

THE INTERNATIONALISATION AND DIGITALISATION OF THE PORTUGUESE ECONOMY

R. Doménech, R. Falbo, A. Marín, M. Montañez, A. Neut and M. Cabezas

Portugal, from here to where? Macroeconomic Challenges for the next decade

Lisbon, May 19, 2017



80

60

40

20

0

10

10

Contents

Internationalisation & Digitalisation

1. Challenges to internationalisation

- ◆ Improvement in export margins
- ◆ Policies to boost competitiveness

2. The age of digitalisation

- ◆ Why digitalisation?
- ◆ Portugal's positioning
- ◆ Opportunities, risks and challenges

Main messages

INTERNATIONALISATION: Portugal's convergence with the major advanced economies requires increases in employment and productivity

Dual economy in which many firms do not promote the accumulation of human capital, innovation and trade in international markets

The size of firms and its determinants, product market regulations and the environment for doing business are of paramount importance

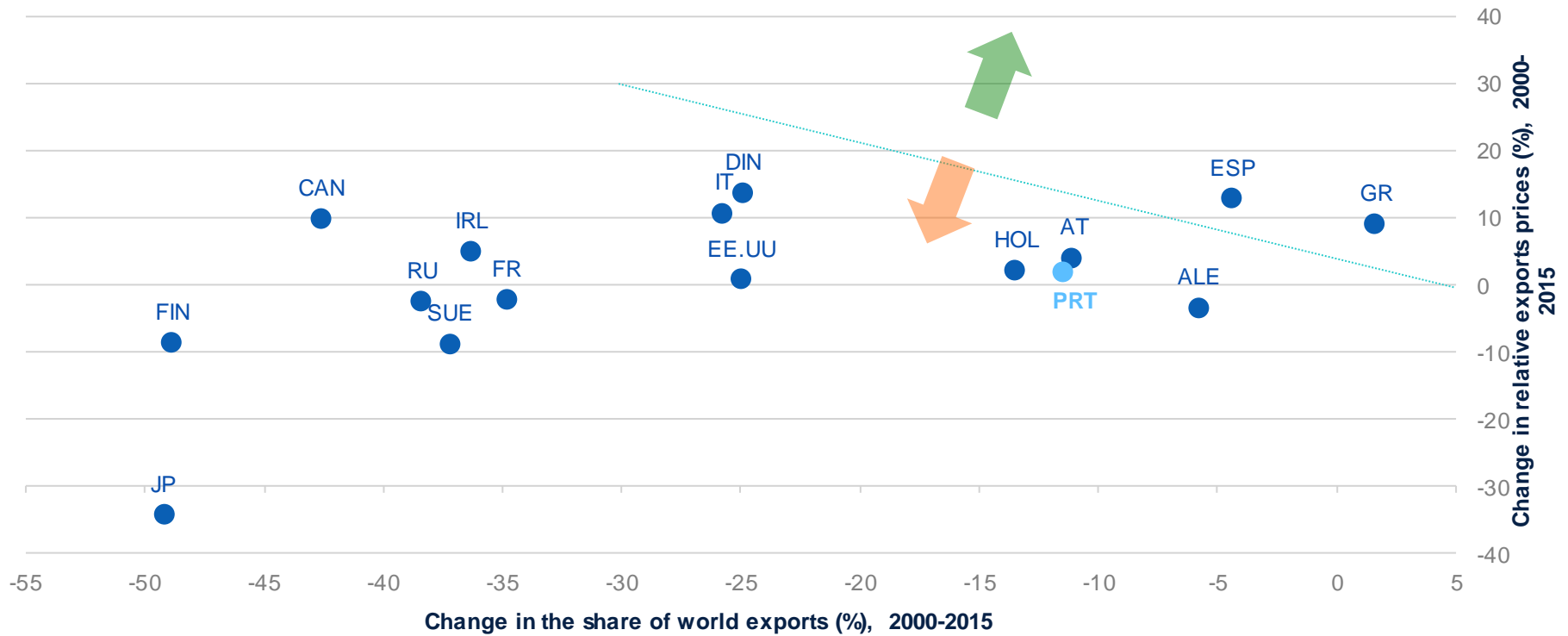
DIGITISATION: All this in a more globalised world economy undergoing an unprecedented and disruptive technological revolution

1.- Challenges to internationalisation

- ◆ Globalisation and new products and sales channels bring obvious benefits to consumers, but new challenges for producers
- ◆ Portugal, a dual economy: good (but relatively few) exporters, many with low productivity firms exposed to international competition
- ◆ Portugal suffered an adjustment to its share of world exports (much larger than in Spain and Germany) and currently finds itself below other EU countries
- ◆ Despite this, the diversification of Portugal's exports in terms of products and countries is relatively high, according to the Atlas of Economic Complexity (2012-2014)
- ◆ The complexity, connectivity and value of opportunity (for trade to grow) of the Portuguese economy are also relatively high

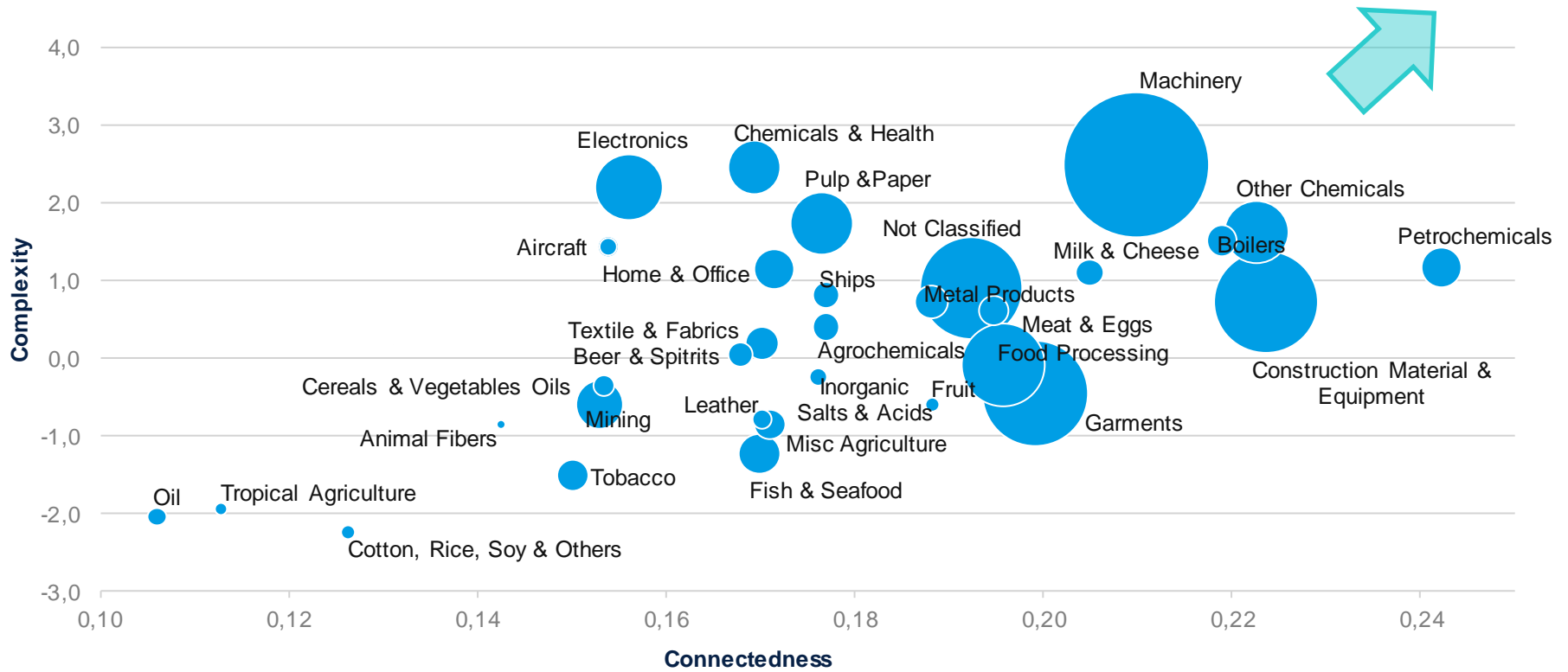
1.- Challenges to internationalisation

Share in world exports and real effective exchange rate



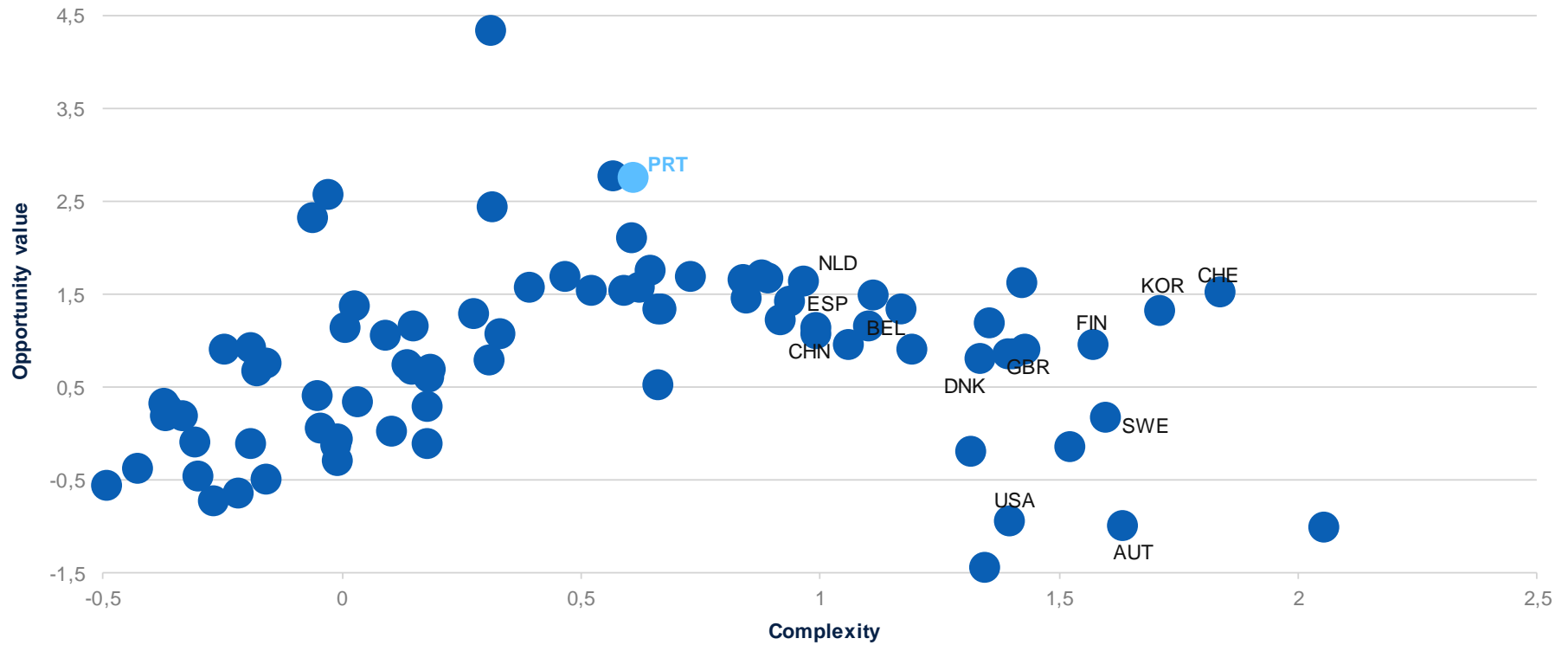
1.- Challenges to internationalisation

Complexity, connectivity and distribution by sector of Portugal's exports (average 2012-2014, the size of the bubble representing the sector's proportional contribution to GDP)



1.- Challenges to internationalisation

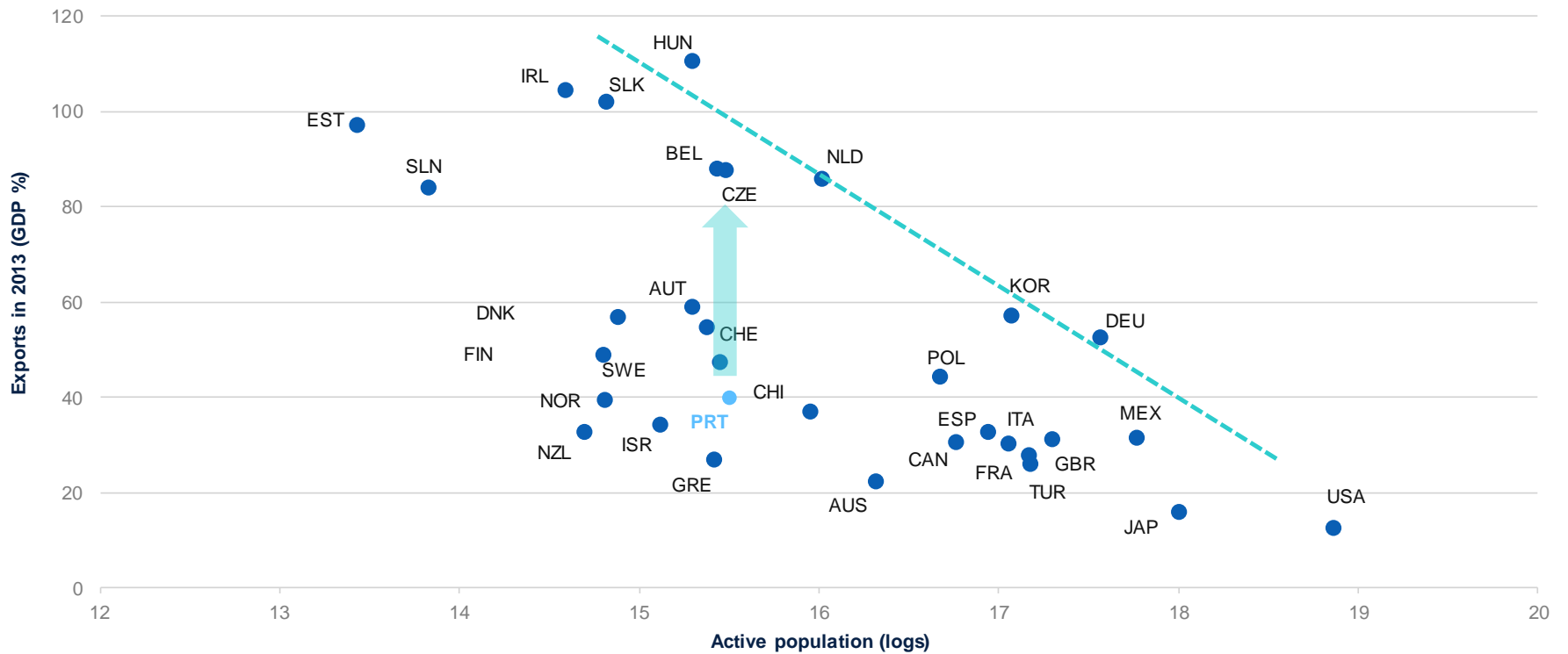
Complexity and value of opportunity (2013)



Source: Andrés and Doménech (2015) based on Hausmann et al (2014)
Andrés, J. and Doménech, R. (2015): En Busca de la Prosperidad. (In Search of Prosperity) Deusto. www.enbuscadelaprosperidad.com

1.- Challenges to internationalisation

Exports and size of the country



1.- Challenges to internationalisation

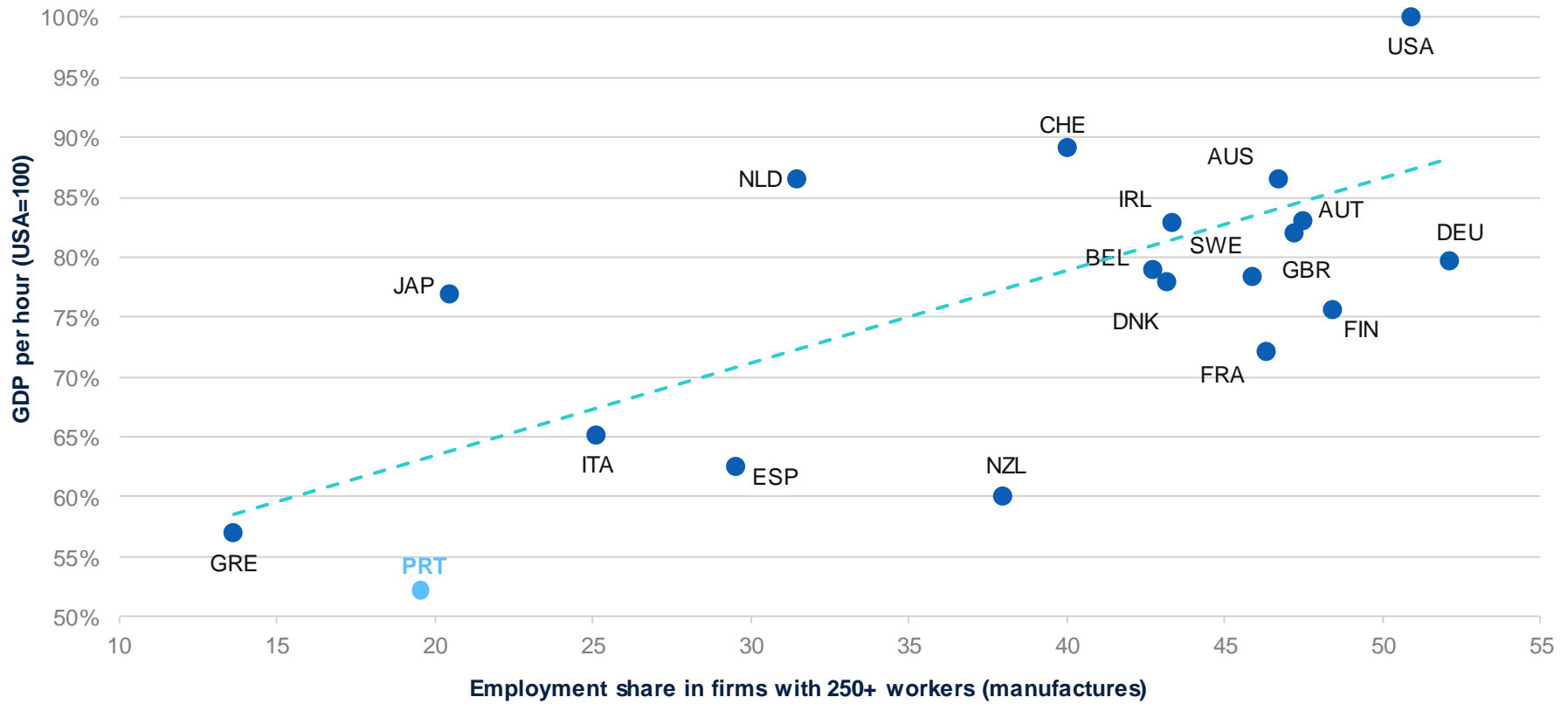
Improvement in international competitiveness

- ◆ Need for a more efficient and inclusive labour market to be accompanied by **improved policies and product market competition regulations**, reduced administrative burden and fewer barriers to internationalisation
- ◆ Portugal can take advantage of globalisation by **improving its position in world value chains**, as some emerging countries are already doing
- ◆ Portugal needs to improve both its **intensive** margin (more exports per firms) and **extensive** margin (more exporters)
- ◆ It is necessary to understand the **determinants of firms internationalisation**. These depend on a large number of economic, legal and institutional factors, all of which **boil down to company size**, a key determinant of competitiveness

1.- Challenges to internationalisation

Company size and productivity

Employment and productivity (2010)



1.- Challenges to internationalisation

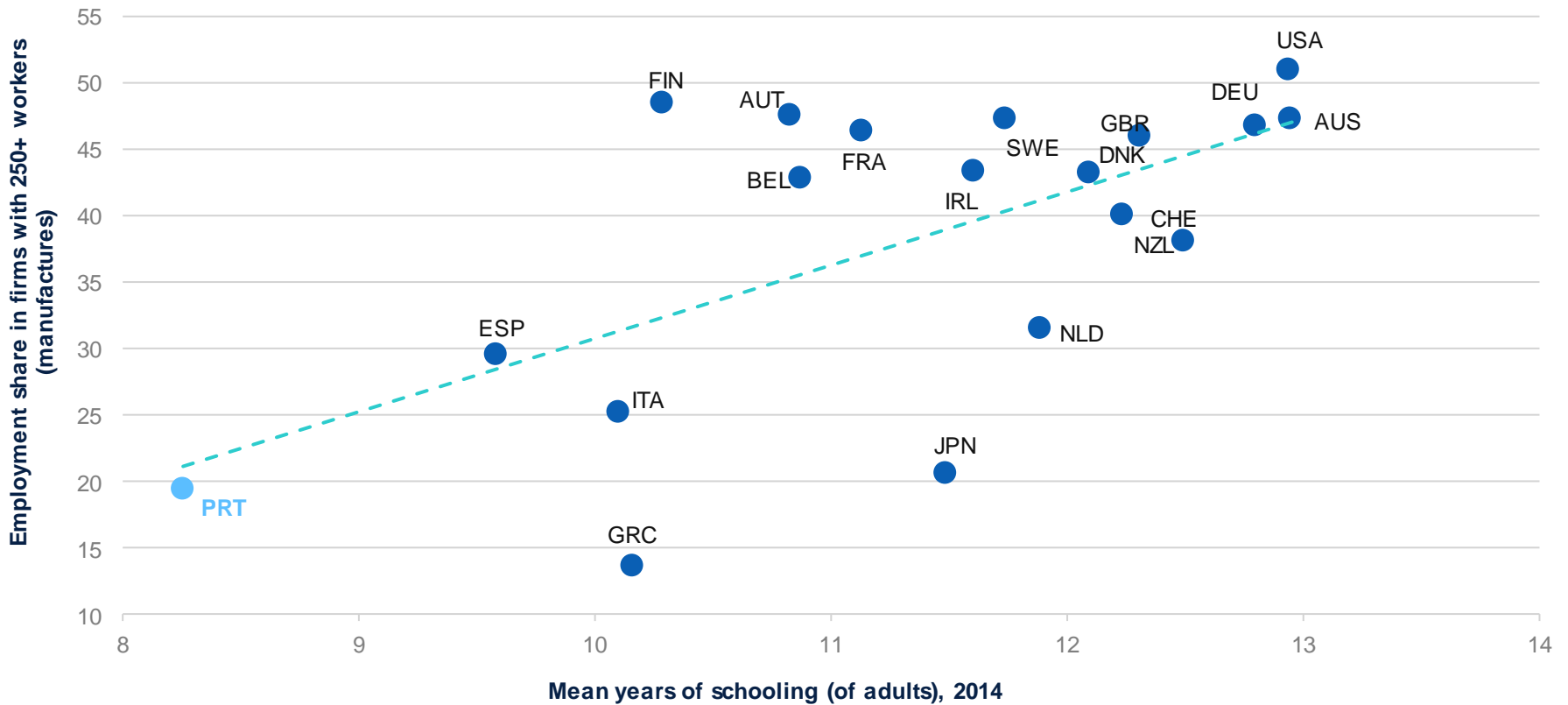
Why are firms small?

- ◆ **Level of development, size of the market and population density**
 - ◆ Two-way causal link with the level of development
 - ◆ Lucas, 1978: as wages and productivity increase, working for a large company becomes more attractive than being a small entrepreneur
- ◆ **Human capital** (Lucas, 1978): existing distribution of human capital, with the ability to manage medium and large firms, plus interaction with small family-owned firms
- ◆ **Institutions, regulations in product markets** (Nicoletti et al., 2001) **and labour markets** (Garicano et al., 2013) **and taxation** (Almunia and López-Rodríguez, 2014)
- ◆ **Access to external funding**
- ◆ **Sector specialisation**: composition effects at the country level
- ◆ **Performance and effectiveness of the legal system** (Kumar et al, 2001, García-Posada and Mora-Sanguinetti, 2013): legal security and certainty

1.- Challenges to internationalisation

Why are firms small?

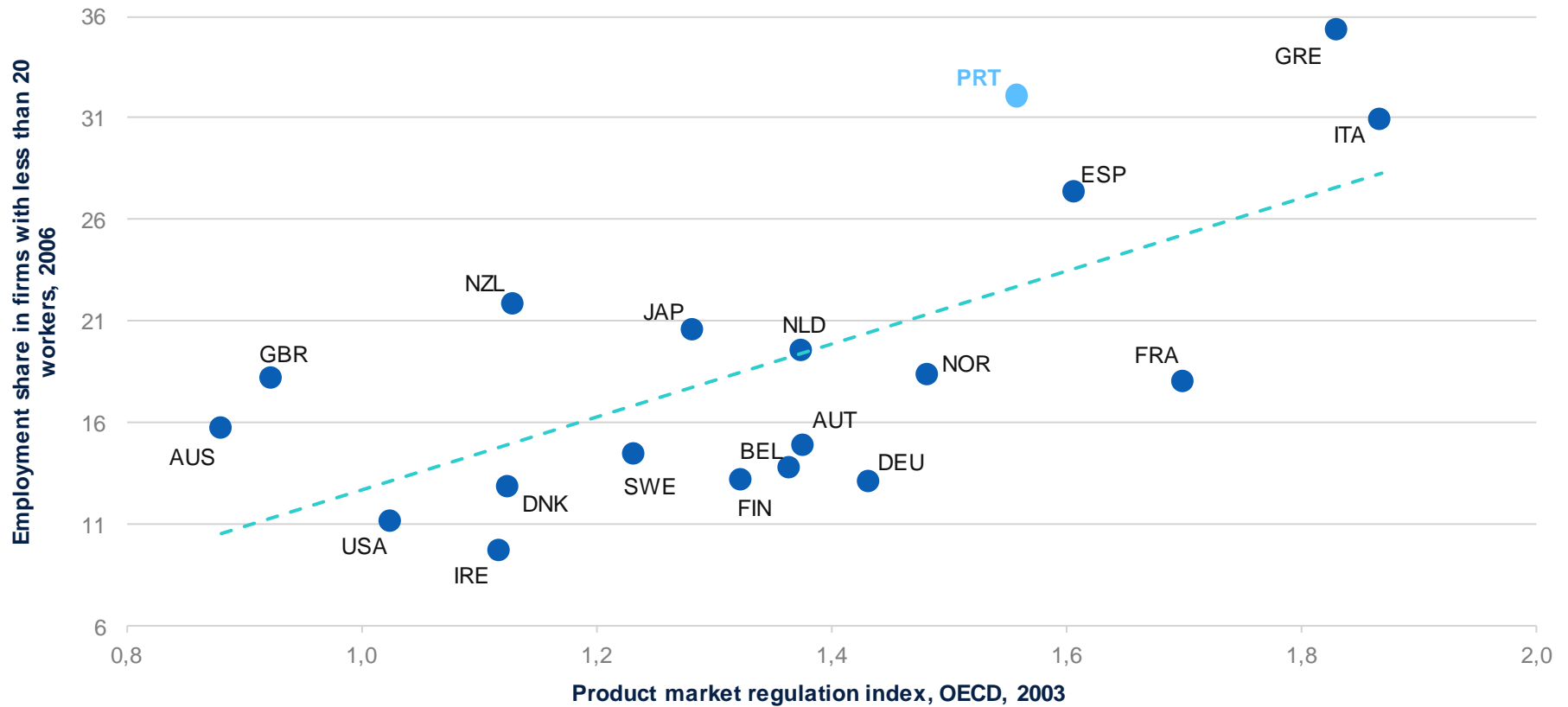
Human capital and company size



1.- Challenges to internationalisation

Why are firms small?

Product market regulations and company size



1.- Challenges to internationalisation

Main characteristics of large firms

- ◆ Greater **productivity**
- ◆ Greater probability of **survival**
- ◆ Lower percentage of **temporary employment** and greater **internal flexibility**
- ◆ Lower **volatility of employment** over the business cycle (Haltiwanger, Scarpetta and Schweiger, 2014)
- ◆ Higher levels of **human capital**
- ◆ Greater access to external **funding**
- ◆ Greater **technological and physical capital** per worker and more **innovation and spending on R&D** -> digital and technological transformation
- ◆ Greater probability of **exports**

1.- Challenges to internationalisation

Size, productivity and competitiveness

Labour markets

- Better regulation and greater internal flexibility: a dysfunctional labour market can be a significant barrier to international trade -> a more efficient and inclusive labour market
- Better human capital at every level, especially in management positions

Capital markets

- Better financing, financial information and risk assessment
- Greater incentives and more support for SMEs when internationalising
- Incentives for mergers and acquisitions -> deleveraging

Regulations & business climate

- Strategic objective: to be among the top ten economies in Doing Business (administrative burden, single market, tax regime, etc.) and other rankings
- Improve competition in the markets for intermediate inputs, such as services and energy
- Eliminate barriers, thresholds and discontinuities, reduce administrative burden Institutional improvements and more effective judicial system: legal certainty

Innovation, R&D & digitalisation

- PPPs with major technological institutes specialising in the transfer of knowledge, technology and product and process innovation to SMEs (e.g., Fraunhofer in Germany (see Comín et al., 2011), ITRI in Taiwan, ETRI in South Korea and TNO in the Netherlands)
- Digitalisation is a tool for dealing with a more complex and globalised world.
- National digital agendas seek to drive economic and social growth, focusing on three main challenges: the high rate of unemployment, an ageing population and low productivity

A more productive economy in the age of digitalisation

DIGITALISATION: Process of innovation that implements technology to improve services, both new and existing, and the use of information

Digital activity is growing faster than general economic activity, a reality that will continue in the future

Digitalisation addresses some existing problems of a macroeconomic nature (high unemployment, low productivity and population ageing)

It allows firms to grow in size, increase productivity, develop new activities and open up new markets

2.- The age of digitalisation

Why digitalisation?

From a **macroeconomic** perspective there are significant challenges in three important determinants of GDP:



**High
rate of un-
employment**



**Ageing
population**



**Lower
productivity**

Digitalisation is a tool for dealing with a more complex and globalised world.

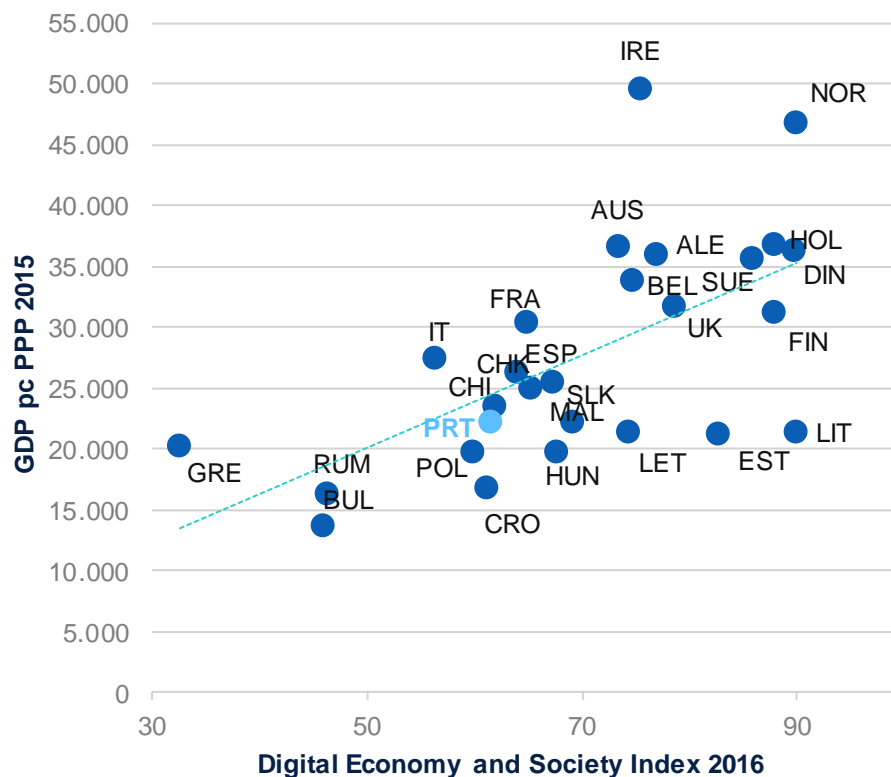
National digital agencies seek to drive economic and social growth

2.- The age of digitalisation

Why digitalisation?

- ◆ Adaptation to the new technologies is a key element in the improvement of the most developed societies.
- ◆ Despite increasing in recent years, Portugal's spending on ICT as a proportion of GDP per capita is still low compared with that of the major EU 15 countries.
- ◆ A World Bank study estimates that an additional 10 percentage points of broadband penetration would increase the GDP growth of developed countries by 1.2 percentage points*

GDP per capita and Digital Economy and Society Index (€ in PPP and value of the index)



* Average between 1980 and 2006. Controlling for convergence, investment per capita and human capital
Source: BBVA Research based on INE and Eurostat

2.- The age of digitalisation

What does digitalisation involve?

Improved supply

- ◆ New **products** and **areas of business**
- ◆ Increase in **productivity**: digitalisation of processes, reduction of trade costs
- ◆ Better knowledge of customers: **Big Data**
- ◆ Facilitates **interaction** with suppliers

Increased demand

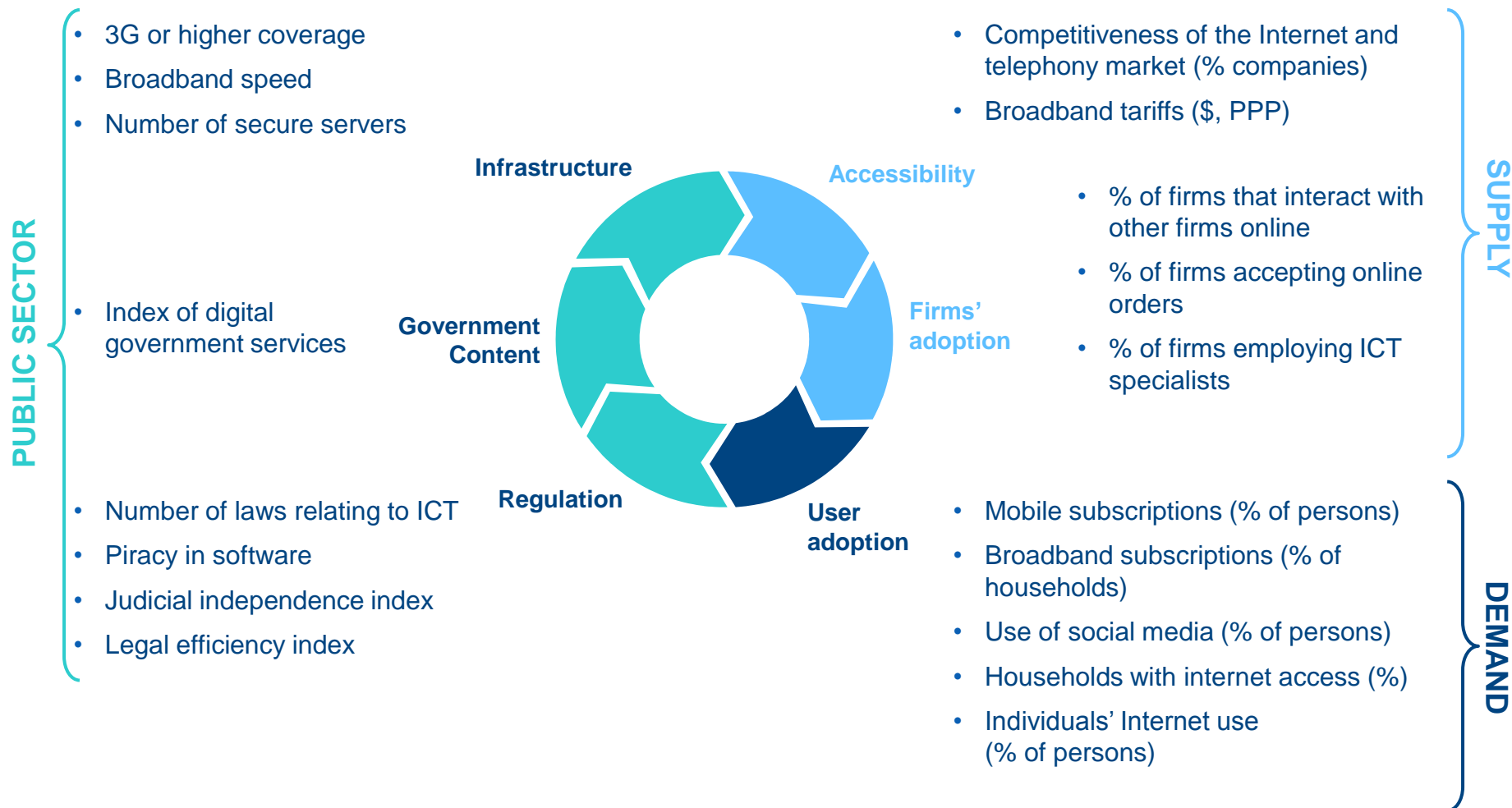
- ◆ Changes in attitudes of **consumers** to demanding greater personalisation, convenience and speed
- ◆ Access to **new customers** and **niche markets**

Improved competitiveness

- ◆ **Facilitates dealings** with **government agencies** and **departments**
- ◆ **Improvements in efficiency, services** and **knowledge of government agencies** and **departments**
- ◆ **Impact on human capital**

2.- The age of digitalisation

BBVA digitalisation index



2.- The age of digitalisation

The situation in Portugal

- ◆ **Not all Portuguese firms are taking advantage** of the possibilities offered by ICT
- ◆ According to INE, **of the 64% of firms with 10 or more employees in Portugal** that had a website in 2016 **(size matters):**



2.- The age of digitalisation

Big data serving citizens

Open data: initiatives that make data generated by government agencies and departments available to society for new services

Types of data

- National statistics
- Budget and public spending
- National maps
- Public agencies (such as meteorological institutes)
- Public transport networks

Infrastructure

- Data aggregation portals
- European Data Portal
 - INE

Results (examples)

- **Smart cities**
- Improvements in **medical research**
- Improve matching process between vacancies and unemployment ...

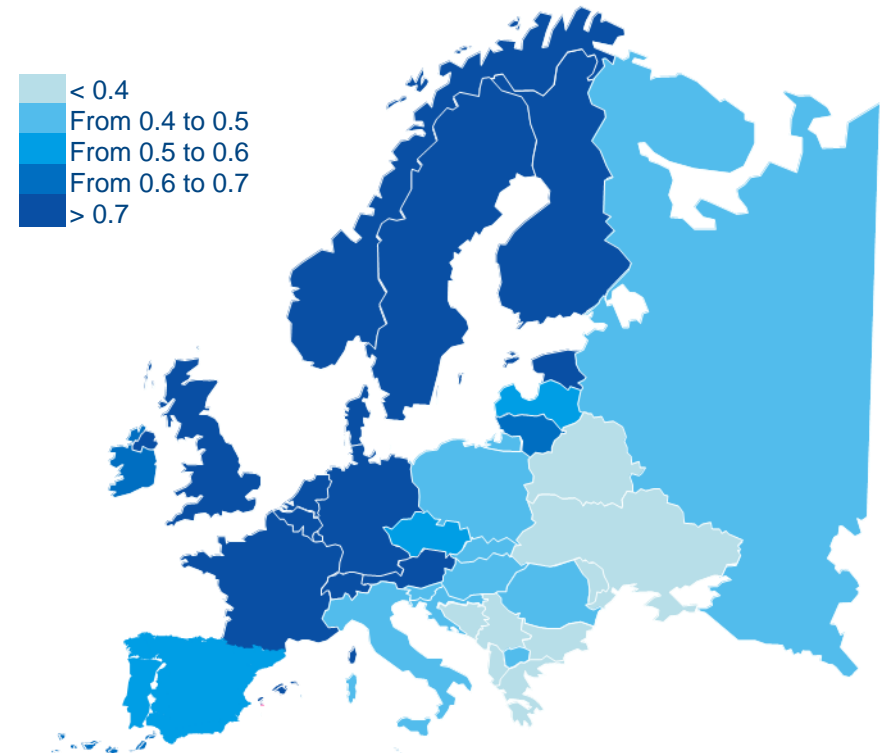
... and many other examples

2.- The age of digitalisation

Portugal's positioning in Europe

	Global	Score
1	Luxembourg	1.00
16	Germany	0.77
20	France	0.76
30	Spain	0.63
32	Portugal	0.59
52	Italy	0.45

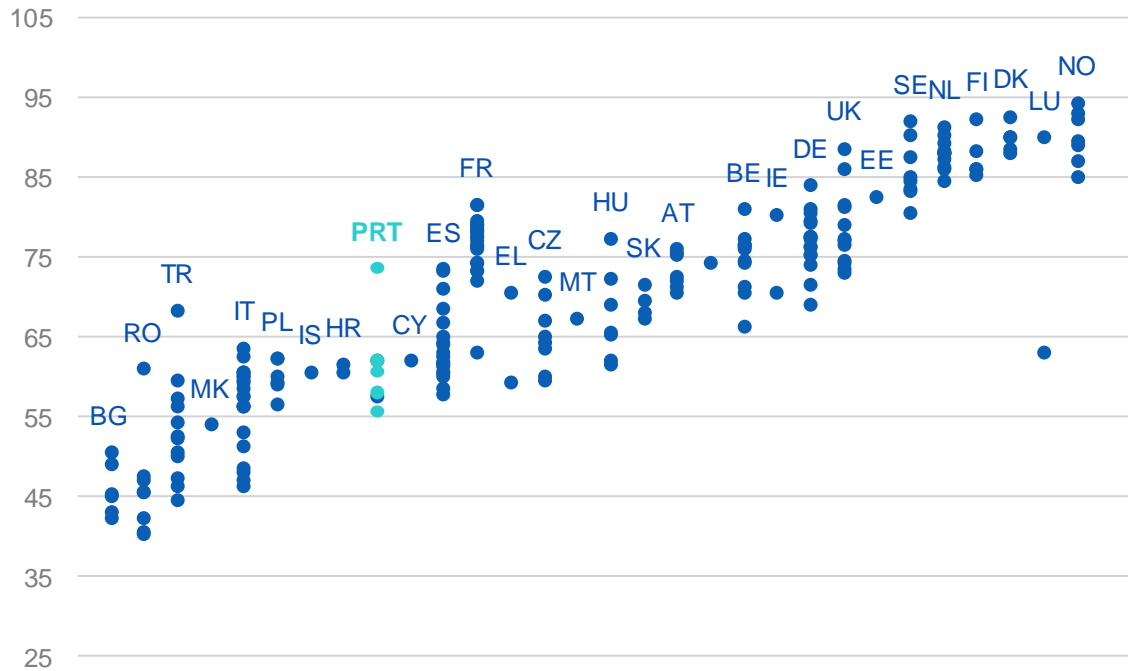
Comparison with Digital Index 2015



* Ranking of a sample of 100 countries
Source: BBVA Research

2.- The age of digitalisation Portugal's position in Europe

Digital Economy and Society Index in Europe, 2016

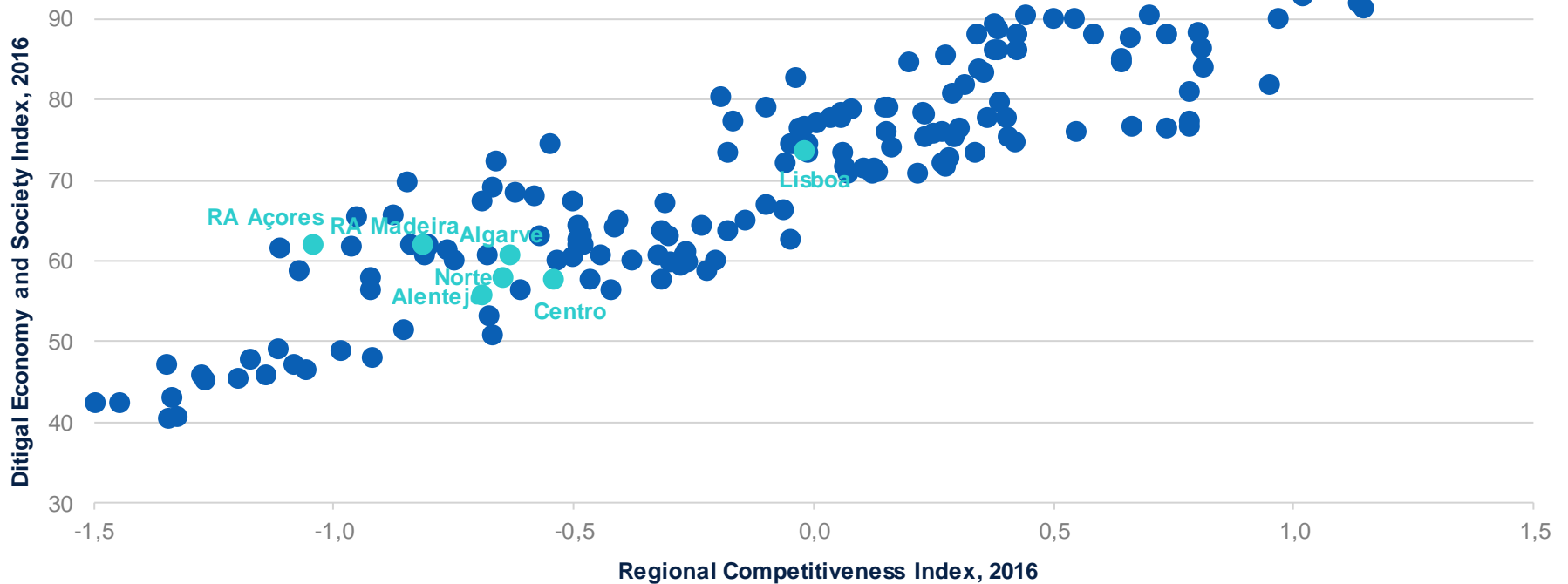


- ◆ There is a high degree of correlation between the BBVA digitisation index and DESI (the EU's Digital Economy and Society Index) (0.86 in countries)
- ◆ Portugal **lags behind other EU countries**
- ◆ The challenge of **double convergence**: between regions and on the border

2.- The age of digitalisation

Portugal's positioning in Europe

Digital Economy and Society Index and Regional Competitiveness Index in Europe



Source: BBVA Research based on Eurostat (2016), INE (2015) and Annoni and Dijkstra (2013)

High degree of correlation between regional competitiveness and economy and society index. Improvements in human capital and institutional quality will be crucial

2.- The age of digitalisation

Opportunities and risks

Opportunities

- ◆ E-commerce has grown considerably in recent years in Portugal. In 2008, 20% of firms used e-commerce, compared with 8% in 2004
- ◆ Digitalisation is an instrument with which SMEs can open up new markets and export
- ◆ It leads to simpler processes and favours outsourcing

Risks

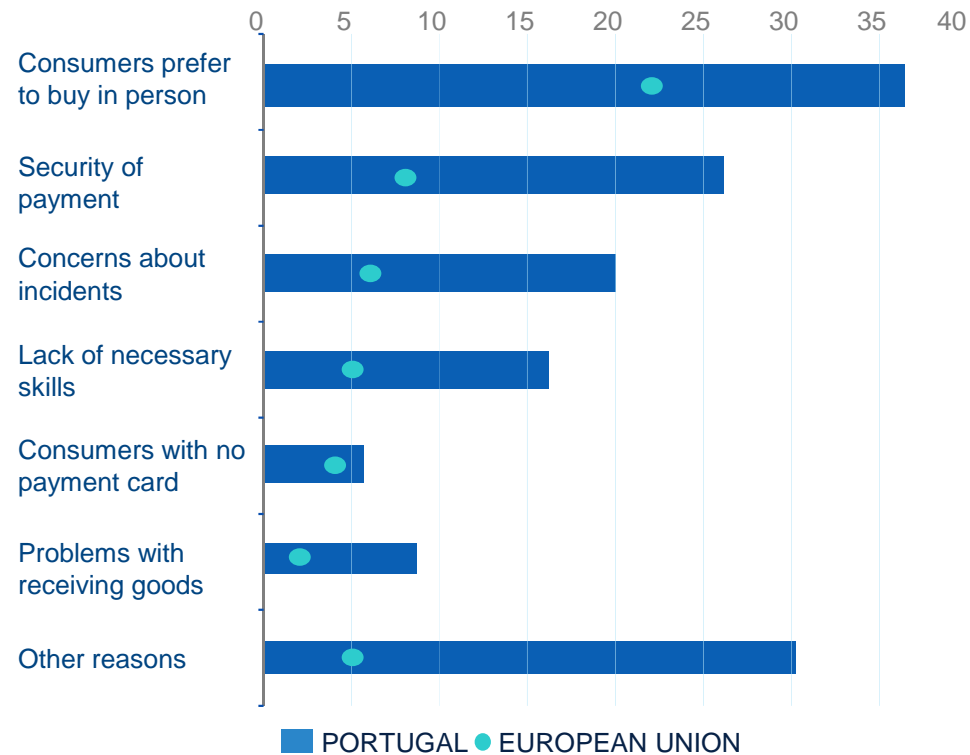
- ◆ Increased competition: anyone can be a potential competitor
- ◆ Slow adaptation of regulatory frameworks to the new digital activities

2.- The age of digitalisation Challenges

1. Improve **ITC infrastructures and cyber-security**
2. Interact digitally with **government**
3. Provide a uniform **regulatory framework**
4. Improve agents' **digital knowledge and skills**
5. Offer access to **funding and investment**
6. Eliminate barriers to **e-commerce**
7. Assure and provide **consumer protection** when using e-commerce

Main barriers to buying online

(% of individuals)



Conclusions

- ◆ The main challenge for the Portuguese economy is to increase employment and productivity in order to **reduce the unemployment rate without the imbalances seen in the past**
- ◆ **Competing in international markets is essential** for the Portuguese economy, which must try to raise the contribution of exports to GDP above 80%
- ◆ Growth will depend on **the reallocation of resources from less dynamic and competitive firms to those with higher growth potential** and international competitiveness
- ◆ This requires **economic policies in the labour, capital and product markets** in order to improve competitiveness and boost extensive and intensive export margins, promoting the **growth of firms through better regulations and a more favourable business climate**

Conclusions

- ◆ Short- and long-term complementary strategies
 - ◆ In the long term, competing with **better quality, greater productivity, innovation and human capital is the best strategy** (as many emerging economies are doing, such as South Korea)
 - ◆ But in the short term, internal devaluation must ensure the **reallocation of resources** from non-tradable products with low demand to competitive and valuable tradable products
- ◆ Increase employment and productivity **taking maximum advantage of the opportunity that the current technological transformation and digitalisation**, as a tool for dealing with a more complex and globalised world

Contacts

Rafael Doménech

r.domenech@bbva.com

Rodrigo Falbo

rodrigo.falbo@bbva.com

Antonio Marín

antonio.marin.campos@bbva.com

Miriam Montañez

miriam.montanez@bbva.com

Alejandro Neut

robertoalejandro.neut@bbva.com

Manuel Cabezas

manuel.cabezas.pedrayes@bbva.com

