

National Bank Of Greece

The effects of economic crisis on Greek entrepreneurship

February 2018



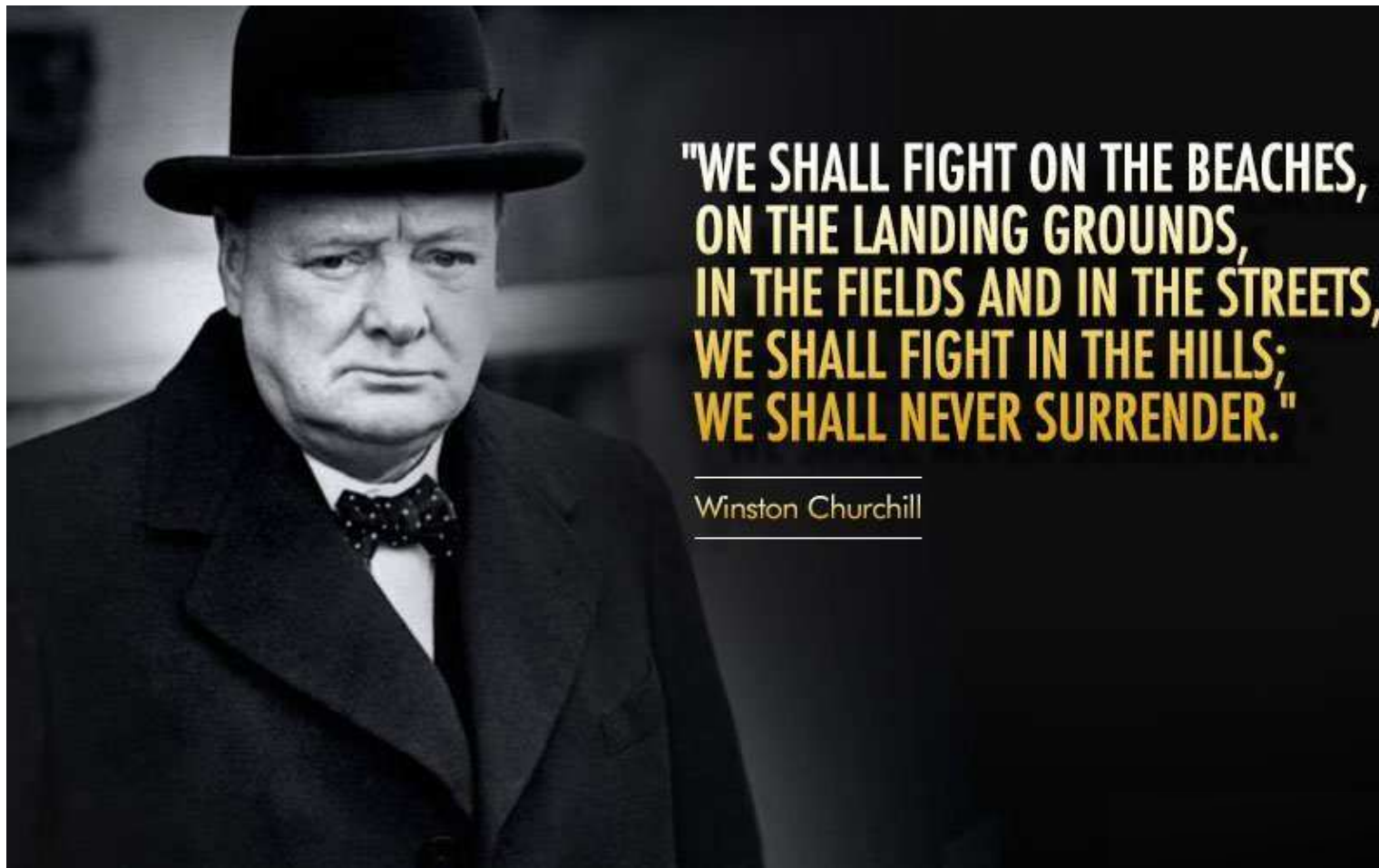
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Head of the Entrepreneurship and Business

Analysis Division

Entrepreneurs that never surrender – the case study of Greece



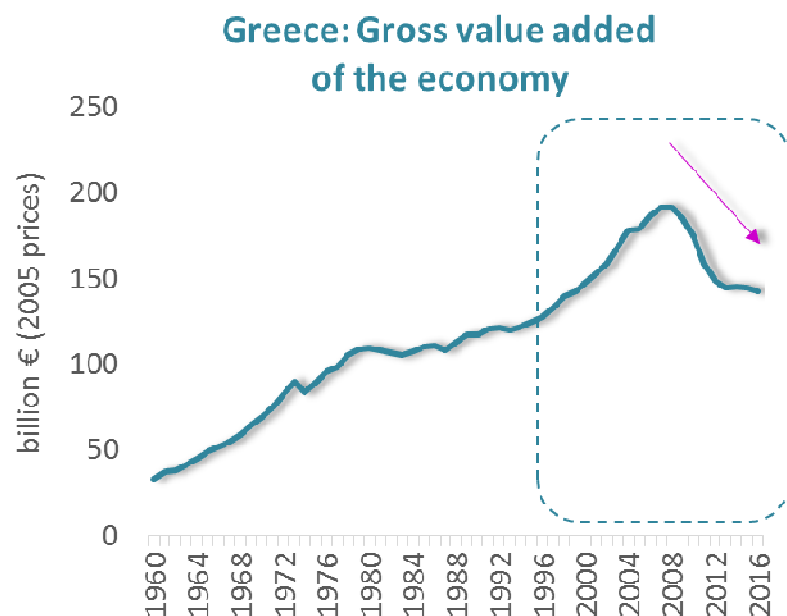
The Greek corporate sector

Focusing on SMEs

Looking forward

The crisis

Following a booming decade (1995-2008), with GDP increasing by 4 per cent in real terms, the current crisis has swept away almost all the previous output gains.



Sources: Eurostat, NBG Estimates

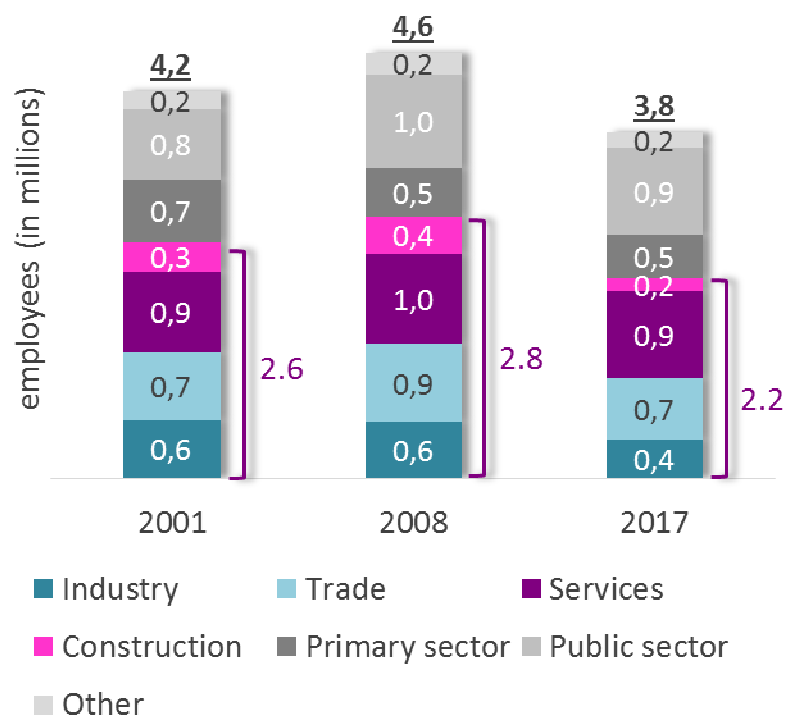
GREECE: GROSS VALUE ADDED PER SECTOR			
	The prosperity years (1995-2008)	The crisis years (2009-2016)	TWO PREVIOUS DECADES
THE GOOD			
Oil industry	-1,4	5,0	3,6
Primary sector	-1,9	0,5	-1,4
THE BAD			
Transport	9,9	-7,3	2,7
Tourism	2,5	-0,1	2,3
Telecoms - IT	5,2	-3,5	1,7
Financials	3,2	-2,1	1,1
Other Services	3,3	-2,3	1,1
Public administration	11,7	-7,7	4,0
THE UGLY			
Trade	6,1	-10,8	-4,7
Industry (excl. oil)	2,8	-6,1	-3,3
Construction	7,5	-8,9	-1,4
Scientific services	5,2	-5,9	-0,7
TOTAL excl. rents and energy	54,1	-49,1	5,0

billion € (2005 prices)

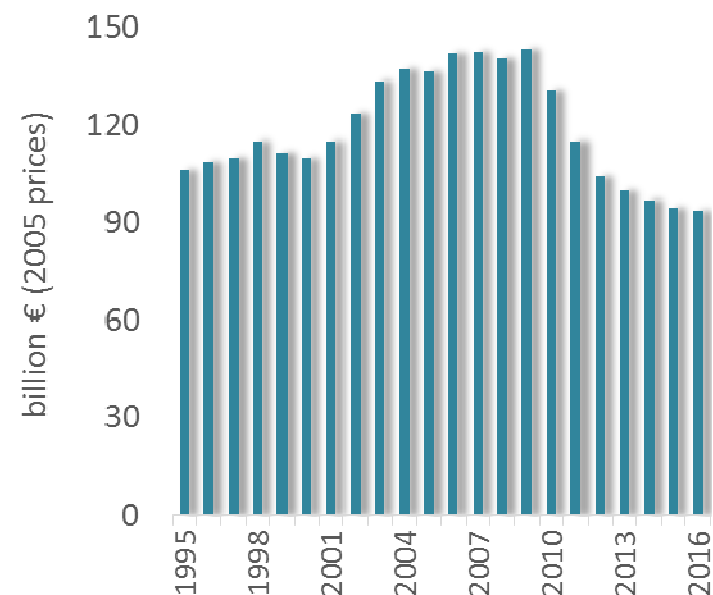
The crisis

With employment suffering a terrible blow (i.e. losses in available jobs of about 0.8 million), domestic demand decreased by more than €50 billion (i.e. more than 1/3 of its pre-crisis level).

Employment in Greece



Greece: Domestic Demand

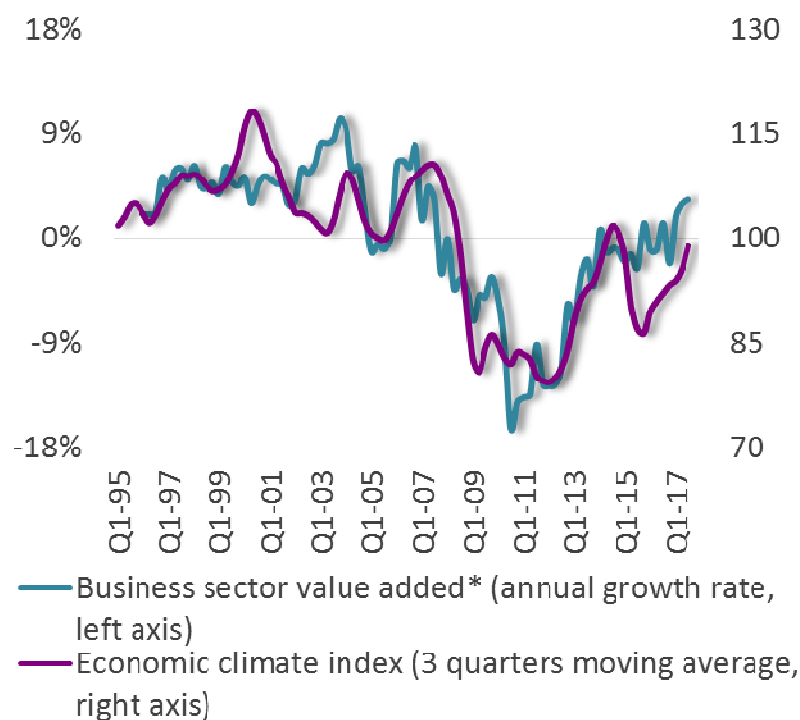


Sources: Eurostat, NBG Estimates

The revival

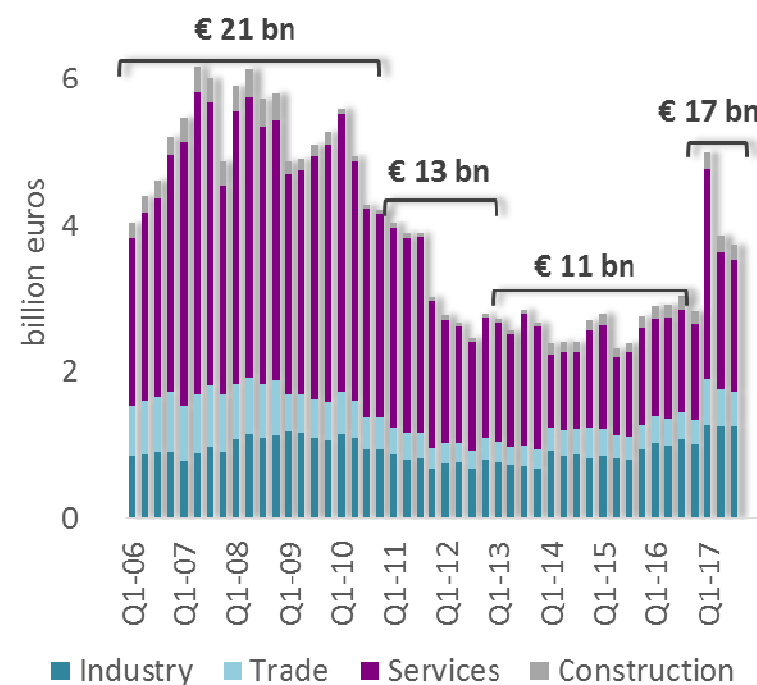
During the past two years, the business climate in Greece is improving, with sentiment indices increasing by more than 15 points and investment by more than 30 per cent.

Business sector output in Greece



*Excluding agricultural, financial, public sector (including education and health services) and private sector's rents.

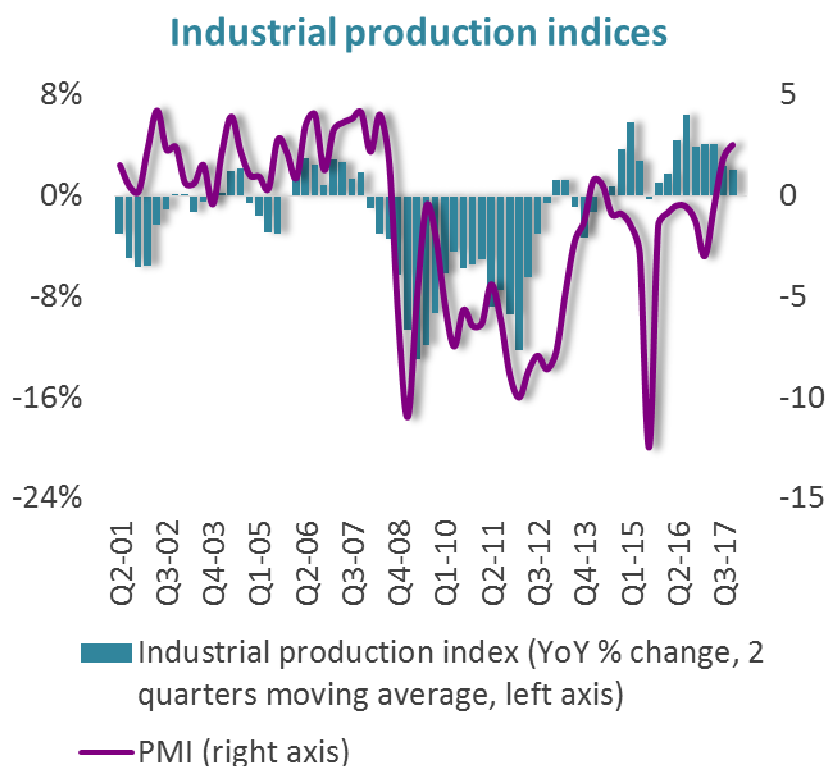
Business sector investment in Greece



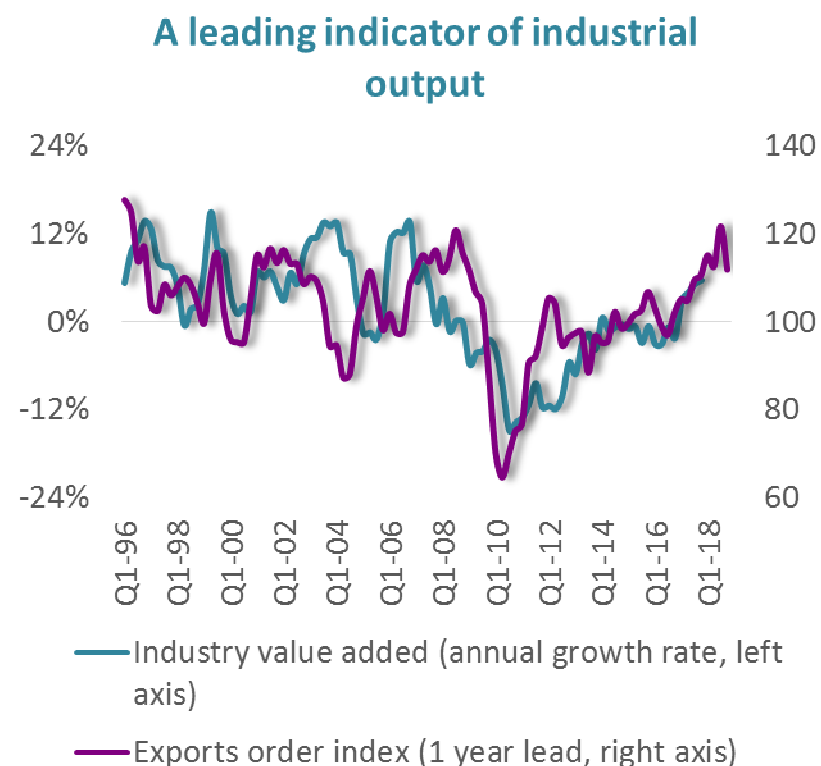
Sources: Eurostat, European Commission, NBG Estimates

The revival

The revival appears well-founded, with industrial production increasing by 6 per cent during the past 12 months and expected to increase by more than 10 per cent during the next 12 months.



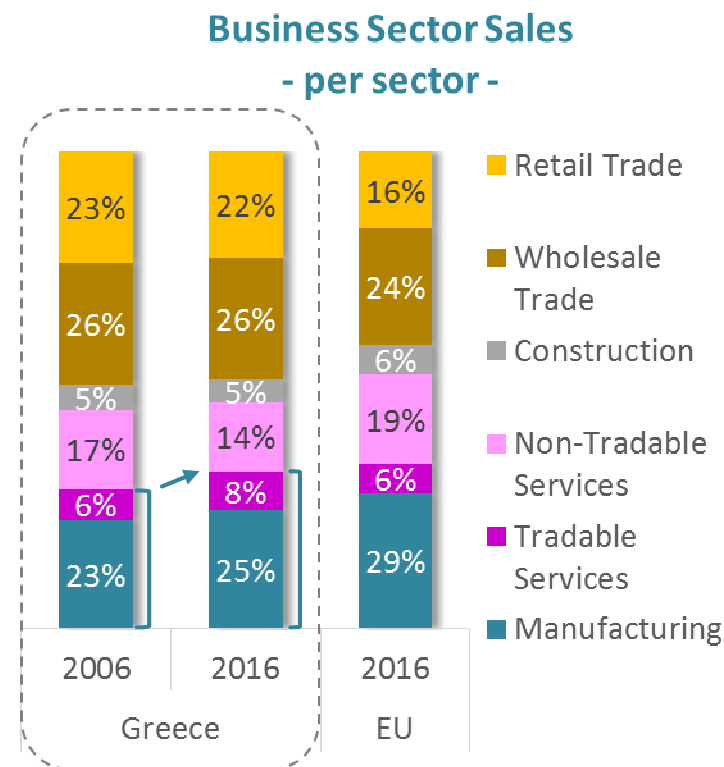
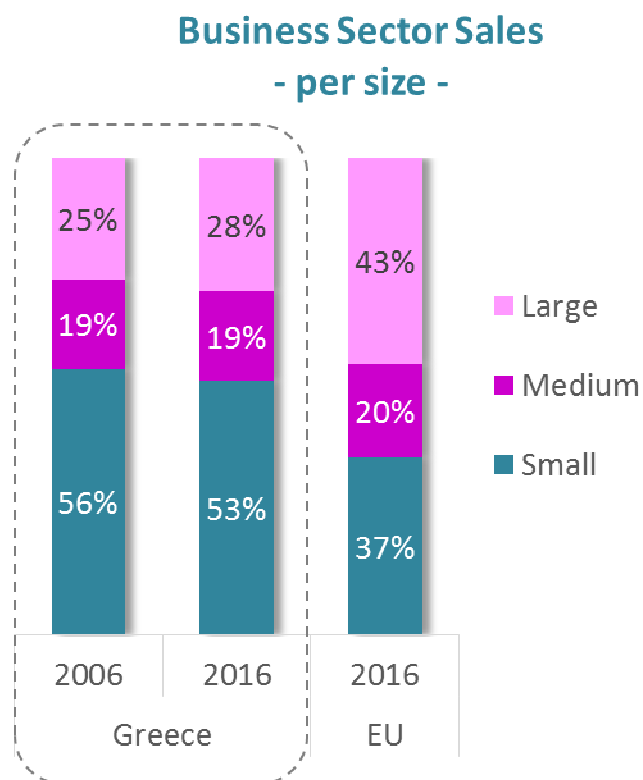
Sources: Eurostat, BoG, NBG Estimates



Sources: Eurostat, European Commission, NBG Estimates

What has changed – why the business sector is fundamentally stronger

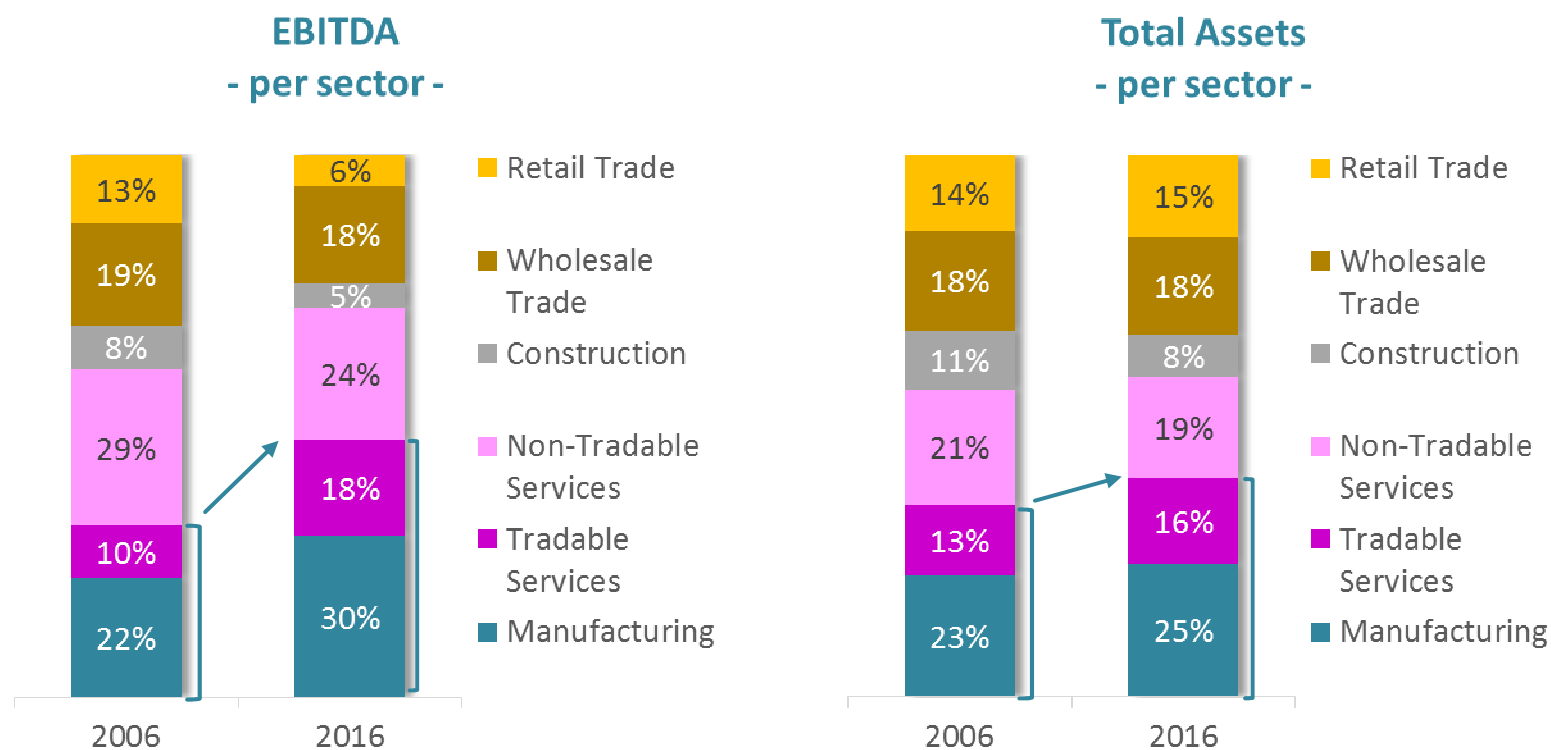
The tradable sectors have increased their share in turnover (33 per cent of business sales in 2016 from 29 per cent in 2006).



Sources: Eurostat, ICAP database, BACH database, NBG Estimates

What has changed – why the business sector is fundamentally stronger

The shift towards tradables is even more pronounced in terms of profits generated, while the capital employed is lagging behind this shift.



Sources: Eurostat, ICAP database, BACH database, NBG Estimates

Key financial ratios - Definition

PROFITABILITY

EBITDA margin = EBITDA/sales =

= (gross profit-other operating costs)/sales

= gross margin – other operating costs/sales

ASSETS UTILIZATION

Assets turnover = sales/assets

= sales/(fixed assets + current assets)

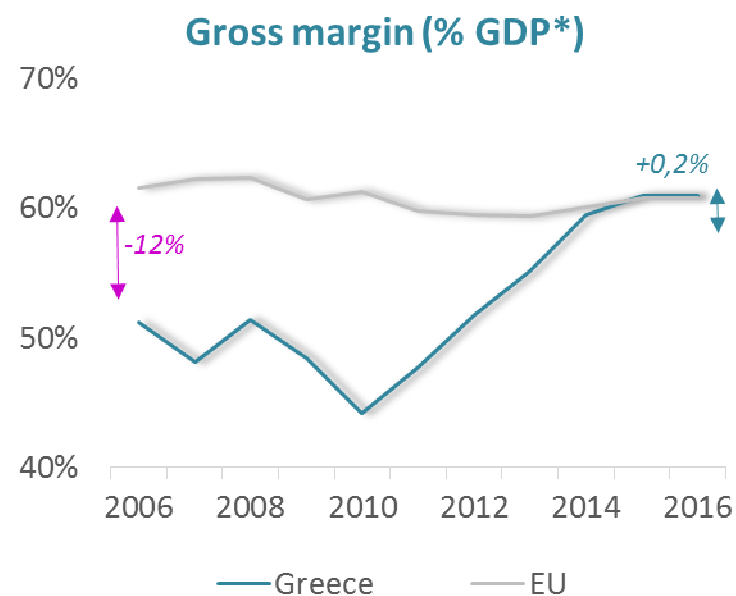
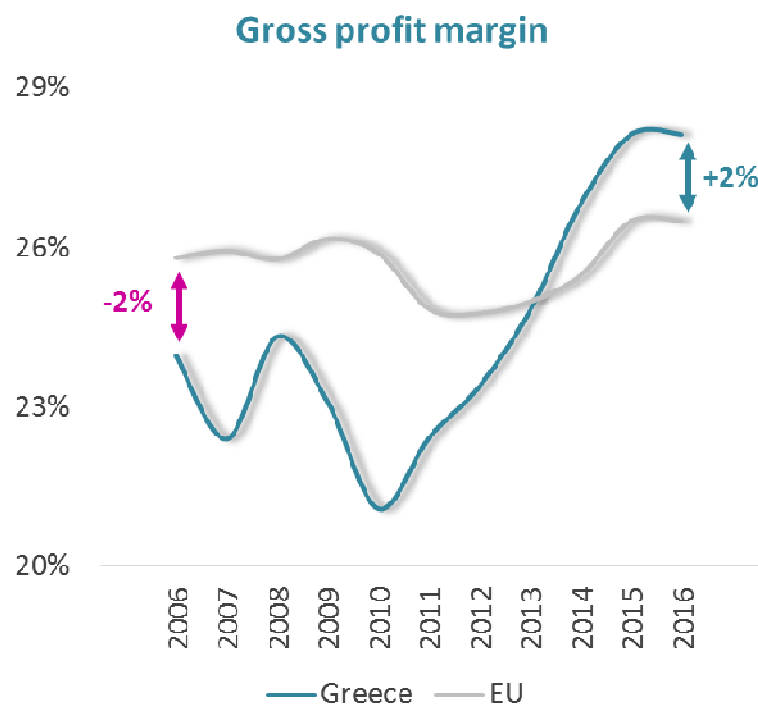
e.g. land and machinery are fixed assets, while cash and accounts receivable are current assets

RETURN ON ASSETS (ROA)

*Operating ROA = EBITDA margin * Assets turnover*

What has changed – why the business sector is fundamentally stronger

Greek enterprises have become leaner and more cost-efficient...

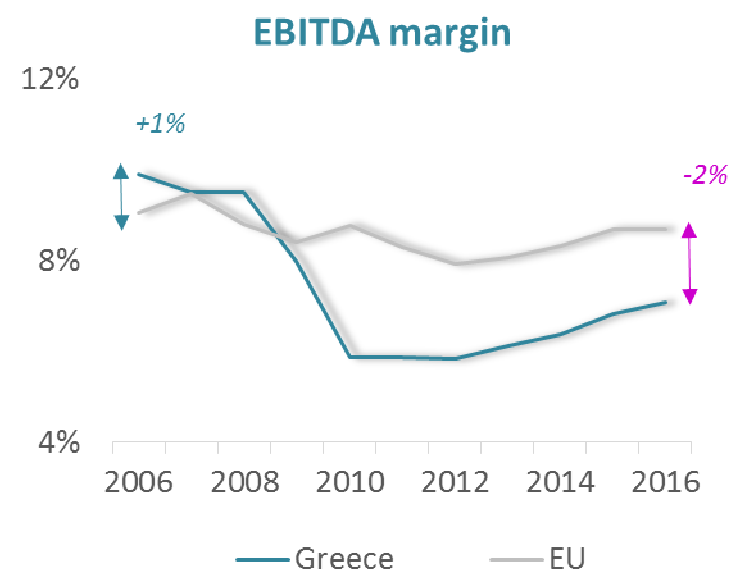
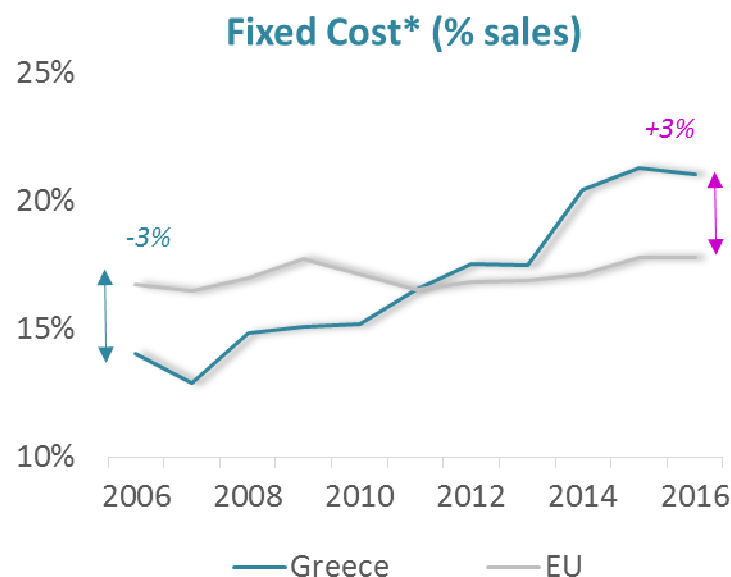


* Business Sector GDP (excluding agriculture, financial activities, electricity and public sector services)

Sources: Eurostat, ICAP database, BACH database, NBG Estimates

What has changed – why the business sector is fundamentally stronger

... but this effect is not visible yet in EBITDA terms, due to the abnormal low level of domestic demand (which results in high fixed costs).

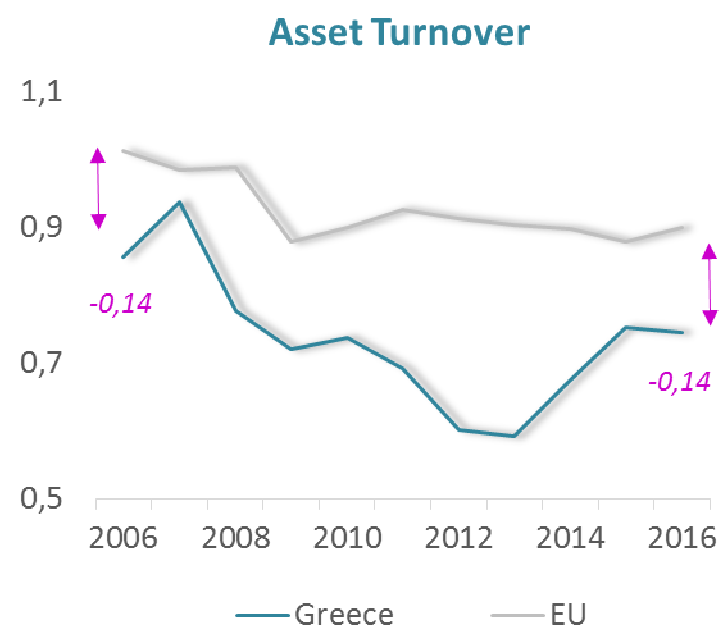
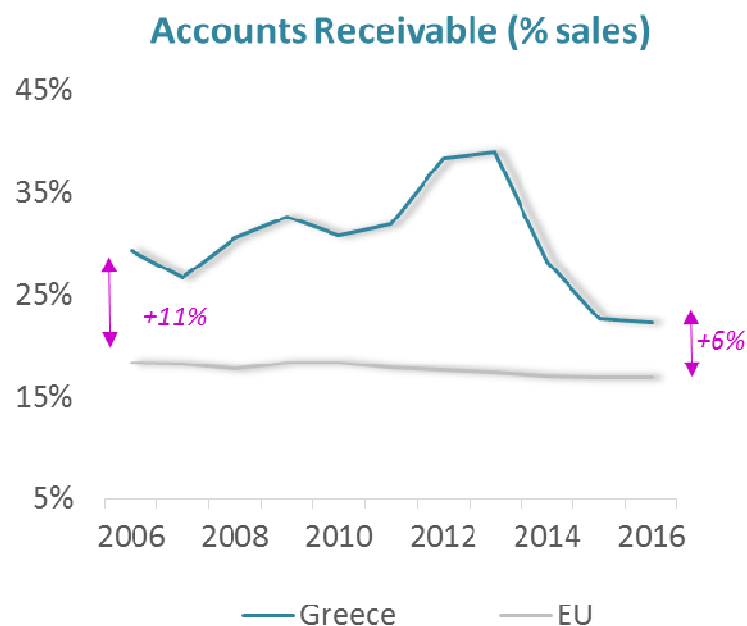


* Fixed cost = Operating cost – Cost of Goods Sold

Sources: Eurostat, ICAP database, BACH database, NBG Estimates

What has changed – why the business sector is fundamentally stronger

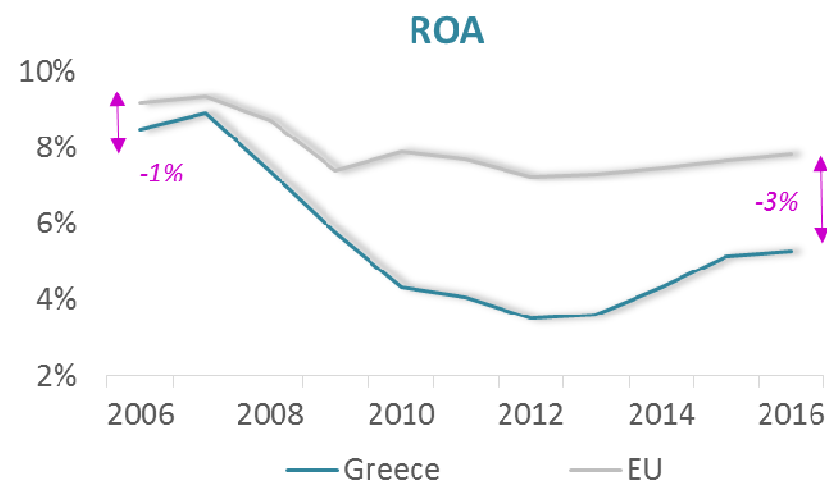
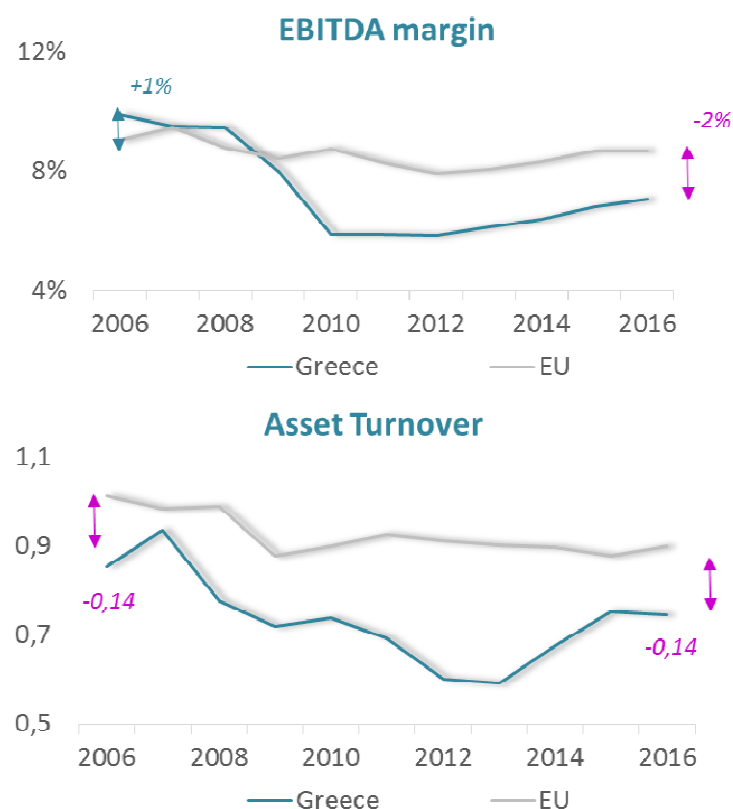
Greek enterprises have also increased their efficiency in terms of their transaction behavior, thus benefiting their assets turnover...



Sources: Eurostat, ICAP database, BACH database, NBG Estimates

What has changed – why the business sector is fundamentally stronger

... while they have also increased their fixed assets' potential capacity to generate revenue, thus they have closed – and will continue to close – the ROA gap versus the EU average.



Sources: Eurostat, ICAP database, BACH database, NBG Estimates

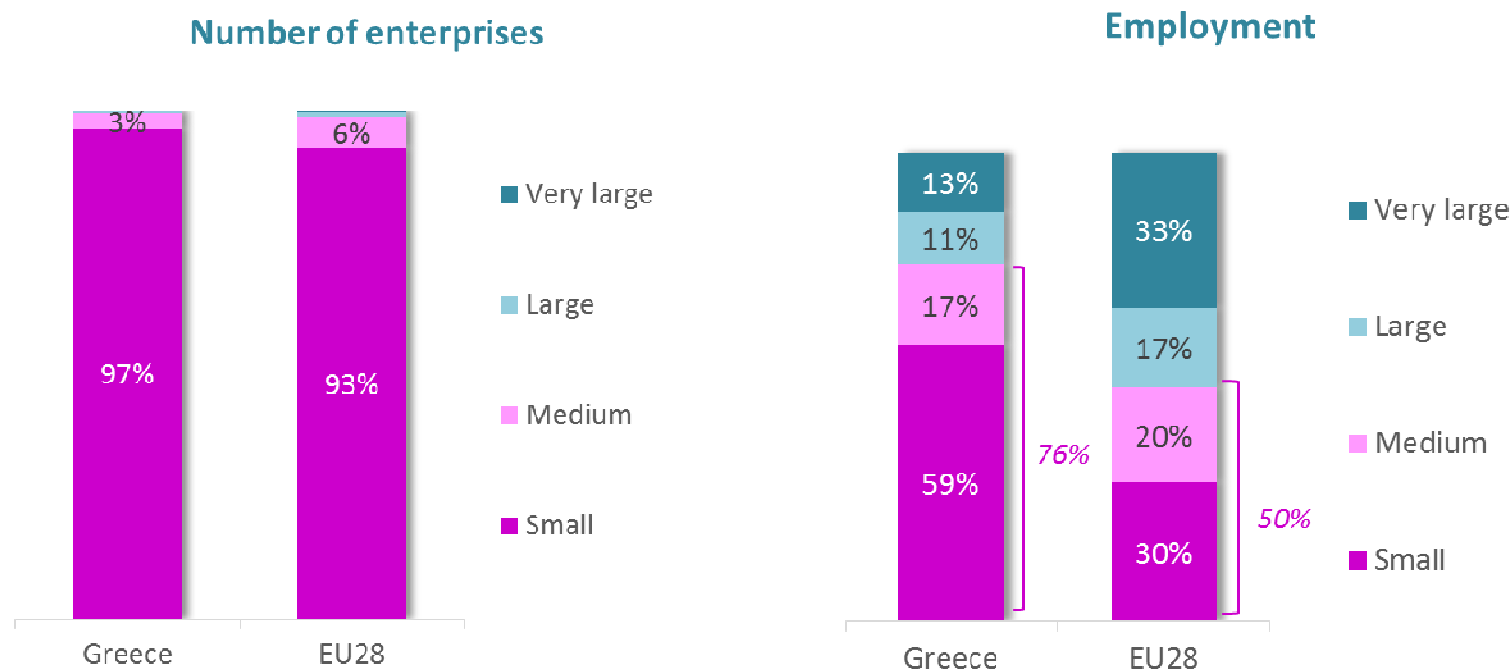
The Greek corporate sector

Focusing on SMEs

Looking forward

SMEs contribution in the economy

There are about 780,000 SMEs in Greece generating a turnover of around €120bn, covering 76% of the employment compared to just 50% in the EU.



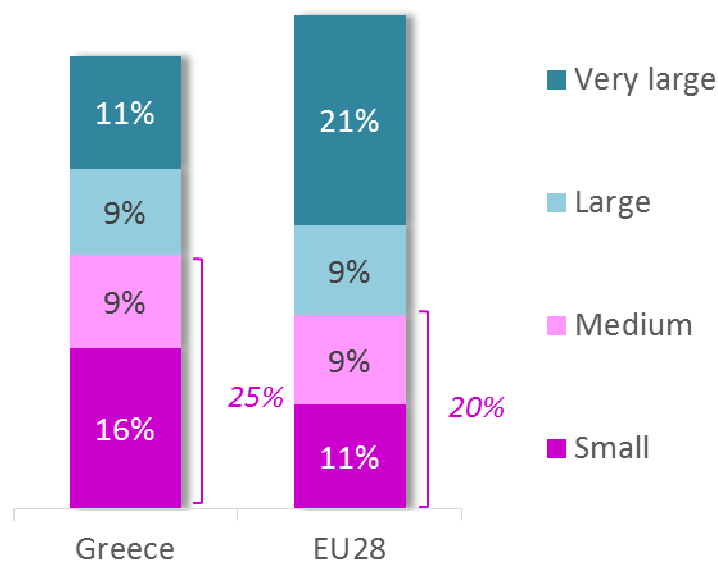
* Enterprise sizes: **Small**: less than 10 employees, **Medium**: 10-50 employees, **Large**: 50-250 employees, **Very Large**: more than 250 employees

Sources: Eurostat, SBA Factsheet, NBG Estimates

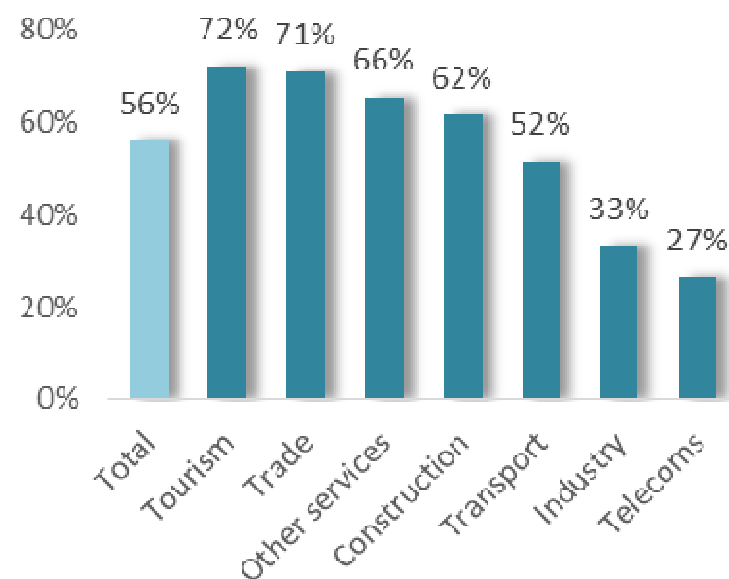
SMEs contribution in the economy

SMEs' contribution to GDP accounts for 25 per cent (compared to 20 per cent in the EU), with their greatest contribution being noted in tourism, trade, services and construction.

Contribution to GDP



SMEs contribution per sector (% of total corporate value added)

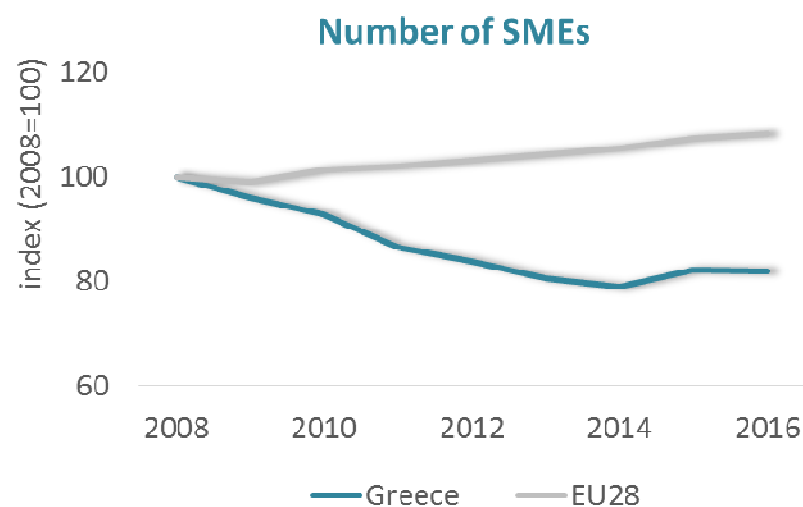


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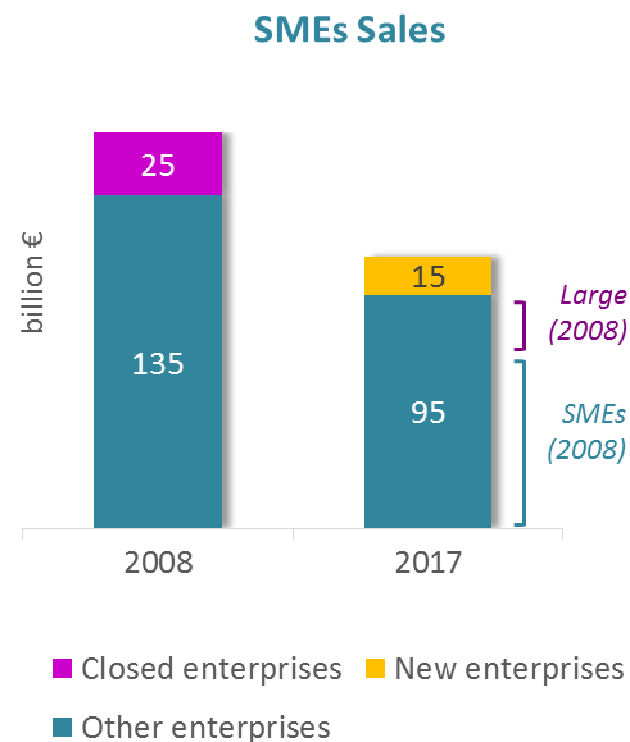
Sources: Eurostat, SBA Factsheet, NBG Estimates

The crisis – SMEs segment

Around 250,000 SMEs have closed during the crisis resulting in an output loss of almost €25 bn, while the sales of the surviving SMEs have plummeted by 30 per cent.



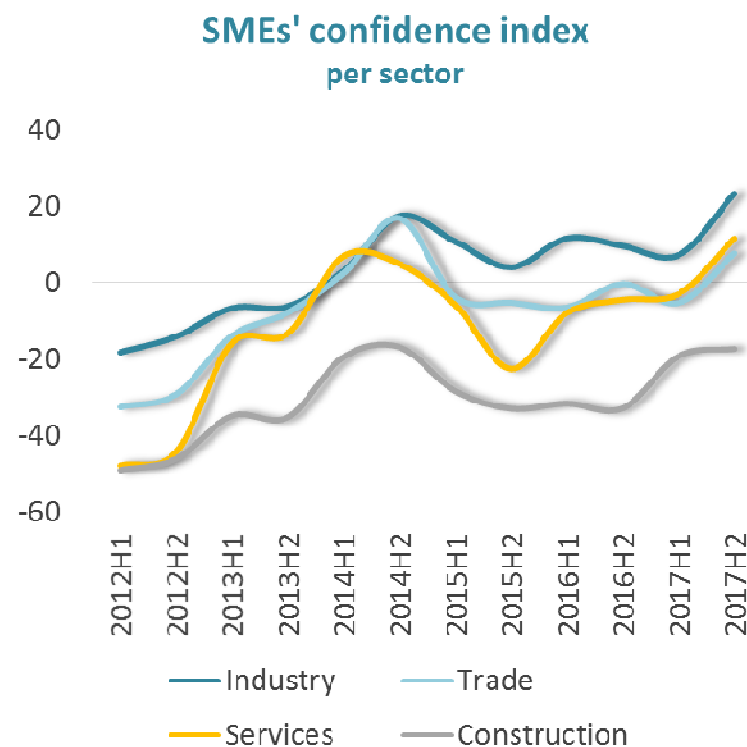
Source: Eurostat, SBA Factsheet, NBG Estimates



Source: Eurostat, SBA Factsheet, NBG Survey, NBG Estimates

The revival – SMEs segment

Business confidence – as measured by the respective index of the NBG survey for SMEs - is reviving to positive levels (with the exception of construction).

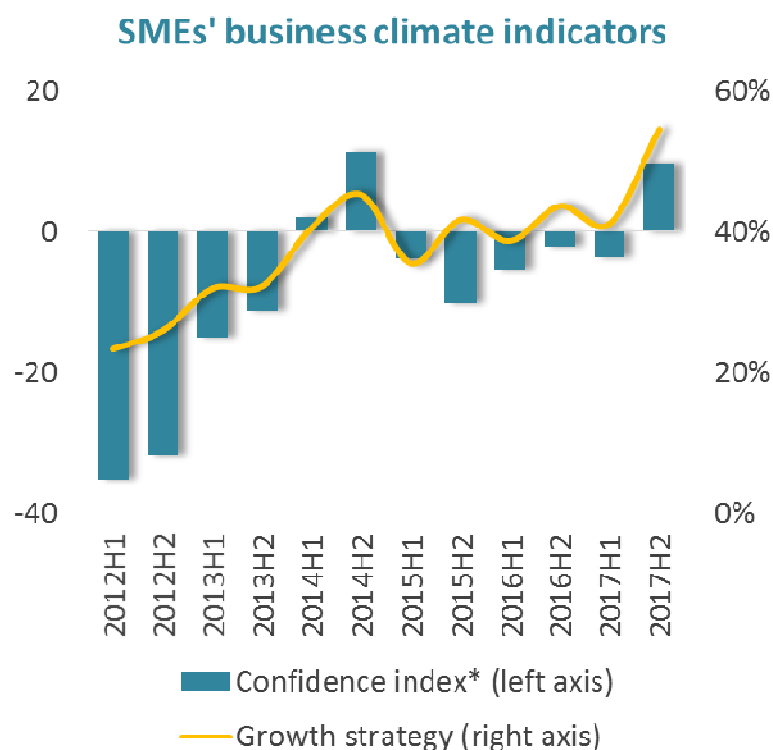
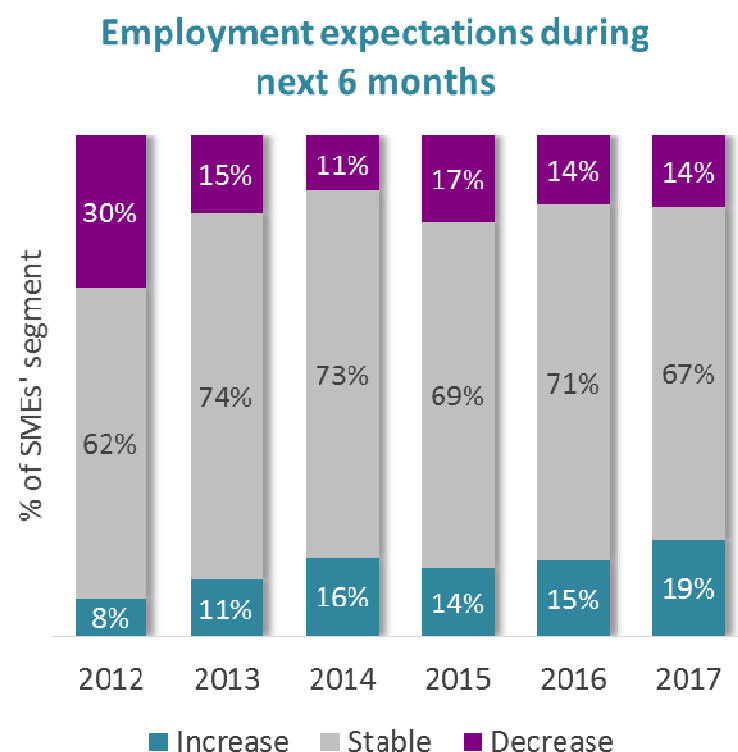


* The confidence index corresponds to the net balance of answers for decrease (-100), stability (0) and increase (+100).

Source: NBG SMEs' Survey

The revival – SMEs segment

Employment expectations verify this positive outlook, while more than ½ of SMEs report having adopted a growth strategy (versus around 20 per cent in the midst of the crisis).

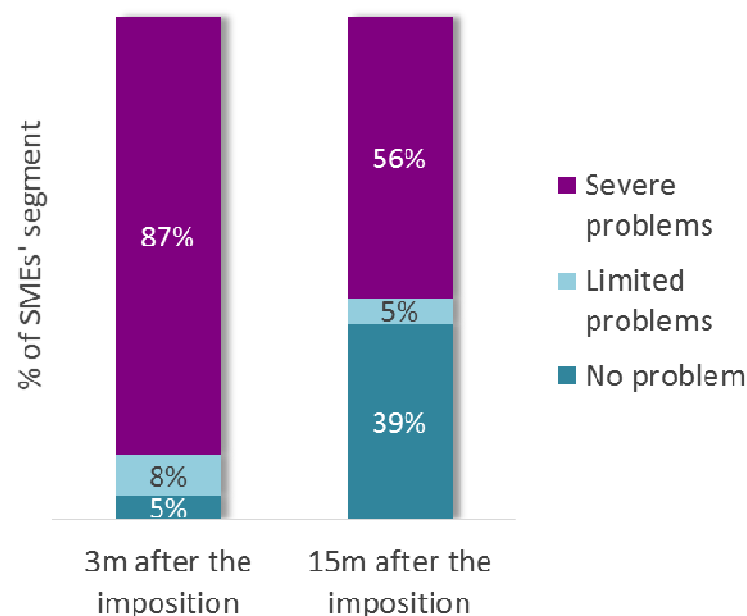


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What has changed – why SMEs are more resilient to shocks - *the experience of capital controls*

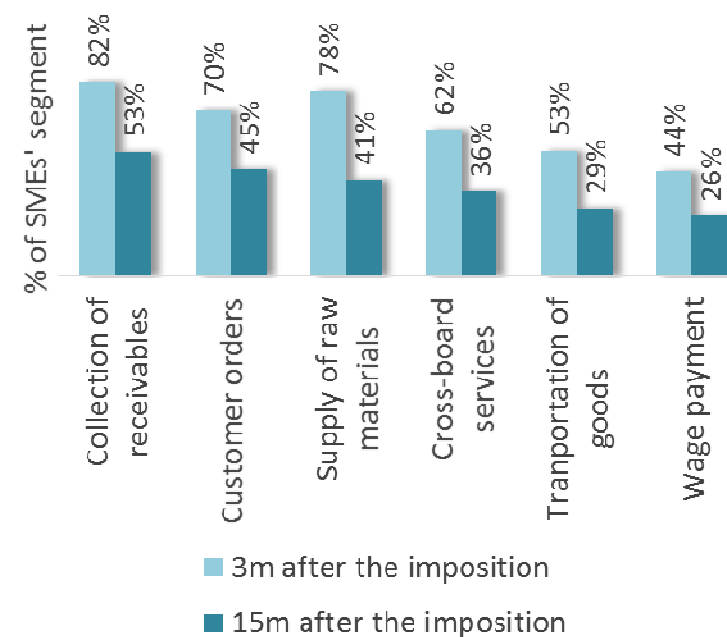
A little more than a year after the imposition of capital controls, SMEs had managed to adopt to the new state of play...

Short-term problems due to capital controls



Source: NBG SMEs' Survey

SMEs facing problems due to capital controls

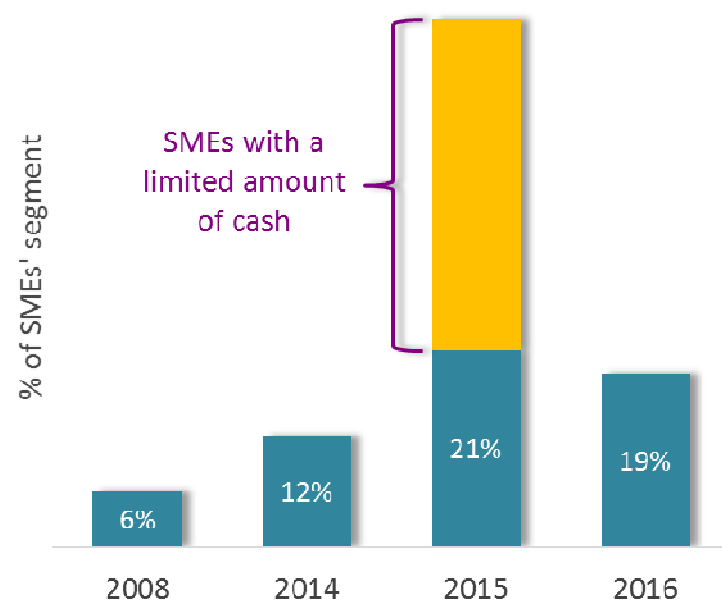


Source: NBG SMEs' Survey

What has changed – why SMEs are more resilient to shocks - *the experience of capital controls*

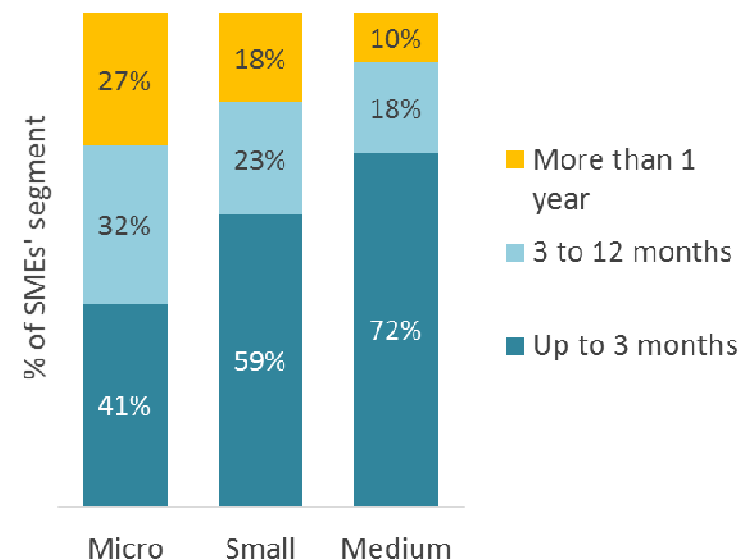
... without the “short-term liquidity cushion” of the first months after the imposition of capital controls, SMEs have become more operationally flexible with the majority reporting high ability for a quick recovery.

**SMEs retaining cash reserves out of
the Greek banking system**



Source: NBG SMEs' Survey

**Estimated time of recovery after the
removal of capital controls
(per size)**

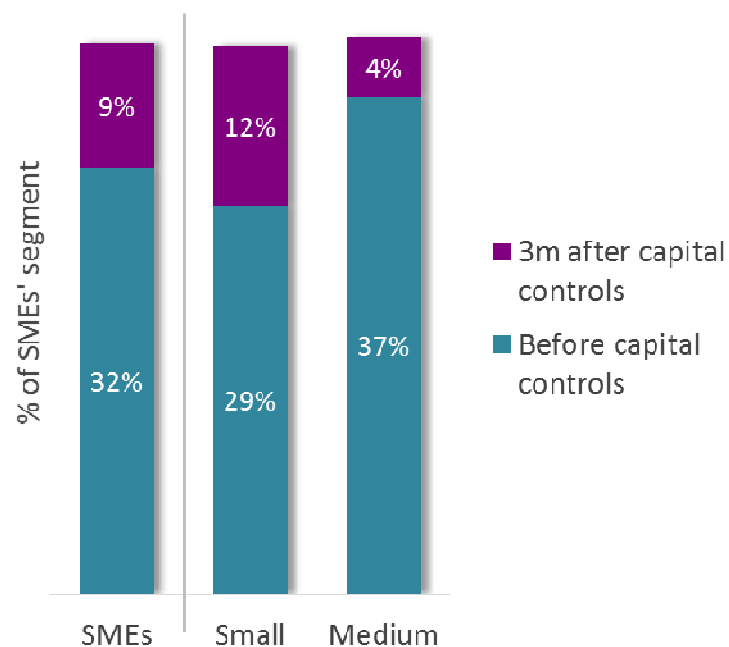


Source: NBG SMEs' Survey

What has changed – the digital advancement of SMEs

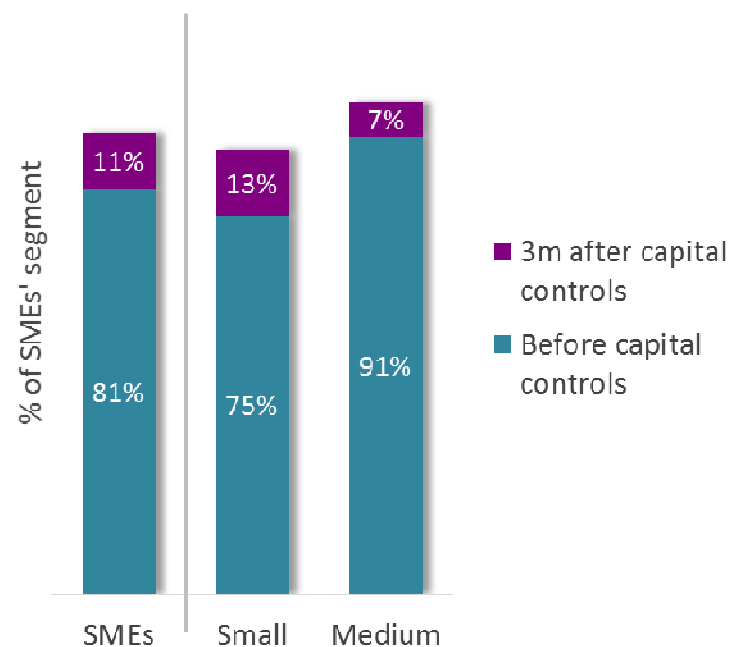
The imposition of capital controls in Greece had a positive side-effect; it has triggered a digital advancement of the business sector.

POS terminal availability



Source: NBG SMEs' Survey

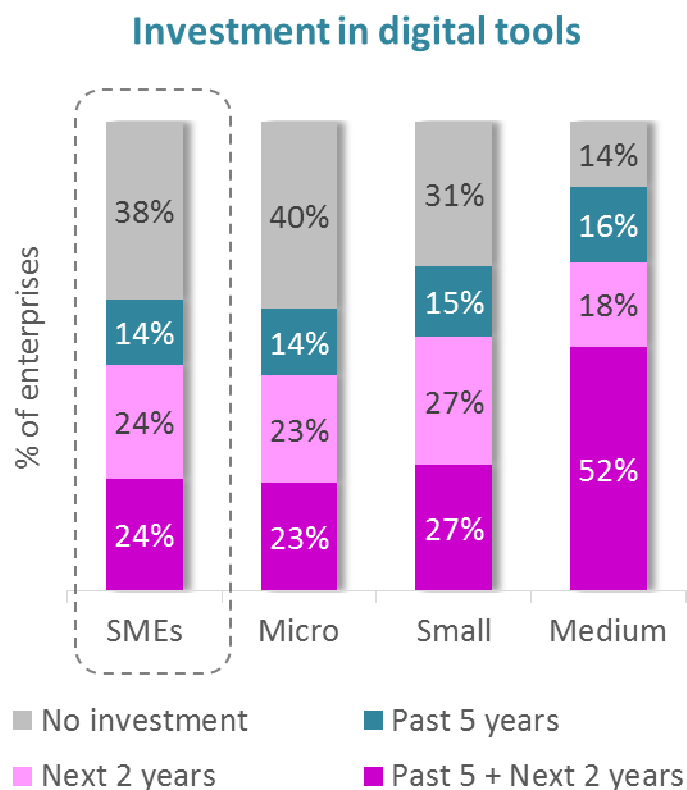
Use of e-banking



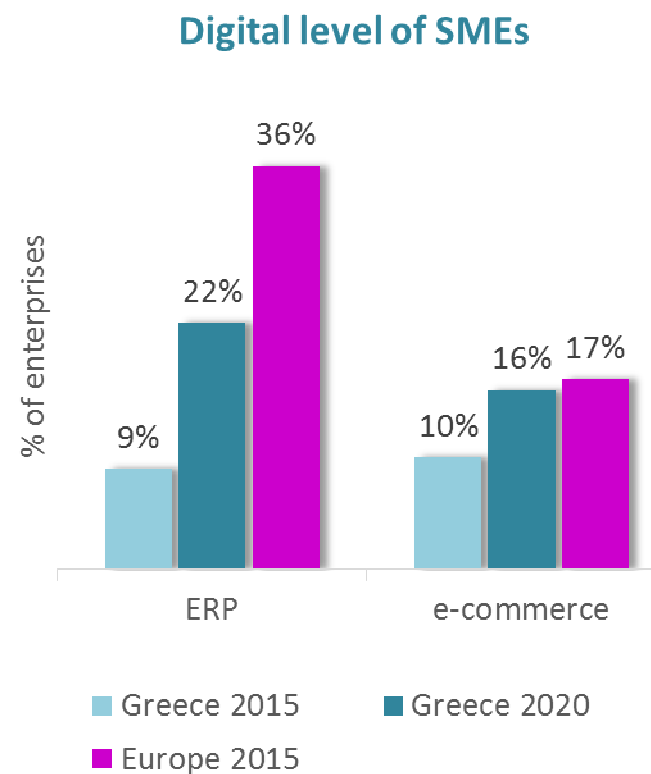
Source: NBG SMEs' Survey

What has changed – the digital advancement of SMEs

Planned investments are expected to narrow significantly the digital gap between Greece and Europe during the next two years.



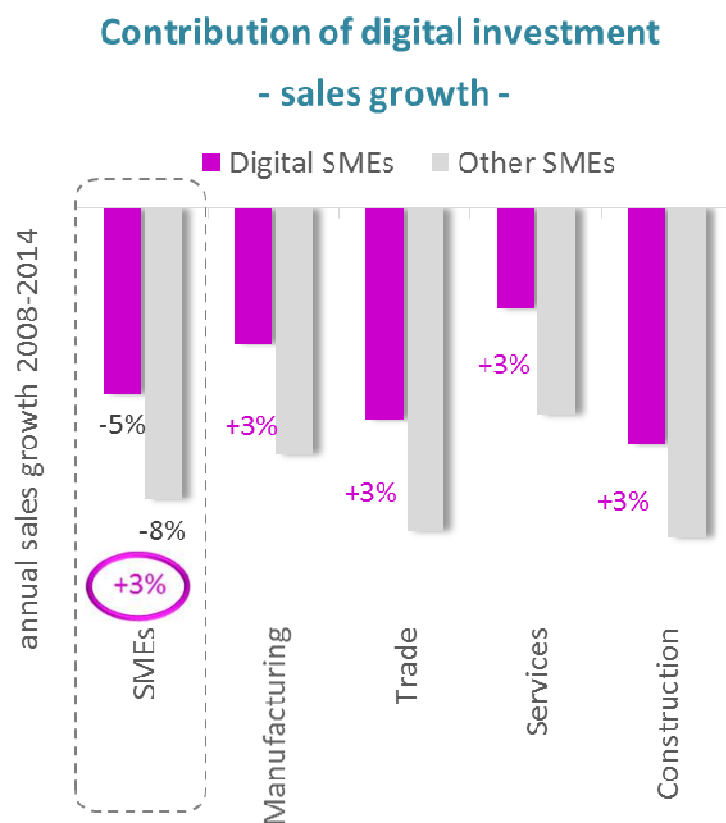
Source: NBG SMEs' Survey



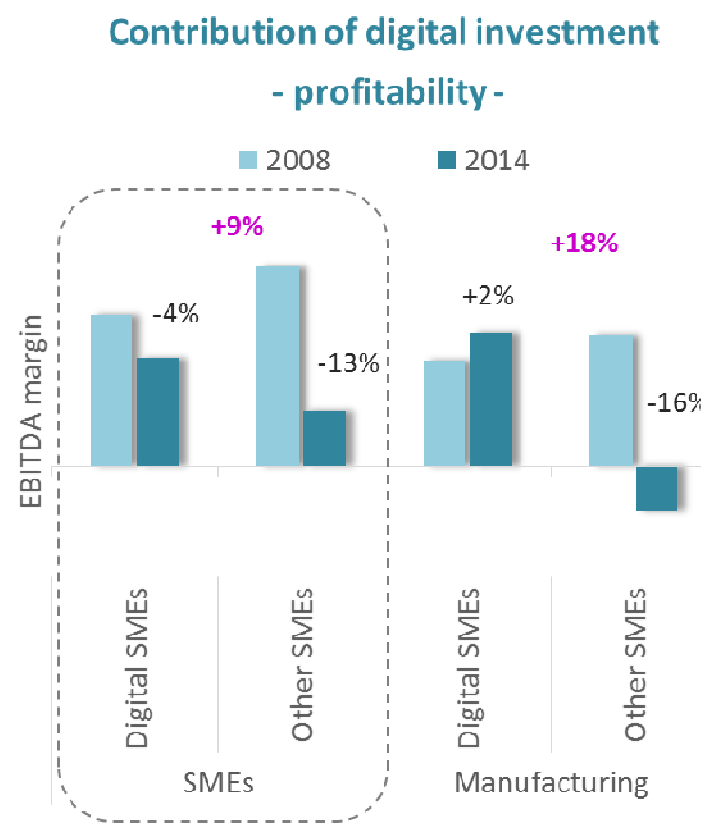
Source: NBG SMEs' Survey

What has changed – the digital advancement of SMEs

As digital upgrade offers a competitive advantage in terms of sales and profitability, the expected return to the Greek economy of the digital transformation of the business sector will be significant.



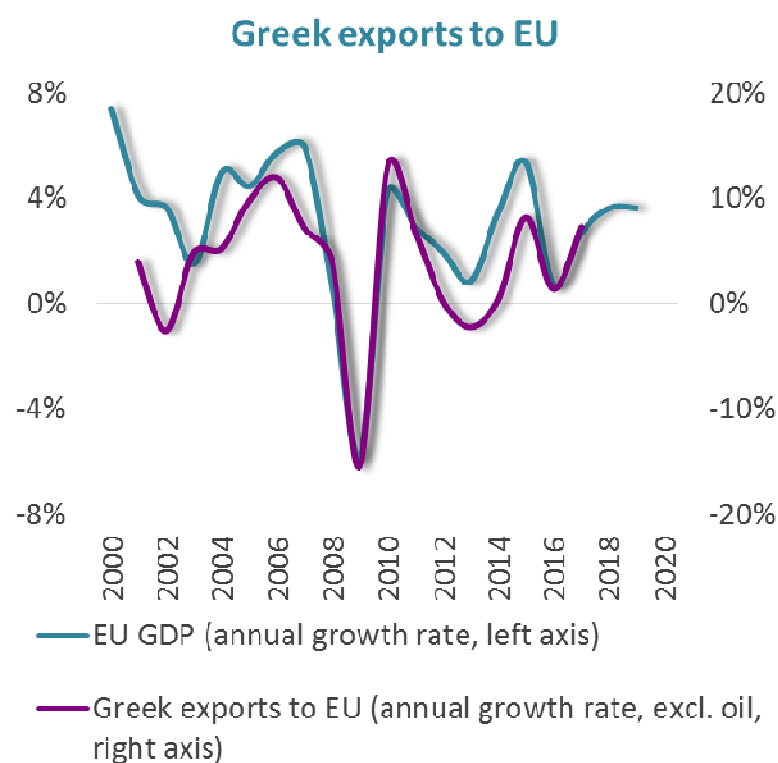
Source: NBG SMEs' Survey



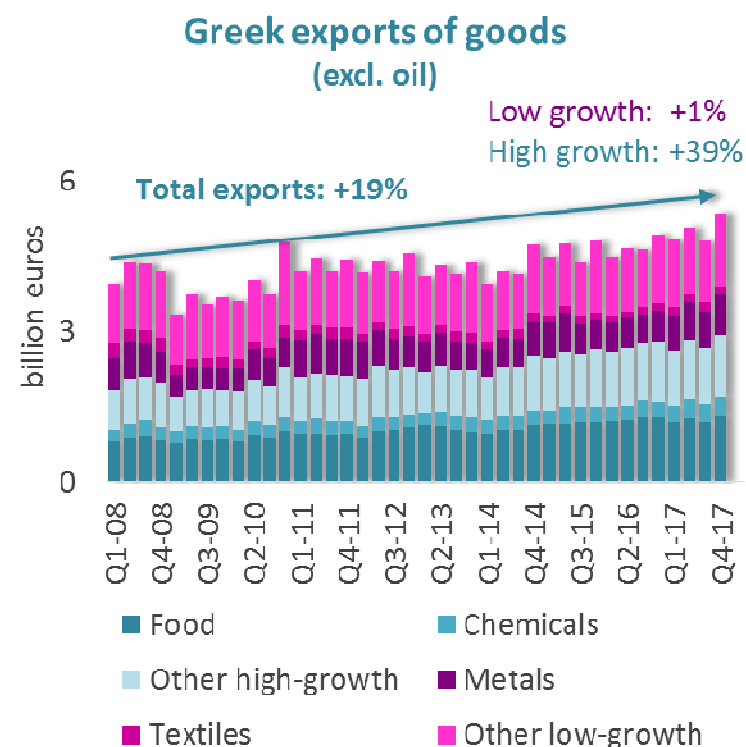
Source: NBG SMEs' Survey

What has changed – the export orientation of SMEs – *case study: manufacturing*

Riding on the EU growth, Greek exports have increased by 19 per cent during the crisis, with ½ of the products almost stagnant and ½ of them rising by almost 40 per cent.



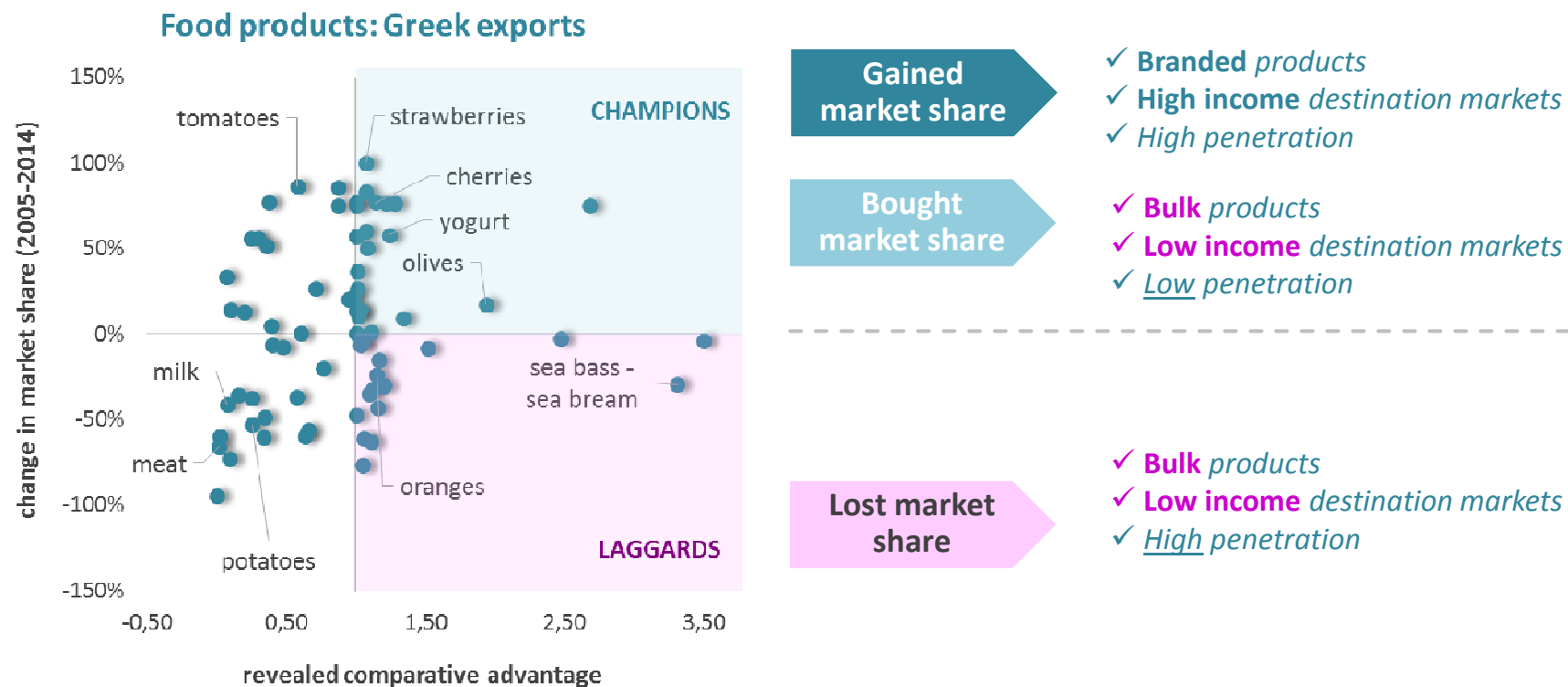
Sources: Eurostat, AMECO, NBG Estimates



* As high (low) growth are defined those branches with an export growth rate greater (lower) than of the total exports.
Sources: Eurostat, NBG Estimates

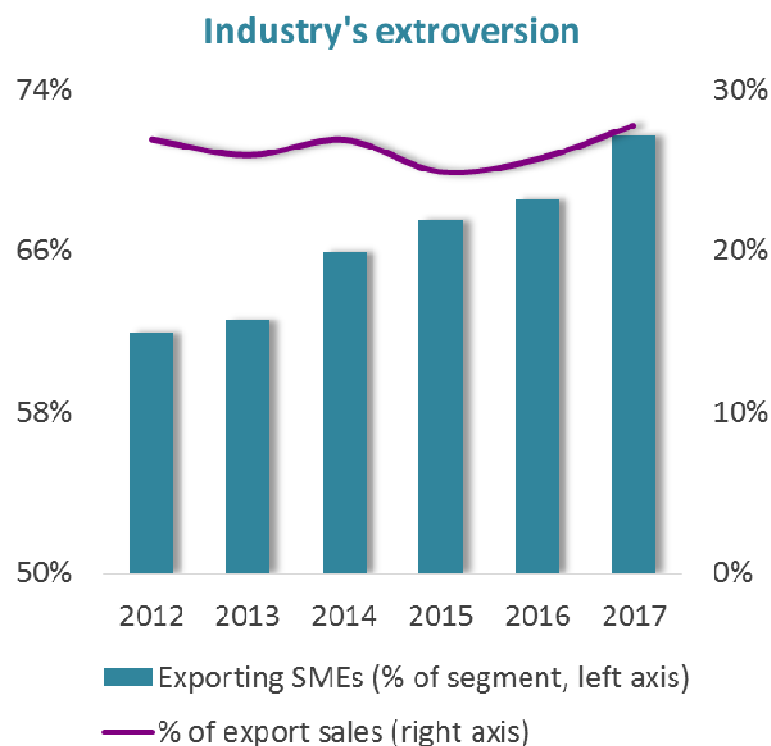
What has changed – the export orientation of SMEs – *case study: manufacturing*

The strategy of exporting successfully is clear: Sell branded products to high income markets. The opposite strategy leads to negative outcomes – first buying market share and eventually losing it.



What has changed – the export orientation of SMEs – *case study: manufacturing*

Three waves of SMEs exporters – the strategic, the rising and the potential – cover half of the segment, while the other half is focused on the domestic market.



Source: NBG SMEs' Survey

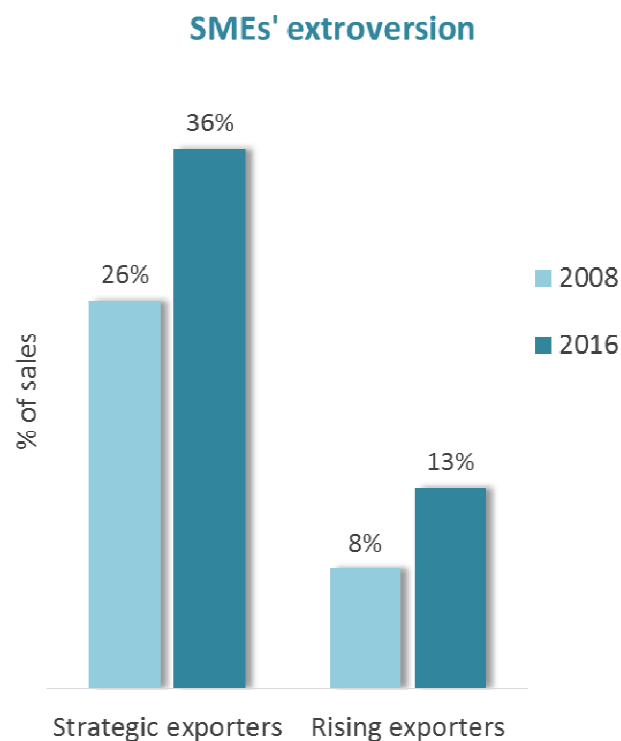
Mapping of industrial SMEs based on their extroversion



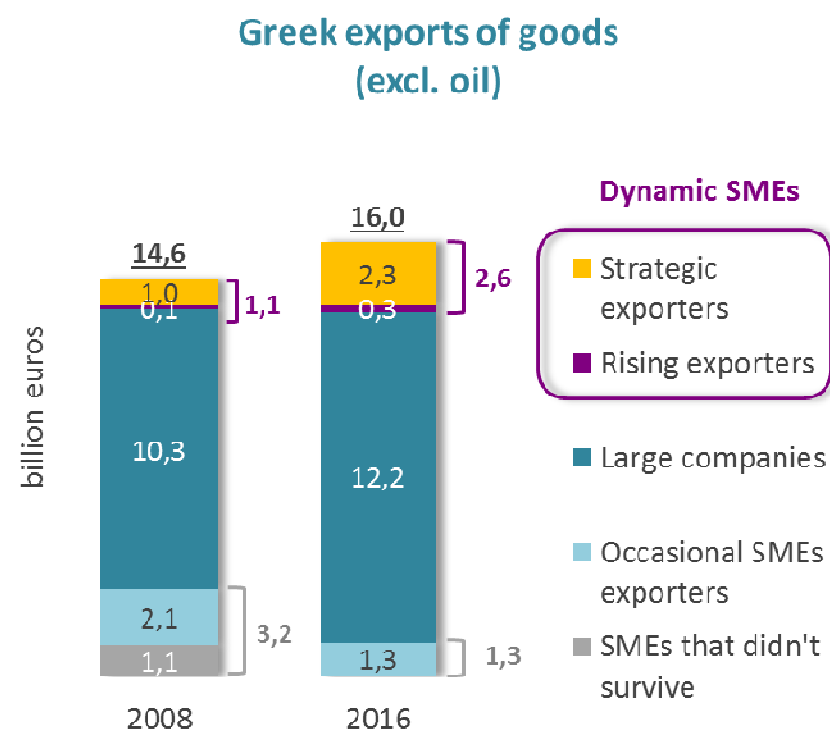
Source: NBG SMEs' Survey

What has changed – the export orientation of SMEs – *case study: manufacturing*

Dynamic SMEs have provided during the crisis an extra €1.5 billion to Greek exports (almost 1 per cent of GDP).



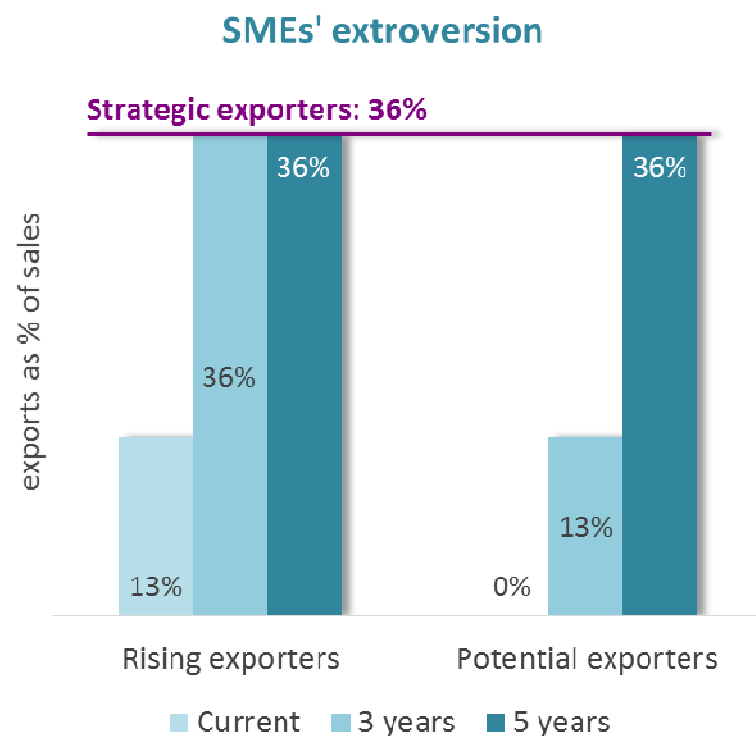
Source: NBG SMEs' Survey



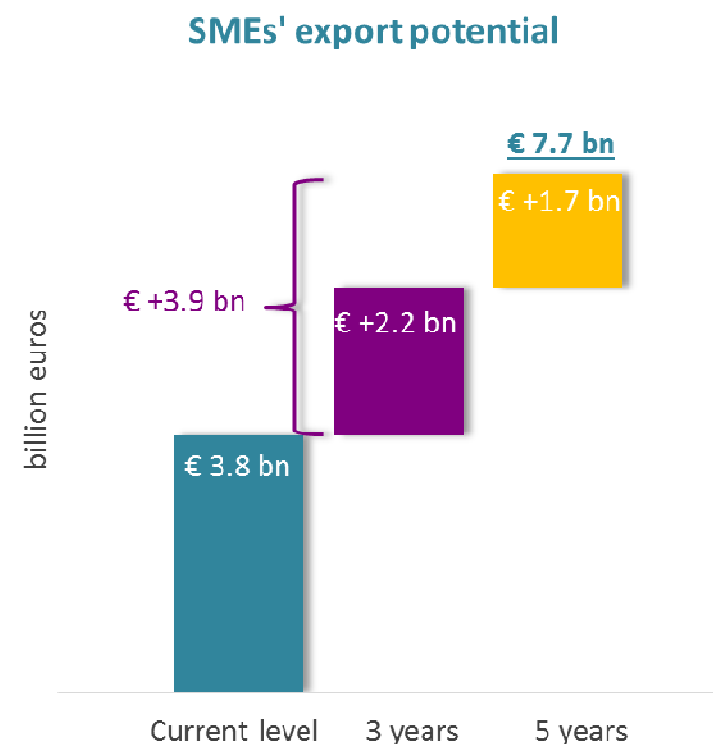
Source: NBG SMEs' Survey

What has changed – the export orientation of SMEs – *case study: manufacturing*

Rising and potential exporters (almost 20 per cent of the segment) are considered the next dynamic wave, expected to boost Greek exports by €4 billion over the next five years.



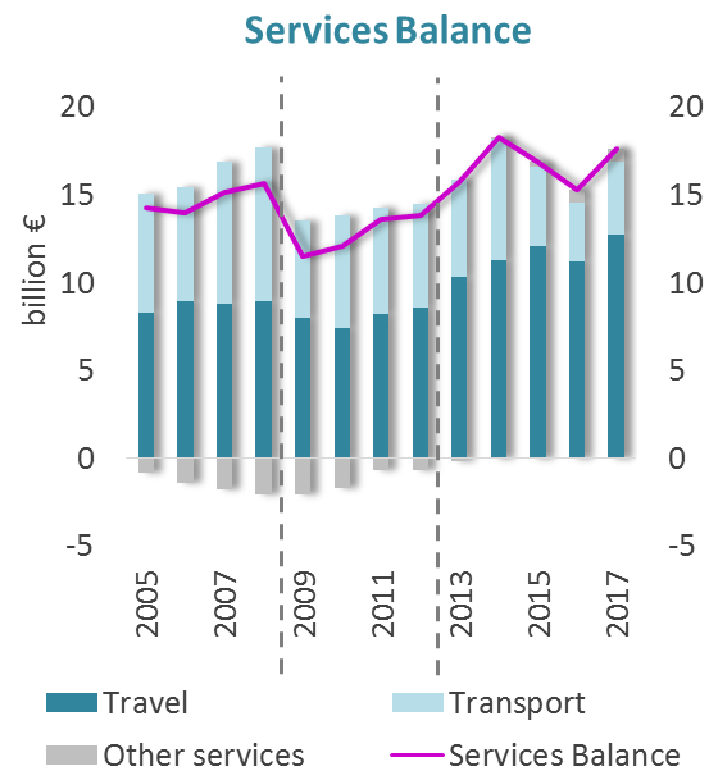
Source: NBG SMEs' Survey



Sources: Eurostat, El.Stat., NBG SMEs' Survey, NBG Estimates

What has changed – the export orientation of SMEs – *case study: tourism*

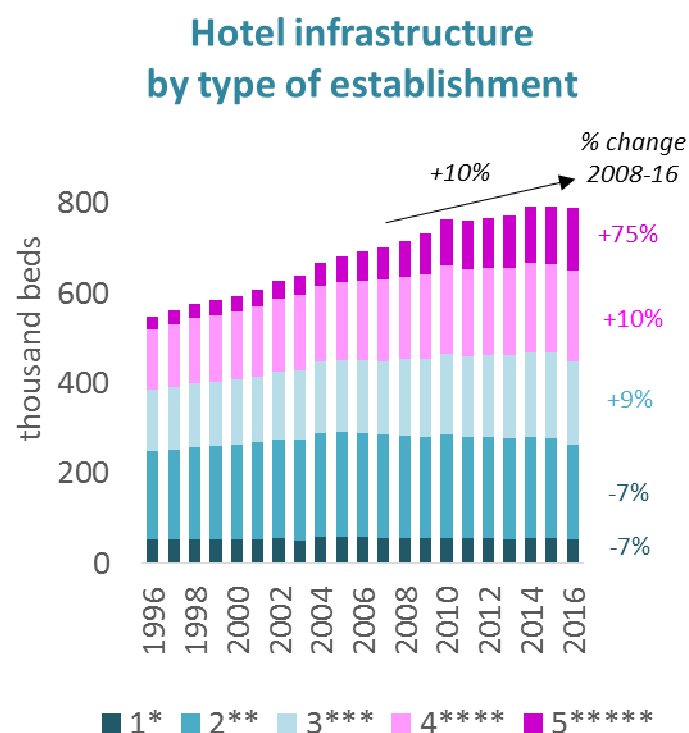
Tapping into the marked dynamism of foreign tourist inflows, the tourism sector proved resilient, providing €14.6 bn in tourism receipts to the Greek economy in 2017 (up from €11.6 bn in 2008).



Sources: Eurostat, Bank of Greece, NBG estimates

What has changed – the export orientation of SMEs – *case study: tourism*

While Greek hotels have upgraded their infrastructure, the low quality of the tourist arrivals remains a structural problem...



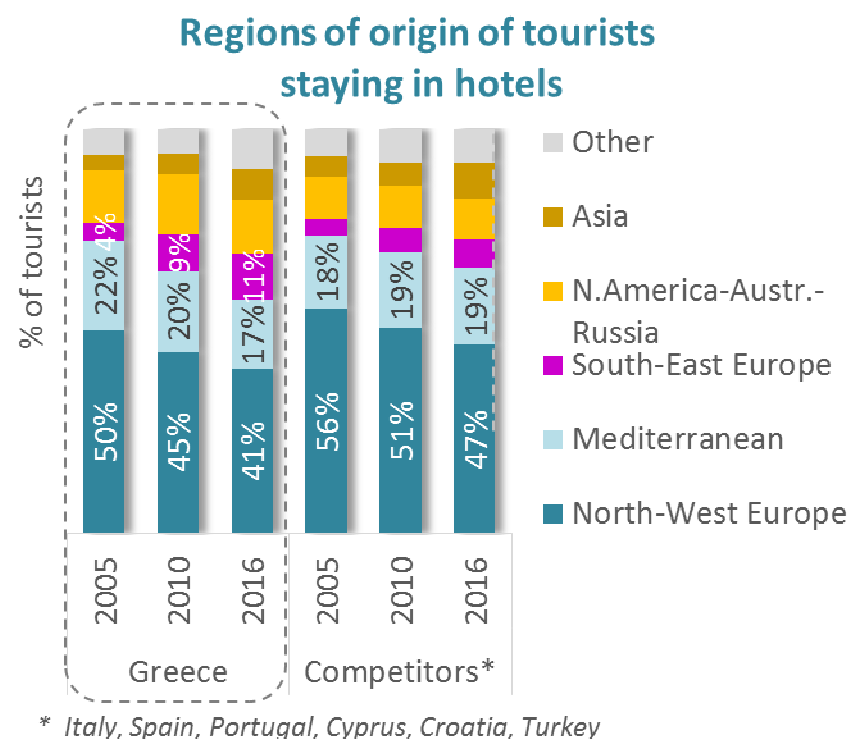
Source: Hellenic Chamber of Hotels, NBG estimates



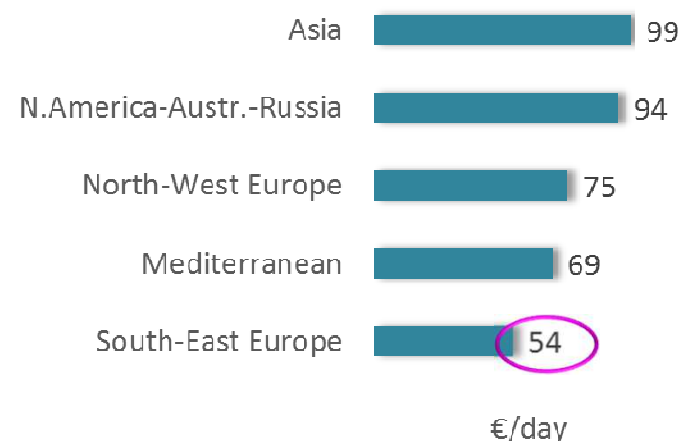
Source: NBG SMEs' Survey

What has changed – the export orientation of SMEs – *case study: tourism*

... mainly reflecting the high share of tourist arrivals from the neighboring SEE region.



Average daily expenditure* by region of origin



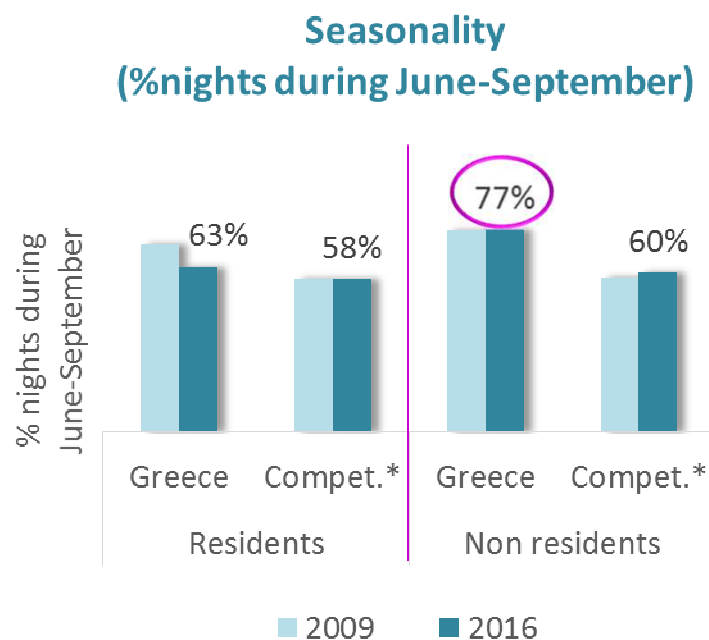
* Including accommodation and other expenditure of all tourists (either they stay in hotels or not)

Source: Eurostat, Turkey Statistics, NBG estimates

Source: Bank of Greece, UNWTO, NBG estimates

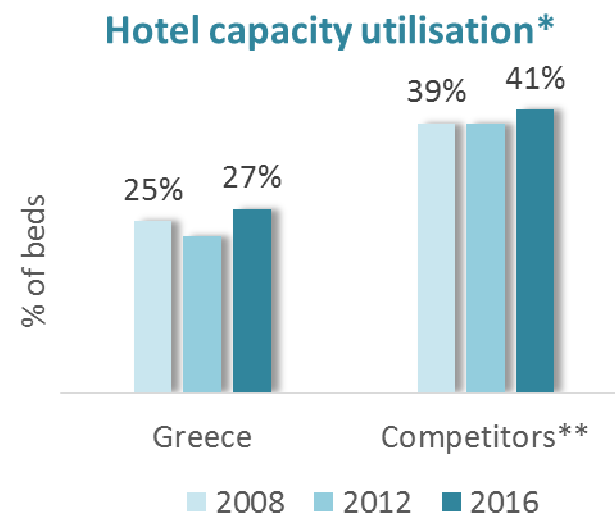
What has changed – the export orientation of SMEs – *case study: tourism*

A second fundamental problem is high seasonality, with almost 80 per cent of tourists visiting during the summer months (versus 60 per cent for other Mediterranean destinations).



* Italy, Spain, Portugal, Cyprus, Croatia

Source: Eurostat, NBG estimates



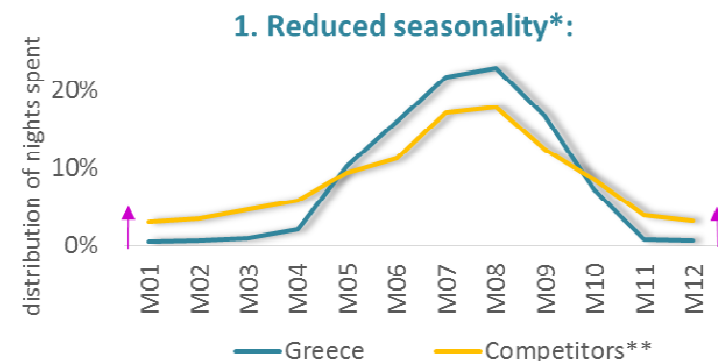
* % of occupied bed places for all 12 months (including periods when hotels may be closed - 6 months on average).

** Italy, Spain, Portugal, Cyprus, Croatia, Turkey

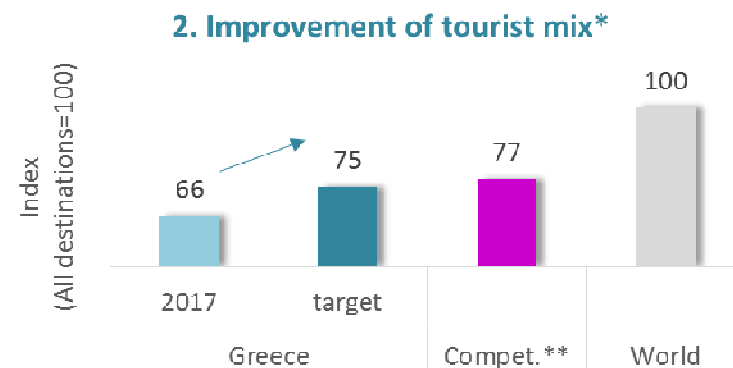
Source: Eurostat, NBG estimates

What has changed – the export orientation of SMEs – *case study: tourism*

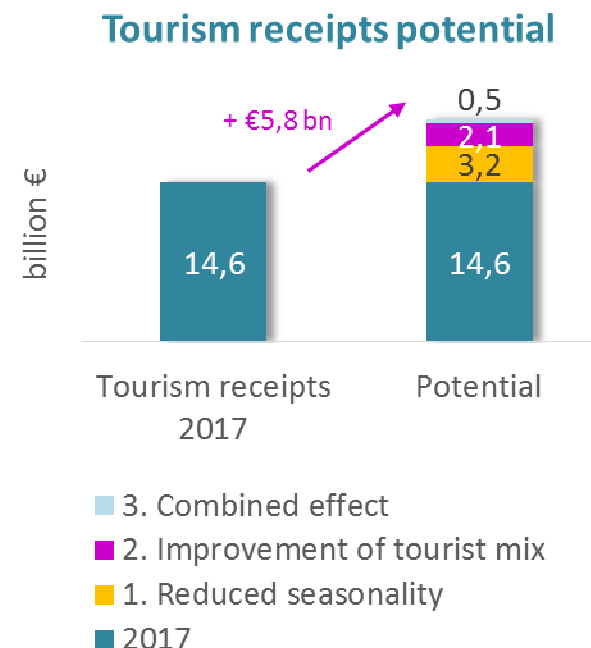
A strategy specifically attacking these two issues (i.e. quality and seasonality) could increase tourism receipts by €5.8 bn per year (with the required cumulative extra investment at around €10 bn).



* Assuming nights spent during the high-season remain the same

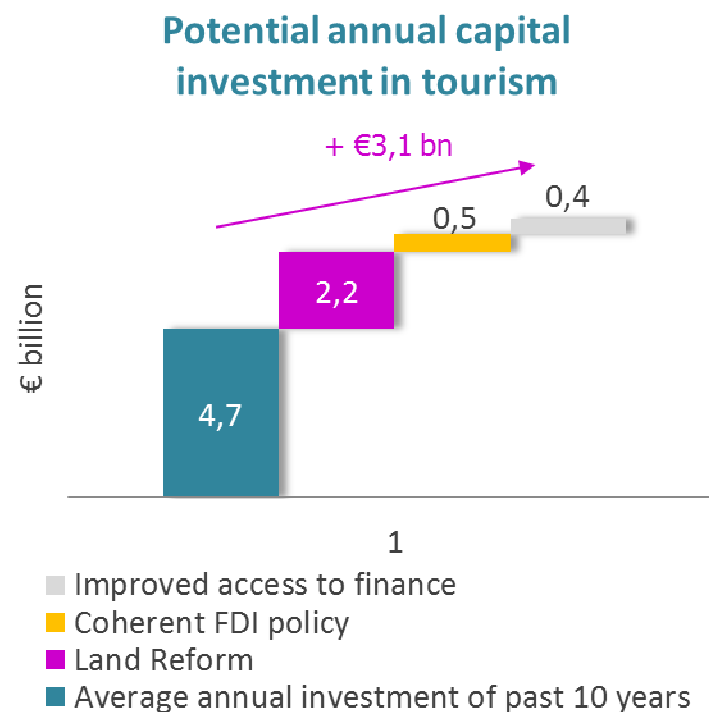


* **Index of Daily Tourist Expenditure:** Measured by tourist expenditure of European tourists (declared in the country of origin)



What has changed – the export orientation of SMEs – *case study: tourism*

Land reforms (such as the completion of the cadaster) combined with a coherent FDI policy could attract the extra required capital of €10 billion in a 3-year period.



Sources: World Travel and Tourism Council, NBG estimates

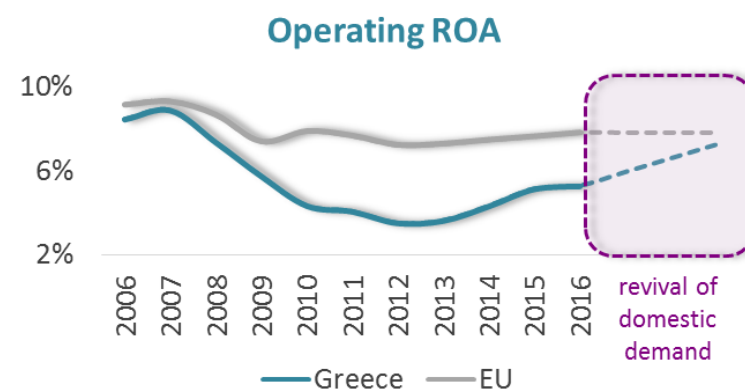
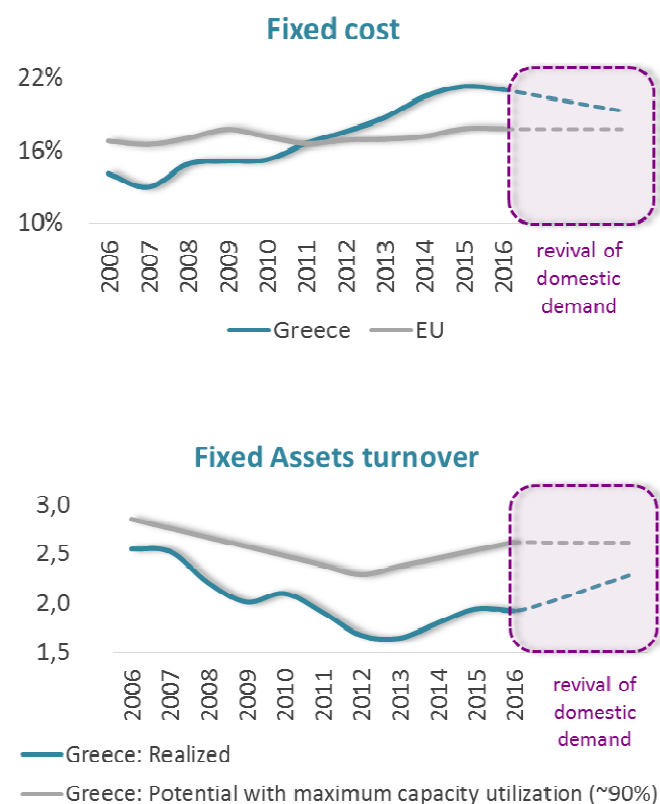
The Greek corporate sector

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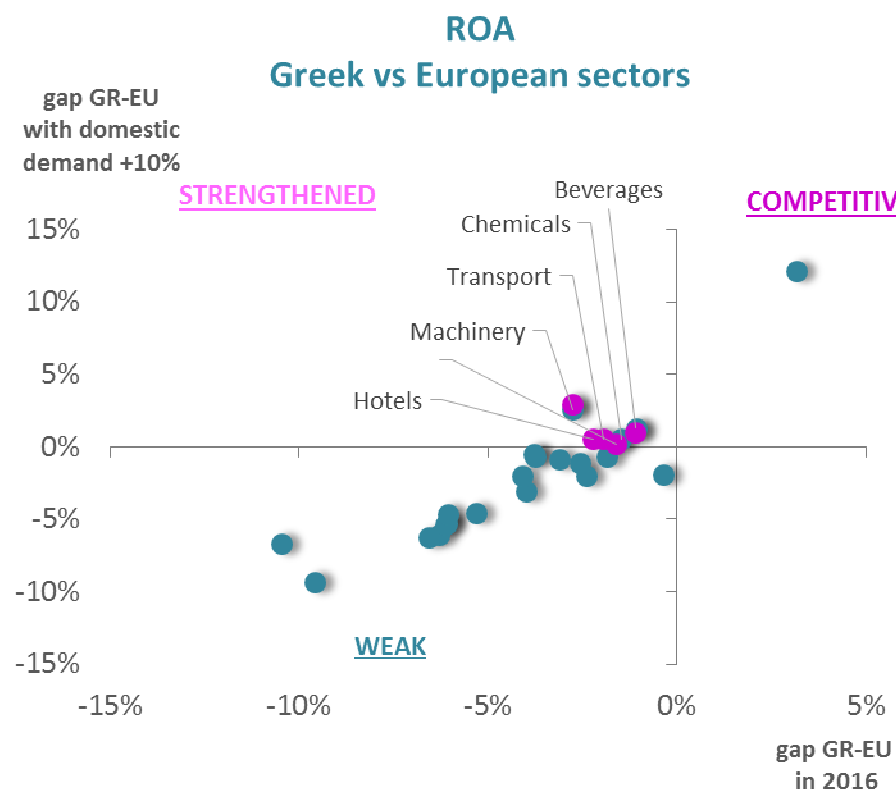
Recovery of domestic demand – Total business sector

According to NBG's forecast, domestic demand will increase by 10 per cent during the next 3 years, leading the Greek ROA near to the EU average (by lowering fixed costs and increasing capacity utilization).

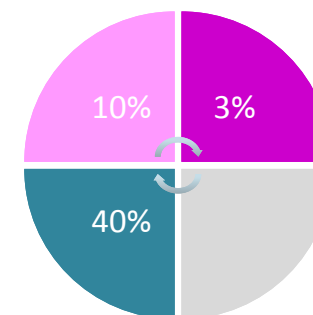


Recovery of domestic demand – Small enterprises – *sectoral view*

Following the revival of domestic demand, small companies in sectors like chemicals, IT and hotels will gain a competitive advantage versus their European counterparts...

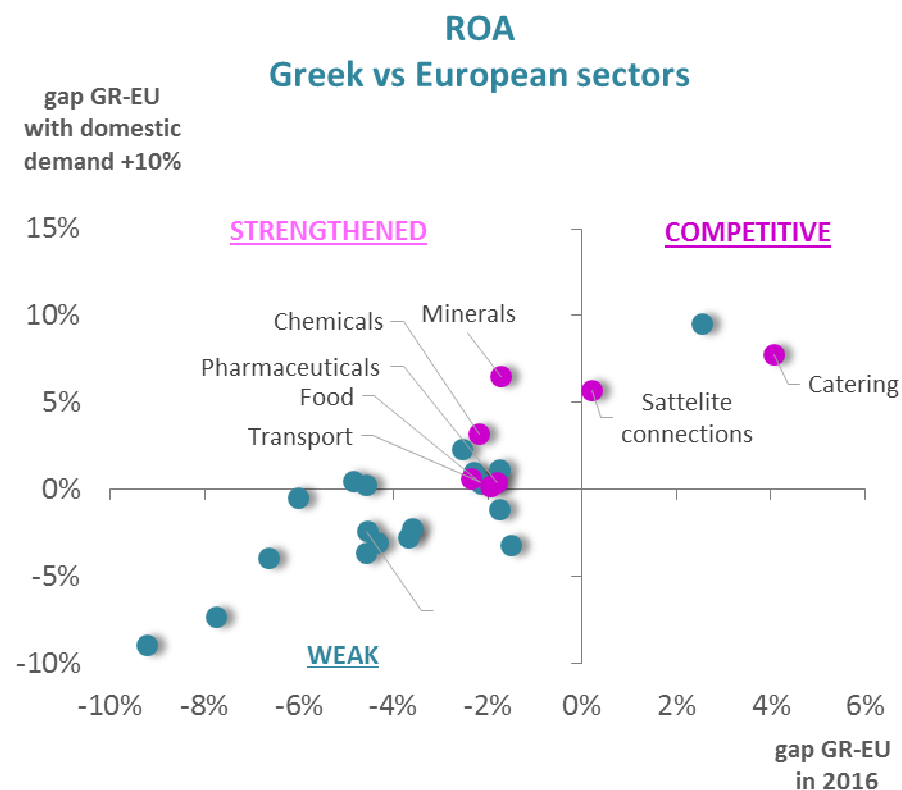


Small (<50 employees):
Covering 53% of sales:

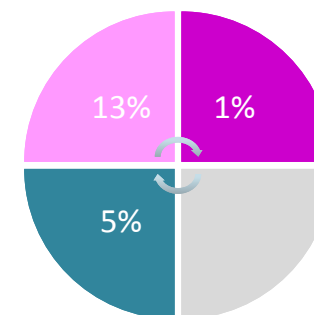


Recovery of domestic demand – Medium enterprises – *sectoral view*

... in the medium segment, sectors like transport, food and minerals are expected to gain competitive advantage versus their European counterparts...

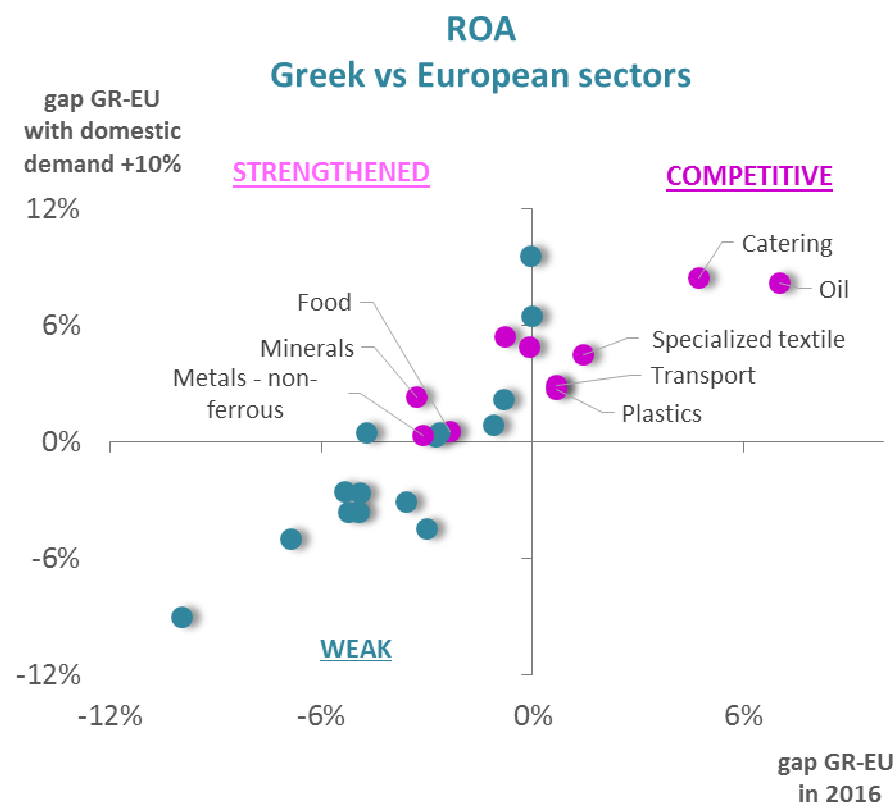


Medium (50-250 employees):
Covering 19% of sales:

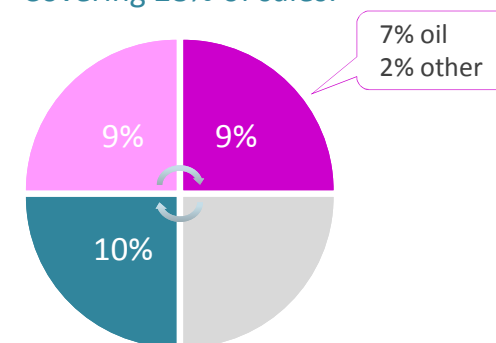


Recovery of domestic demand – Large enterprises – *sectoral view*

...and in the large segment, sectors like non-ferrous metals will gain a competitive advantage while sectors like oil and plastics have already higher ROA versus the EU average.

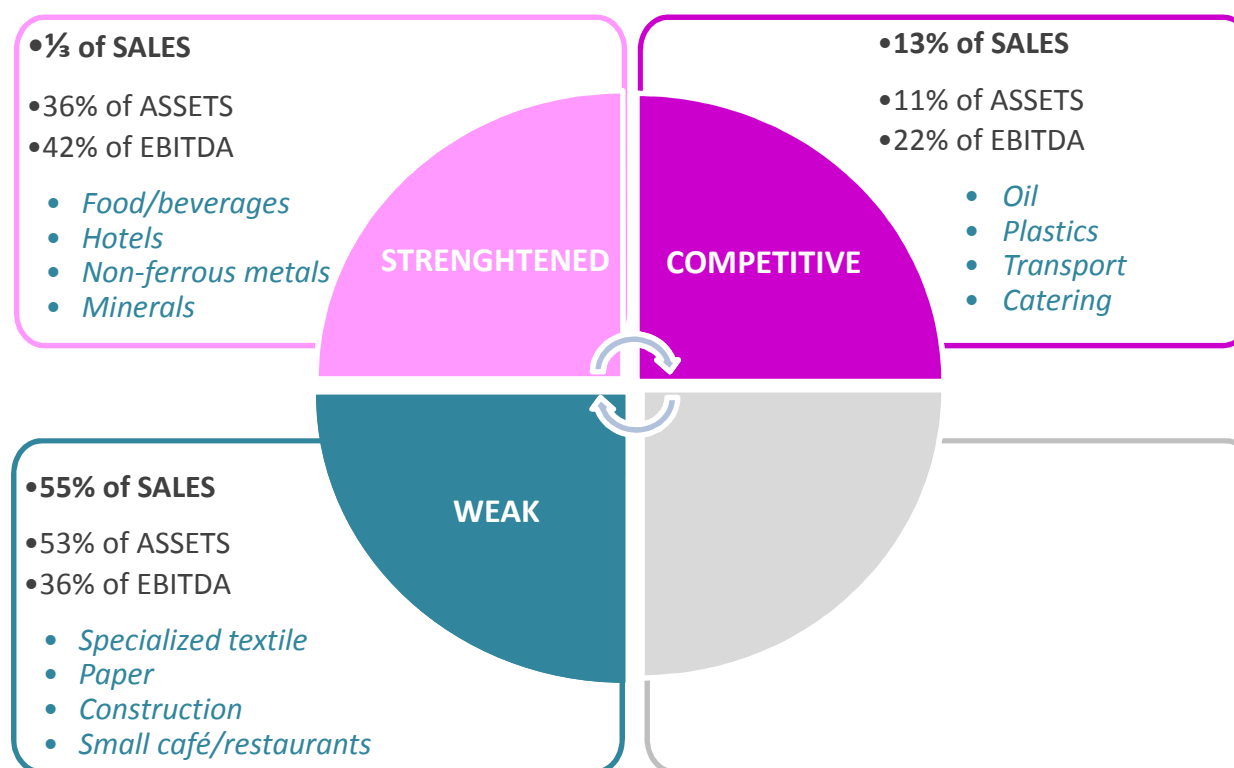


Large (>250 employees):
Covering 28% of sales:



Recovery of domestic demand – Mapping of Greek business sector's competitiveness

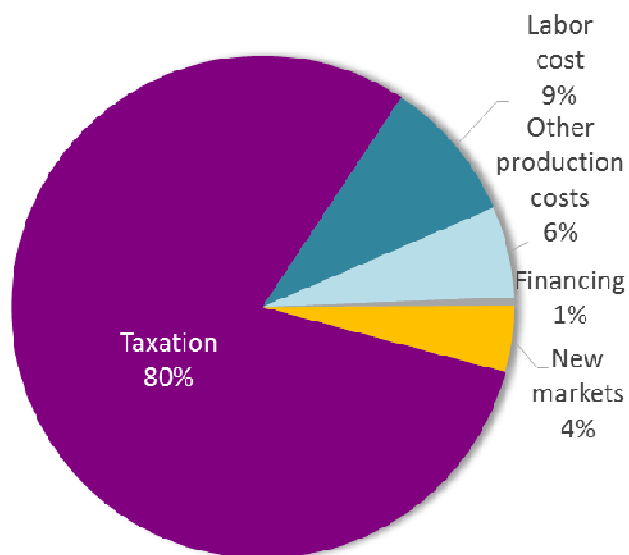
The already competitive business sectors of the Greek economy cover 13 per cent of sales and 22 per cent of profits, while the fundamentally strengthened sectors cover 1/3 of sales and 42 per cent of profits.



Recovery of domestic demand – Back to Greece

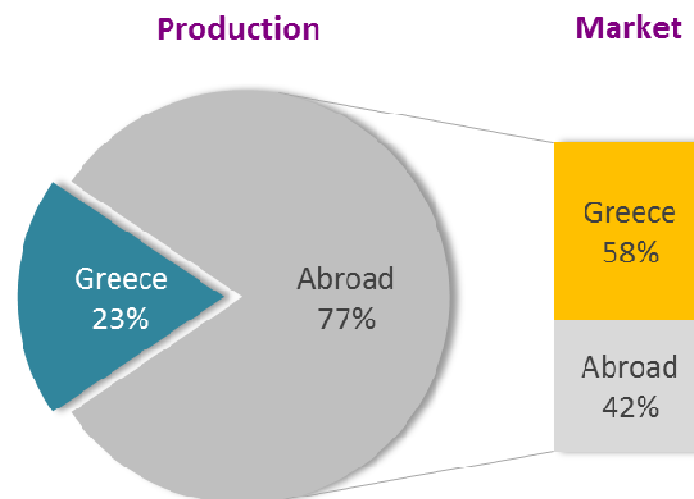
With ties to the Greek market remaining so strong, the revival of domestic demand might trigger their return home, as transport cost and proximity-to-market considerations might counterbalance the tax differential.

Main reason for the relocation decision



Source: NBG SMEs' Survey

Strategies of Greek SMEs that have already relocated



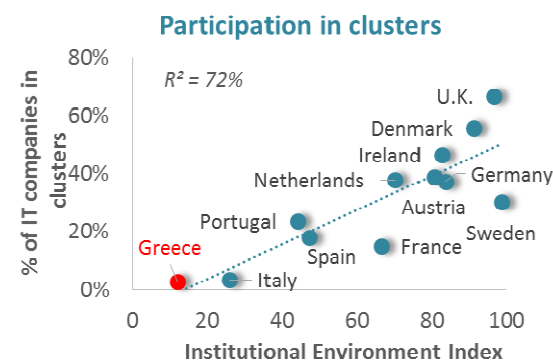
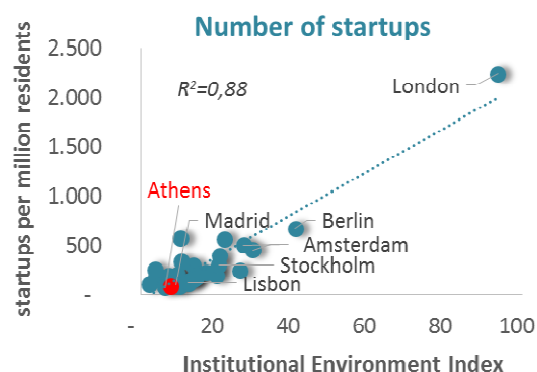
Source: NBG SMEs' Survey

Long-run potential of Greek entrepreneurship

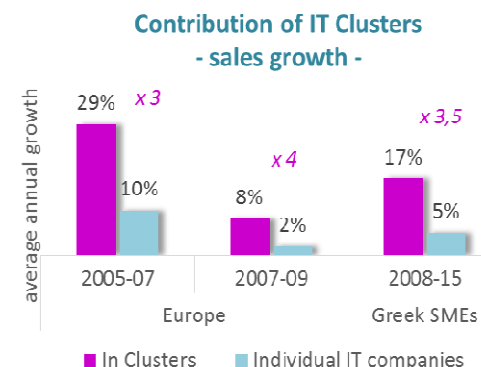
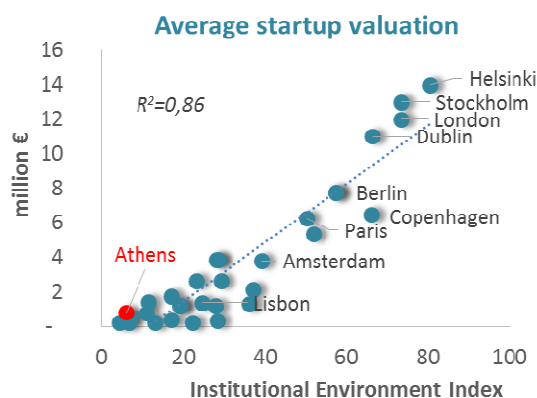
Institutional reform – case study: IT sector

The institutional framework – mainly its legal and judicial parameters – are highly correlated with the creation and the growth momentum of tech startups and IT clusters.

Creation



Growth



Source: Tech EU Radar, European Digital City Index, WEF-Global Competitiveness Index, NBG estimates

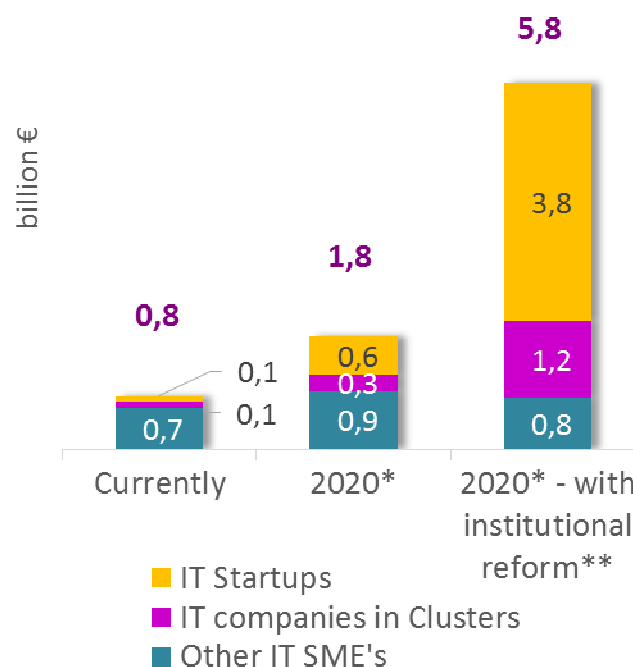
Source: OECD working papers, Temuri Y. (2012), "The Cluster Scoreboard - Measuring the performance of local business clusters in the knowledge economy", Eurostat, WEF:Global Competitiveness Index, NBG estimates

Long-run potential of Greek entrepreneurship

Institutional reform – *case study: IT sector*

The convergence of the Greek institutional framework to the European standards could increase IT clusters' sales by €1bn and the tech startups' sales by €3bn.

Greek IT sector sales potential: - Startups + clusters -



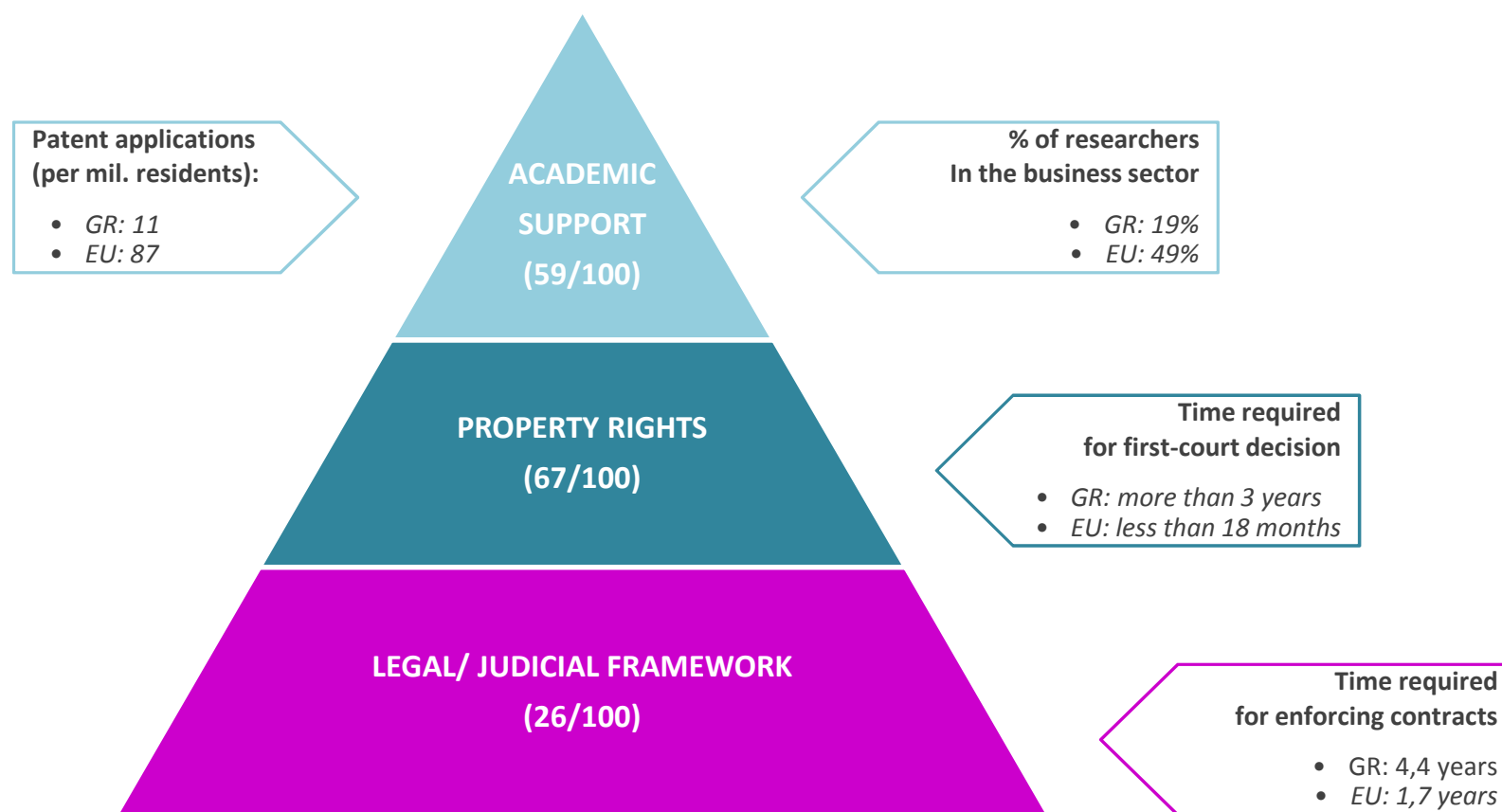
* The projections of the future startups' contribution was based on investors' valuation (reflecting future net flows).

**In the scenario that the Greek business environment gradually approaches the EU average (excluding countries with highly developed startup ecosystems).

Long run potential of Greek entrepreneurship

Institutional reform – *case study: IT sector*

These are the main areas where reform initiatives could have a high impact on the long-run potential of Greek entrepreneurship.



Entrepreneurship is a risky and heroic activity

Antifragile entrepreneurs at Greece's finest hour



Antifragility is beyond resilience or robustness. The resilient resists shocks and stays the same; the antifragile gets better.

— Nassim Nicholas Taleb —

National Bank of Greece

The effects of economic crisis on Greek entrepreneurship

February 2018

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