# REGIONAL DISPARITIES IN SOUTHERN EUROPE: PROSPECTIVE SCENARIOS

Madalena Fonseca (University of Porto & A3ES)

# REGIONAL DISPARITIES IN SOUTHERN EUROPE: PROSPECTIVE SCENARIOS

### Summary

- Background and Objectives THE BOOK!
- Methodology
- Southern Europe at a Glance
- Meeting the EU 2020 targets: statistics and regional upgrading or convergence
- Reflections/ Conclusions

## REGIONAL DISPARITIES IN SOUTHERN EUROPE: PROSPECTIVE SCENARIOS

Background and Objectives – THE BOOK!

Is there a different Geography in Southern Europe? Is

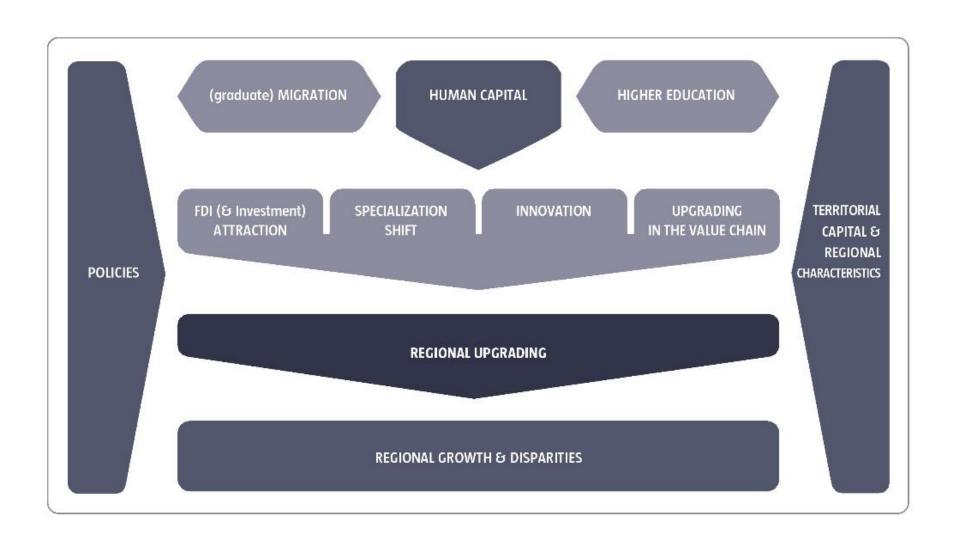
there a "Third Europe"?

Institutional framework/

/relational economic geography approaches

**Advances in Spatial Science** Madalena Fonseca Ugo Fratesi Editors Regional Advances in Spatial Science **Upgrading** in Southern Europe Madalena Fonseca Ugo Fratesi Editors **Spatial Disparities and Human Capital** Regional gsid leiteg2 Upgrading Southern E Spatial Disparities and H I isəteri E Madalena Fonseca

### Conceptual scheme of the book



**Focus of the Conference** 



# REGIONAL DISPARITIES IN SOUTHERN EUROPE: PROSPECTIVE SCENARIOS

Methodology (1)

Chapter 1 of the book: Southern Europe at a Glance

- The social filter concept: indicators for demography, employment, social and human capital
- Principal Component Analysis for variable

reduction and factor identification

# REGIONAL DISPARITIES IN SOUTHERN EUROPE: PROSPECTIVE SCENARIOS

Methodology (2)

Prospective scenarios

- ➤ Europe 2020 targets
- > Projections

### **Data Base**

### Eurostat data

- All data was collected from Eurostat general statistics and the Eurostat's monitor for the EU2020 strategy
- http://ec.europa.eu/eurostat/web/europe-2020indicators

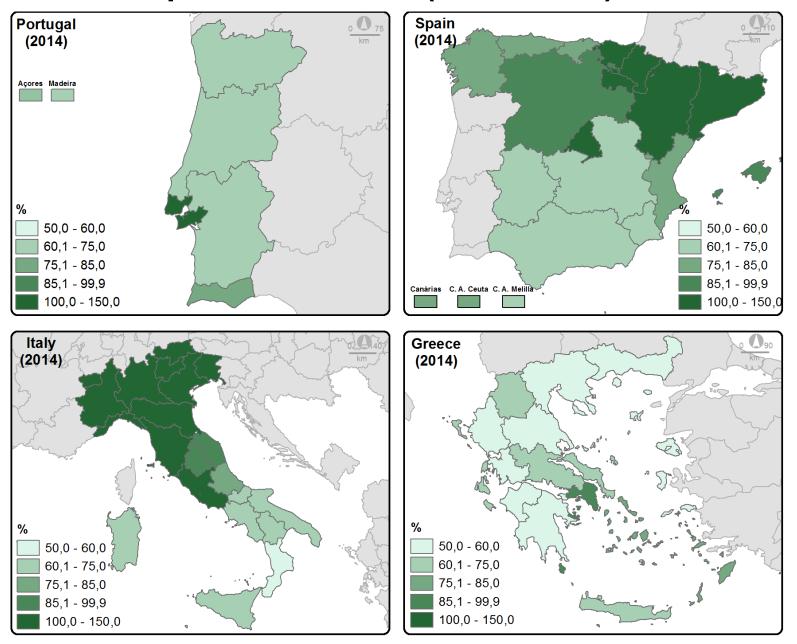
### Projections

 Demographic projections were also collected from Eurostat and EU2020 indicators were derived through regression analysis (own elaboration)

# REGIONAL DISPARITIES IN SOUTHERN EUROPE: PROSPECTIVE SCENARIOS

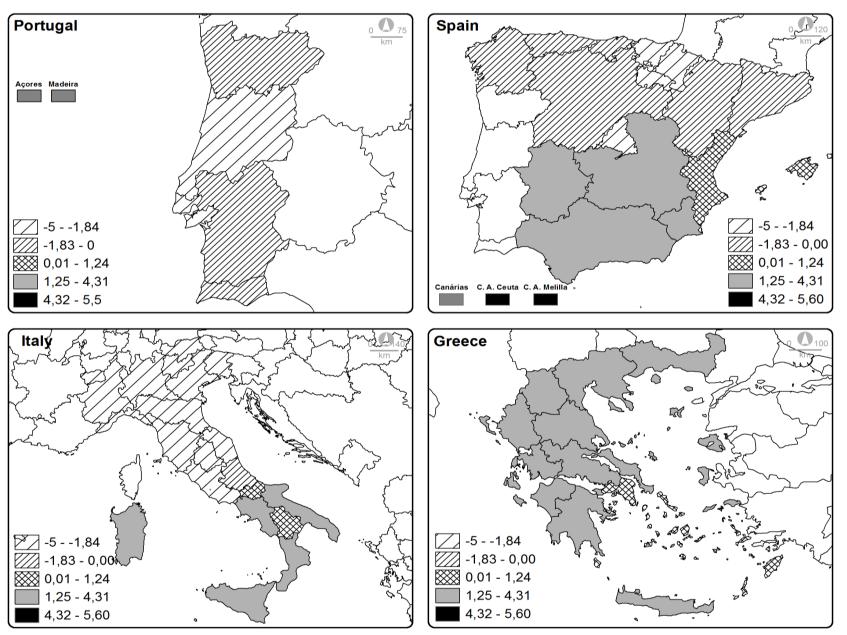
Southern Europe at a Glance

### GDP - PPS per inhabitant % (EU27 = 100) - NUTS 2

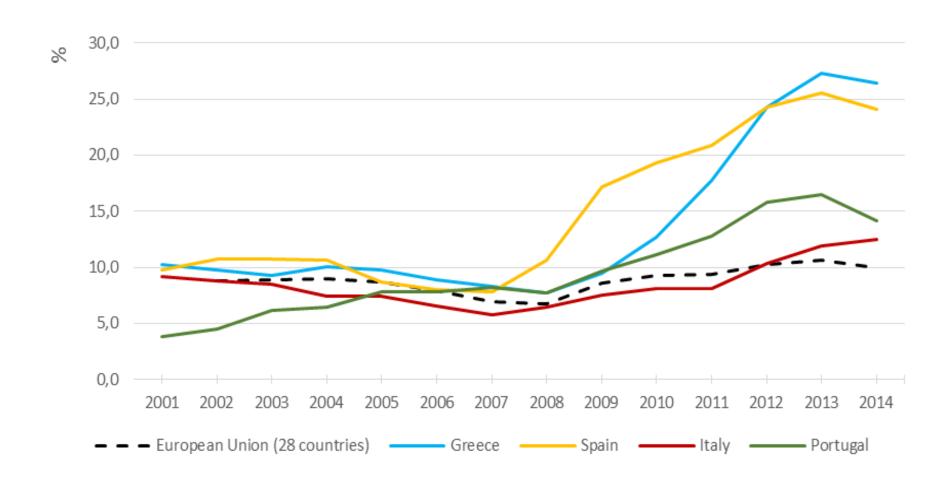


### Factor 1 - The Unemployment Rigidity Factor

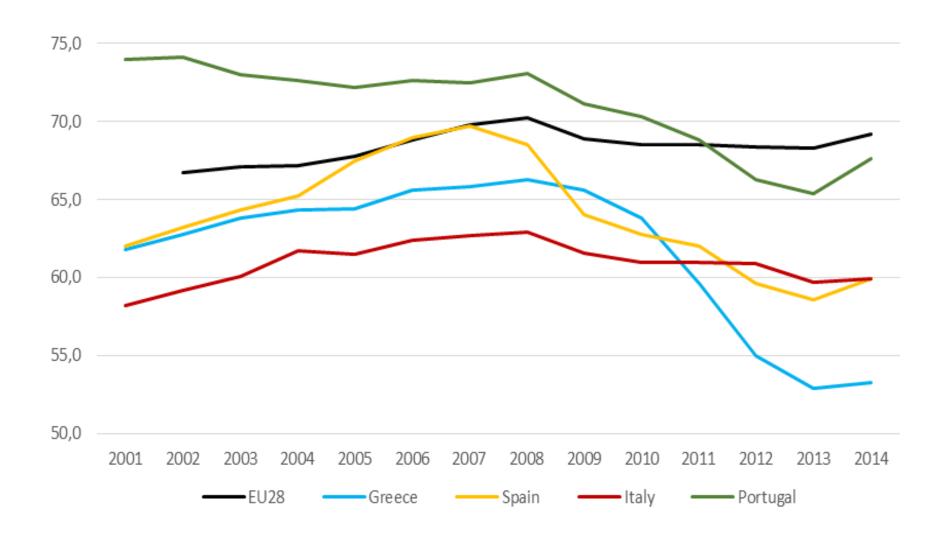
(Eigenvalue 9,270, variability 29,902%)



### Unemployment rate (% from population 25 – 64)

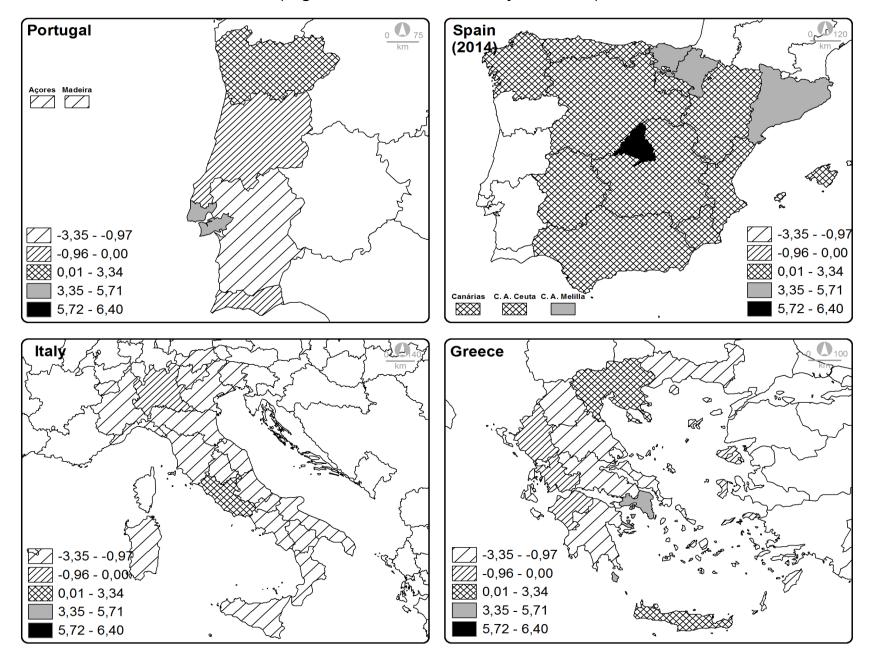


### Employment rate (% from population 25 - 64)



### **Factor 2 - The Human Capital and Innovation Factor**

(Eigenvalue 5,544, variability 17,885%)



# REGIONAL DISPARITIES IN SOUTHERN EUROPE: PROSPECTIVE SCENARIOS

Meeting the EU 2020 targets: statistics and regional upgrading or convergence

### Meeting the EU 2020 targets

### The European crisis on 2008

- The EU202 strategy was already designed in the context of the current European crisis which started by 2008 affecting most severely the Southern European countries;
- EU2020 identified the main consequences of this crisis: 1) at EU level GDP fell 4%; 2) industrial production dropped to 1990s levels; 3) Unemployment reached 10% of active population; 4) low average growth comparing with the Europe's main economic partners; 5) and demographic ageing was accelerating

### The EU2020 strategy (2010) – the roadmap on growth and development for the new decade

- EU 2020 intended to be a fully integrated program for all areas of development
- Three main priorities were defined for EU 2020 "Smart growth: developing an economy based on knowledge and innovation", "Sustainable growth: promoting a more resource efficient, greener and more competitive economy", "Inclusive growth (growth for all): fostering a high-employment economy delivering social and territorial cohesion".

### Europe 2020 structure

| Europe 2            | 020 Flagship Initiative                        | Europe      | 2020 Competitive | eness Index                  |
|---------------------|--|-------------|------------------|------------------------------|
|                     | An Industrial Policy for the Globalization Era |             |                  | Enterprise<br>environment    |
|                     | A Digital Agenda for Europe                    |             | SMART            | Digital agenda               |
| ative               | Innovation Union                               | 020         | SWANT            | Innovative Europe            |
| Flagship Initiative | Youth on the Move                              | EUROPE 2020 |                  | Education and training       |
| Flag                | An Agenda for New<br>Skills and Jobs           | EU          | INCLUSIVE        | Labour market and employment |
|                     | European Platform against Poverty              |             | INCLUSIVE        | Social inclusion             |
|                     | Resource-efficient<br>Europe                   |             | SUSTAINABLE      | Environmental sustainability |

Source: World Economic Forum, 2014

### Europe 2020 strategy headline indicators, EU28

|                               | Headline indicator  | Past situation | Cur     | rent situat | ion   | 2020<br>Target |
|-------------------------------|---|----------------|---------|-------------|-------|----------------|
|                               |   | 2008           | 2012    | 2013        | 2014  | Target         |
| Employment                    | Employment rate, total (% of the population aged 20-64)   | 70.3           | 68.4    | 68.4        | 69.2  | 75             |
|                               |   |                |         |             |       |                |
| R&D                           | Gross domestic expenditure on R&D (% of GDP)  | 1.85           | 2.01    | 2.03        | 2.03p | 3.00           |
|                               |   |                |         |             |       |                |
|                               | Greenhouse gas emissions* (index 1990=100)  | 90.16          | 81.69   | 80.2        | :     | 80             |
| Climate change                | Share of renewable energy in gross final energy consumption (%)                                     | 10.5           | 14.3    | 15.0        | :     | 20             |
| & energy                      | Primary energy consumption (Million tonnes of oil equivalent)                                       | 1,686.6        | 1,583.9 | 1,566.5     | :     | 1,483          |
|                               | Final energy consumption (Million tonnes of oil equivalent)   | 1,173.3        | 1,102.4 | 1,104.6     | :     | 1,086          |
|                               |   |                |         |             |       |                |
| Education                     | Early leavers from education & training, total (% of population aged 18-24)                         | 14.6           | 12.7    | 11.9        | 11.2b | <10.0          |
| Education                     | <b>Tertiary educational attainment, total</b> (% of population aged 30-34)                          | 31.2           | 36.0    | 37.1        | 37.9b | ≥40.0          |
|                               |   |                |         |             |       |                |
| Poverty or social exclusion** | <b>People at risk of poverty or social exclusion</b> (Cumulative difference from 2008 in thousands) | :              | 5993    | 5064        | 4527  | -20000         |

<sup>\*</sup> Total emissions, including international aviation, but excluding emissions from land use, land use change and forestry.

e estimate p provisional b break in time series : Data not available

Source: Europe 2020 (EC, 2016)

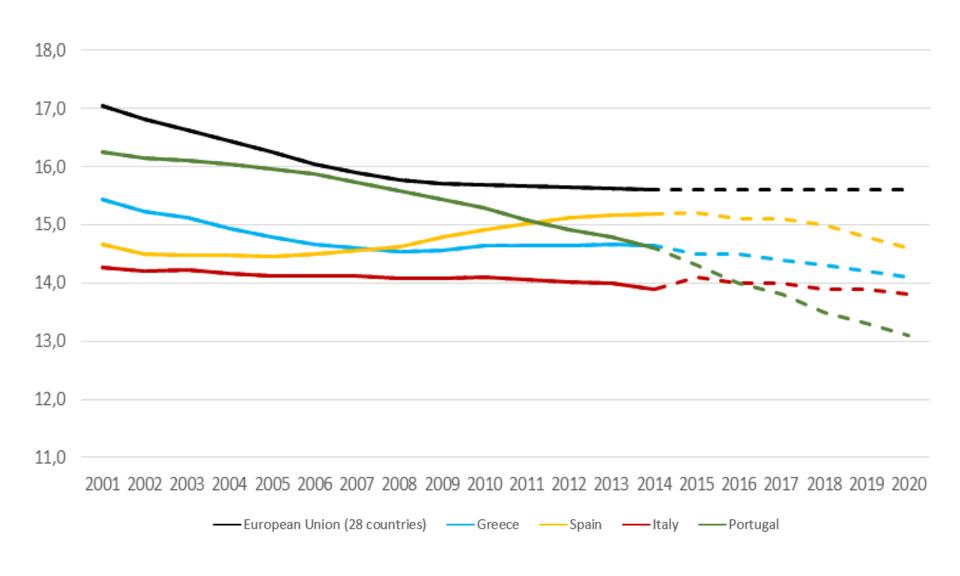
<sup>\*\*</sup> People at risk of poverty or social exclusion are in at least one of the following three conditions: at-risk-of-poverty after social transfers (income poverty), severely materially deprived or living in a household with very low work intensity. Persons are only counted once even if they are present in several sub-indicators. The overall EU target is to lift at least 20 million people out of risk of poverty or social exclusion by 2020 with 2008 as a baseline year. All data refer to EU27.

# Meeting the EU 2020 targets: statistics and regional upgrading or convergence

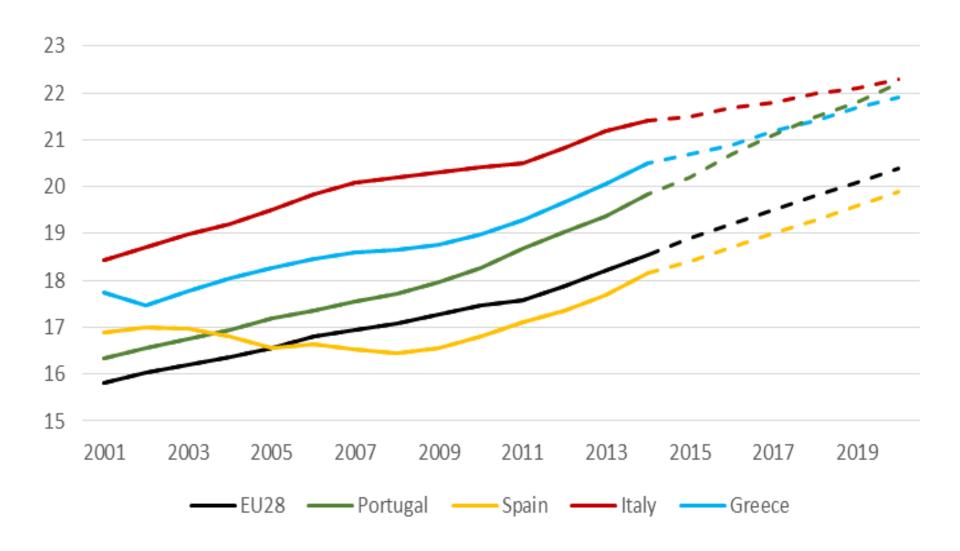
Headline targets and additional benchmarks for education in the EU2020 strategy

|  |      | EU      | 28     | Gre     | ece    | Sp      | ain    | lt      | aly    | Port    | tugal  |
|--|------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| Headline targets                               |      | Current | EU2020 |
| neduline targets                               | Year | value   | Target |
| Early leavers from education and training      | 2014 | 11,2    | 10     | 9       | 9,7    | 21,9    | 15     | 15      | 16     | 17,4    | 10     |
| Population 30-34 year olds with tertiary       | 2014 | 27.0    | 40     | 27.2    | 22     | 42.2    | 44     | 22.0    | 26     | 24.2    | 40     |
| education                                      | 2014 | 37,9    | 40     | 37,2    | 32     | 42,3    | 44     | 23,9    | 26     | 31,3    | 40     |
| Additional benchmarks                          |      |         |        |         |        |         |        |         |        |         |        |
| Lifelong learning - adults 25-64 participating | 2014 | 10.7    | 45     | 2       | 4.5    | 0.0     | 45     | 0       | 45     | 0.0     | 15     |
| in education and training                      | 2014 | 10,7    | 15     | 3       | 15     | 9,8     | 15     | 8       | 15     | 9,6     | 15     |
| Early childhood education and care             | 2012 | 93,9    | 95     | 75,2    | 95     | 97,4    | 95     | 99,2    | 95     | 95      | 95     |
| Foreign languages learned per pupil at         | 2012 | 1.4     | 2      | 1       | ,      | 1.2     | ,      | 1.2     | ,      | 0.7     | 2      |
| ISCED 3 level                                  | 2012 | 1,4     |        | 1       | 2      | 1,2     | 2      | 1,3     | 2      | 0,7     | 2      |
| Employment of recent graduates (ages 20-       |      |         |        |         |        |         |        |         |        |         |        |
| 34 having left education and training in the   | 2014 | 7.0     |        | 44.2    |        | CF 4    | 00     | 45      | 02     | 60.4    | 00     |
| past 1 to 3 years, upper secondary or higher   | 2014 | 76      | 82     | 44,3    | 82     | 65,1    | 82     | 45      | 82     | 69,4    | 82     |
| ISCED 3-8)                                     |      |         |        |         |        |         |        |         |        |         |        |
| Basic Skills (PISA - Low reading literacy      | 2042 | ,       | 4.5    | 22.6    | 4-     | 40.2    | 45     | 40.5    | 4.5    | 40.0    | 45     |
| performance for 15 year old pupils)            | 2012 | n/a     | 15     | 22,6    | 15     | 18,3    | 15     | 19,5    | 15     | 18,8    | 15     |

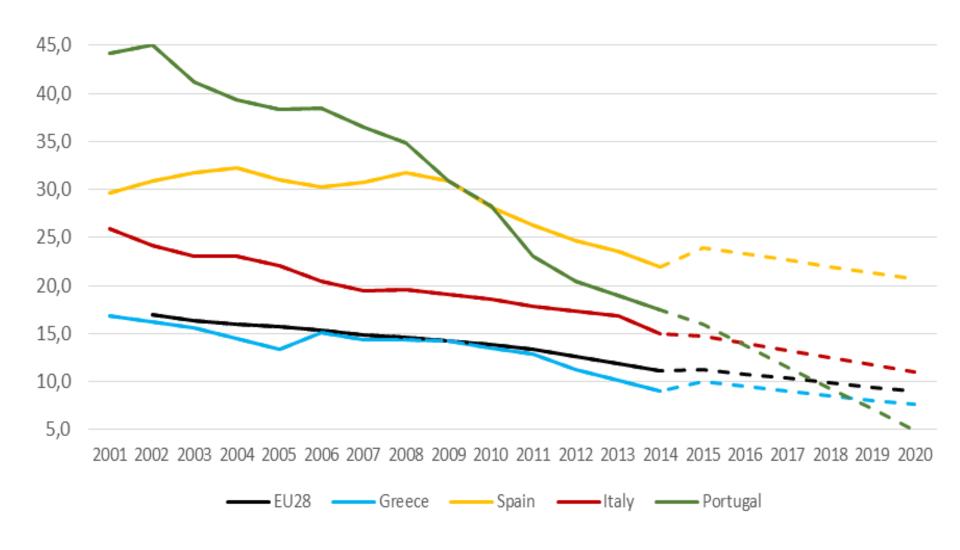
### Population aged 0 - 14 (%) (2001 - 2020)



### Population aged 65 or + (%) (2001 - 2020)

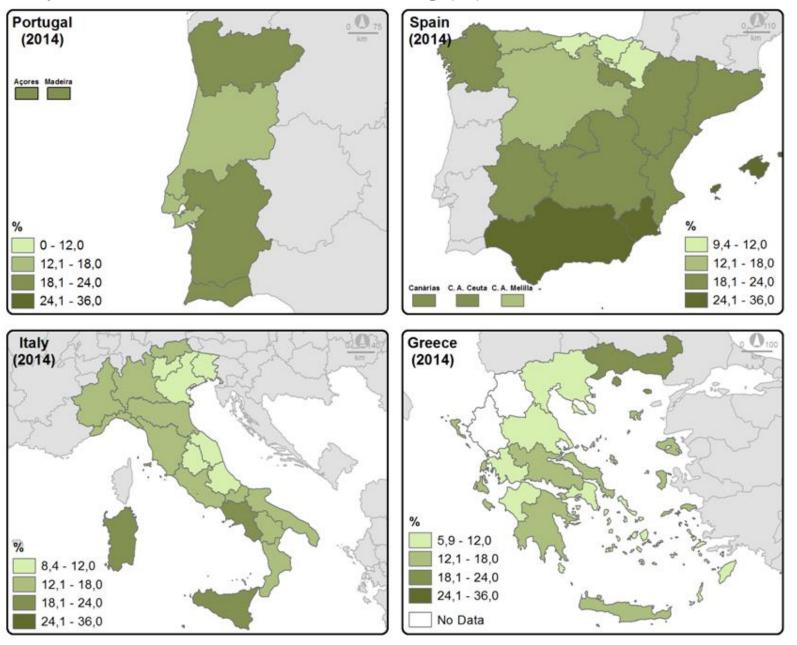


### Early leavers from education and training



Source: Eurostat plus linear regression analysis

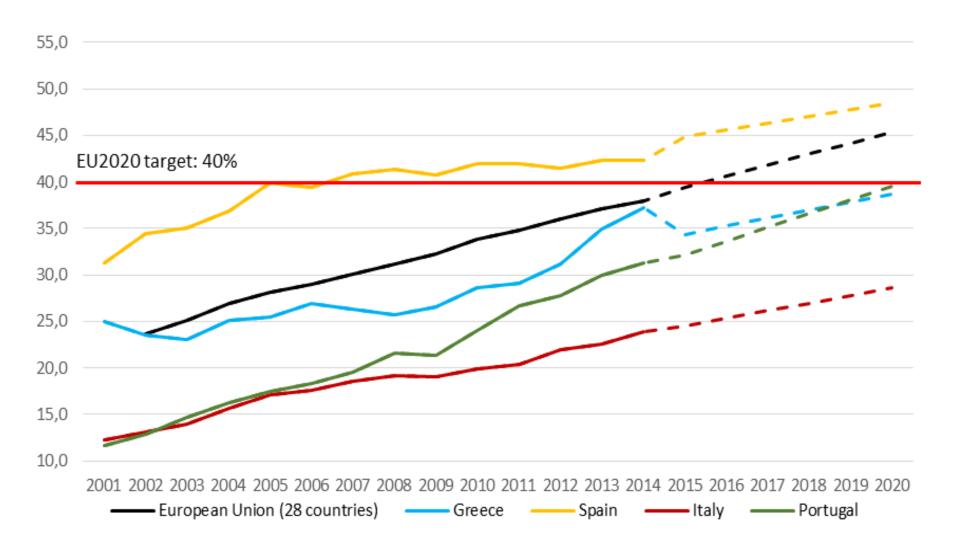
Early leavers from education and training (%) – NUTS 2



### Population aged 30-34 years (total and with tertiary education): Variation (%)

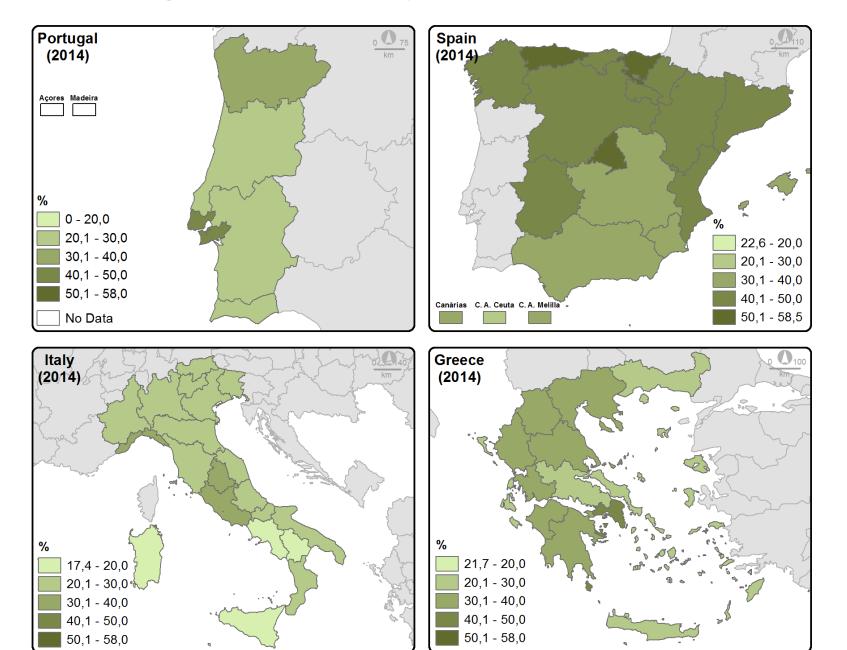
|                     | 2001               | /2014                                   | 2004               | 4/2014                                  | 2008/2014          |   |  |  |  |
|---------------------|--------------------|---|--------------------|---|--------------------|---|--|--|--|
|                     | Pop 30-34<br>total | Pop 30-34<br>with tertiary<br>education | Pop 30-34<br>total | Pop 30-34<br>with tertiary<br>education | Pop 30-34<br>total | Pop 30-34<br>with tertiary<br>education |  |  |  |
| European Union (28) | -8,83              |   | -6,72              | 31,42                                   | -3,36              | 17,39                                   |  |  |  |
| European Union (27) | -8,92              | 51,79                                   | -6,82              | 31,15                                   | -3,41              | 17,27                                   |  |  |  |
| Greece              | -8,92              | 35,52                                   | -7,17              | 37,59                                   | -6,69              | 35,07                                   |  |  |  |
| Spain               | 3,67               | 40,1                                    | -4,52              | 9,45                                    | -15,61             | -13,56                                  |  |  |  |
| Italy               | -19,6              | 57,51                                   | -19,21             | 23,78                                   | -15,62             | 5,04                                    |  |  |  |
| Portugal            | -8,53              | 144,7                                   | -12,59             | 67,85                                   | -17,31             | 19,82                                   |  |  |  |

### Population aged 30 – 34 with tertiary education attainment (%)

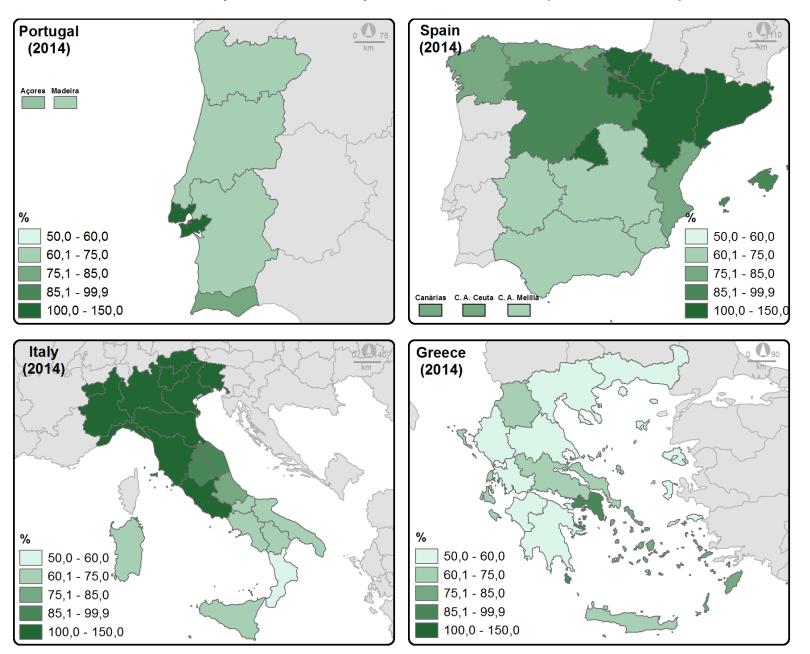


Source: Eurostat plus linear regression analysis

### Population aged 30 – 34 with tertiary education attainment (%) – NUTS 2



### GDP at current market prices - PPS per inhabitant % (EU27 = 100) – NUTS 2



# REGIONAL DISPARITIES IN SOUTHERN EUROPE: PROSPECTIVE SCENARIOS

Reflections/ Conclusions

- Going back to the Lisbon Strategy (2010)
  - Before assessing the feasibility of EU 2020, it is also important to retrieve the former Lisbon strategy or Lisbon Agenda for 2010, designed with similar objectives
  - what outcomes were delivered by the Lisbon strategy on Southern Europe?
- Human Capital vs Regional development
  - In the knowledge economy, human capital is the pillar for innovation and economic growth. Human capital endowment embodies educational stock and therefore higher education and qualification at higher levels of the school system are the most relevant components of human capital.
  - The link between human capital, innovation, economic growth and regional development
  - The effect of HEIs on economic growth and regional development

### Where we are - 30 years of European Regional/ Cohesion Policy

- Regional development policies in Southern Europe have been repeatedly criticized because they have concentrated more in physical capital and less on human capital enhancement
- After more than 30 years of European Regional/ Cohesion Policy,
   Europe should evidence a regional upgrading and convergence
   from the lagging regions. That is not the case, however.
- Before feeding great expectations for 2020, it is important to do some ex-ante assessment of the policies that are being implemented
- Monitoring and assessing the effects of the EU policies and structural funds on growth and convergence have been producing an immense amount of studies and reports however, we have not always been able to guarantee the expected achievements of the various plans

### Education - Are the EU2020 targets enough?

- Some of the obstacles identified for the limits of the Lisbon Strategy were the high number of targets and the lack of efficient governance tools
- In spite of the huge efforts developed in what concerns higher education and overall education policies, the persistency of the lagging behind vast territories in Southern Europe countries are troubling. It is not enough to meet the marks of the EU 2020 targets for Education if there is not a real economic and social upgrading in those regions.
- Education is a condition but not the sufficient condition to foster growth and development.

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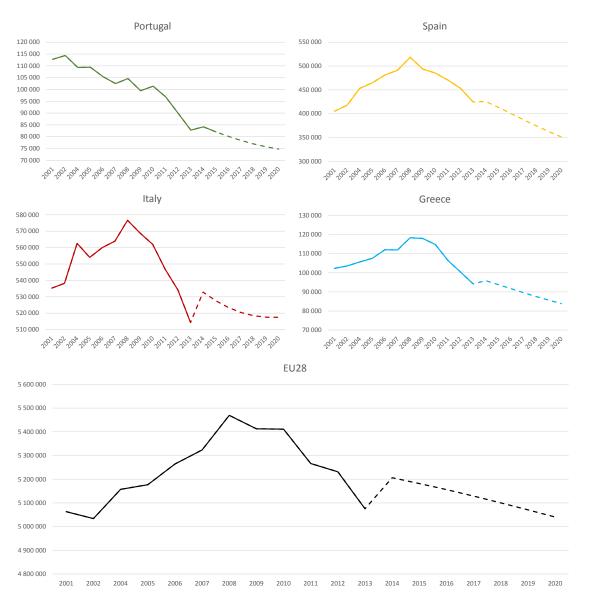
### Thank you for your attention

Madalena Fonseca (University of Porto & A3ES)

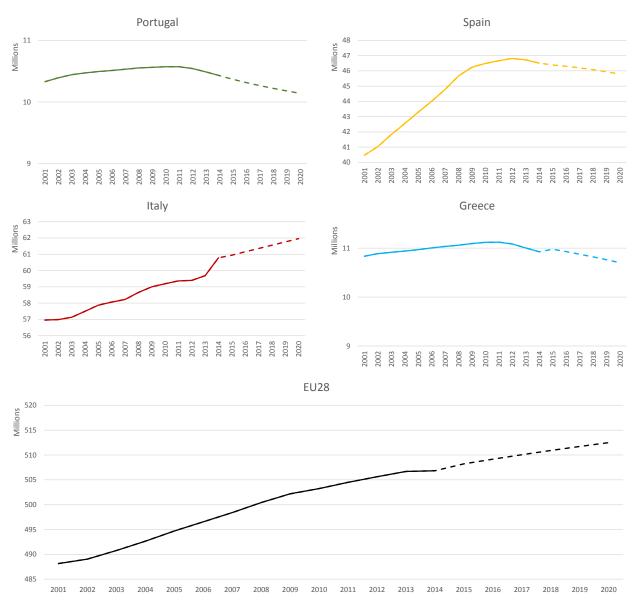
madalena@letras.up.pt

| SLIDES SOS: Dados de base para se alguém fizer perguntas específicas, ir buscar. |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

#### Total births 2001 - 2020



### Total population projections 2001 – 2020



Gross domestic product (GDP) at current market prices - Purchasing Power

Standard per inhabitant in percentage of the EU average, at country level

(EU28 = 100)

|                               | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| European Union (28 countries) | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  |
| Greece                        | 88   | 92   | 94   | 96   | 91   | 94   | 92   | 94   | 94   | 87   | 77   | 74   | 74   | 72   |
| Spain                         | 98   | 100  | 100  | 100  | 100  | 102  | 103  | 101  | 101  | 97   | 94   | 92   | 91   | 91   |
| Italy                         | 119  | 113  | 112  | 108  | 106  | 106  | 105  | 105  | 104  | 103  | 103  | 101  | 98   | 96   |
| Portugal                      | 78   | 78   | 78   | 76   | 79   | 79   | 79   | 79   | 81   | 81   | 78   | 77   | 77   | 78   |

### Unemployment rate (% from population 25 – 64)

|                               | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| European Union (28 countries) |      | 8,8  | 8,9  | 9    | 8,7  | 7,9  | 6,9  | 6,7  | 8,6  | 9,3  | 9,4  | 10,2 | 10,6 | 10   |
| Greece                        | 10,2 | 9,8  | 9,3  | 10,1 | 9,8  | 8,9  | 8,3  | 7,7  | 9,5  | 12,7 | 17,8 | 24,3 | 27,3 | 26,4 |
| Spain                         | 9,8  | 10,7 | 10,7 | 10,6 | 8,7  | 8    | 7,8  | 10,6 | 17,2 | 19,3 | 20,9 | 24,3 | 25,6 | 24,1 |
| Italy                         | 9,2  | 8,8  | 8,5  | 7,4  | 7,4  | 6,5  | 5,8  | 6,4  | 7,5  | 8,1  | 8,1  | 10,3 | 11,9 | 12,5 |
| Portugal                      | 3,8  | 4,5  | 6,2  | 6,4  | 7,8  | 7,8  | 8,2  | 7,7  | 9,7  | 11,1 | 12,8 | 15,8 | 16,5 | 14,1 |

### Employment rate (% from population 25 - 64)

|                               | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| European Union (28 countries) |      | 62,3 | 62,5 | 62,6 | 63,3 | 64,2 | 65,2 | 65,6 | 64,4 | 64   | 64,1 | 64   | 64   | 64,8 |
| European Union (27 countries) | 62,5 | 62,4 | 62,6 | 62,7 | 63,4 | 64,3 | 65,2 | 65,7 | 64,4 | 64,1 | 64,2 | 64,1 | 64,1 | 64,9 |
| Greece                        | 56,5 | 57,6 | 58,7 | 59,3 | 59,6 | 60,6 | 60,9 | 61,4 | 60,8 | 59,1 | 55,1 | 50,8 | 48,8 | 49,4 |
| Spain                         | 57,7 | 59   | 60,1 | 61,1 | 63,6 | 65   | 65,8 | 64,5 | 60   | 58,8 | 58   | 55,8 | 54,8 | 56   |
| Italy                         | 54,5 | 55,4 | 56,1 | 57,8 | 57,6 | 58,3 | 58,6 | 58,6 | 57,4 | 56,8 | 56,8 | 56,6 | 55,5 | 55,7 |
| Portugal                      | 68,9 | 69,1 | 68,1 | 67,8 | 67,3 | 67,6 | 67,6 | 68   | 66,1 | 65,3 | 63,8 | 61,4 | 60,6 | 62,6 |

### Early leavers from education and training (%)

|          | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| EU28     |      | 17   | 16,4 | 16   | 15,7 | 15,3 | 14,9 | 14,6 | 14,2 | 13,9 | 13,4 | 12,6 | 11,9 | 11,1 | 11,2 | 10,8 | 10,3 | 9,9  | 9,4  | 9,0  |
| EU27     | 17,2 | 17   | 16,5 | 16,1 | 15,8 | 15,4 | 15   | 14,7 | 14,3 | 14   | 13,4 | 12,7 | 12   | 11,2 | 11,4 | 11,0 | 10,5 | 10,1 | 9,6  | 9,2  |
| Greece   | 16,9 | 16,2 | 15,6 | 14,5 | 13,3 | 15,1 | 14,3 | 14,4 | 14,2 | 13,5 | 12,9 | 11,3 | 10,1 | 9    | 10,0 | 9,5  | 9,0  | 8,6  | 8,1  | 7,6  |
| Spain    | 29,7 | 30,9 | 31,7 | 32,2 | 31   | 30,3 | 30,8 | 31,7 | 30,9 | 28,2 | 26,3 | 24,7 | 23,6 | 21,9 | 23,9 | 23,3 | 22,6 | 22,0 | 21,3 | 20,7 |
| Italy    | 25,9 | 24,2 | 23   | 23,1 | 22,1 | 20,4 | 19,5 | 19,6 | 19,1 | 18,6 | 17,8 | 17,3 | 16,8 | 15   | 14,7 | 14,0 | 13,2 | 12,5 | 11,8 | 11,0 |
| Portugal | 44,2 | 45   | 41,2 | 39,3 | 38,3 | 38,5 | 36,5 | 34,9 | 30,9 | 28,3 | 23   | 20,5 | 18,9 | 17,4 | 16,0 | 13,8 | 11,5 | 9,3  | 7,1  | 4,9  |

|          | Regression equation   | R-squared      |
|----------|-----------------------|----------------|
| EU28     | y = -0,45x + 17,985   | $R^2 = 0.9921$ |
| Greece   | y = -0,4864x + 17,312 | $R^2 = 0.9312$ |
| Spain    | y = -0,6534x + 33,751 | $R^2 = 0.8502$ |
| Italy    | y = -0,7314x + 25,657 | $R^2 = 0.9887$ |
| Portugal | y = -2,2204x + 49,289 | $R^2 = 0.9844$ |

Source: Eurostat plus linear regression analysis

### Population aged 30 – 34 with tertiary education attainment (%)

|                               | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| European Union (28 countries) |      | 23,6 | 25,1 | 26,9 | 28,1 | 29   | 30,1 | 31,2 | 32,3 | 33,8 | 34,8 | 36   | 37,1 | 37,9 | 39,5 | 40,6 | 41,8 | 43,0 | 44,2 | 45,3 |
| Greece                        | 25   | 23,5 | 23   | 25,1 | 25,5 | 26,9 | 26,3 | 25,7 | 26,6 | 28,6 | 29,1 | 31,2 | 34,9 | 37,2 | 34,3 | 35,2 | 36,1 | 37,0 | 37,9 | 38,7 |
| Spain                         | 31,3 | 34,4 | 35,1 | 36,9 | 39,9 | 39,4 | 40,9 | 41,3 | 40,7 | 42   | 41,9 | 41,5 | 42,3 | 42,3 | 44,8 | 45,6 | 46,3 | 47,1 | 47,8 | 48,5 |
| Italy                         | 12,2 | 13,1 | 13,9 | 15,6 | 17,1 | 17,6 | 18,6 | 19,2 | 19   | 19,9 | 20,4 | 21,9 | 22,5 | 23,9 | 24,5 | 25,3 | 26,1 | 27,0 | 27,8 | 28,6 |
| Portugal                      | 11,7 | 12,9 | 14,7 | 16,3 | 17,5 | 18,3 | 19,5 | 21,6 | 21,3 | 24   | 26,7 | 27,8 | 30   | 31,3 | 32,1 | 33,6 | 35,1 | 36,6 | 38,1 | 39,6 |

|          | Regression equation  | R-squared      |
|----------|----------------------|----------------|
| EU28     | y = 1,1764x + 21,812 | $R^2 = 0,9988$ |
| Greece   | y = 0,8787x + 21,167 | $R^2 = 0,9148$ |
| Spain    | y = 0,7413x + 33,719 | $R^2 = 0.9191$ |
| Italy    | y = 0,8349x + 11,945 | $R^2 = 0.9905$ |
| Portugal | y = 1,4884x + 9,8088 | $R^2 = 0,9953$ |

Source: Eurostat plus linear regression analysis