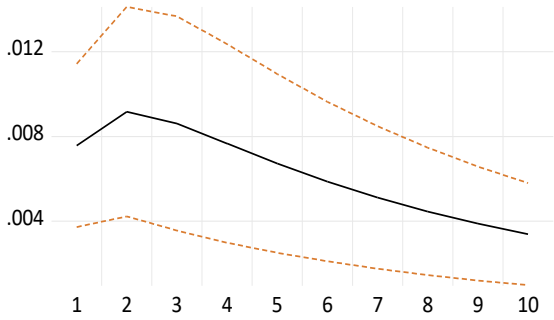
Response of LNOPERE to LNOPERE



Response of LVANBS to LNOPERE

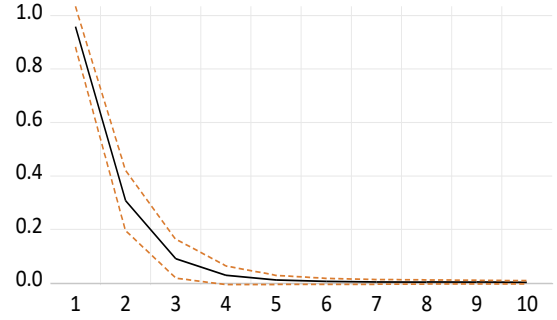


Response of LPRODL to LNOPERE

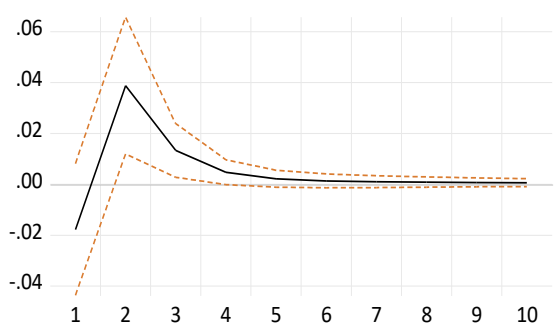


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

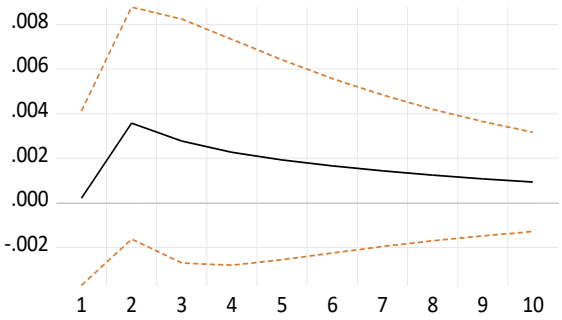
Response of LNFONDO to LNFONDO



Response of LVANBS to LNFONDO



Response of LPRODL to LNFONDO



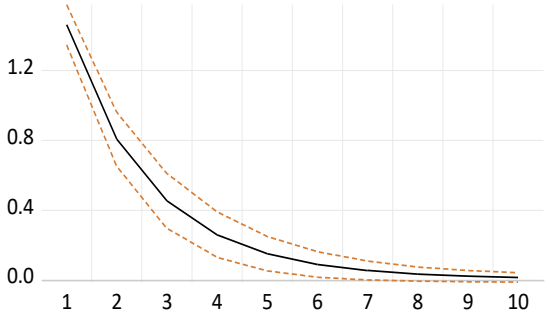
EFFECT OF THE CASSA DEL MEZZOGIORNO ON THE LABOUR PRODUCTIVITY

	Effects on PRODL					
	Cassa		Opere		Fondo	
	IRF	CUM	IRF	CUM	IRF	CUM
1	0,004	0,004	0,007	0,007	0,000	0,000
2	0,007	0,008	0,008	0,012	0,004	0,003
3	0,006	0,011	0,008	0,016	0,003	0,005
4	0,006	0,014	0,007	0,020	0,002	0,006
5	0,005	0,016	0,006	0,023	0,002	0,008
6	0,004	0,018	0,005	0,026	0,002	0,009
7	0,004	0,020	0,005	0,028	0,001	0,010
8	0,003	0,021	0,004	0,030	0,001	0,011
9	0,003	0,022	0,004	0,032	0,001	0,011
10	0,002	0,023	0,003	0,033	0,001	0,012
Average	0,004	0,016	0,006	0,023	0,002	0,008

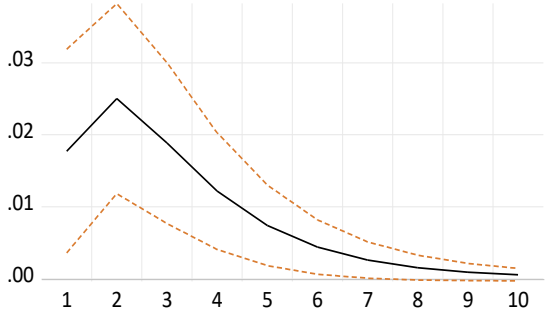
Effect of the Cassa del Mezzogiorno on the labour productivity in the Agriculture

Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

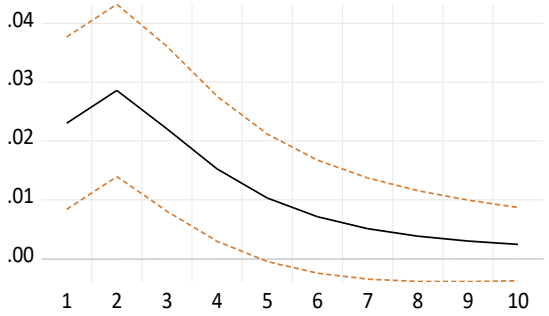
Response of LNCASSA to LNCASSA



Response of LVAAG to LNCASSA

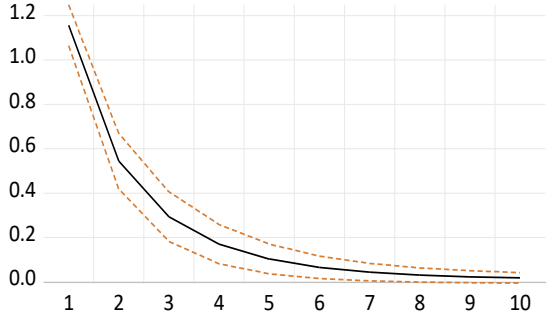


Response of LPRODAG to LNCASSA

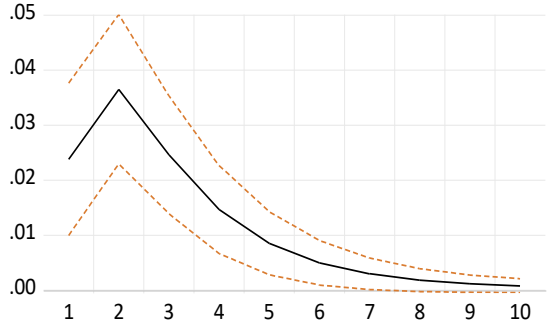


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

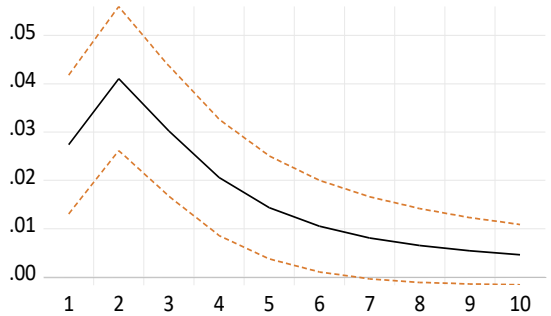
Response of LNOPERE to LNOPERE



Response of LVAAG to LNOPERE

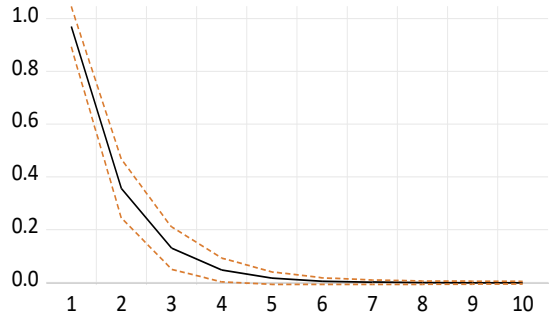


Response of LPRODAG to LNOPERE

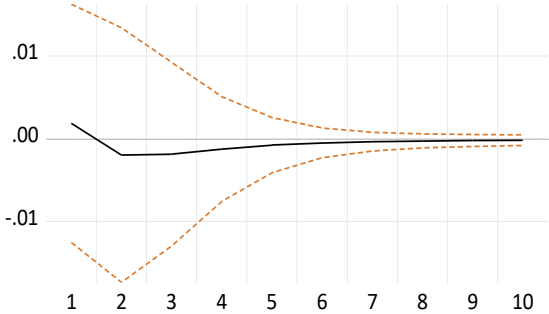


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

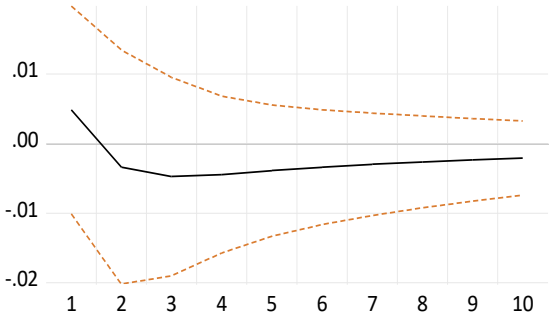
Response of LNFONDO to LNFONDO



Response of LVAAG to LNFONDO



Response of LPRODAG to LNFONDO



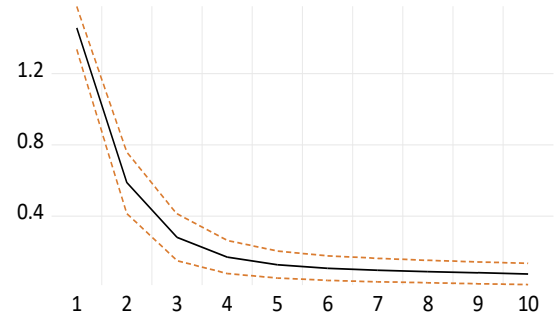
EFFECT OF THE CASSA DEL MEZZOGIORNO ON THE LABOUR PRODUCTIVITY IN THE AGRICULTURE

	Effects on PRODAG					
	Cassa		Opere		Fondo	
	IRF	CUM	IRF	CUM	IRF	CUM
1	0,016	0,016	0,024	0,024	0,005	0,005
2	0,020	0,023	0,036	0,040	-0,004	0,001
3	0,015	0,027	0,026	0,049	-0,005	-0,002
4	0,010	0,030	0,018	0,055	-0,005	-0,005
5	0,007	0,032	0,012	0,059	-0,004	-0,008
6	0,005	0,033	0,009	0,062	-0,004	-0,010
7	0,003	0,034	0,007	0,064	-0,003	-0,012
8	0,003	0,035	0,006	0,066	-0,003	-0,014
9	0,002	0,035	0,005	0,068	-0,002	-0,015
10	0,002	0,036	0,004	0,069	-0,002	-0,017
Average	0,008	0,030	0,015	0,056	-0,003	-0,008

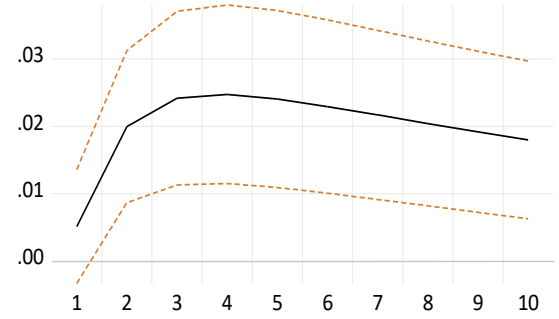
Effect of the Cassa del Mezzogiorno on the labour productivity of the Manifacturing sector

Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

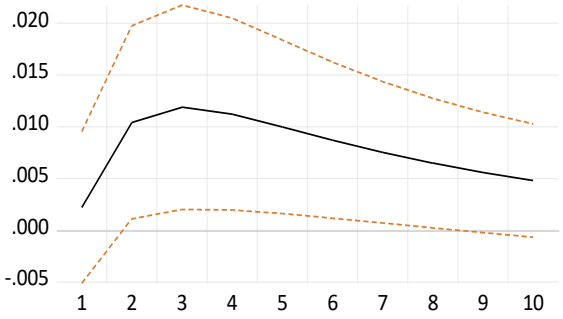
Response of LNCASSA to LNCASSA



Response of LVAMI to LNCASSA

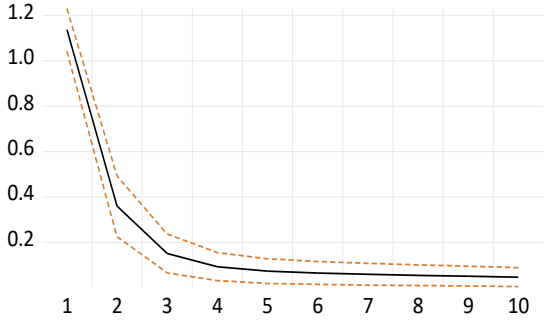


Response of LPRODMI to LNCASSA

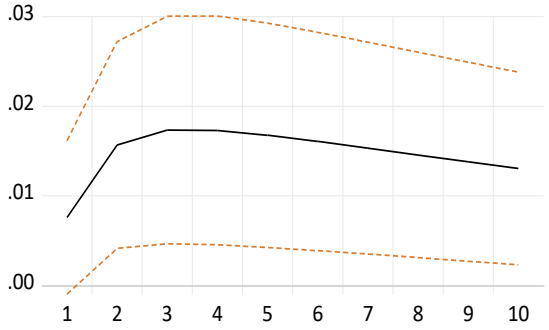


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

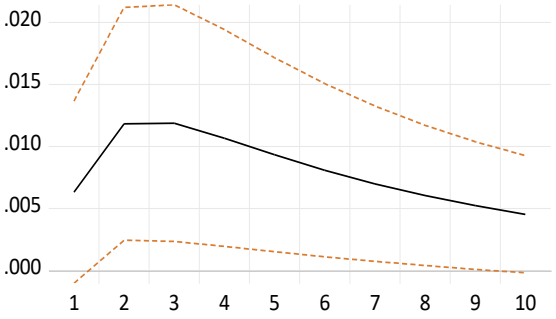
Response of LNOPERE to LNOPERE



Response of LVAMI to LNOPERE

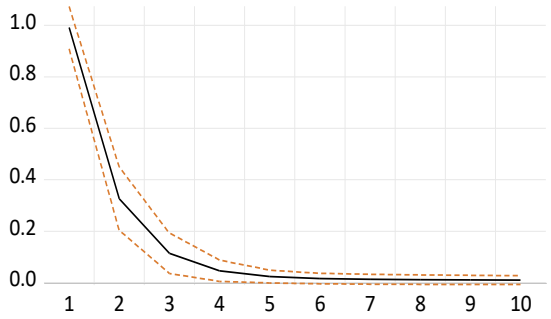


Response of LPRODMI to LNOPERE

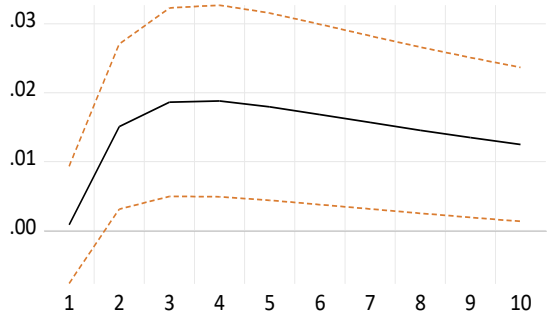


Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

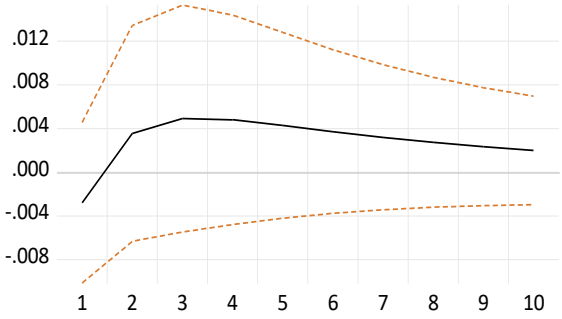
Response of LNFONDO to LNFONDO



Response of LVAMI to LNFONDO



Response of LPRODMI to LNFONDO



EFFECT OF THE CASSA DEL MEZZOGIORNO ON THE LABOUR PRODUCTIVITY OF THE MANIFACTURING SECTOR

	Effects on PRODMI					
	Cassa		Opere		Fondo	
	IRF	CUM	IRF	CUM	IRF	CUM
1	0,002	0,002	0,006	0,006	-0,003	-0,003
2	0,007	0,006	0,017	0,017	0,004	0,001
3	0,008	0,011	0,010	0,022	0,005	0,004
4	0,008	0,014	0,010	0,027	0,005	0,007
5	0,007	0,017	0,008	0,032	0,004	0,010
6	0,006	0,020	0,007	0,035	0,004	0,012
7	0,005	0,022	0,006	0,037	0,003	0,014
8	0,004	0,023	0,005	0,039	0,003	0,016
9	0,004	0,025	0,005	0,041	0,002	0,017
10	0,003	0,026	0,004	0,042	0,002	0,018
Average	0,005	0,017	0,008	0,030	0,003	0,010

CONCLUSIONS