
CASE STUDY OF GREECE: WEAK GROWTH PERFORMANCE, REGIONAL INEQUALITIES, UNBALANCED INTEGRATION AND POLITICAL DISCONTENT

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A union under strain: growth, inequality, and trust in the EU

Sluggish growth and rising regional disparities threaten EU cohesion.



Growing mistrust and political fragmentation challenge legitimacy.



Greece provides a compelling case to explore these dynamics at the regional level.

The puzzle

- EU integration is considered an engine of aggregate economic growth BUT the growth returns of trade are spatially uneven (both cross-nationally and cross-regionally)
 - Growing skepticism regarding the benefits of the EU integration experience that may undermine the growth prospects of specific (mostly peripheral) regions
 - An unbalanced pattern of winners and losers from economic integration may amplify regional inequalities
 - Regional inequalities, if ignored, can fuel political reaction and gradually lead to growing discontent
 - **Integration dynamics (via the channel of impact on inequalities) affects and drives the growth of discontent**
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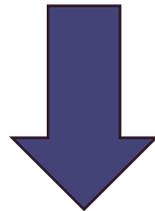


Research line (1)

Step 1: evaluation of the relationship between regional performance and distribution of the merits of integration.

Findings: the impact of integration is asymmetric for peripheral regions trading with core EU trade partners, revealing that different development levels are associated with different types of integration and unequal growth returns.

Petrakos, G., Sotiriou, A. and Alexiou, S., The geography of integration and regional growth in the EU, revision submitted in Regional Studies



Dep.var: g	All regions to all EU			Peripheral regions to core EU			Peripheral regions to peripheral EU		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Y	-0.168 (0.336)	-0.245 (0.329)	-0.516 (0.382)	0.332 (0.224)	0.051 (0.243)	-1.055*** (0.235)	0.332 (0.224)	0.299 (0.203)	-1.105*** (0.237)
T-INT	0.029** (0.014)	0.024* (0.014)	0.016* (0.009)	-0.054* (0.029)	-0.055** (0.027)	-0.052** (0.025)	0.054* (0.029)	0.052* (0.028)	0.051** (0.026)
OPEN	0.021* (0.012)	0.018* (0.009)	0.021*** (0.006)	0.030*** (0.009)	0.018*** (0.006)	0.021*** (0.004)	0.030*** (0.009)	0.029*** (0.009)	0.026*** (0.005)
S-INT		0.184*** (0.021)	0.083*** (0.016)		0.351*** (0.073)	0.157*** (0.057)		0.165 (0.099)	0.047 (0.055)
SKILL			0.325*** (0.058)			0.444*** (0.061)			0.471*** (0.075)
PUB			0.007 (0.014)			0.057* (0.032)			0.056* (0.032)
GRAV			0.633 (0.528)			0.920*** (0.306)			1.103*** (0.256)
FDI			0.022*** (0.005)			0.023 (0.018)			0.024 (0.020)
Constant	2.125 (10.564)	1.429 (10.102)	-71.316 (45.861)	-0.277 (1.500)	0.118 (1.795)	-95.532*** (28.604)	-5.719* (3.366)	-5.761* (3.242)	-118.677*** (23.858)
Observations	1,470	1,470	1,464	511	511	508	511	511	508
R ²	0.018	0.067	0.164	0.043	0.095	0.223	0.043	0.048	0.215
Number of regions	210	210	210	73	73	73	73	73	73
F	6.13	87.97	378.2	16.83	12.65	1471.34	16.83	18.30	175.66
Region FE	YES	YES	YES	YES	YES	YES	YES	YES	YES

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Research line (2)

Step 2: estimation of the interplay between regional inequalities, the unbalanced growth returns of EU integration and the rise of discontent.

Findings: a strong association between persisting regional inequalities, low regional growth, and widespread discontent in the EU.

Sotiriou, A., Petrakos, G. and Alexiou, S. (2024). *The drivers of regional discontent in the EU. Global Challenges & Regional Science, 1*, <https://doi.org/10.1016/j.gcrs.2024.100002>

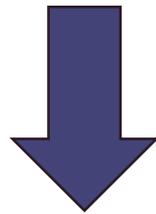


Table 1
Discontent and regional inequalities.

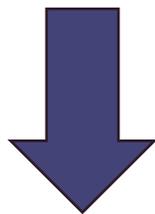
Dependent variable: DISC	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
									Lagging regions
GgapEU	0.307*** (0.098)		0.281*** (0.097)	-0.081 (0.077)			0.286*** (0.086)	0.389*** (0.085)	0.509*** (0.125)
YgapEU		0.048*** (0.012)	0.019*** (0.007)	0.048*** (0.012)	-0.009 (0.007)	0.039** (0.016)			0.041*** (0.011)
g					-1.061*** (0.113)	-1.316*** (0.146)			
INTcore			0.154* (0.086)	0.182** (0.076)	0.132* (0.074)	0.242*** (0.073)	0.135*** (0.034)	0.115*** (0.037)	0.220** (0.098)
PUB	-0.575 (0.415)		-3.429*** (1.031)		-3.565*** (1.044)				
PUBsq			5.135*** (1.612)		6.270*** (1.662)				
SOCIAL	-0.110*** (0.011)		-0.105*** (0.009)		-0.072*** (0.014)				
SF		0.026*** (0.006)		0.079*** (0.010)		0.088*** (0.012)	0.063*** (0.011)	0.023*** (0.003)	0.089*** (0.011)
SFsq				-0.006*** (0.001)		-0.007*** (0.002)			-0.007*** (0.001)
UNEMP	0.322 (0.251)	0.513** (0.257)	0.119 (0.252)	0.399 (0.254)	1.112*** (0.256)	0.039 (0.024)	0.095 (0.133)	0.079 (0.119)	
TRAD	-0.676*** (0.200)	-0.781*** (0.251)		-0.690*** (0.268)	-0.555*** (0.176)	-0.160 (0.260)	-0.125** (0.060)	-0.019 (0.067)	-0.642** (0.258)
DENS	-0.002*** (0.001)	-0.0002*** (0.0001)	-0.0005*** (0.00001)	-0.0002*** (0.0001)	-0.001*** (0.0004)	-0.0003 (0.0002)	-4.55e-06 (2.78e-06)	-6.21e-07 (2.80e-06)	0.003*** (0.001)
EDU		-0.020*** (0.002)		-1.857*** (0.153)	-0.009*** (0.002)				
MIGR	-0.248** (0.111)		-0.711*** (0.227)		-0.281*** (0.093)		-0.349*** (0.109)	-0.356*** (0.103)	
FOREIGN		-2.807*** (0.486)		-2.905*** (0.471)		-4.699*** (0.600)			-0.654 (1.107)
YgapEU * MIGR			0.102* (0.054)						
LDR							-0.064*** (0.021)		
LDR*SF							-0.040*** (0.012)		
CORE								0.061*** (0.017)	
CORE*SF								0.088*** (0.027)	
Constant	1.341*** (0.196)	1.235*** (0.087)	1.150*** (0.214)	1.106*** (0.145)	2.936*** (0.226)	1.754*** (0.201)	0.080 (0.097)	-0.100 (0.094)	0.043 (0.267)
Thresholds									
PUB >			0.33		0.28				
YgapEU >			6.97						
MIGR >			-0.18						
SF <				6.38		6.37			6.81
Observations	1,611	1,358	1,799	1,356	1,611	1,356	1,886	1,886	553
R-squared	0.223	0.469	0.261	0.493	0.367	0.376	0.043	0.034	0.347
Region FE	YES	YES	YES	YES	YES	YES	NO	NO	YES
F	24.68	69.63	22.52	63.94	46.16	48.41	.	.	16.99

Research line (3)

Step 3: assessment of the extent to which CP is endogenous, in the sense that it prioritizes and addresses the various economic and social gaps that exist in the weaker EU regions, or despite intentions, in fact it serves other priorities

Findings: Although CP is responsive to certain economic and social gaps, at the same time it is also responsive to political parameters

Petrakos, G., Alexiou, S. and Sotiriou, A., Endogenous Cohesion Policy (to be submitted)

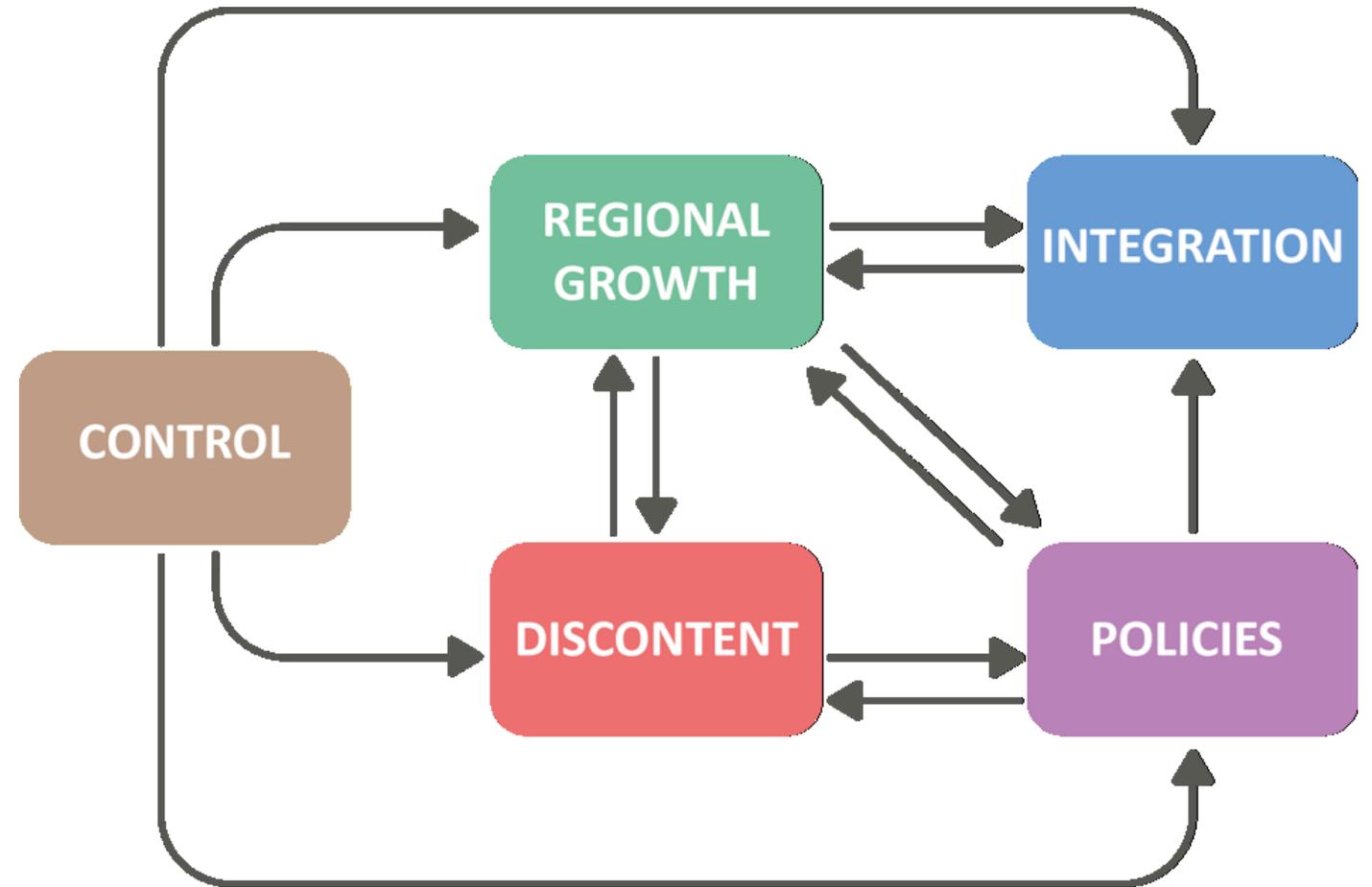


DEP.VAR: CP	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
GDPcap GAP	0.868*** (0.158)	0.802*** (0.139)	1.740*** (0.247)	2.039*** (0.245)	1.803*** (0.253)	2.050*** (0.240)	0.491*** (0.162)	0.299** (0.141)	0.685*** (0.148)	0.628*** (0.153)
HC GAP	3.514*** (0.925)		3.934*** (0.916)		4.112*** (0.889)		4.445*** (0.795)		3.251*** (0.809)	3.568*** (0.810)
UNEM GAP		0.368*** (0.085)		0.279*** (0.086)		0.249*** (0.085)		0.517*** (0.075)		
INFR GAP	0.065 (0.074)		0.663*** (0.130)		0.720*** (0.133)		-0.004 (0.057)		0.175*** (0.058)	0.146*** (0.057)
GFCF GAP		-1.015*** (0.180)		1.049*** (0.358)		1.083*** (0.355)		-0.529*** (0.157)	-0.591*** (0.175)	-0.514*** (0.174)
ENV GAP	2.344*** (0.574)	2.643*** (0.452)	2.155*** (0.577)	1.950*** (0.469)	2.151*** (0.541)	1.563*** (0.486)	0.658 (0.438)	1.163*** (0.375)	-0.084 (0.520)	0.364 (0.490)
GDPcap GAP *			-0.391*** (0.070)		-0.428*** (0.071)					
INFR GAP *				-1.168*** (0.168)		-1.204*** (0.167)				
GDPcap GAP *										
GFCF GAP										
DG_REGIO					0.199*** (0.067)	0.334*** (0.061)			0.296*** (0.103)	0.237** (0.107)
DG_ECFIN					0.466*** (0.111)	0.263*** (0.093)			0.235** (0.107)	0.230** (0.108)
DG_EMPL					0.353*** (0.119)	0.269*** (0.122)			0.115 (0.107)	0.089 (0.113)
DG_EVN					-0.955** (0.375)	-0.377** (0.174)				-0.749** (0.359)
DG_AGRI					0.485** (0.224)	0.098 (0.147)				-0.198 (0.200)
PRES_COM									0.103 (0.109)	0.070 (0.110)
PRES_COUNCIL									0.141*** (0.046)	0.139*** (0.044)
NON-MAINSTREAM PARTIES									-0.798*** (0.274)	-0.893*** (0.274)
ABS							1.396*** (0.162)	1.427*** (0.143)		-0.111 (0.237)
GRAV							-0.364*** (0.071)	-0.406*** (0.064)	-0.467*** (0.063)	-0.411*** (0.071)
DENS							-0.116** (0.048)	-0.129*** (0.042)		-0.057 (0.050)
INST							2.079*** (0.407)	2.195*** (0.344)	1.820*** (0.506)	1.531*** (0.515)
Constant	-4.642*** (0.584)	-3.826*** (0.543)	-5.771*** (0.653)	-5.107*** (0.577)	-5.903*** (0.631)	-4.381*** (0.569)	0.356 (0.979)	0.909 (0.904)	1.525 (1.132)	1.064 (1.130)
Observations	628	719	628	719	628	719	626	715	585	583
R-squared	0.649	0.683	0.671	0.700	0.686	0.707	0.748	0.788	0.814	0.821
Number of rg	227	252	227	252	227	252	227	252	227	227
Country FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
$\partial CP / \partial GDPcap\ GAP > 0$ if INFR GAP < 0			4.45		4.21					
$\partial CP / \partial INFR\ GAP > 0$ if GDPcap GAP < 0			1.70		1.68					
$\partial CP / \partial GDPcap\ GAP > 0$ if GFCF GAP < 0				1.75		1.70				
$\partial CP / \partial GFCF\ GAP > 0$ if GDPcap GAP < 0				0.90		0.90				

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Research line (4)

Step 4: investigation the interdependent nature between integration, regional growth and discontent, which are potentially endogenous with direct and indirect two-way associations.



The interrelated effects of multiple phenomena

Zooming in: Greece as a case study of uneven integration and discontent

Greece offers a **unique and revealing case** within the EU:

a country that is both deeply integrated and deeply affected by the asymmetries of that integration.

Over the past two decades, it has faced:

- **Severe economic crisis** and prolonged austerity
- **Persistent regional disparities** despite EU support
- A **sharp decline in public trust** in EU institutions

The Greek experience illustrates how **imbalanced integration patterns** can amplify **spatial inequality** and **social discontent** — especially in peripheral economies.

This section investigates Greece's regional economic performance, trade dependencies, and evolving public sentiment toward the EU.

Methodology snapshot: key indicators and approach

Unit of analysis & Time Frame

- NUTS 2 regions of Greece
- Focus period: primarily 2010–2018, with some indicators spanning 2000–2023

Main Variables

- **Economic Growth**, measured as regional GDP per capita growth
- **Regional Inequality**: Intra-national disparities measured via GDP per capita gaps and inequality indices
- **EU Integration Index**: EU trade (exports + imports) as a share of total trade
- **Discontent**, measured as % of respondents reporting **distrust** in the EU / Regional estimates constructed from Flash Eurobarometer waves where available

Empirical Tools

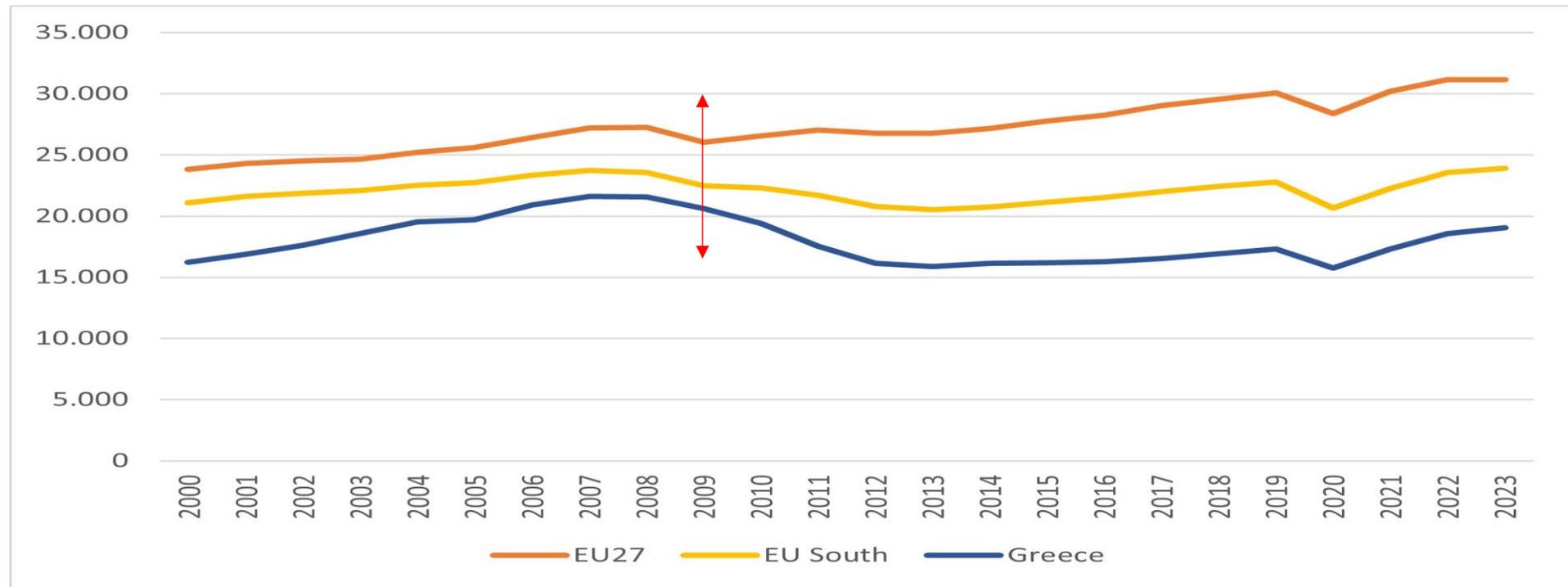
- Descriptive analysis
 - Planned extension: **Generalized system of equations** to explore endogeneity and feedback loops between growth, integration, and discontent
-

The performance of the Greek economy: taking crisis into consideration

2000 - 2009 : a trend of slow convergence with the EU average

2010 - 2023 : a process of divergence that may still be active

Figure 1. GDP per capita of Greece, EU and EU South (constant 2015), 2000-2023

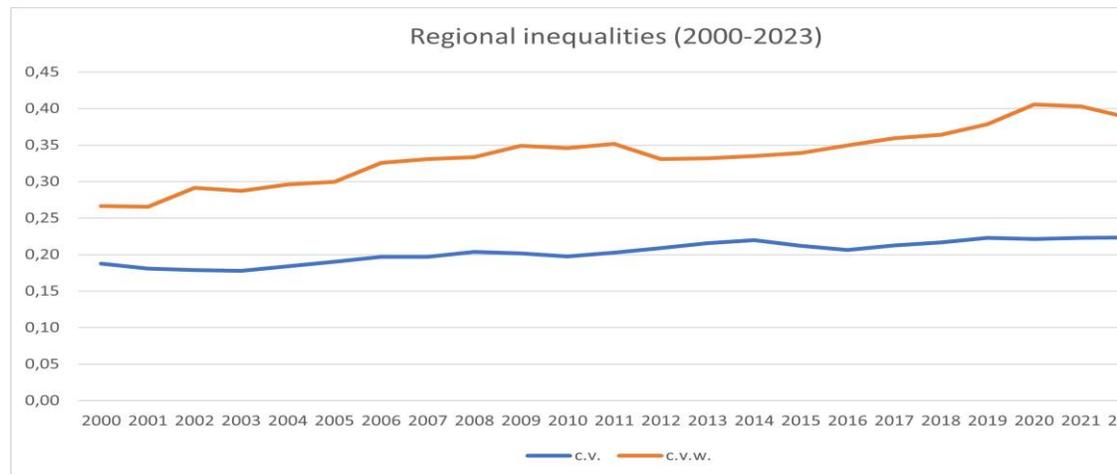


Source: own elaboration using data from the Annual Regional Database of the European Commission's Directorate General for Regional and Urban Policy (2025)

The spatial pattern of inequality

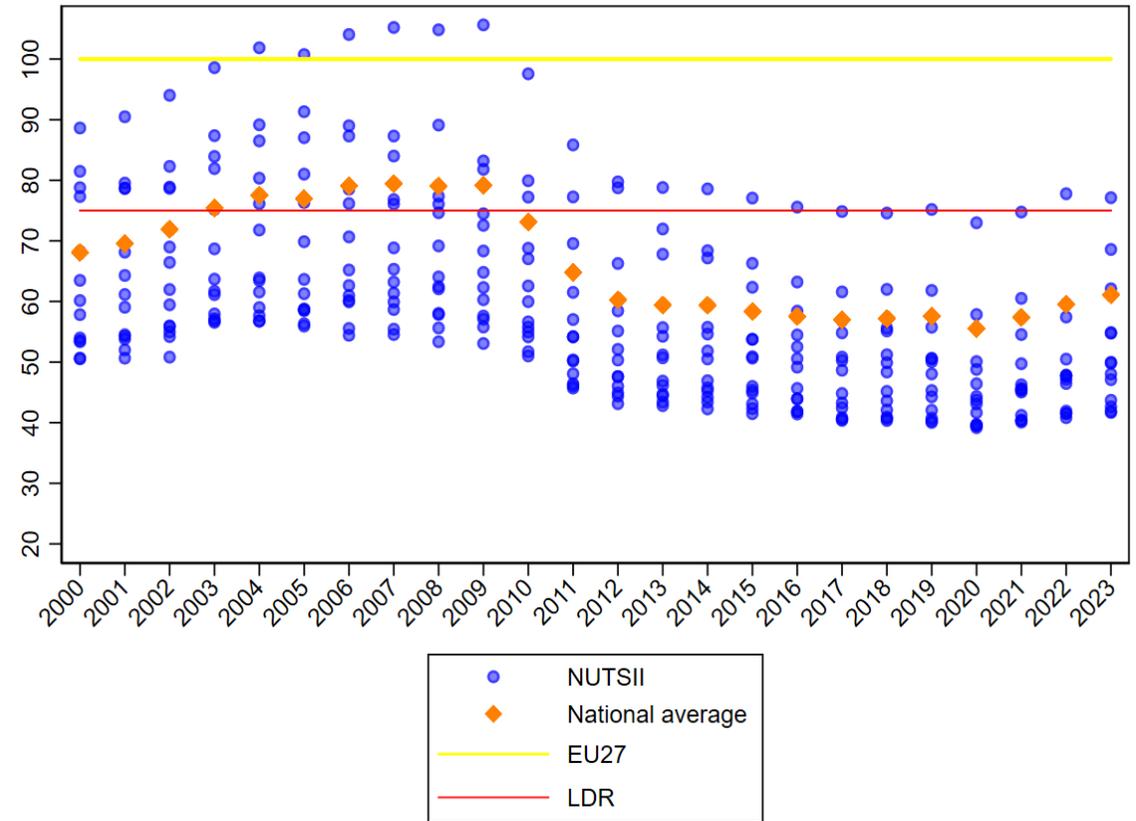
- The impact of the crisis increased the distance of all regions from EU average
- In the years after the crisis the dominant role of Attica is more evident
- Regional inequalities have increased

Figure 2. Evolution of regional inequalities (2000-2023)



Source: Source: own elaboration using data from EUROSTAT (2025)

Figure 3. Regional GDP cap evolution (EU=100), 2000-2023

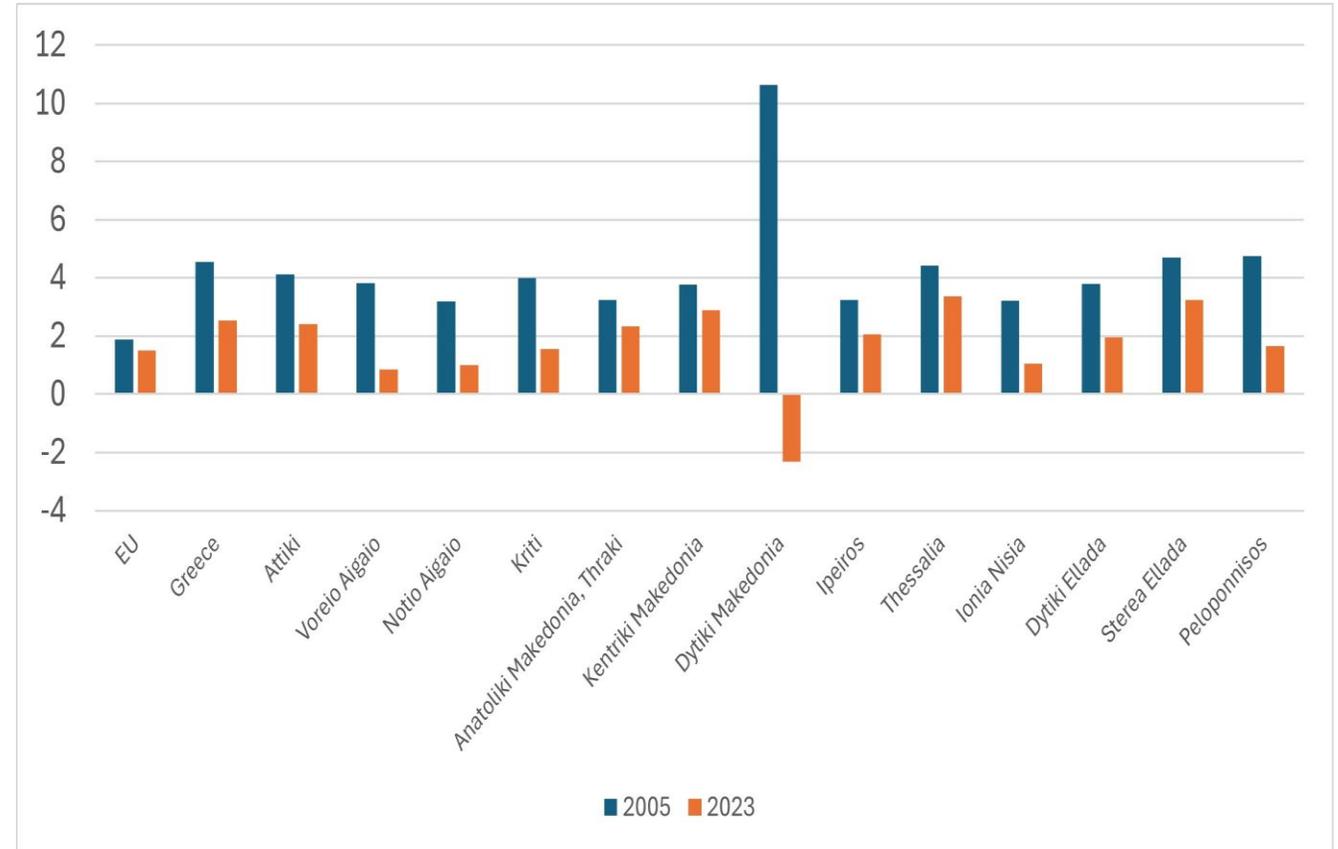


Source: own elaboration using data from the Annual Regional Database of the European Commission's Directorate General for Regional and Urban Policy (2025)

Comparison of 5-year moving average growth rates by region in Greece: 2005 vs 2023

- Notable changes in regional economic dynamics over the past two decades
- Overall slower or even negative growth by 2023
- Some regions show relatively stable performance, while others experienced substantial slowdowns

Figure 4. 5year growth moving average of Greek regions, 2005 vs 2023

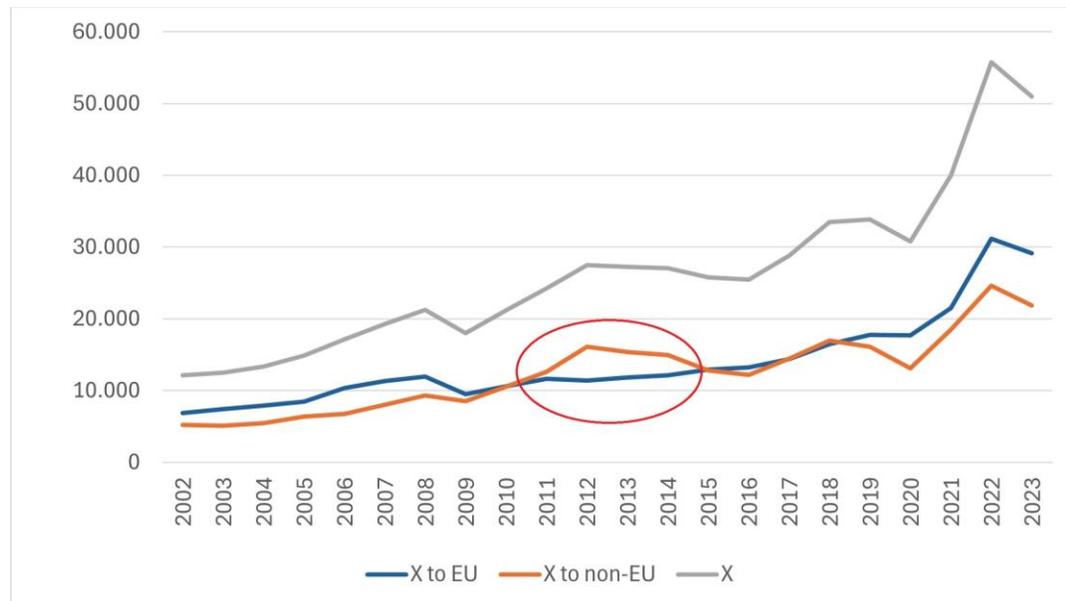


Source: own elaboration using data from the Annual Regional Database of the European Commission's Directorate General for Regional and Urban Policy (2025)

Examination of trade relations: exports

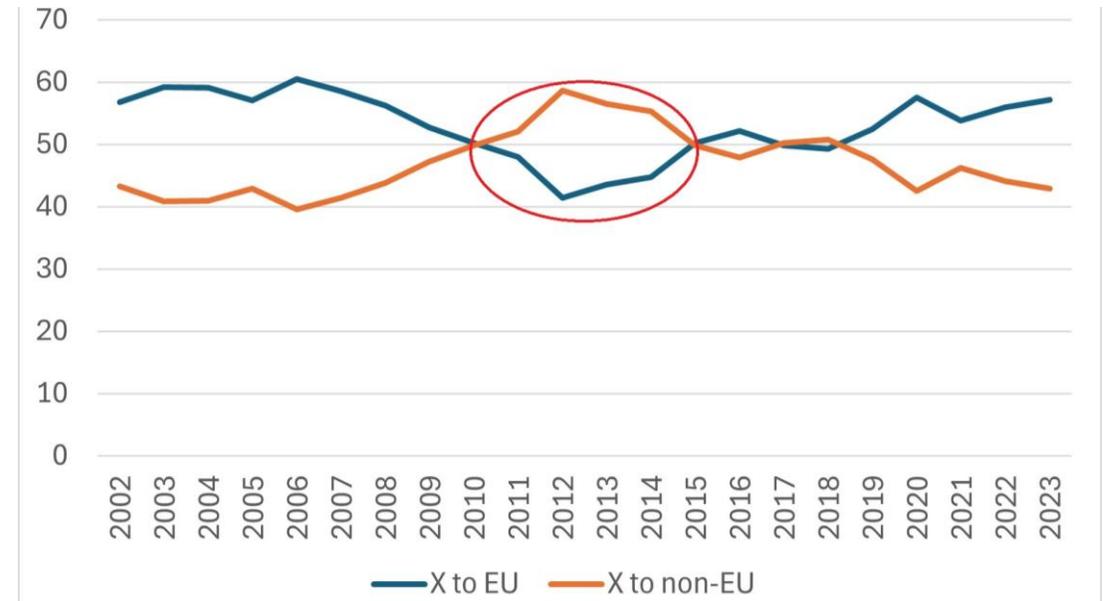
- Non-EU exports exceeded those to EU in the first years of the crisis
→ shift of the productive system to less demanding markets

Figure 5. Greek exports (million €), 2000-2023



Source: own elaboration using data from EUROSTAT (2025)

Figure 6. Share of exports (over total), 2000-2023

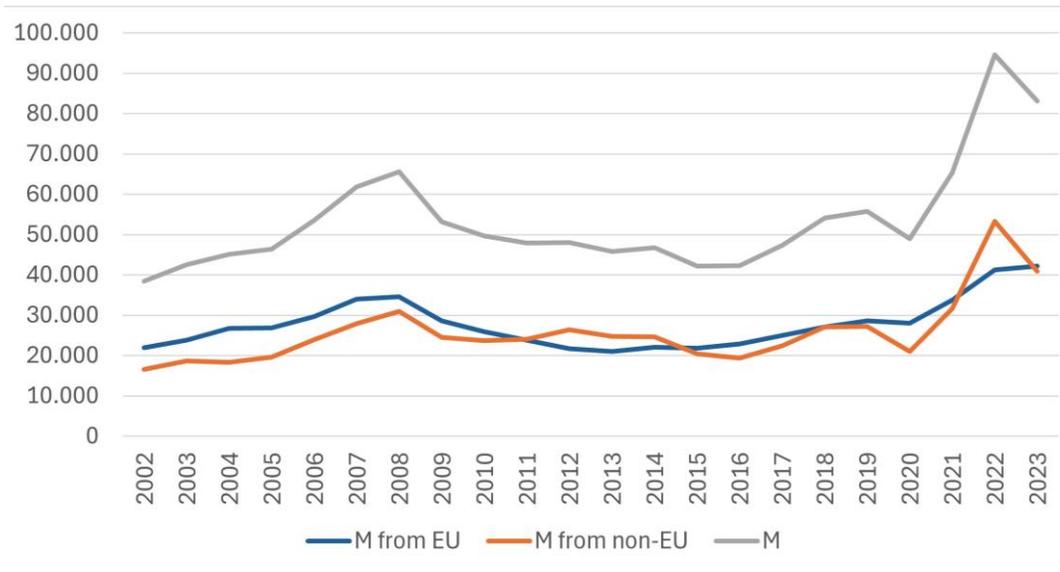


Source: own elaboration using data from EUROSTAT (2025)

Examination of trade relations: imports

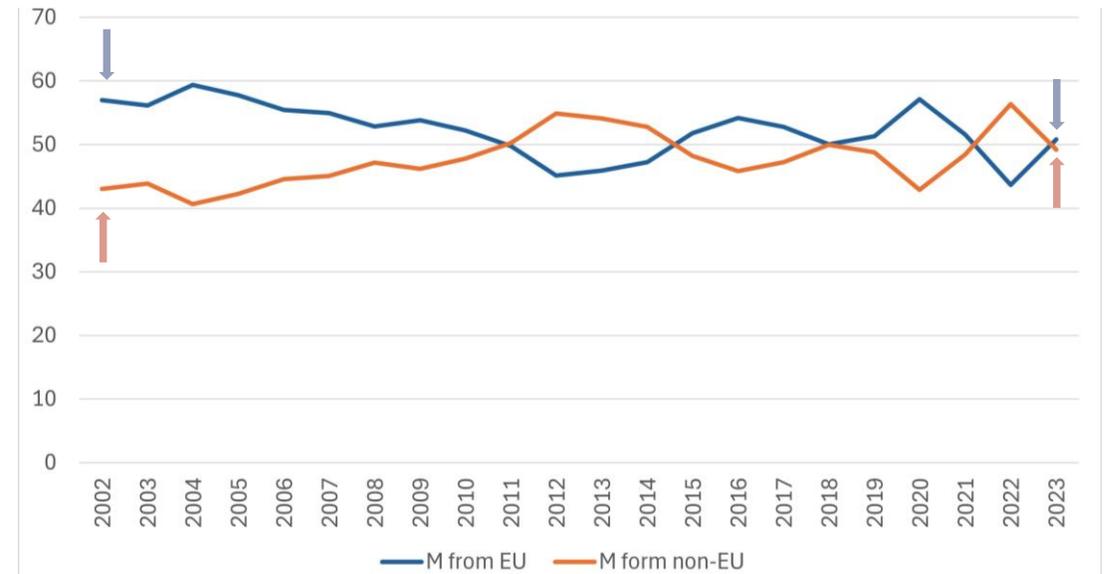
- Imports from EU have declined for several years before regaining an upward trend, but their relative share is lower at the end of the period
- Imports from non-EU were also affected by the crisis, but increased their relative share at the end of the period

Figure 7. Greek imports (million €), 2000-2023



Source: own elaboration using data from EUROSTAT (2025)

Figure 8. Share of imports (over total), 2000-2023

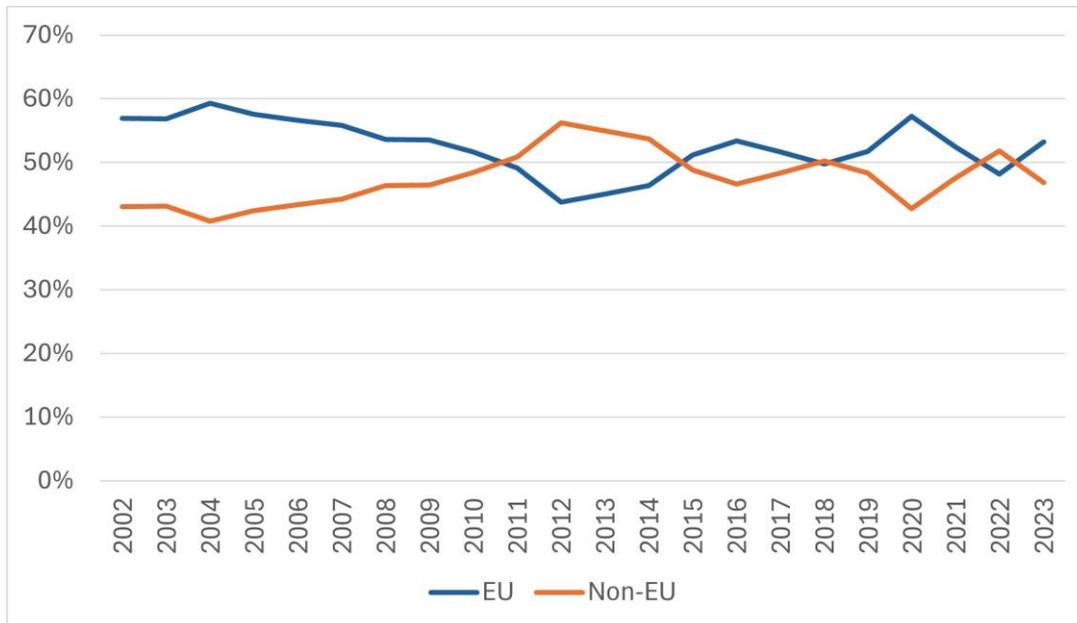


Source: own elaboration using data from EUROSTAT (2025)

Integration dynamics: two parallel and overlapping processes of integration

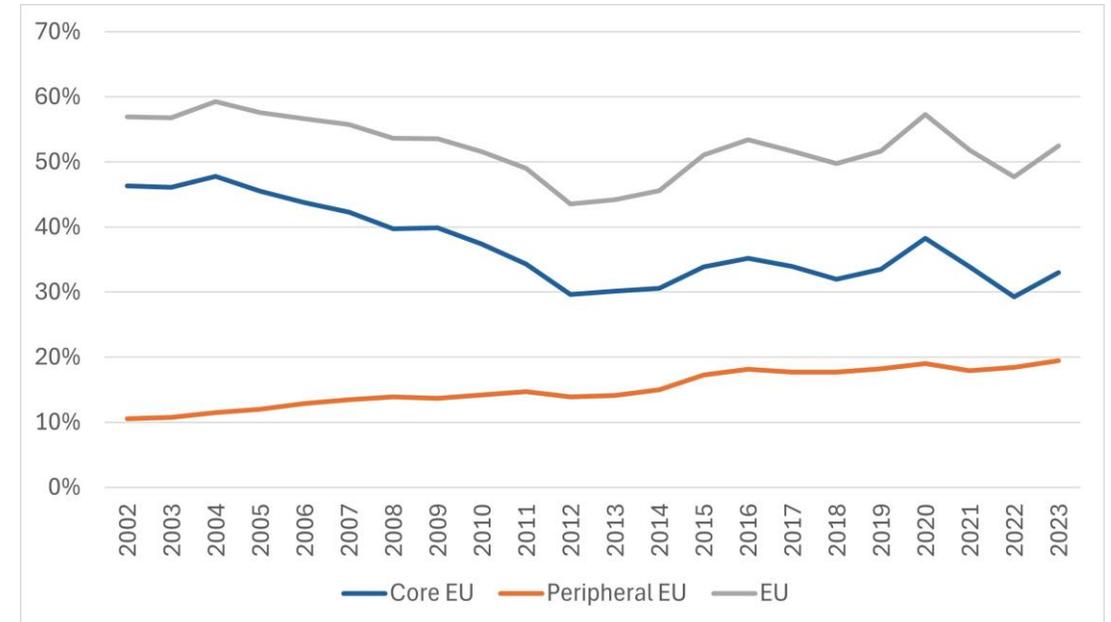
- The crisis has led to a significant reduction of the share of trade with the EU for a period, which may leave a permanent impact on the direction of Greek trade
- The production system of Greece is gradually moving from trade with Core to trade with Peripheral EU countries in an effort to better adapt to competition

Figure 9. EU and non-EU Trade Integration Index, 2000-2023



Source: own elaboration using data from EUROSTAT (2025)

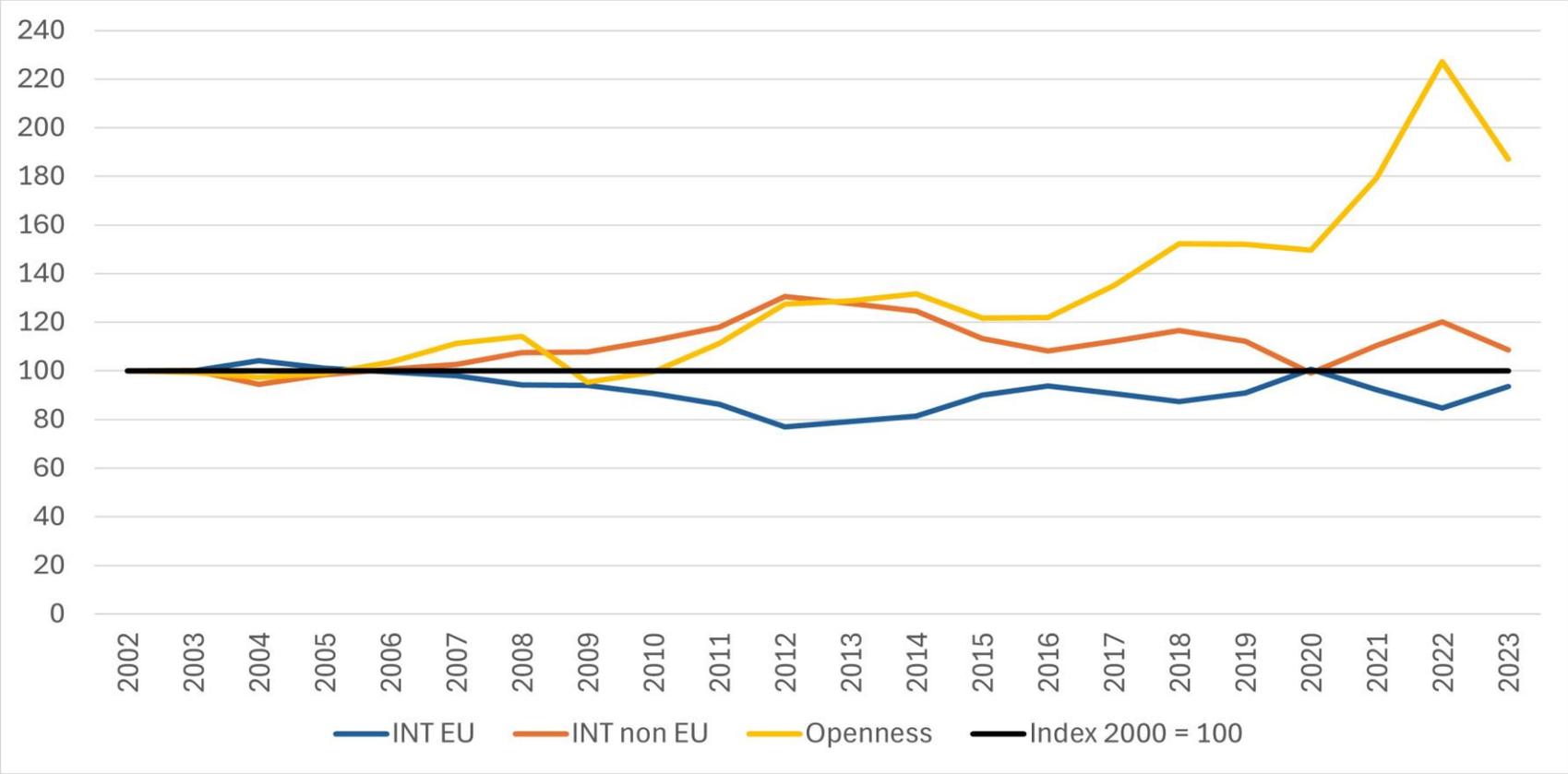
Figure 10. Intra-EU Trade Integration Index, 2000-2023



Source: own elaboration using data from EUROSTAT (2025)

The processes of globalization and integration

Figure 11. Indices of EU and non-EU integration and openness (2000=100), 2000-2023



The globalization (openness) process has been stronger than the integration process during the period under examination, even though Greece is an EU member for over 40 years.

Source: own elaboration using data from EUROSTAT (2025)

Regional trade dependence on the EU in Greece: exports and imports

Figure 12. Share of exports to the EU (2010-2018 average)

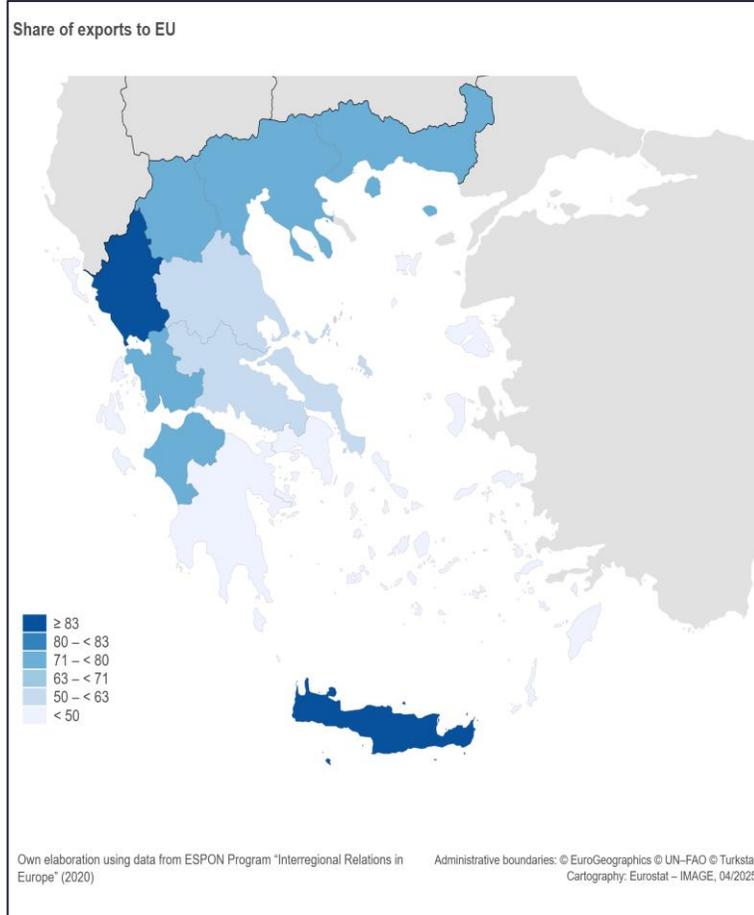
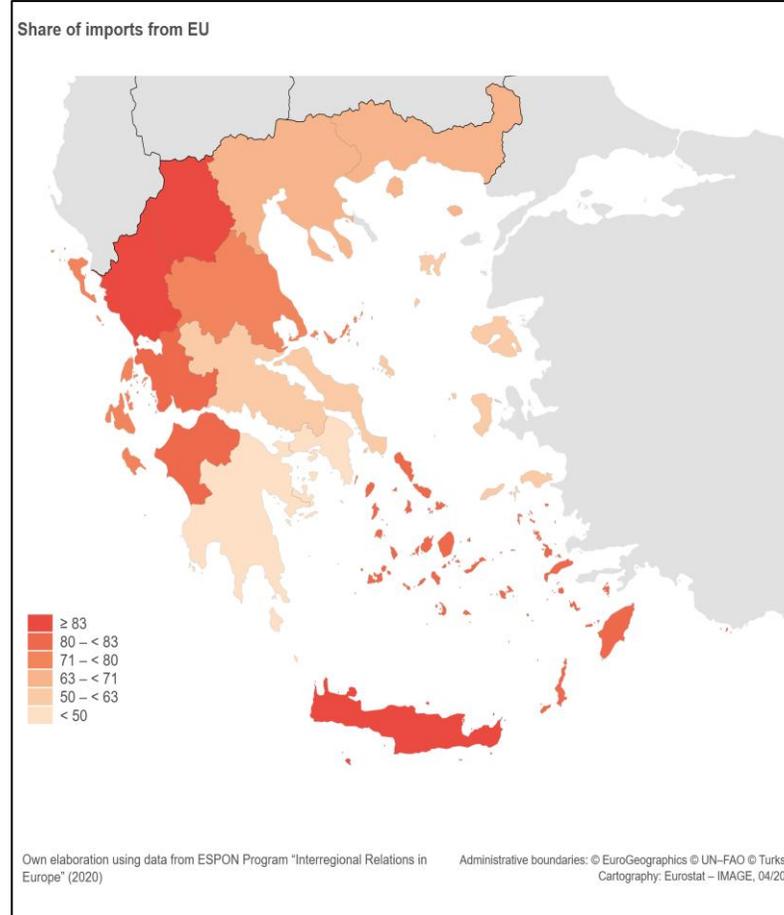


Figure 13. Share of imports from the EU (2010-2018 average)



Spatial patterns of trade dependence on the EU

Strong export performance in specific regions: a **north-to-south** gradient in export intensity

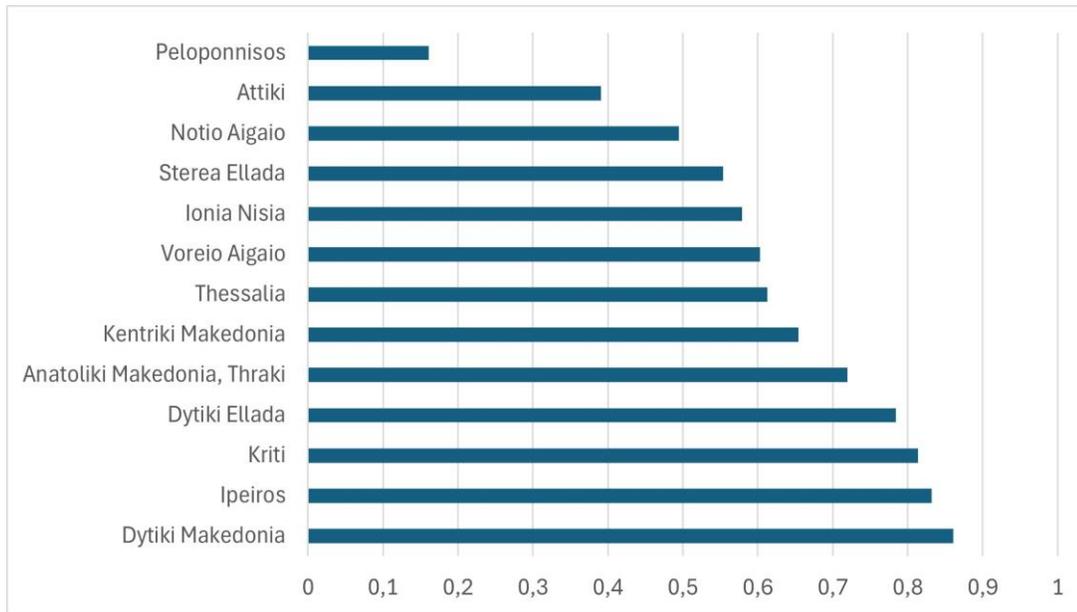
Broad Import Dependence: import-heavy patterns mainly in Central, Northern and island regions

Regional EU Integration : Core vs Periphery Dynamics

Regions like Dytiki Makedonia, Ipeiros, and Kriti show the highest levels of EU integration.

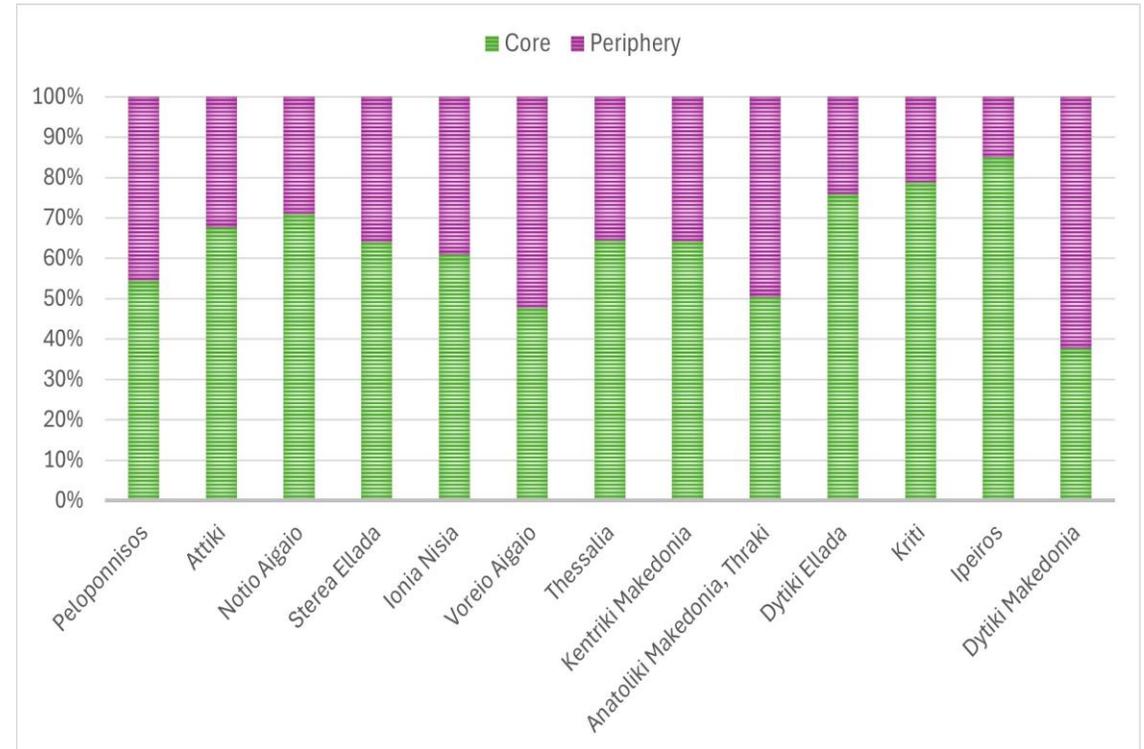
Attiki, despite being Greece's economic core, has relatively low integration.

Figure 14. EU Trade Integration in Greek Regions (2010–2018 Average)



Source: own elaboration using data from ESPON Program “Interregional Relations in Europe” (2020)

Figure 15. Intra-EU Trade Integration (2010–2018 Average)

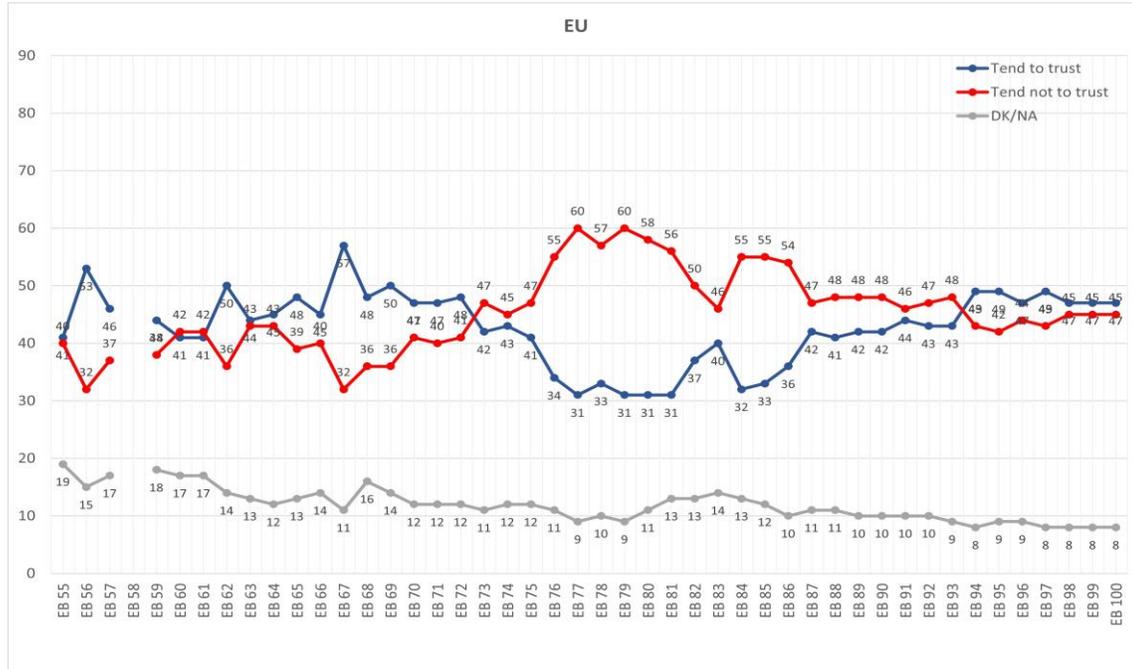


Source: own elaboration using data from ESPON Program “Interregional Relations in Europe” (2020)

Strong trade orientation towards the core EU, but mostly import-dominated

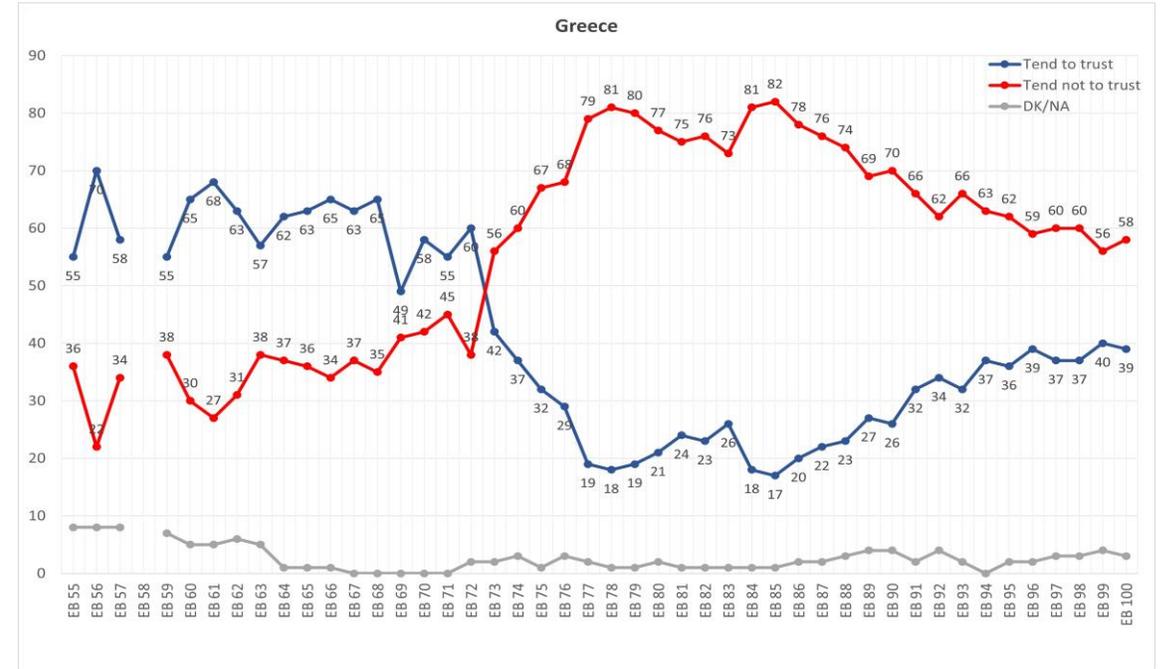
Public trust in the EU: Greece vs EU average over time

Figure 16. Evolution of citizens' perceptions at the EU level, 2001-2023



Source: own elaboration using data from Eurobarometer

Figure 17. Evolution of citizens' perceptions in Greece, 2001-2023



Source: own elaboration using data from Eurobarometer

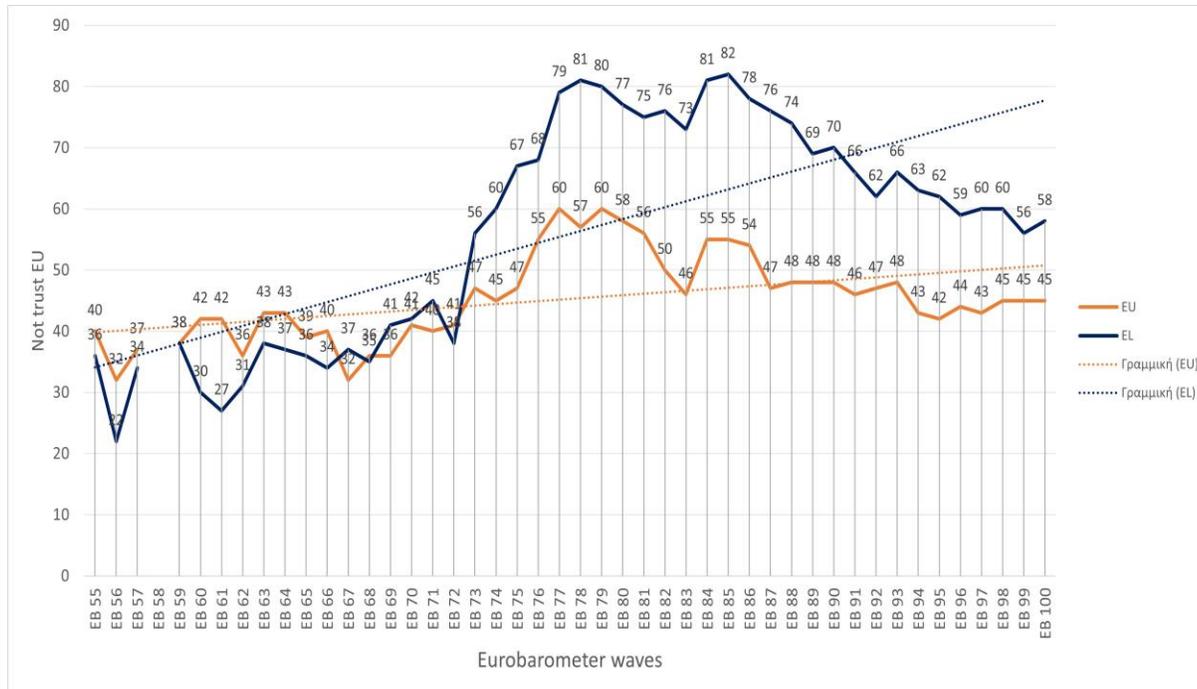
Sharp divergence in public sentiment between Greece and the EU average

- Before the crisis, Greece reports higher trust in the EU than the European average
- From 2009 onwards → a dramatic collapse in trust

Deep erosion of political legitimacy

Rising discontent: long-term trends in EU distrust – Greece vs EU

Figure 18. Evolution discontent, 2001-2023



Source: own elaboration using data from Eurobarometer

- Pre-Crisis (2001–2009): Distrust in Greece was below the EU average, showing strong public confidence in the EU.
- Crisis Years (2009–2016): A sharp spike in Greek distrust starts in EB72, peaking between EB78–EB81 (~2012–2014) at 81–82%.
- Post-Crisis Recovery (2016–2023): Greek distrust gradually declines but remains significantly higher than the EU average. The trendline for Greece continues its upward slope, while the EU line is relatively flat — reflecting a persistent divergence in sentiment.

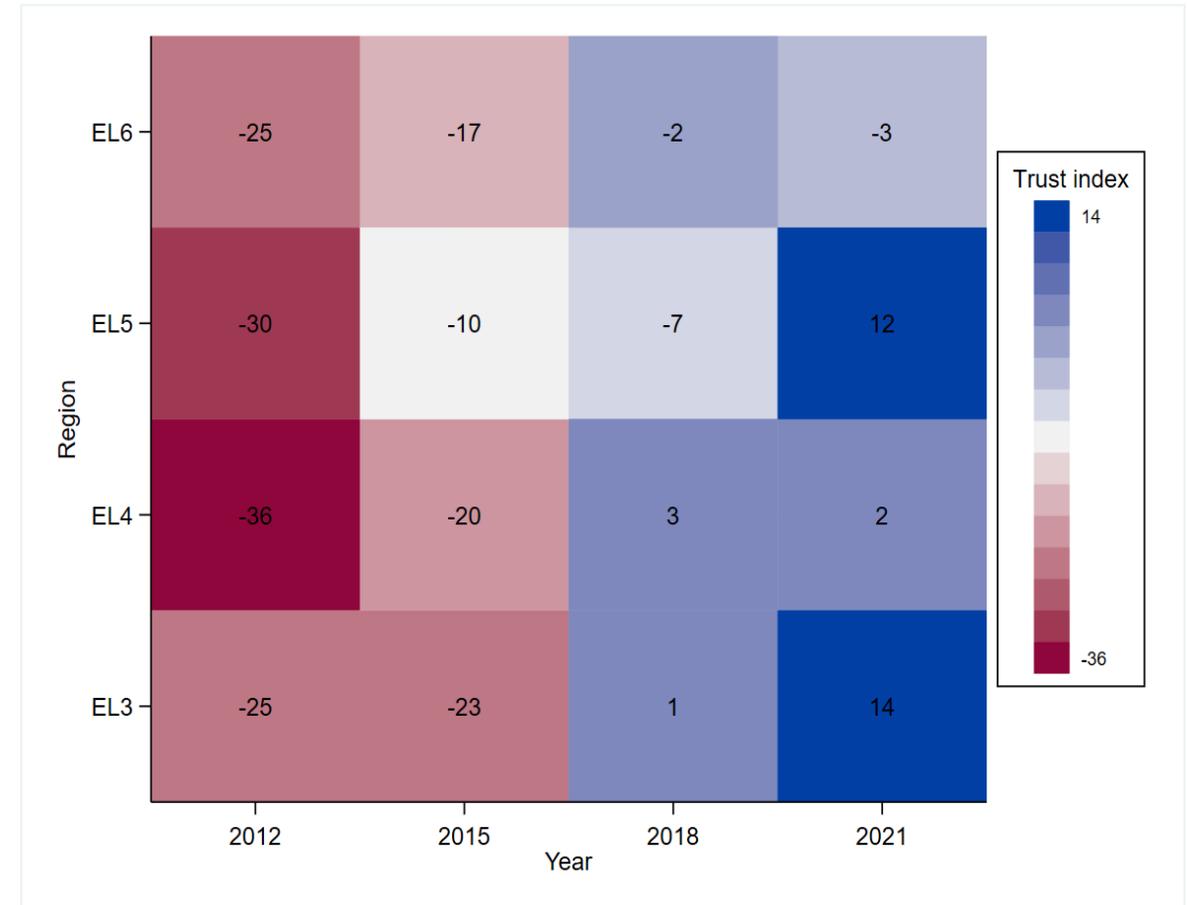
Uneven Recovery: Regional Divergence in Trust Toward the EU

2012–2015: Deep distrust

2018–2021: Transition towards positivity

- A clear turnaround in public trust, with most regions moving from distrust to cautiously positive perceptions between 2012 and 2021.
- However, regional disparities remain, suggesting that economic recovery and political reconciliation were unevenly distributed.

Figure 19. Heatmap of Trust Index in Greek Regions (2012–2021)



Source: own elaboration using data from Flash Eurobarometer (2012, 2015, 2018, 2021)

Growth and EU integration: core vs periphery trade dynamics

Figure 20. Growth vs EU integration (2010-2018)

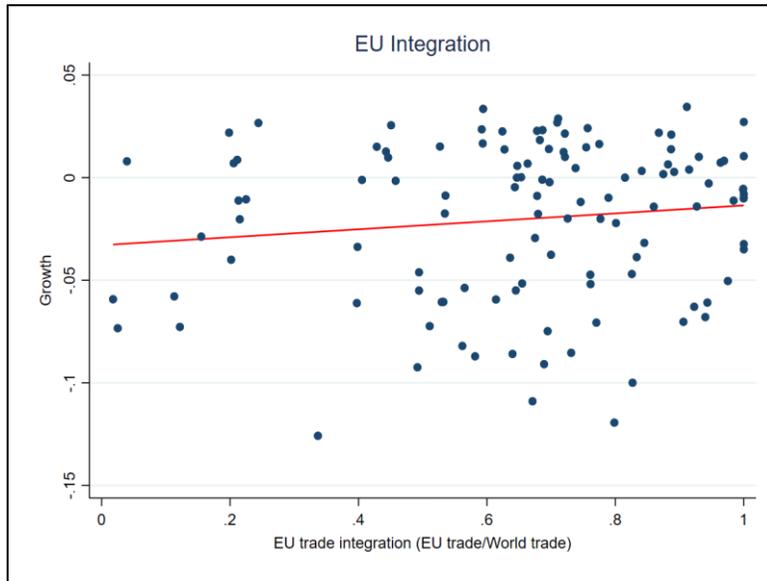
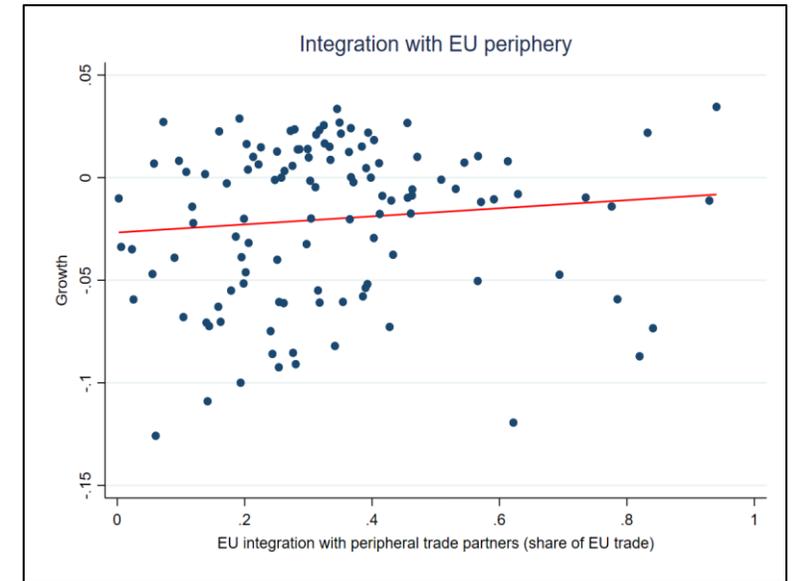
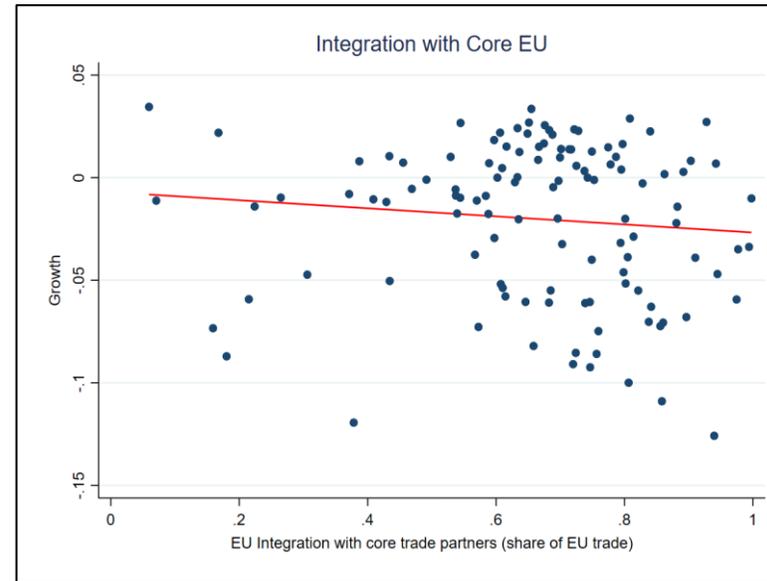


Figure 21. Growth vs integration with EU core (2010-2018) Figure 22. Growth vs integration with EU periphery (2010-2018)



Source: own elaboration using data from ESPON Program “Interregional Relations in Europe” (2020) and ARDECO database (2025)

Overall EU integration shows a positive link to regional growth: more integrated regions tend to grow slightly faster.

Integration with core EU economies is negatively associated with growth, possibly due to competition, import dominance, or asymmetric trade structures.

Integration with the EU periphery shows a positive correlation with growth — suggesting regional complementarity and more inclusive economic dynamics.

These findings highlight the importance of trade composition, not just trade intensity, in shaping growth outcomes.

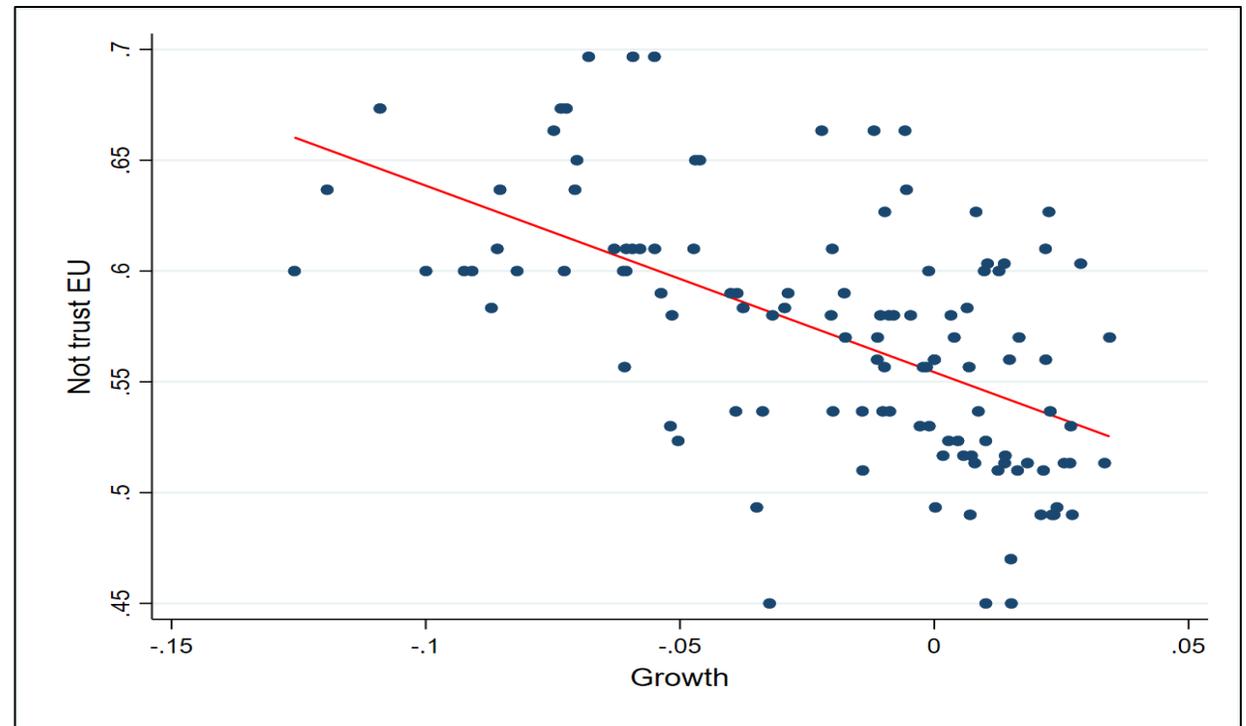
Economic growth and EU discontent: a negative correlation

Strong negative correlation: as economic growth increases, distrust in the EU declines.

Implication: Regions with weaker or negative growth between tend to show higher levels of EU discontent, while those with better economic performance report lower distrust.

This suggests that citizens' trust in the EU is closely linked to their local economic realities — when regions experience stagnation or contraction, dissatisfaction with EU institutions rises.

Figure 23. Growth vs Discontent (2010-2018)



Source: own elaboration using data from Eurobarometer and ARDECO database (2025)

Next steps: empirical assessment of interdependent dynamics

Objective: to empirically assess the **endogenous relationships** between growth, EU integration, policies and public discontent

Methodological Approach: Generalized System of Equations to capture two-way feedback and simultaneity across key variables

Model structure:

- Equation 1: Regional Growth = $f(\text{Integration, Discontent, Policies, Controls})$
- Equation 2: Integration = $f(\text{Growth, Policies, Controls})$
- Equation 3: Discontent = $f(\text{Growth, Integration, Policies, Controls})$
- Equation 4: Policies = $f(\text{Growth, Discontent, Controls})$

Why This Matters:

Understanding these dynamics as **mutually reinforcing** allows for more effective, evidence-based regional and cohesion policy design — especially in peripheral economies.

Key policy implications from the Greek case

1. Integration quality matters, not just quantity

- The structure of trade relations has unequal growth returns.
- Overreliance on imports from the core can deepen peripheral dependency.

2. Addressing regional inequalities is essential

- Persistent disparities weaken the overall effectiveness of EU integration.
- Cohesion Policy should be more targeted toward structurally disadvantaged regions.

3. Discontent is economically rooted

- Lack of inclusive growth drives political distrust — especially in crisis-hit or low-growth regions.
- Rebuilding trust requires visible improvements in regional well-being.

4. Need for a more endogenous Cohesion Policy

- CP should be more responsive to local economic and social gaps.
 - Evidence-based targeting can increase legitimacy and impact.
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THANK YOU FOR YOUR ATTENTION
