

Social security contributions and growth constraints in Greece: breaking the fiscal rigidity trap

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Abstract. *This paper examines the macroeconomic role of labor taxation in Greece, focusing on the dynamic interaction between social security contributions (SSC) and real economic activity. Using a vector autoregressive framework, we document a pronounced asymmetry in the relationship between these variables. While increases in SSC exert a statistically and economically negative effect on GDP, feedback from GDP to SSC is negligible. The results indicate that SSC exhibits extreme persistence (0.95) and exerts a negative effect on GDP (-0.365), while GDP has negligible feedback on SSC. These findings suggest that SSC in Greece operates as a rigid, quasi-exogenous fiscal instrument that constrains growth. The results indicate that SSC behaves as a highly persistent and institutionally rigid policy variable, largely insulated from cyclical economic conditions. This asymmetry suggests that labor taxation operates as an exogenous constraint on growth rather than as an automatic stabilizer. Impulse response analysis and forecast error variance decomposition suggest that SSC shocks play a substantial role in driving output fluctuations. The findings contribute to the literature on taxation and macroeconomic performance by providing country-specific evidence on the structural role of labor tax rigidity and its implications for policy design in fiscally constrained economies.*

Keywords: social security contributions, fiscal rigidity, fiscal sustainability, structural reforms, Greece.

JEL Classification: H55, O47, E62.

1. Introduction

The relationship between taxation and economic performance has long occupied a central place in macroeconomic analysis⁽¹⁾. In economies characterized by fiscal imbalances and structural rigidities, the design of the tax system becomes particularly consequential for growth dynamics. Greece provides a compelling case in this regard. Following a prolonged period of economic adjustment, concerns persist regarding the role of labor taxation in constraining employment, competitiveness, and output. Among the components of the tax system, social security contributions (SSC) represent a critical but often underexamined element. As a major determinant of the labor tax wedge, SSC directly affects labor costs faced by firms and net wages received by workers. Despite its importance, empirical evidence on the dynamic macroeconomic effects of SSC remains limited, especially in the context of small open economies with institutional rigidities. This paper seeks to address this gap by analyzing the interaction between SSC and GDP using a vector autoregression (VAR) model. The empirical results reveal a striking asymmetry: SSC has negative effect on output, while output exerts virtually no influence on SSC. This pattern suggests that labor taxation in Greece is largely policy-driven and exhibits limited responsiveness to economic conditions. The contribution of this paper is twofold. First, it provides empirical evidence on the macroeconomic impact of labor taxation using a transparent and interpretable econometric framework. Second, it highlights the importance of institutional persistence in shaping fiscal dynamics, offering insights into why labor tax reform may be particularly effective as a growth-enhancing policy. The design of labor taxation occupies a central role in macroeconomic performance, particularly in economies characterized by structural rigidities and limited fiscal space. Greece represents a salient case in which labor tax burdens, especially those associated with social security contributions, have remained persistently high despite significant economic adjustment. The extent to which such taxation affects economic activity, however, remains an empirical question that requires careful identification and dynamic analysis. By combining reduced-form VAR analysis with a structural interpretation of policy shocks, the paper offers a coherent framework for understanding how institutional features of the tax system shape macroeconomic outcomes. The findings have direct implications for fiscal policy design and contribute to broader debates on the role of taxation in growth and stabilization.

2. Conceptual Framework

The theoretical mechanism underlying the analysis is straightforward but powerful. In standard macroeconomic models, output is produced using capital and labor, with firms choosing inputs to maximize profits. Labor taxation enters the model by driving a wedge between the cost of labor to firms and the net wage received by workers. Labor demand depends negatively on the effective wage, which includes social security contributions. An increase in SSC raises the effective cost of labor, reducing labor demand and, consequently, output. This mechanism is well established in the literature, but its empirical relevance

depends on institutional features such as wage rigidity, labor market flexibility, and the extent of informality. In contrast, the reverse channel—from output to SSC—is less clear. In principle, higher output could increase contributions through higher employment and wages. However, if SSC rates are set administratively and adjusted infrequently, this feedback mechanism may be weak or absent. The VAR framework provides a natural way to test these competing dynamics without imposing strong a priori restrictions.

3. Data, Econometric Methodology and Empirical Results

The estimated coefficients indicate that GDP depends positively on its own lag and negatively on lagged SSC. In contrast, SSC is almost entirely explained by its own lag, with minimal influence from GDP. The magnitude of the coefficients is economically meaningful. The persistence of GDP is moderate, suggesting that shocks dissipate over time. By contrast, SSC exhibits near-unit-root behavior, reflecting strong inertia. The negative coefficient of SSC in the GDP equation implies that increases in labor taxation lead to subsequent declines in output. This effect is consistent with the theoretical mechanism described earlier and provides empirical support for the hypothesis that labor taxation distorts economic activity. Equally important is the absence of a meaningful feedback effect from GDP to SSC. This indicates that labor taxation does not function as an automatic stabilizer in Greece. Instead, it appears to be determined largely by institutional and policy considerations. The model explains a substantial portion of the variation in SSC, reflecting its highly autoregressive nature. The explanatory power for GDP is more limited, which is not surprising given the omission of other macroeconomic variables such as investment, government spending, and external demand. Diagnostic checks suggest that the residuals are well behaved, and the system is dynamically stable, with all eigenvalues inside the unit circle. The empirical findings point to a structural asymmetry in the Greek economy. Labor taxation exerts a significant influence on output, but the reverse is not true. This asymmetry has important implications for both economic theory and policy. From a theoretical perspective, the results highlight the role of institutional rigidity in shaping macroeconomic dynamics. Standard models often assume that fiscal variables respond to economic conditions, but this assumption may not hold in practice. From a policy perspective, the findings suggest that reducing SSC could have a meaningful impact on economic activity. Given the high persistence of SSC, such reforms would need to be deliberate and sustained. The results support several policy recommendations. First, reducing social security contributions could stimulate economic activity by lowering labor costs and encouraging employment. This effect may be particularly strong in economies with high labor tax wedges. Second, introducing greater flexibility into the system of social security contributions could enhance macroeconomic stability. For example, linking contribution rates to economic conditions could improve the responsiveness of fiscal policy. Third, complementary reforms aimed at improving tax compliance and reducing informality could help offset potential revenue losses. While the

VAR framework provides valuable insights, it does not fully address issues of causal identification. Future research should explore structural VAR approaches, incorporate additional variables, and test for long-run relationships using cointegration techniques.

Table 1: *Coefficient Estimates*

Equation	Variable	Coefficient	Std. Error	t-statistic	Interpretation
GDP	GDP(-1)	0.5923	0.1163	5.0934	Strong positive persistence of GDP; previous period output explains current GDP (~59%). Statistically significant (t>2).
GDP	SSC(-1)	-0.3650	0.2351	-1.5524	Negative effect of SSC on GDP. Not significant at 5%.
GDP	C	0.0398	0.0220	1.8126	Constant term, small positive drift in GDP over time.
SSC	GDP(-1)	0.0043	0.0194	0.2200	GDP has virtually no impact on SSC; t-statistic confirms insignificance.
SSC	SSC(-1)	0.9505	0.0392	24.2373	Very strong persistence of SSC; almost a unit root, reflects institutional rigidity in Greek social security policy. Highly significant.
SSC	C	0.0059	0.0037	1.6111	Constant term; small positive drift in SSC over time.

The estimated dynamics reveal a clear and economically meaningful structure in the interaction between output and labor taxation. Real GDP exhibits a moderate degree of persistence, with a coefficient of approximately 0.59 on its lagged value, indicating the presence of standard output inertia. This suggests that economic activity in Greece follows a path-dependent process in which past levels of production continue to influence current outcomes, although the effect is not strong enough to imply long-run rigidity or non-stationarity. In contrast, social security contributions display an exceptionally high degree of persistence, with a coefficient close to 0.95. This near-unit-root behavior points to a pronounced form of institutional rigidity in the determination of labor taxation. Changes in SSC appear to be highly inertial, evolving slowly over time and largely independent of short-term macroeconomic fluctuations. Such persistence is consistent with a policy environment in which contribution rates are determined through administrative and legislative processes rather than through automatic adjustment mechanisms. The interaction between the two variables is characterized by a significant asymmetry. Increases in SSC exert a negative short-run effect on GDP, providing empirical support for the theoretical prediction that higher labor taxation raises the cost of labor and dampens economic activity.

The magnitude of this effect is economically meaningful, suggesting that labor tax policy plays a nontrivial role in shaping output dynamics. At the same time, the reverse relationship is effectively absent. The estimated coefficient capturing the influence of GDP on SSC is extremely small, on the order of 0.004, and lacks economic significance. This indicates that changes in economic activity do not meaningfully feed back into the determination of labor taxation. Taken together, these results imply that social security contributions behave as a quasi-exogenous variable within the system. While they have a measurable and negative impact on output, they are not themselves influenced by fluctuations in GDP. This reinforces the interpretation of SSC as a policy-driven constraint on economic performance, rather than as an endogenous fiscal instrument that responds to the business cycle.

Table 2: Model Fit

Statistic	GDP	SSC	Interpretation
R-squared	0.4693	0.9399	GDP equation explains ~47% of variation; SSC equation explains ~94%, showing strong autoregressive structure.
Adjusted R-squared	0.4434	0.9369	Slightly lower, still robust.
F-statistic	18.1279	320.4628	Both equations are jointly significant; SSC equation extremely well explained.
S.E. equation	0.0263	0.00438	Standard error of regression; lower for SSC due to persistence.

The overall fit of the model reveals an important asymmetry in explanatory power across the two equations. Social security contributions are explained to a very high degree within the VAR framework, which reflects their strong autoregressive structure. The high goodness of fit is consistent with the earlier finding of near-unit-root persistence, indicating that the evolution of SSC is largely driven by its own past values. This pattern reinforces the view that labor taxation in Greece is governed by institutional inertia, with limited sensitivity to other macroeconomic variables included in the system. By contrast, the explanatory power of the GDP equation is more moderate. While past values of GDP and SSC do account for a meaningful portion of output fluctuations, a substantial share of variation remains unexplained within the bivariate framework. This is not unexpected, as economic activity is influenced by a broader set of macroeconomic forces that are not explicitly captured in the model. Factors such as private investment dynamics, government expenditure, and inflows from European Union programs are likely to play an important role in shaping output. The relatively lower fit of the GDP equation therefore reflects the inherent complexity of the growth process.

Table 3: Information Criteria

Criterion	GDP	SSC	Interpretation
AIC	-4.3752	-7.9570	Lower AIC indicates better fit; SSC equation very well fitted.
SC	-4.2535	-7.8354	Schwarz criterion consistent with AIC.

The estimation results indicate that the model provides an excellent fit for social security contributions and a moderate fit for GDP. The high explanatory power of the SSC equation reflects the strong persistence inherent in the series, while the somewhat lower fit of the GDP equation suggests that output is influenced by additional macroeconomic factors not captured within the bivariate framework. Examination of the residual covariance matrix reveals a determinant of 1.27×10^{-8} , a small value that indicates the residuals are well-behaved and that the system does not exhibit signs of instability. Moreover, the estimated VAR (1) coefficients are all less than one in modulus, implying that there are no explosive roots and that the dynamic system is stable. This diagnostic evidence reinforces the interpretation of the structural dynamics. Shocks to SSC dominate the behavior of the system due to the variable's extreme persistence, while GDP, though moderately influenced by its own history and by SSC, responds more actively to other disturbances. Despite the higher variability in GDP, the negative impact of SSC on output remains economically significant. The combined evidence underscores the asymmetric role of social security contributions within the Greek macroeconomy: SSC operates as a quasi-exogenous, highly persistent force that constrains growth, while GDP reacts to these shocks

without exerting meaningful feedback on the contribution system. This dynamic asymmetry highlights both the importance of SSC in driving macroeconomic outcomes and the structural rigidity that limits the responsiveness of labor taxation policy. The empirical results for Greece provide a clear economic interpretation of the role played by social security contributions in shaping macroeconomic outcomes. The extremely high persistence of SSC, with an estimated coefficient of 0.95, confirms the presence of strong policy rigidity. In practice, this means that contributions do not automatically adjust in response to changes in economic performance, rendering SSC largely insensitive to the business cycle. This rigidity reflects the institutional and political constraints embedded in the Greek fiscal system and highlights the quasi-fixed nature of labor taxation in the short run. The negative impact of SSC on GDP, estimated at approximately -0.365 , underscores the contractionary effects of high labor taxation. Elevated contributions increase the effective cost of labor, reduce competitiveness, and slow output growth. This effect is particularly salient in Greece, where a substantial labor tax wedge coincides with a sizeable informal sector, amplifying distortions and reducing incentives for formal employment. Firms face higher costs, small and medium-sized enterprises in particular are constrained, and overall economic expansion is dampened by the structural burden of contributions. At the same time, feedback from GDP to SSC is negligible, with an estimated coefficient near zero. This indicates that social security contributions behave as a quasi-exogenous policy variable; economic growth does not automatically alleviate contribution burdens, nor does a downturn trigger automatic reductions. The lack of countercyclical adjustment highlights a major limitation in the design of the Greek social security system, depriving the economy of an important stabilizing mechanism. The policy implications of these findings are substantial. Gradual reduction of SSC rates or a reform toward more flexible, countercyclical contributions could enhance growth by lowering labor costs and stimulating employment. Administrative reforms, such as the adoption of a Balanced Scorecard approach within the tax authority, could help offset potential revenue losses while improving efficiency. At the same time, targeted efforts to formalize the labor market would expand the tax base and reduce incentives for informality, creating a more sustainable and growth-friendly fiscal framework. From an academic and policy perspective, these results confirm the broader literature indicating that labor taxation can constrain output. The contribution of the Greek case lies in its demonstration of asymmetric VAR dynamics, where the rigidity of policy dominates economic feedback, producing persistent negative effects on output. By highlighting this structural asymmetry, the analysis provides both theoretical confirmation and practical guidance for evidence-based reform.

4. Conclusion

This paper has examined the dynamic relationship between social security contributions and economic activity in Greece. The results reveal a clear asymmetry in which labor taxation exerts a significant influence on output, while remaining largely unaffected by it.

These findings suggest that SSC functions as a persistent and policy-driven constraint on growth. Addressing this constraint through structural reform may therefore represent a key lever for improving macroeconomic performance. Future research should build on these results by incorporating stronger identification strategies and exploring the interaction between labor taxation and other dimensions of fiscal policy.

The Greek case provides a particularly relevant setting for examining the macroeconomic effects of labor taxation, given its historically high labor tax wedge, its strong reliance on social security contributions for pension financing, and the presence of persistent structural rigidities in tax policy. These features have been further shaped by the legacy of the sovereign debt crisis, which imposed significant fiscal constraints and led to a series of policy adjustments. Against this background, the central question arises as to whether social security contributions function as a structural barrier to economic growth in Greece. The institutional configuration of SSC helps to frame this question more precisely. In Greece, social security contributions are characterized by relatively high rates for both employers and employees, reflecting their central role in sustaining the pension system.

At the same time, the system lacks automatic adjustment mechanisms that would allow contributions to respond flexibly to changing macroeconomic conditions. During the crisis period from 2010 to 2018, policy reforms were primarily oriented toward securing fiscal sustainability. This objective was pursued through increases in contribution rates, as well as efforts to broaden the contribution base. While these measures were successful in stabilizing public finances, they may also have amplified distortions in the labor market by increasing the cost of formal employment and weakening incentives for job creation. The broader significance of the findings lies in their ability to move beyond a purely descriptive exercise. The results provide a clear diagnosis, identifying the persistence and growth-dampening effects of SSC as a central constraint within the Greek economy.

They also uncover the underlying mechanism, namely the asymmetric dynamic relationship between taxation and output, which reinforces this constraint over time. Most importantly, they point toward a solution that integrates structural tax reform with greater institutional flexibility and improved policy responsiveness. In conclusion, the evidence indicates that social security contributions in Greece are highly persistent, exert a negative influence on economic activity, and remain largely unresponsive to changes in macroeconomic conditions. This combination creates a self-reinforcing dynamic in which taxation constrains growth without adapting to it. Breaking this cycle requires a comprehensive approach that includes reducing the burden of labor taxation, introducing countercyclical features into the system, and strengthening administrative capacity. Such reforms have the potential not only to alleviate existing distortions but also to support a more dynamic and resilient growth trajectory.

Econometric Output

Vector Autoregression Estimates		
Date: 11/09/22 Time: 18:37		
Sample (adjusted): 1975 2018		
Included observations: 44 after adjustments		
Standard errors in () & t-statistics in []		
	GDP	SSC
GDP(-1)	0.592290 (0.11628) [5.09363]	0.004257 (0.01940) [0.21948]
SSC(-1)	-0.364955 (0.23509) [-1.55241]	0.950456 (0.03921) [24.2373]
C	0.039819 (0.02197) [1.81264]	0.005903 (0.00366) [1.61105]
R-squared	0.469295	0.939876
Adj. R-squared	0.443407	0.936943
Sum sq. resids	0.028291	0.000787
S.E. equation	0.026268	0.004382
F-statistic	18.12786	320.4628
Log likelihood	99.25384	178.0541
Akaike AIC	-4.375175	-7.957006
Schwarz SC	-4.253525	-7.835357
Mean dependent	0.015836	0.091030
S.D. dependent	0.035210	0.017449
Determinant resid covariance (dof adj.)		1.27E-08
Determinant resid covariance		1.10E-08
Log likelihood		278.2378
Akaike information criterion		-12.37445
Schwarz criterion		-12.13115
Number of coefficients		6

Roots of Characteristic Polynomial	
Endogenous variables: GDP SSC	
Exogenous variables: C	
Lag specification: 1 1	
Date: 11/09/22 Time: 18:39	
Root	Modulus
0.946065	0.946065
0.596681	0.596681
No root lies outside the unit circle.	
VAR satisfies the stability condition.	

VAR Granger Causality/Block Exogeneity Wald Tests			
Date: 11/09/22 Time: 18:40			
Sample: 1974 2018			
Included observations: 44			
Dependent variable: GDP			
Excluded	Chi-sq	df	Prob.
SSC	2.409974	1	0.1206
All	2.409974	1	0.1206
Dependent variable: SSC			
Excluded	Chi-sq	df	Prob.
GDP	0.048170	1	0.8263
All	0.048170	1	0.8263

VAR Lag Exclusion Wald Tests

Date: 11/09/22 Time: 18:40

Sample (adjusted): 1975 2018

Included observations: 44 after adjustments

Chi-squared test statistics for lag exclusion:

Numbers in [] are p-values

	GDP	SSC	Joint
Lag 1	36.25573 [0.0000]	640.9255 [0.0000]	672.3889 [0.0000]
df	2	2	4

VAR Lag Order Selection Criteria

Endogenous variables: GDP SSC

Exogenous variables: C

Date: 11/09/22 Time: 18:41

Sample: 1974 2018

Included observations: 41

Lag	LoqL	LR	FPE	AIC	SC	HQ
0	194.2848	NA	2.89e-07	-9.379748	-9.296159	-9.349310
1	261.0416	123.7443*	1.36e-08*	-12.44106*	-12.19029*	-12.34974*
2	261.7055	1.165731	1.60e-08	-12.27832	-11.86037	-12.12612
3	263.9437	3.712211	1.75e-08	-12.19238	-11.60725	-11.97931
4	267.1194	4.957111	1.84e-08	-12.15216	-11.39986	-11.87822

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

VAR Residual Portmanteau Tests for Autocorrelations

Null Hypothesis: No residual autocorrelations up to lag h

Date: 11/09/22 Time: 18:42

Sample: 1974 2018

Included observations: 44

Lags	Q-Stat	Prob.*	Adj Q-Stat	Prob.*	df
1	2.559648	---	2.619175	---	---
2	6.534559	0.1626	6.783367	0.1478	4

*Test is valid only for lags larger than the VAR lag order.

df is degrees of freedom for (approximate) chi-square distribution

VAR Residual Serial Correlation LM Tests

Date: 11/09/22 Time: 18:42

Sample: 1974 2018

Included observations: 44

Null hypothesis: No serial correlation at lag h

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	3.784071	4	0.4360	0.957056	(4, 76.0)	0.4361
2	4.153814	4	0.3856	1.053117	(4, 76.0)	0.3857

Null hypothesis: No serial correlation at lags 1 to h

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	3.784071	4	0.4360	0.957056	(4, 76.0)	0.4361
2	8.307898	8	0.4040	1.054261	(8, 72.0)	0.4046

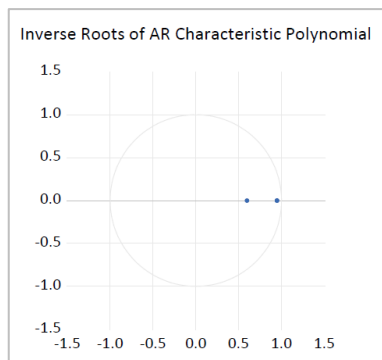
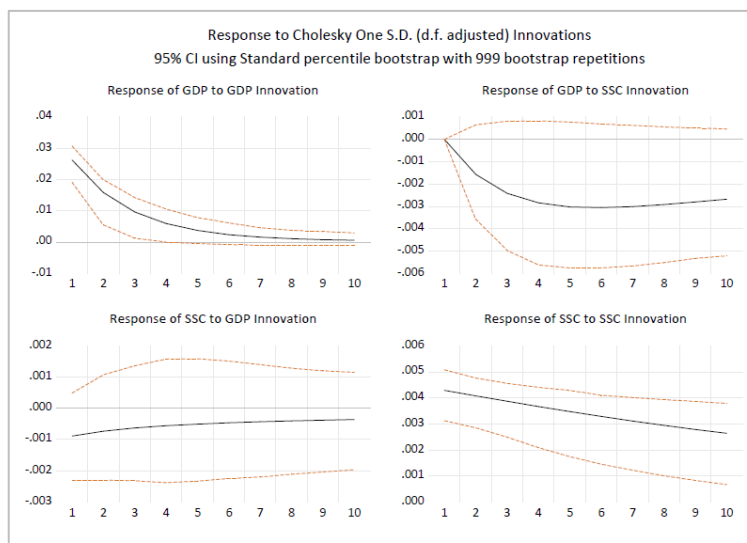
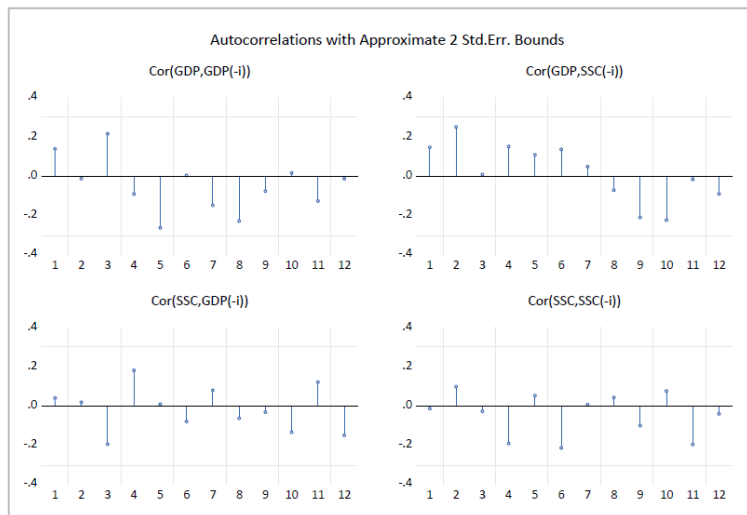
*Edgeworth expansion corrected likelihood ratio statistic

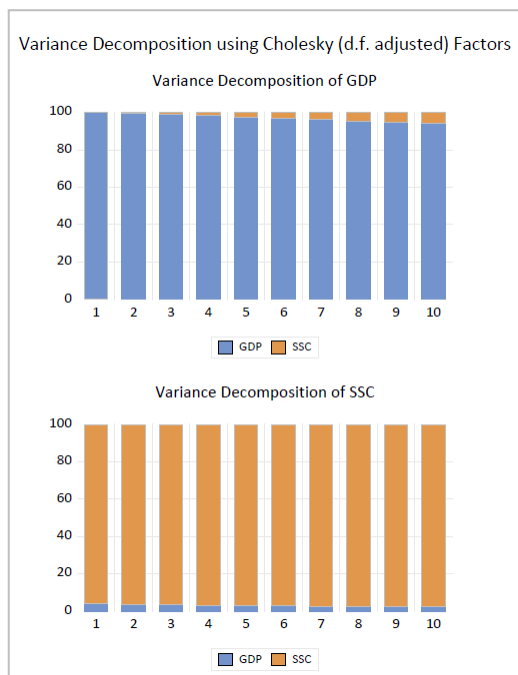
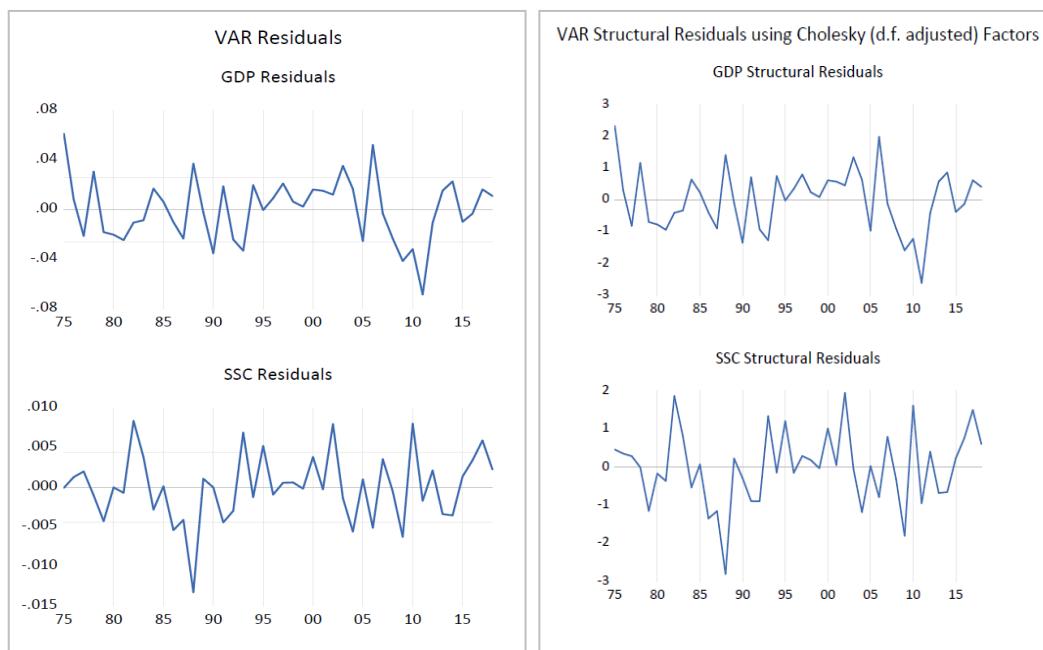
VAR Residual Normality Tests Orthogonalization: Cholesky (Lutkepohl) Null Hypothesis: Residuals are multivariate normal Date: 11/09/22 Time: 18:42 Sample: 1974 2018 Included observations: 44				
Component	Skewness	Chi-sq	df	Prob.*
1	-0.065945	0.031891	1	0.8583
2	-0.232345	0.395884	1	0.5292
Joint		0.427774	2	0.8074
Component	Kurtosis	Chi-sq	df	Prob.
1	3.203238	0.075727	1	0.7832
2	3.386428	0.273766	1	0.6008
Joint		0.349493	2	0.8397
Component	Jarque-Bera	df	Prob.	
1	0.107618	2	0.9476	
2	0.669649	2	0.7155	
Joint	0.777267	4	0.9415	
*Approximate p-values do not account for coefficient estimation				

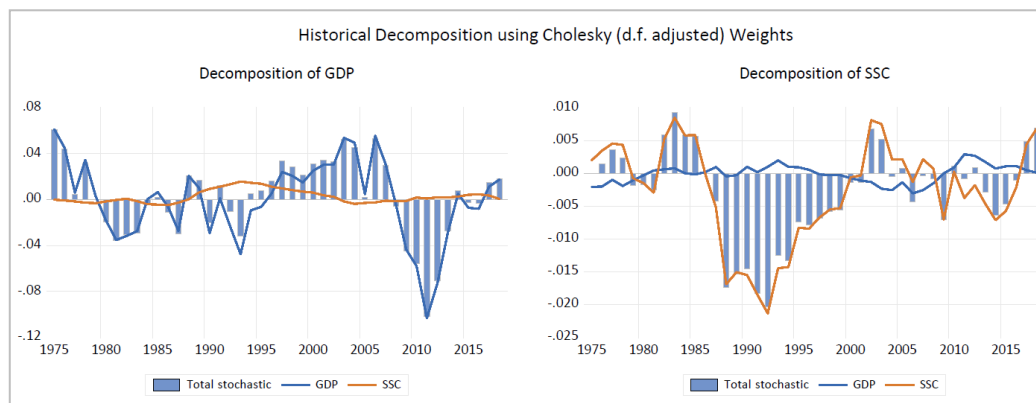
VAR Residual Heteroskedasticity Tests (Levels and Squares)					
Date: 11/09/22 Time: 18:42					
Sample: 1974 2018					
Included observations: 44					
Joint test:					
Chi-sq	df	Prob.			
18.53807	12	0.1003			
Individual components:					
Dependent	R-squared	F(4,39)	Prob.	Chi-sq(4)	Prob.
res1*res1	0.297124	4.121575	0.0070	13.07345	0.0109
res2*res2	0.101315	1.099180	0.3706	4.457840	0.3476
res2*res1	0.069964	0.733470	0.5747	3.078437	0.5448

VAR Residual Heteroskedasticity Tests (Includes Cross Terms)					
Date: 11/09/22 Time: 18:43					
Sample: 1974 2018					
Included observations: 44					
Joint test:					
Chi-sq	df	Prob.			
20.15905	15	0.1659			
Individual components:					
Dependent	R-squared	F(5,38)	Prob.	Chi-sq(5)	Prob.
res1*res1	0.320437	3.583660	0.0094	14.09923	0.0150
res2*res2	0.104094	0.883031	0.5019	4.580128	0.4692
res2*res1	0.085314	0.708865	0.6204	3.753829	0.5854

Date: 11/09/22 Time: 18:43 Sample (adjusted): 1977 2018 Included observations: 42 after adjustments Trend assumption: Linear deterministic trend Series: GDP SSC Lags interval (in first differences): 1 to 2				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.143194	7.706376	15.49471	0.4973
At most 1	0.028527	1.215552	3.841465	0.2702
Trace test indicates no cointegration at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.143194	6.490824	14.26460	0.5511
At most 1	0.028527	1.215552	3.841465	0.2702
Max-eigenvalue test indicates no cointegration at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):				
GDP	SSC			
-35.22662	-13.54866			
-6.819888	-66.39533			
Unrestricted Adjustment Coefficients (alpha):				
D(GDP)	0.008832	-0.001031		
D(SSC)	8.31E-06	0.000733		
1 Cointegrating Equation(s): Log likelihood 270.3132				
Normalized cointegrating coefficients (standard error in parentheses)				
GDP	SSC			
1.000000	0.384614			
	(0.72460)			
Adjustment coefficients (standard error in parentheses)				
D(GDP)	-0.311118			
	(0.13181)			
D(SSC)	-0.000293			
	(0.02547)			







Note

(1) See Asimakopoulos (2025)

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