UNIVERSIDAD NACIONAL MAYOR DE

SAN MARCOS

143° Aniversario

Universidad del Perú, DECANA DE AMERICA

FACULTAD DE CIENCIAS ECONÓMICAS

SEMINARIO INTERNACIONAL

ACERCA DE LA GLOBALIZACIÓN ECONÓMICA

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Profesores Panelistas

Mg. Carlos Aquino Rodríguez

Mg. Richard Roca Garay

ORGANIZA: VICEDECANATO DE INVESTIGACION Y POSGRADO

Ingreso libre

Día: Jueves 10: Globalización y competitividad

Día Viernes 11: Integración del progreso técnico

Mayo 2018

Hora: 11.00 a. m.

Lugar: Salón de Grados FCE – 1er. piso

Se entregará Constancia de participación

INCORPORACIÓN DEL PROGRESO TÉCNICO

Patricio Pérez

Universidad de Cantabria

Lima, 11 de mayo de 2018

II. ON THE COMPETITIVENESS IN THE LAC

AND

EUROPEAN COUNTRIES

OECD R&D Statistics

- HUMAN AND FINANCIAL RESOURCES DEVOTED TO R&D, 2015
- http://www.oecd.org/sti/inno/researchanddevelopmentstatisticsrds.htm

The Global Competitiveness Index 2016–2017

- The GCI combines 114 indicators grouped into 12 pillars, which are, in turn, organized into three subindexes (Fig.). These are given weights, depending on each economy's stage of development (Tab.):
  - lower-income countries ⇒ a higher weight is given to basic requirements;
  - middle-income countries ⇒ the priority is efficiency enhancers;
  - higher-income countries ⇒ focus on improving innovation and sophistication.

Table 1: Subindex weights and income thresholds for stages of development

	STAGE OF DEVELOPMENT				
	Stage 1: Factor-driven	Transition from stage 1 to stage 2	Stage 2: Efficiency-driven	Transition from stage 2 to stage 3	Stage 3: Innovation-driven
GDP per capita (US$) thresholds*	<2,000	2,000–2,999	3,000–8,999	9,000–17,000	>17,000
Weight for basic requirements	60%	40–60%	40%	20–40%	20%
Weight for efficiency enhancers	35%	35–50%	50%	50%	50%
Weight for innovation and sophistication factors	5%	5–10%	10%	10–30%	30%

GLOBAL COMPETITIVENESS INDEX

Basic requirements subindex

Pillar 1. Institutions

Pillar 2. Infrastructure

Pillar 3. Macroeconomic environment

Pillar 4. Health and primary education

Key for **factor-driven** economies

Efficiency enhancers subindex

Pillar 5. Higher education and training

Pillar 6. Goods market efficiency

Pillar 7. Labor market efficiency

Pillar 8. Financial market development

Pillar 9. Technological readiness

Pillar 10. Market size

Key for **efficiency-driven** economies

Innovation and sophistication factors subindex

Pillar 11. Business sophistication

Pillar 12. Innovation

Key for **innovation-driven** economies

Country/Economy	GCI 2016–2017 Rank (out of 138)	GCI 2016–2017 Score (1–7)	GCI 2015–2016 Rank (out of 140)	GCI 2015–2016 Score (1–7)
Switzerland	1	5.81	1	5.76
Singapore	2	5.72	2	5.68
United States	3	5.70	3	5.61
Netherlands	4	5.57	5	5.50
Germany	5	5.57	4	5.53
Sweden	6	5.53	9	5.43
United Kingdom	7	5.49	10	5.43
Japan	8	5.48	6	5.47
Hong Kong SAR	9	5.48	7	5.46
Finland	10	5.44	8	5.45
Norway	11	5.44	11	5.41
Denmark	12	5.35	12	5.33
New Zealand	13	5.31	16	5.25
Taiwan, China	14	5.28	15	5.28
Canada	15	5.27	13	5.31
United Arab Emirates	16	5.26	17	5.24
Belgium	17	5.25	19	5.20
Qatar	18	5.23	14	5.30
Austria	19	5.22	23	5.12
Luxembourg	20	5.20	20	5.20
France	21	5.20	22	5.13
Australia	22	5.19	21	5.15
Ireland	23	5.18	24	5.11
Israel	24	5.18	27	4.98
Malaysia	25	5.16	18	5.23
Korea, Rep.	26	5.03	26	4.99
Iceland	27	4.96	29	4.83
China	28	4.95	28	4.89
Saudi Arabia	29	4.84	25	5.07
Estonia	30	4.78	30	4.74
Czech Republic	31	4.72	31	4.69
Spain	32	4.68	33	4.59
Chile	33	4.64	35	4.58
Thailand	34	4.64	32	4.64
Lithuania	35	4.60	36	4.55
Poland	36	4.56	41	4.49
Azerbaijan	37	4.55	40	4.50
Kuwait	38	4.53	34	4.59
India	39	4.52	55	4.31
Malta	40	4.52	48	4.39
Indonesia	41	4.52	37	4.52
Panama	42	4.51	50	4.38
Russian Federation	43	4.51	45	4.44
Italy	44	4.50	43	4.46
Mauritius	45	4.49	46	4.43
Portugal	46	4.48	38	4.52
South Africa	47	4.47	49	4.39
Bahrain	48	4.47	39	4.52
Latvia	49	4.45	44	4.45
Bulgaria	50	4.44	54	4.32
Mexico	51	4.41	57	4.29
Rwanda	52	4.41	58	4.29
Kazakhstan	53	4.41	42	4.48
Costa Rica	54	4.41	52	4.33
Turkey	55	4.39	51	4.37
Slovenia	56	4.39	59	4.28
Philippines	57	4.36	47	4.39
Brunei Darussalam	58	4.35	n/a	n/a
Georgia	59	4.32	66	4.22
Vietnam	60	4.31	56	4.30
Colombia	61	4.30	61	4.28
Romania	62	4.30	53	4.32
Jordan	63	4.29	64	4.23
Botswana	64	4.29	71	4.19
Slovak Republic	65	4.28	67	4.22
Oman	66	4.28	62	4.25
Peru	67	4.23	69	4.21
Macedonia, FYR	68	4.23	60	4.28
Hungary	69	4.20	63	4.25

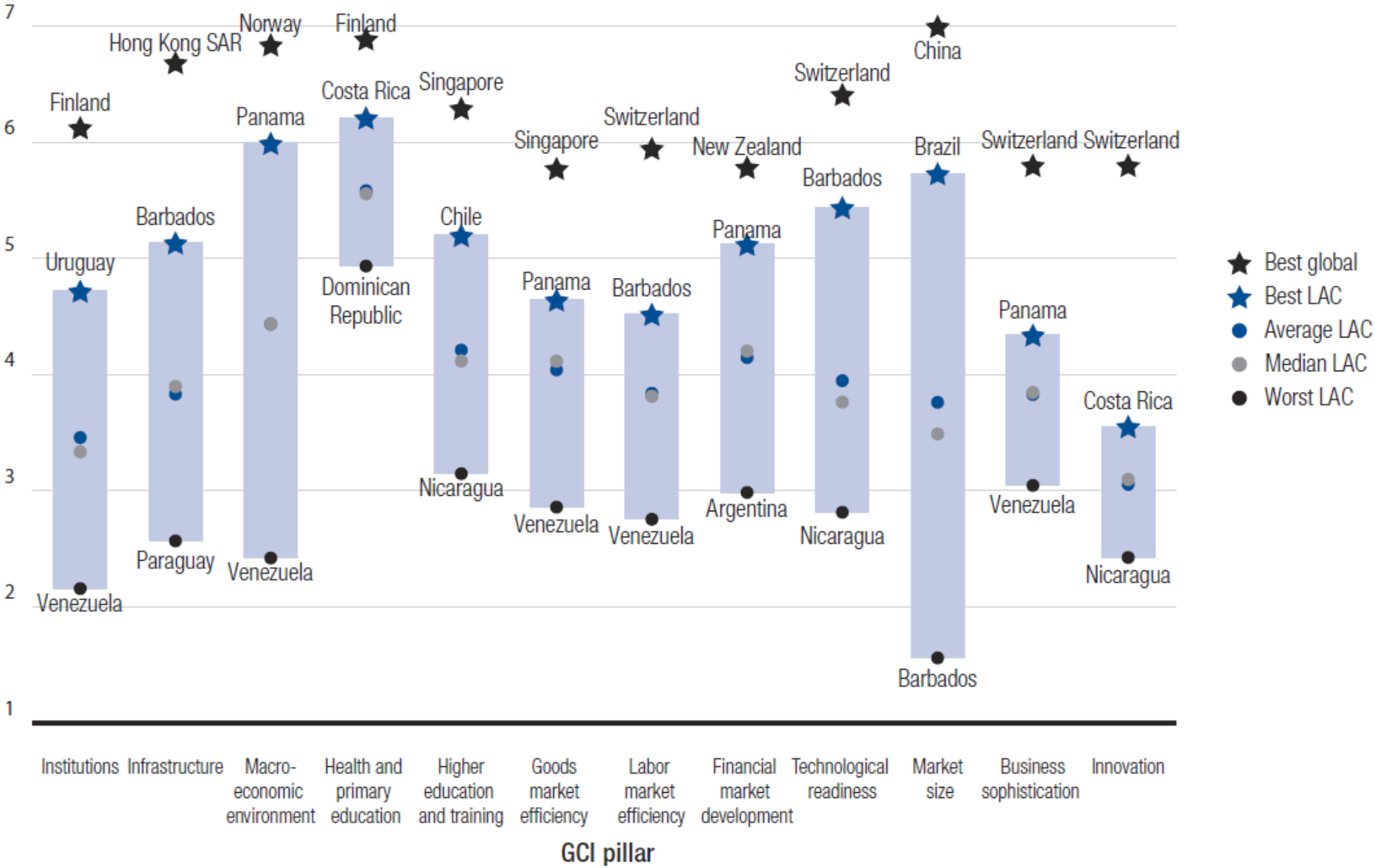
II.1 LATIN AMERICA AND THE CARIBBEAN

Regional highlights: LAC

- The two best-performing countries: Argentina (52) and Chile (53) share similar strengths and weaknesses.
- The region's two largest economies: Mexico (69) and Brazil (77) rank towards the middle of the Index overall.
- Peru (66) and Colombia (68) score in the middle of the region, with Peru outperforming and topping the region on the Deployment subindex due to high levels of labour force participation.
- The bottom ranks of the region are made up of Venezuela (94) , and the group of Central American nations, such as Honduras (101).

Figure 14: GCI score range across the 12 pillars in Latin America and the Caribbean (LAC), 2016–2017 editio

Score (1–7)



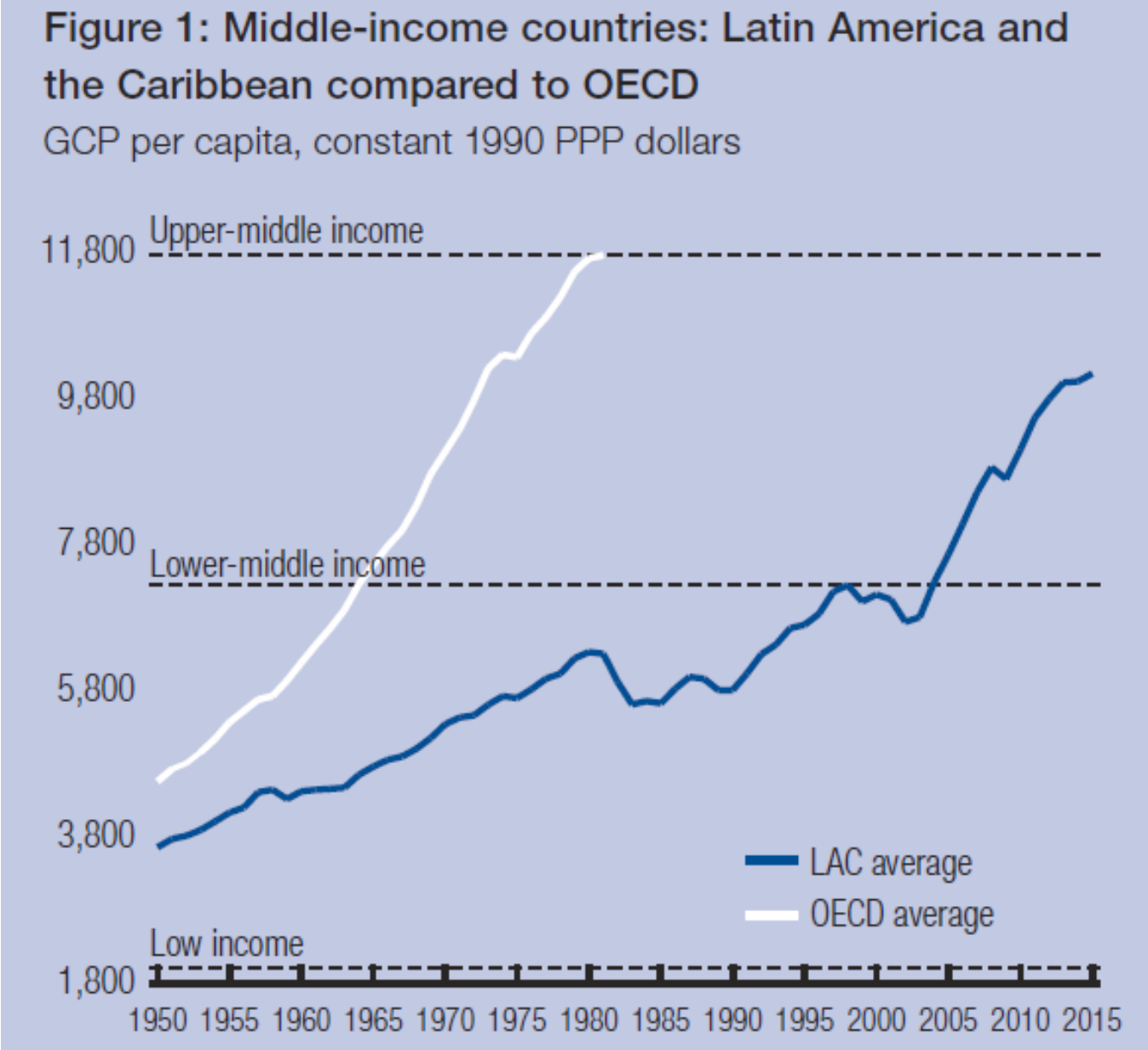
Regional highlight: LAC

- The largest gaps with the best world performer are in business sophistication and innovation, where Panama and Costa Rica lead the region.
- Other large gaps are in infrastructure, institutions, and labor market efficiency.
- The Fourth Industrial Revolution is not defined by any particular set of emerging technologies themselves, but rather by the transition to new systems that are being built on the infrastructure of the digital revolution.

Regional highlight: LAC
The middle-income trap

- As the 4th Industrial Revolution disrupts patterns of development, other ways to boost inclusive growth are being looked at:
  - For LAC countries, an challenging scenario is the "middle-income trap". It is common for countries to grow rapidly in early stages, only to stagnate when they approach middle levels of per capita income.
- Middle-income ranges between US$2,000–11,750, measured in 1990 constant levels and adjusted for PPP:
  - Only Argentina, Chile, and Uruguay have overcome the trap.
  - Several countries were already in the middle-income range as early as 1950, but these countries have not advanced beyond that range.
  - The region's average per capita income growth has remained weak in comparison to the OECD average (Fig. 1).

Regional highlight: LAC
The middle-income trap



Regional highlight: LAC
The middle-income trap

- The **variables** that best separate the sets of countries that did and did not evade the middle-income trap are the rule of law, the index of productive capabilities, and investment.
  - Israel (1986), Singapore (1988), Ireland (1990), Spain (1990), Korea (1995), Portugal (1996), Greece (2000), Chile (2005), Qatar (2005), Uruguay (2012), Malaysia (2014), and Poland (2014).
- The analysis points to policy priorities for economies in LAC:
  - Chile lags behind in terms of productive capabilities and the size of the manufacturing sector.
  - Colombia and Peru: also challenges linked to public revenues, and the rule of law.
  - Mexico: improvements to the rule of law are highlighted.

Results overview: LAC
Dutch disease phenomena

- The end of the commodity super-cycle and the sharp drop in prices, reveals a relationship commodity dependence–competitiveness:
  - As prices of commodities soared following the financial crisis, reinforced by demand from the BRICs, the weight of commodities in the export baskets of commodity-rich economies increased.
  - Close-to-zero interest rates induced large capital flows into emerging markets that went to these profitable commodity sectors.
  - The dollar depreciation was matched by currency appreciations in emerging markets, and manufacturing sectors found it harder to export and to attract investment.
  - #More competitive economies also have more diversified export baskets, and more diversified economies are more competitive.

Source: Authors' calculations based on IMF Diversification Index.
Note: Higher diversification scores indicate more concentrated (less diversified) export baskets based on a sample of 117 economies.

- More competitive economies also have more diversified export baskets, and more diversified economies are more competitive.

OECD R&D Statistics

- The Global Competitiveness Report: PERU (pp. 294)

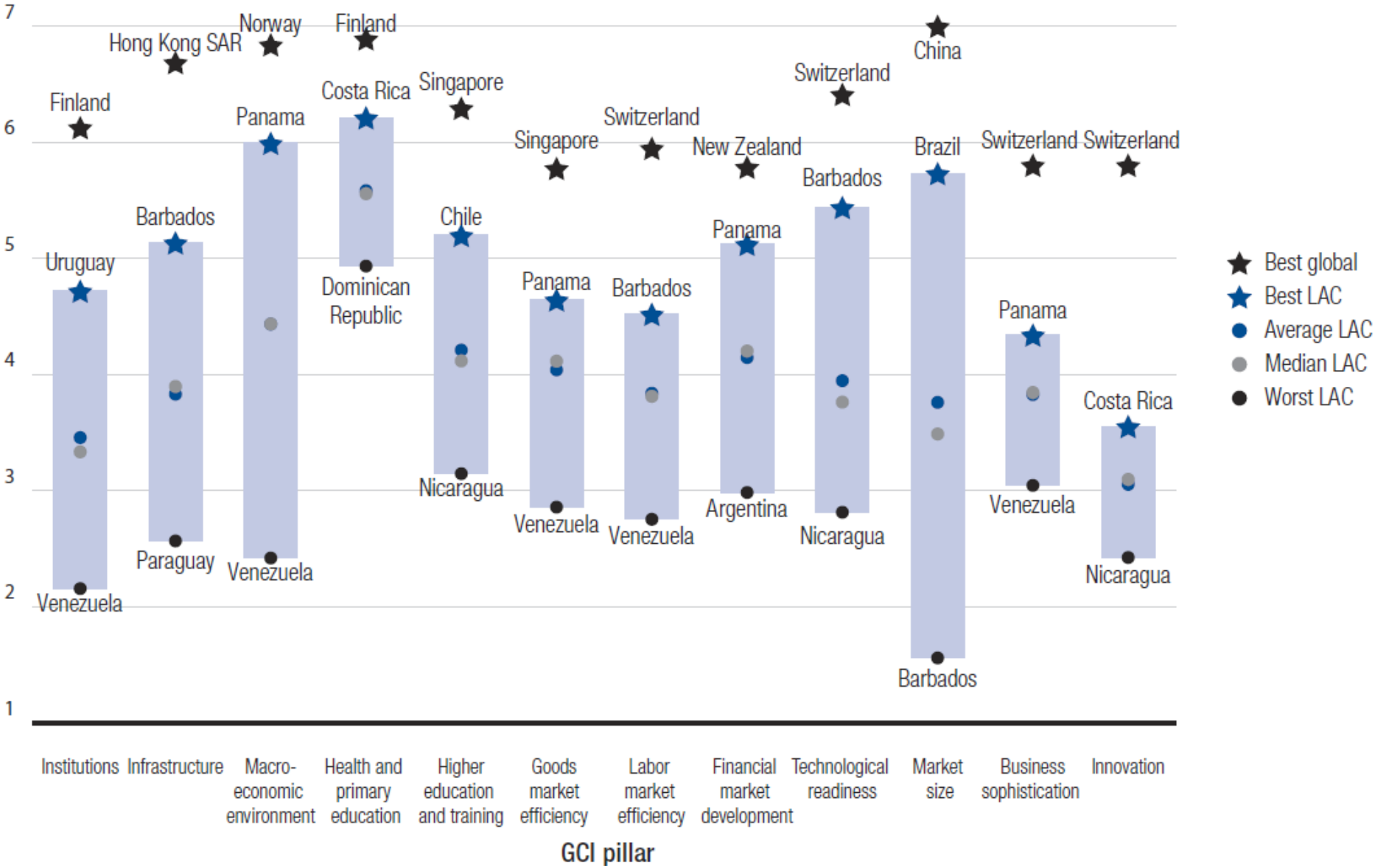
II.2 EUROPE

Regional highlights: Europe

- Faced with impending Brexit and geopolitical crises, Europe finds itself in critical condition in many respects:
- The region performs above the global average, including 8 over the top 12 (Fig. 7):
  - Switzerland (1st),
  - Netherlands (4th),
  - Germany (5th),
  - Sweden (6th),
  - The United Kingdom (7th),
  - Finland (10th),
  - Norway (11th), and
  - Denmark (12th).

Figure 14: GCI score range across the 12 pillars in Latin America and the Caribbean (LAC), 2016–2017 editio

Score (1–7)

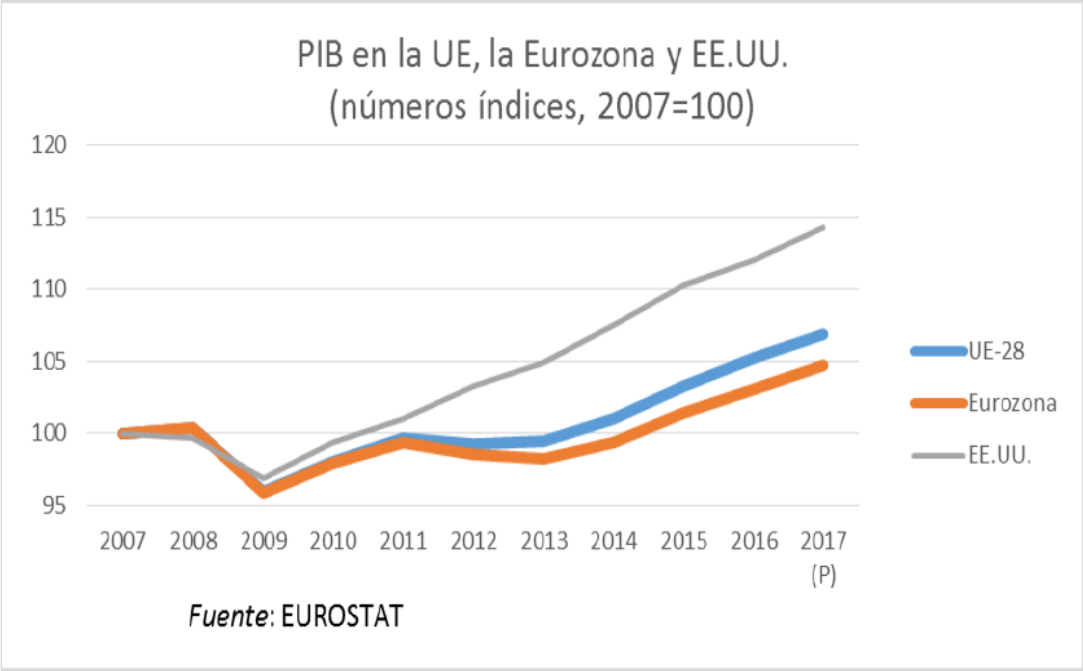


Regional highlights: Europe

- Although, there is wide dispersion in regional performance:
  - The largest gap is in the macroeconomic pillar → the region recovered unevenly from the global financial crisis.
  - There is a significant gap between the innovation for Northern and Western countries versus Eastern, and Southern ones (Fig. 8).
  - The United Kingdom is currently the most attractive EU destination for talent, yet the Brexit vote has created significant uncertainty.
  - Economies open to foreign competition are more innovative, suggesting the importance of openness for innovation (Fig. 5).

Regional highlights: Europe

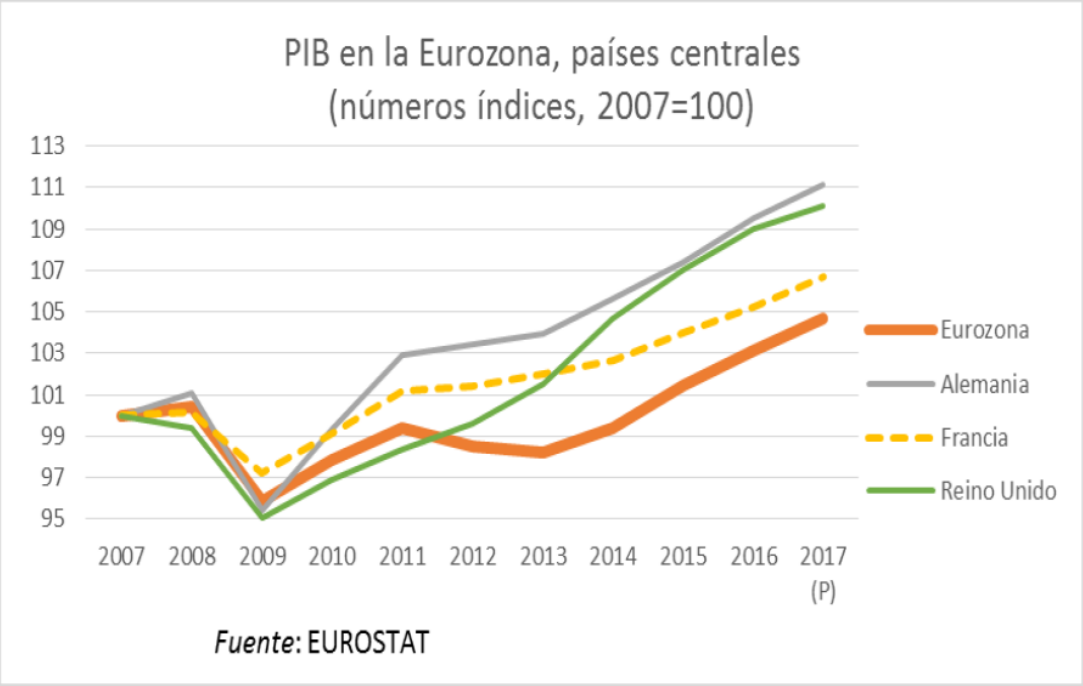
Recuperación de la crisis (1)



- Recuperación más lenta en la UE que en EE.UU.
- Más lenta aún en la Eurozona.
- Myro (2017): *Las perspectivas de crecimiento en Europa y el debate sobre el estancamiento secular*

Regional highlights: Europe

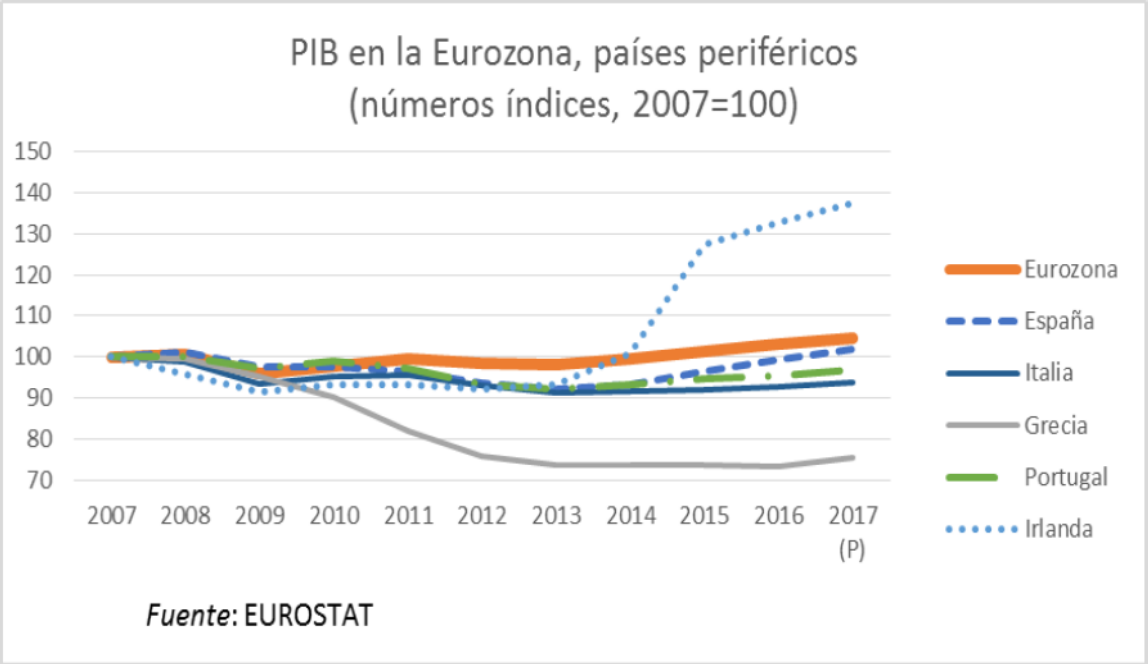
Recuperación de la crisis (2)



Alemania y Reino Unido, más competitivos que Francia y el conjunto de la eurozona

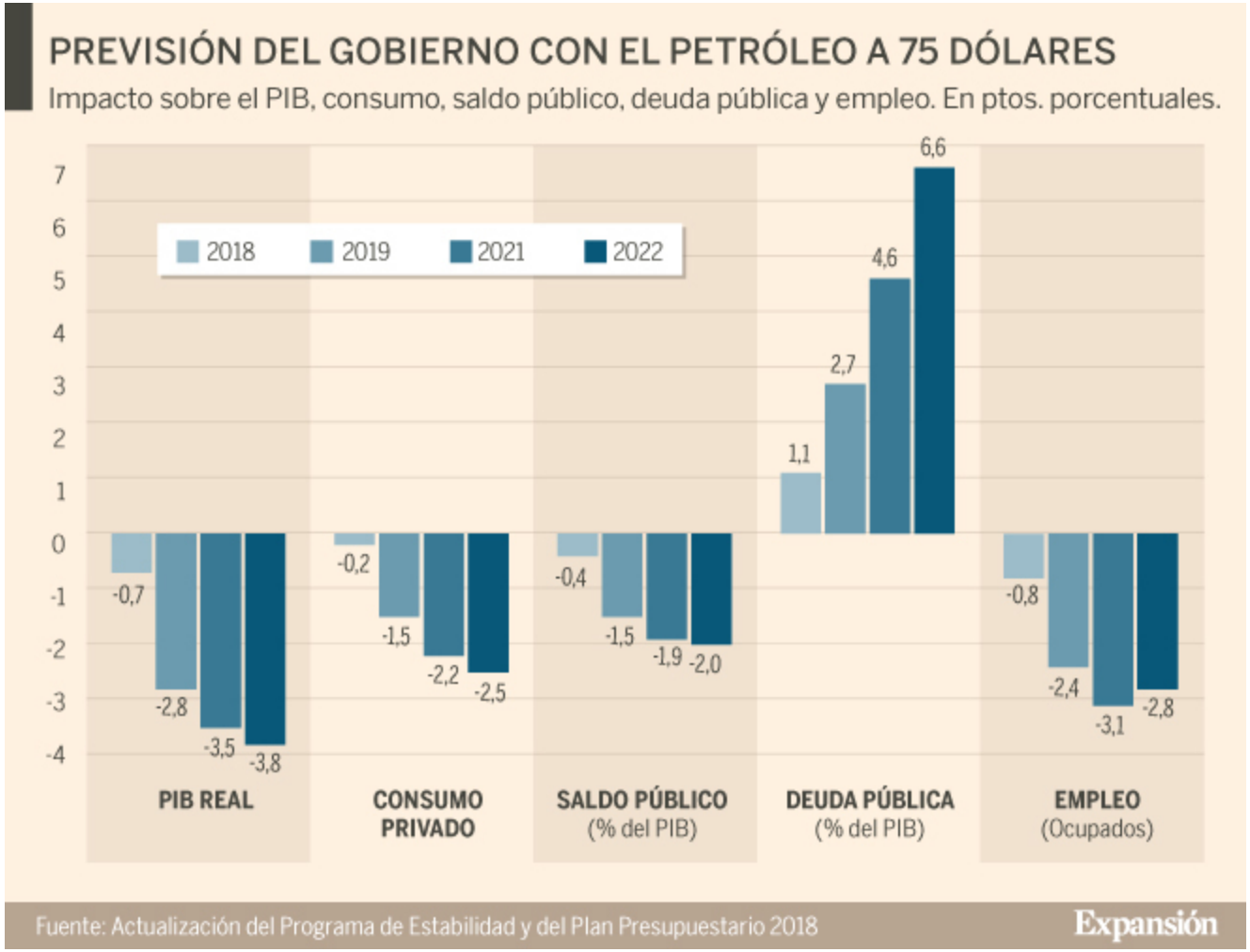
Regional highlights: Europe

Recuperación de la crisis (3)



- Crisis particularmente intensa en los países del sur de Europa.
- Hoy sólo Grecia, Italia, Portugal, Finlandia, Croacia y Chipre tienen un PIB menor al de 2008

Regional highlights: Spain



Regional highlights: Spain

ESCENARIO DE RIESGO CON EL PETRÓLEO A 80 DÓLARES

	2017	2018	2019	2020
PIB	3,1	2,0	1,5	1,8
Consumo privado	2,4	1,2	0,9	1,4
Consumo público	1,6	1,0	0,9	1,0
Formación bruta de capital fijo	5,0	4,7	2,5	2,9
- Construcción	4,6	4,8	2,3	2,9
- Equipo y otros productos	5,4	4,6	2,8	2,8
Exportaciones	5,0	4,5	3,5	4,1
Importaciones	4,7	4,1	2,9	3,8
Demanda nacional (aportación)	*2,8*	*1,7*	*1,2*	*1,6*
Sector exterior (aportación)	*0,3*	*0,3*	*0,3*	*0,2*
Tasa de inflación	2,0	2,4	1,4	1,7
Empleo	2,8	1,7	1,2	1,4
Tasa de desempleo	17,2	15,7	14,5	13,0
Balanza de pagos por cc (% PIB)	1,8	0,6	0,7	0,7
Tasa de ahorro de los hogares	6,0	5,7	6,3	6,4
Deuda AA.PP. (% del PIB)	98,4	98,0	97,8	96,8

Fuente: Funcas

Expansión

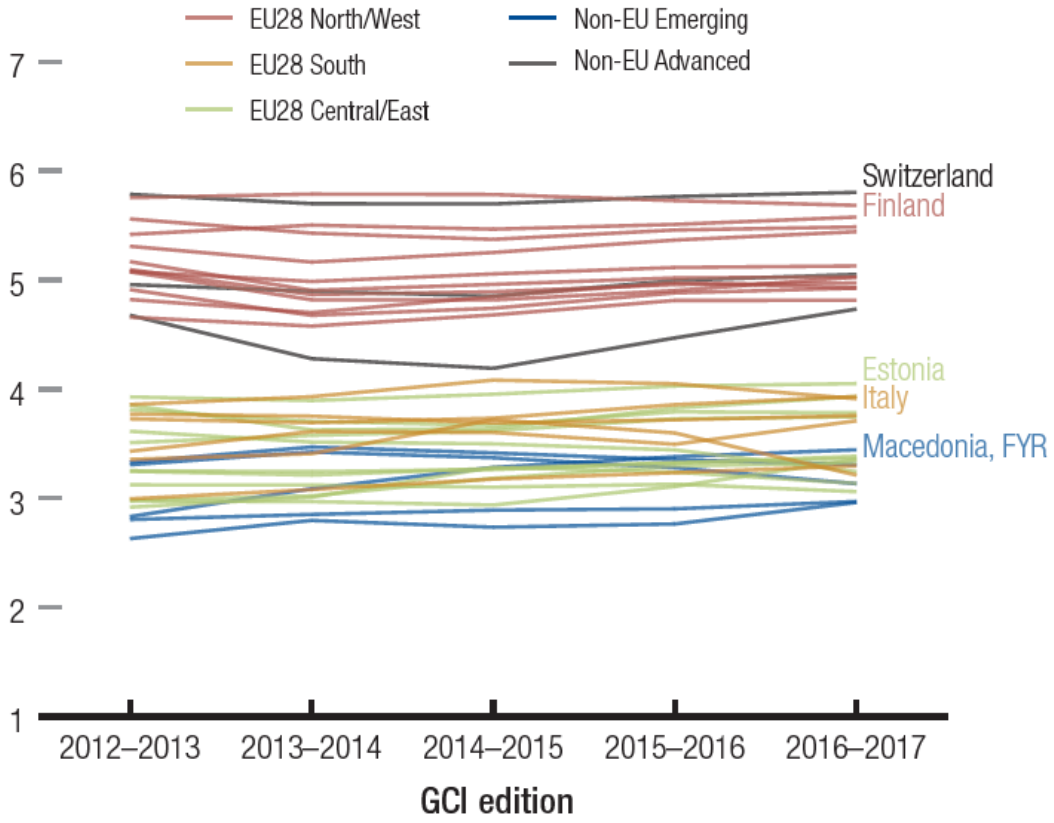
Regional highlights: Europe

- Although, there is wide dispersion in regional performance:
  - The largest gap is in the **macroeconomic pillar** → the region recovered unevenly from the global financial crisis.
  - There is a significant gap between the **innovation** for Northern and Western countries versus Eastern, and Southern ones (Fig. 8).
  - The United Kingdom is currently the most attractive EU **destination for talent**, yet the Brexit vote has created significant uncertainty.
  - Economies open to foreign competition are more innovative, suggesting the **importance of openness** for innovation (Fig. 5).

Regional highlights: Europe

Figure 8: Evolution of the innovation pillar in Europe, 2012–2017

Score (1–7)



There is a significant gap between the innovation for Northern and Western countries versus Eastern, and Southern ones.

Regional highlights: Europe

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What effect will Brexit have on competitiveness?

- Before the Brexit vote, the economic recovery in Europe was progressing, backed by stronger internal demand fueled by low oil prices, accommodating monetary policy, and ongoing job creation.

- The vote triggered an immediate depreciation of the pound and a drop in the price of UK and EA risky assets, and led to downward corrections for both the UK and the rest of the EU.

- Although people do not know yet what the exact impact of Brexit will be, economic repercussions of the leave vote are likely to fall into two categories: the *short run* and the *longer run*.

What impact… in the short run?

- Economic outcomes are affected by an increase in *uncertainty* over the legal conditions that will eventually prevail.
- Increased uncertainty has macroeconomic consequences, reducing investment, consumption, and foreign trade as consumers and investors become more cautious.
- Projections by the EC yield a downward revision of the 2017 growth forecast by 1.00–2.75 pp for the United Kingdom and 0.25–0.50 pp for the European Union.
- Because uncertainty is holding back investment and reducing the attractiveness of the UK for talent, important drivers of competitiveness are expected to be affected.

What impact… in the longer run?

- There is a consensus that the impact on the UK 2030 GDP will be negative under all scenarios:
  - The largest negative impact (–6.3 to –9.5%) is predicted under a scenario that models impacts on trade, productivity, and budget with EEA/EFTA parameters in a dynamic setting. Static, trade only projections put the economic cost at 1.3 to 2.6%.
  - UK government projections assume changes in budget, trade, foreign direct investment, and productivity and find losses ranging from 3.8% (EEA/ Norwegian model) to 7.5% (WTO model).
  - Since proximity is an important factor in determining trade flows, simply shifting trade to more distant markets is unlikely to provide a quick fix.
- Additional effects are likely to be felt in terms on innovation if the country becomes less accessible for international talent.
  - In order to cushion the impact, the UK Treasury has pledged to guarantee funding for projects currently funded by the EU.

What impact… in the longer run?

- One source of potential benefits of leaving might be regulatory changes that shift the regime in an optimal way for the UK:
  - Currently, a part of the UK economy is subject to a regulatory regime that reflects a compromise between the preferences of 28 countries.
  - However, no clear plan for such regulatory changes that would allow for a forecast of economic impact has been outlined.
- The size of the ultimate effect of Brexit on productivity itself remains difficult to predict:
  - The ultimate productivity impact will depend to a large extent on the level of competition that prevails in the UK economy after Brexit.
  - Reversing trade liberalization is known to have negative productivity effects because it loosens competitive pressures.
  - The costs will mostly fall on those with middle incomes, although the poor will not be spared from its impact

Regional highlights: Europe

- Although, there is wide dispersion in regional performance:
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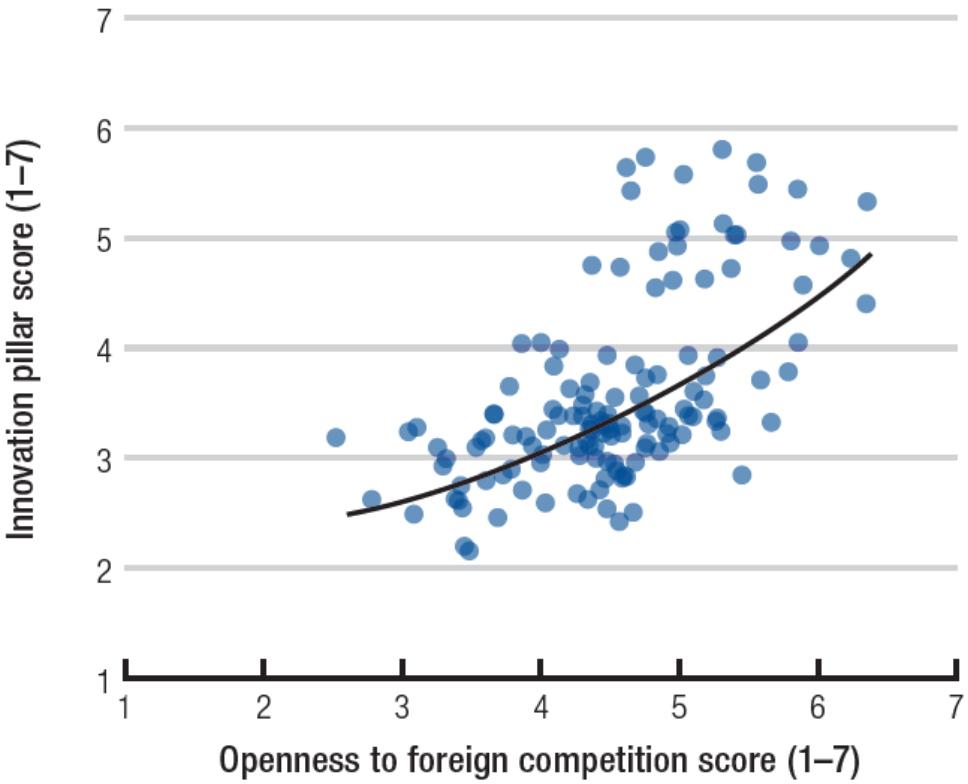
Regional highlights: Europe

Figure 5: Correlation between openness and innovation, 2016–2017 edition



Economies open to foreign competition are more innovative, suggesting the importance of openness for innovation (Fig 5).

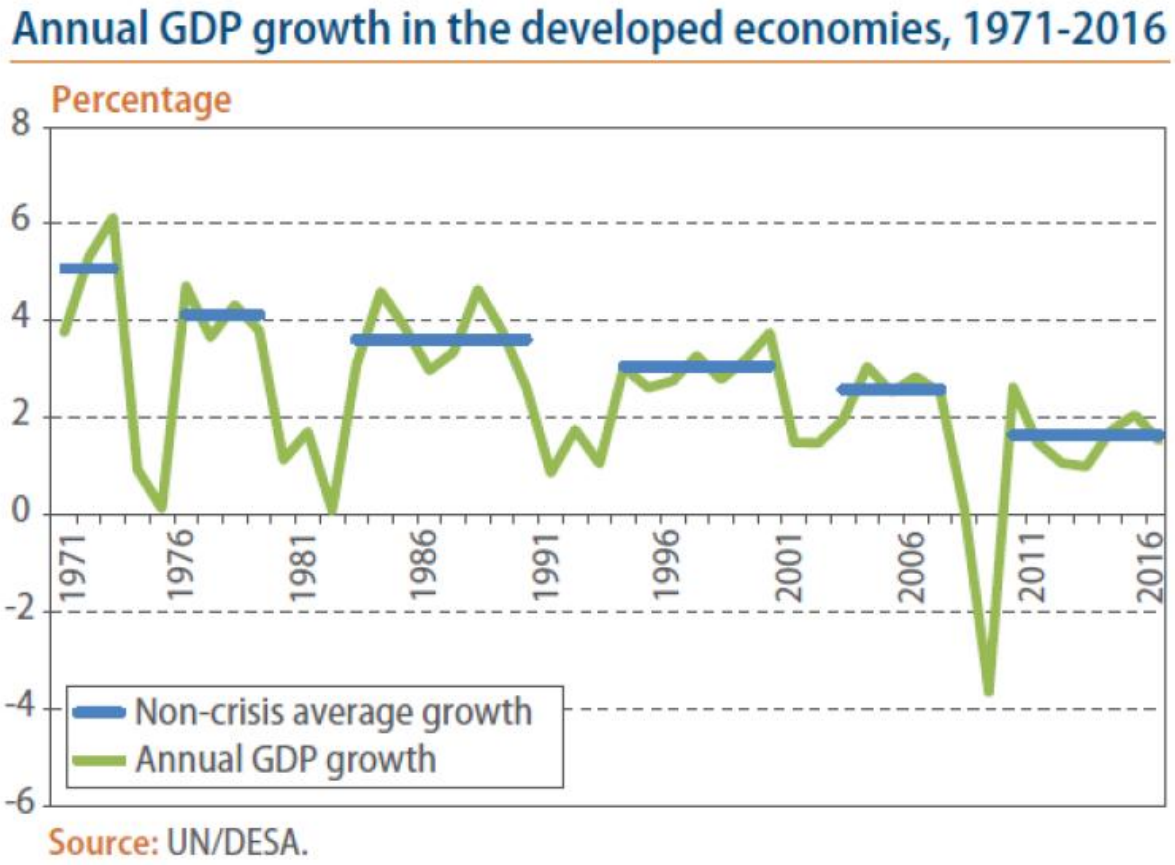
Regional highlights: Europe

Estancamiento secular (ES)

- Término creado en 1938 por **Alvin Hansen** y desarrollado hoy por **Larry Summers**.
  - El estancamiento tecnológico y demográfico reducía la rentabilidad de las inversiones, y con ella la inversión deseada, la demanda agregada y la producción
  - Una población crecientemente envejecida crearía un exceso de ahorro con respecto a la inversión
- **Robert Gordon** también lo adopta, atribuyendo sus causas a:
  - Ralentización del crecimiento de la productividad (rendimientos decrecientes en la innovación)
  - Limites a la expansión del capital humano
  - Desaceleración del crecimiento de la población
  - Descenso en el peso de la población en edad de trabajar

Rafael Myro (2017): *Las perspectivas de crecimiento en Europa y el debate sobre el estancamiento secular*

Regional highlights: Europe

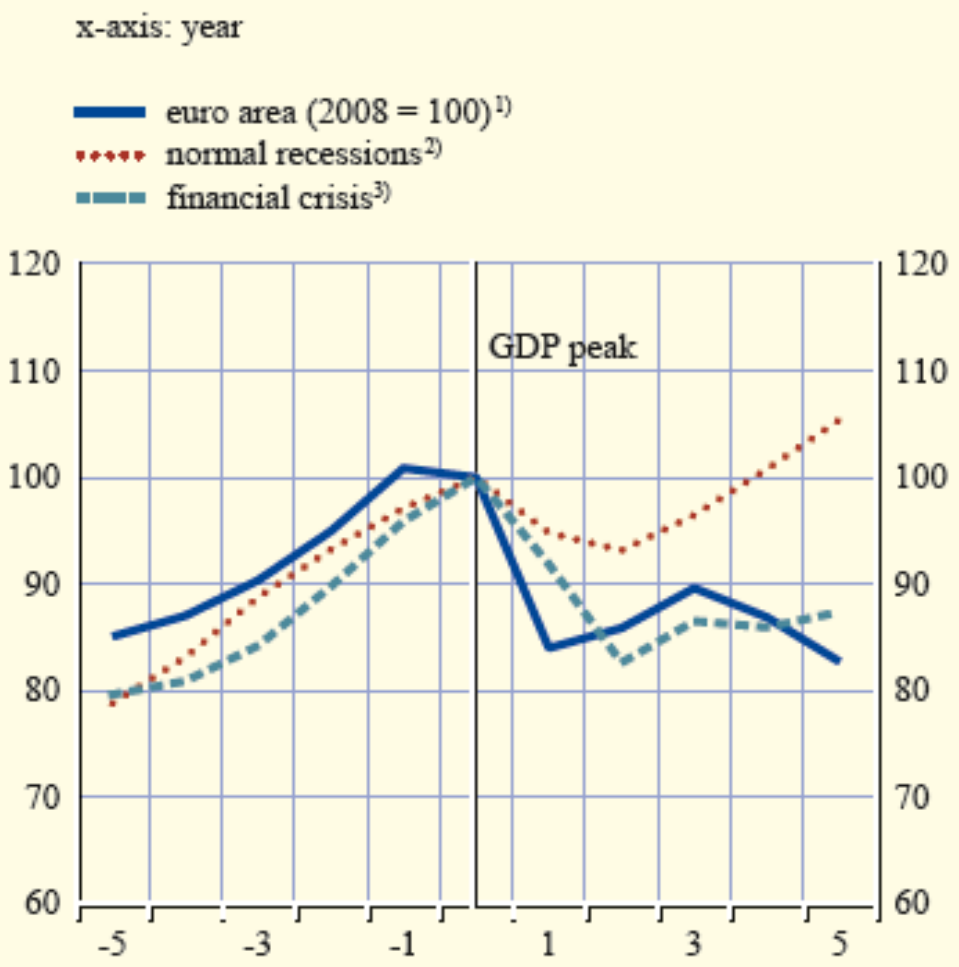


Rafael Myro (2017): *Las perspectivas de crecimiento en Europa y el debate sobre el estancamiento secular*

Chart A Business investment during normal recessions and financial crises

(index, GDP peak = 100)

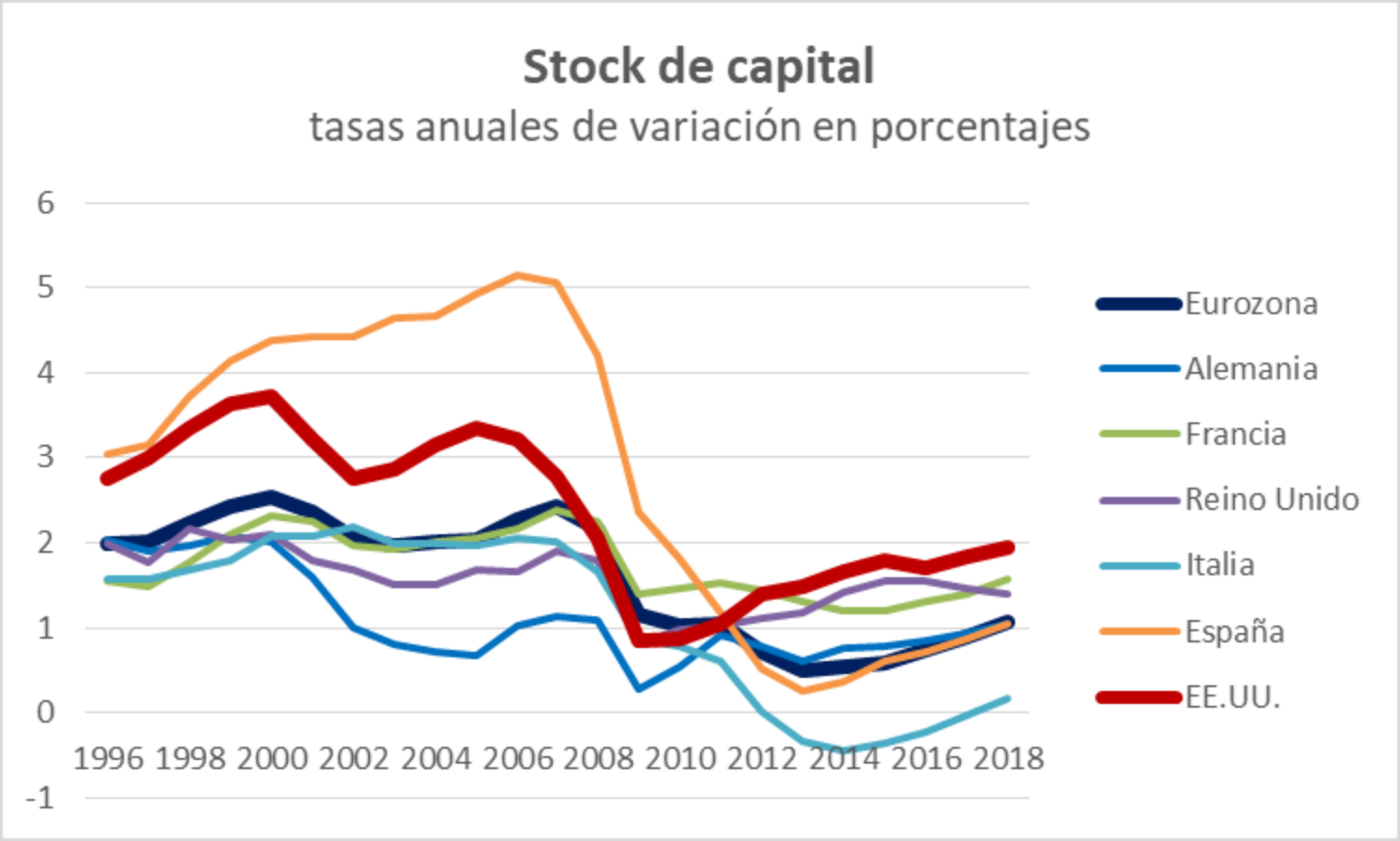
European Central Bank



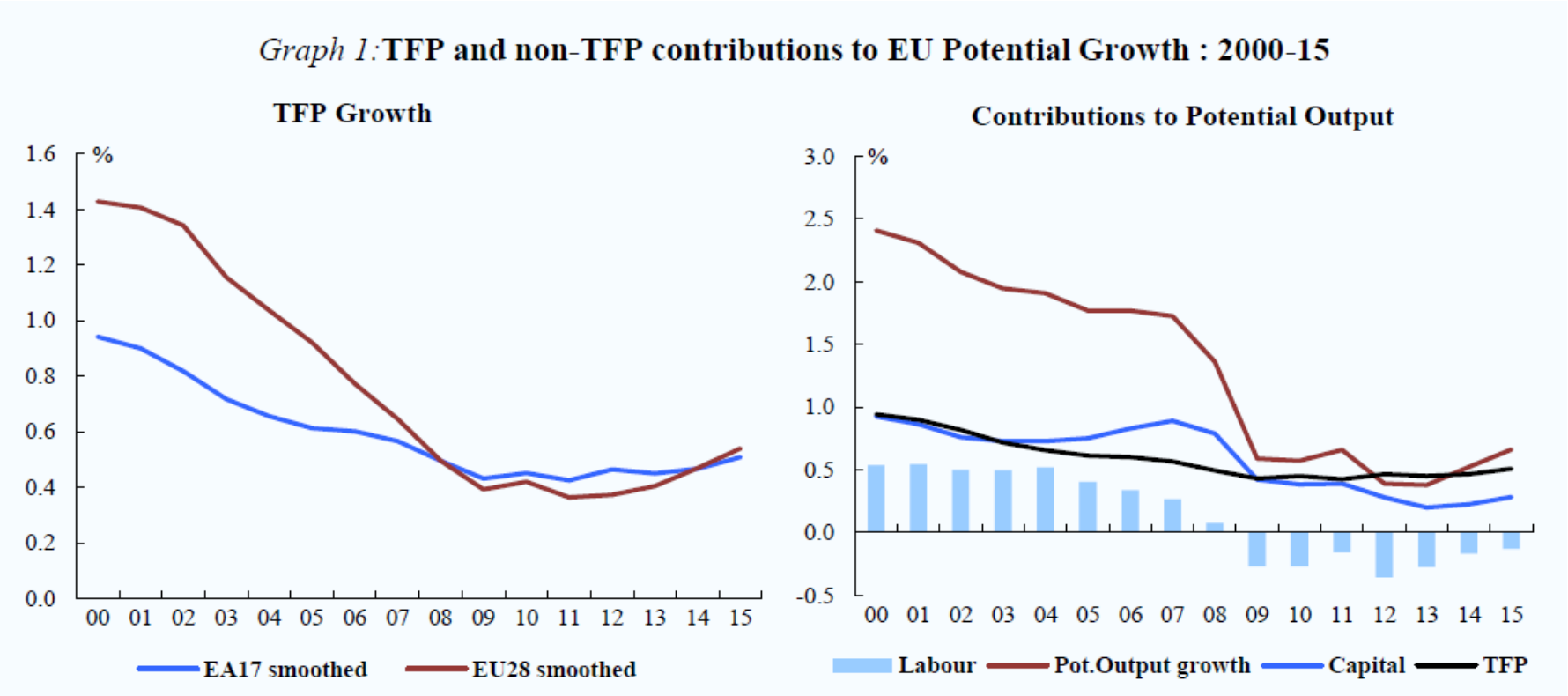
Sources: OECD and Eurostat.

1) Euro area business investment is measured using gross fixed capital formation of non-financial corporations. The price-adjusted series is derived using the gross fixed capital

Regional highlights: Europe



Regional highlights: Europe



- Global impact of the crisis slightly negative.
- It is soon to know if the fall is linked to the crisis or reflects an underlying downward trend, prior to the crisis.

Regional highlights: Europe

Ball, L. (2014)

- The null hypothesis. According to textbooks:
  - A fall in aggregate demand causes a recession in which output drops below potential output.
  - The effect is temporary, though. A recession is followed by a recovery in which output returns to potential, that is not affected significantly by the recession.
- The alternative hypothesis: this theory is called into question.

Table 1 – Losses in OECD Countries

Country	Loss in Potential, 2013	Output Gap, 2013	Loss in Potential, 2015	Output Gap, 2015	Growth Rate of Potential, Pre-Crisis	Growth Rate of Potential, 2014-2015
Australia	1.40%	1.60%	1.83%	2.27%	3.33%	3.11%
Austria	6.02%	2.75%	7.14%	2.64%	2.36%	1.75%
Belgium	7.54%	1.73%	8.82%	1.19%	2.07%	1.36%
Canada	8.24%	0.75%	9.71%	-0.16%	2.90%	2.08%
Czech Republic	18.24%	3.58%	22.40%	3.52%	4.62%	1.92%
Denmark	9.73%	2.93%	11.32%	1.63%	1.76%	0.86%
Finland	15.66%	2.63%	18.99%	3.08%	3.09%	1.04%
France	7.50%	2.68%	8.58%	3.08%	2.08%	1.48%
Germany	2.87%	0.56%	3.39%	-0.87%	1.52%	1.25%
Greece	29.98%	9.33%	35.40%	7.59%	3.96%	-0.15%
Hungary	25.69%	1.93%	30.51%	0.69%	4.42%	0.98%
Ireland	27.70%	6.32%	34.15%	4.45%	5.75%	0.93%
Italy	9.88%	5.04%	12.05%	3.74%	1.34%	0.11%
Japan	8.47%	-0.15%	9.57%	-0.89%	1.40%	0.79%
Netherlands	6.83%	4.01%	8.53%	4.09%	2.14%	1.20%
New Zealand	6.50%	0.29%	7.47%	-1.22%	3.07%	2.53%
Poland	5.24%	0.66%	7.42%	0.16%	4.11%	2.91%
Portugal	11.41%	6.42%	13.74%	4.98%	1.83%	0.49%
Spain	18.21%	4.37%	22.33%	3.52%	3.47%	0.83%
Sweden	7.58%	1.75%	8.66%	0.76%	3.02%	2.41%
Switzerland	-0.42%	0.76%	-0.88%	0.39%	1.81%	2.04%
United Kingdom	10.98%	2.14%	12.37%	0.32%	2.66%	1.85%
United States	4.70%	3.35%	5.33%	1.87%	2.57%	2.23%
Weighted Average	7.18%	2.56%	8.38%	1.49%	2.39%	1.68%

Loss in Potential = (Y**-Y*)/Y**

Output Gap =(Y*-Y)/Y**

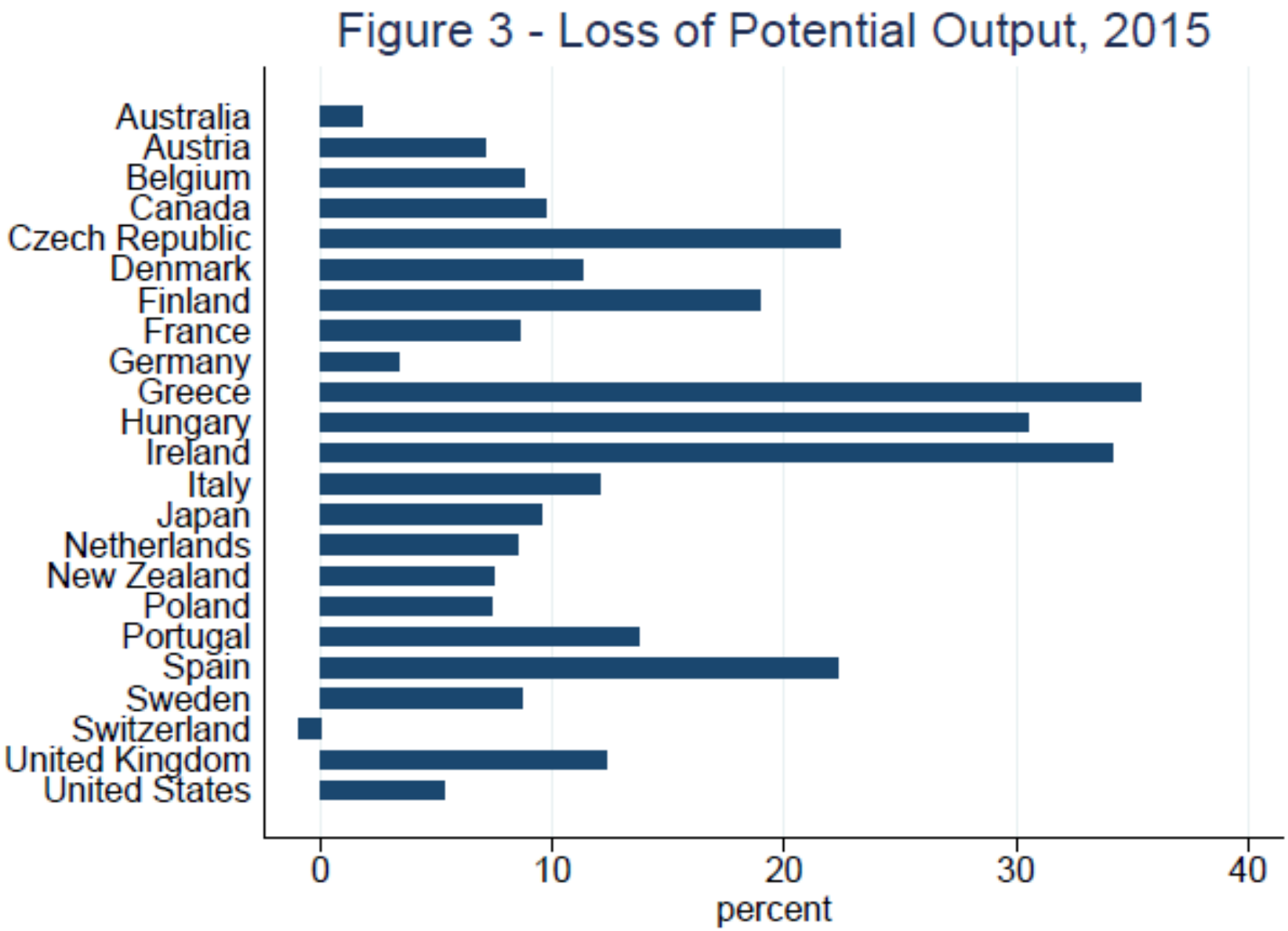
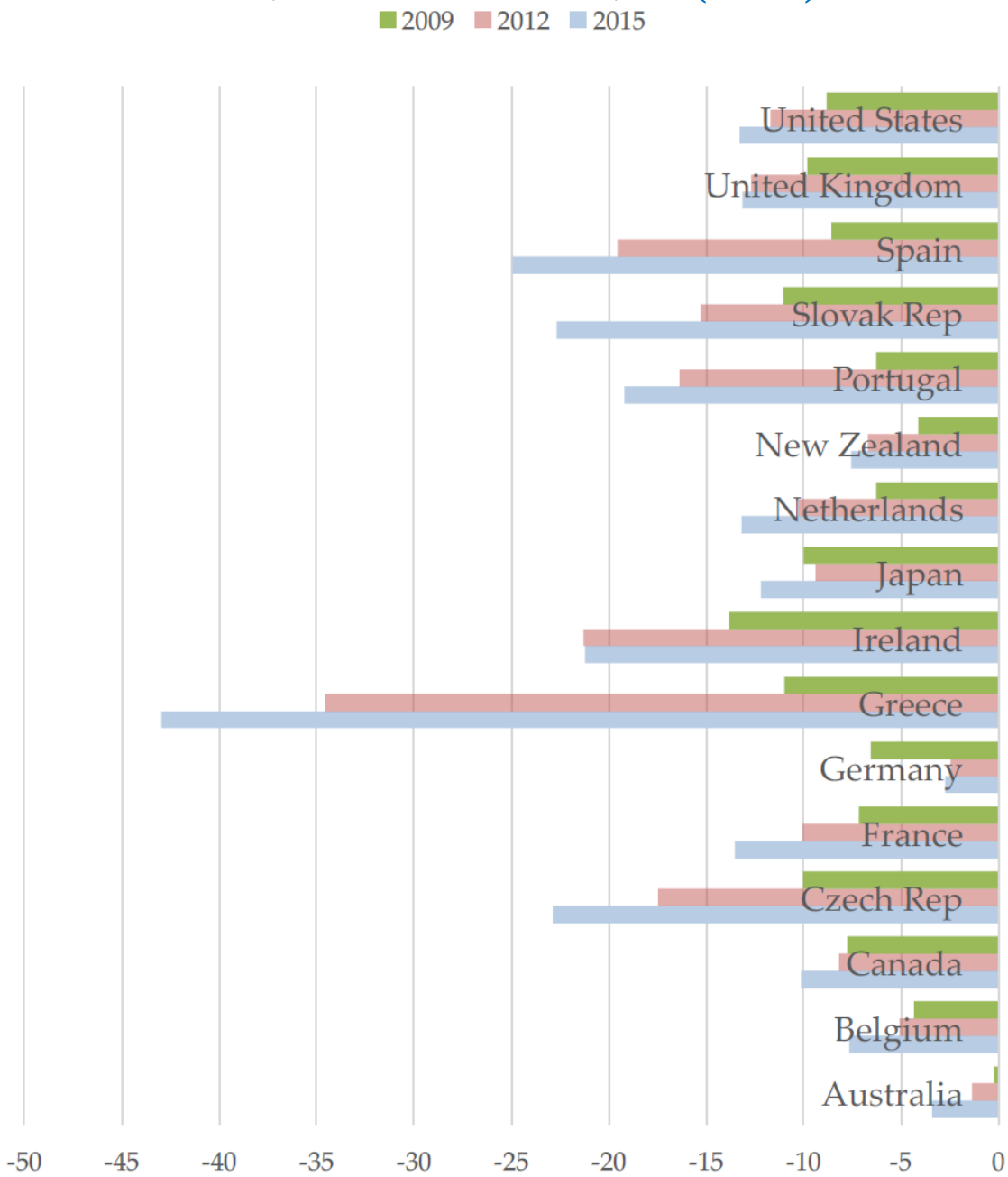


Figure 3 - Loss of Potential Output, 2015
Australia
Austria
Belgium
Canada
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Japan
Netherlands
New Zealand
Poland
Portugal
Spain
Sweden
Switzerland
United Kingdom
United States
0
10
20
30
40
percent

Figure 4. Forecast Error Real GDP 2009, 2012 and 2015.

Fatás, A. and Summers, L. (2016)



Regional highlights: Europe

Persistence of Forecast Errors Potential GDP.			
Advanced Economies	Forecast Error Potential GDP		
	2012	2015	2021
Forecast Error Real GDP 2009	1.17***	1.54***	1.84***
Constant	-0.19	-1.19	-4.64*
Observations	29	29	29
R-squared	0.45	0.44	0.40

Fatás, A. and Summers, L. (2016): *The Permanent Effects of Fiscal Consolidations*. 10902 CEPR

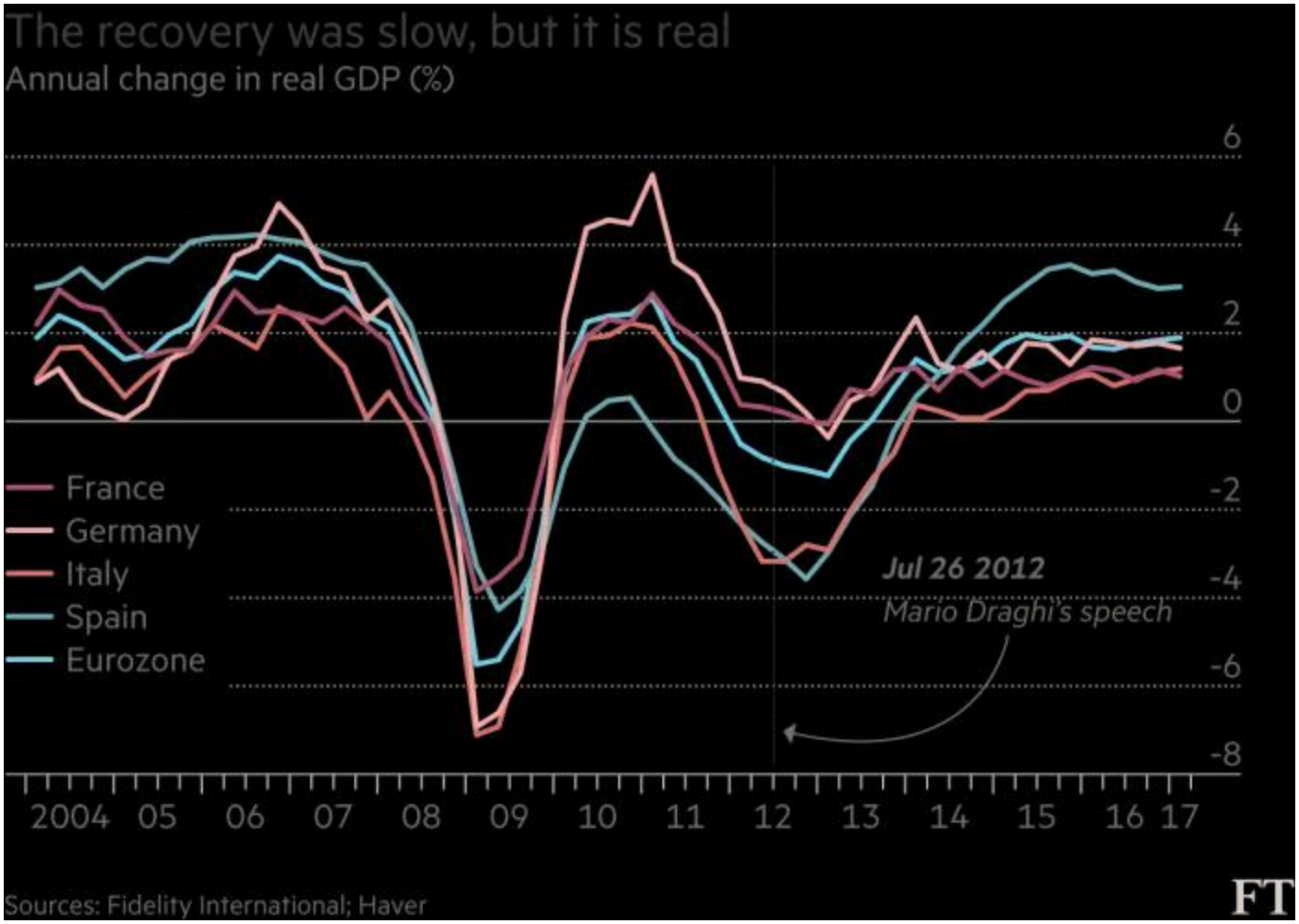
Regional highlights: Europe

Persistence of Forecast Errors Real GDP			
Emerging Economies	Forecast Error Real GDP		
	2012	2015	2021
Forecast Error Real GDP 2009	1.59***	2.18***	2.18***
Constant	1.97	-0.41	-0.41
Observations	31	31	31
R-squared	0.73	0.69	0.69

Regional highlights: Europe

Persistence of Forecast Errors Potential GDP							
		Europe			*EA*		
		2012	2015	2021	2012	2015	2021
Forecast Error Real GDP 2009		1.4***	1.5***	1.9***	1.8***	2.2***	2.8***
Constant		-1.5	-2.6	-4.6	3.4	2.1	0.8
Observations		19	19	19	13	13	13
R-squared		.39	.36	.34	.48	0.40	0.39

Regional highlights: Europe



On July 2012 Mario Draghi said "within our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough."

Regional highlights: Europe

- Many advanced economies have been dealing with the consequences of large fiscal deficits and debt that required a process of fiscal consolidation.
- As fiscal consolidation is implemented, we are likely to see the negative effects on output growth:
  - Negative effects on growth leads to policy makers becoming pessimistic about GDP $\Rightarrow$
  - Negative loop: consolidations lead to lower growth that will need to be addressed by an ever larger fiscal adjustments years ahead.
  - It sharply reduce capital accumulation, have long-term effects on employment, and slow the growth of TFP.

THANKS FOR YOUR ATTENTION

INCORPORACIÓN DEL PROGRESO TÉCNICO

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