

November 25, 2015

***Boosting Italian Economic
Growth through ICT, Productivity,
and Innovation Policy***

***The New Digital Government
Summit***

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ITIF: Who We Are

The Information Technology and Innovation Foundation is a think tank at the cutting edge of designing innovation policies and exploring how innovation boosts growth and competitiveness.

ITIF focuses on:

- Innovation processes, policy, and metrics;
- Internet, big data, and ICT policy;
- ICT and economic productivity;
- Science and tech policy; and
- Innovation and trade policy.

Today's Presentation

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Productivity and Economic Growth

2

ICTs and Productivity Growth

3

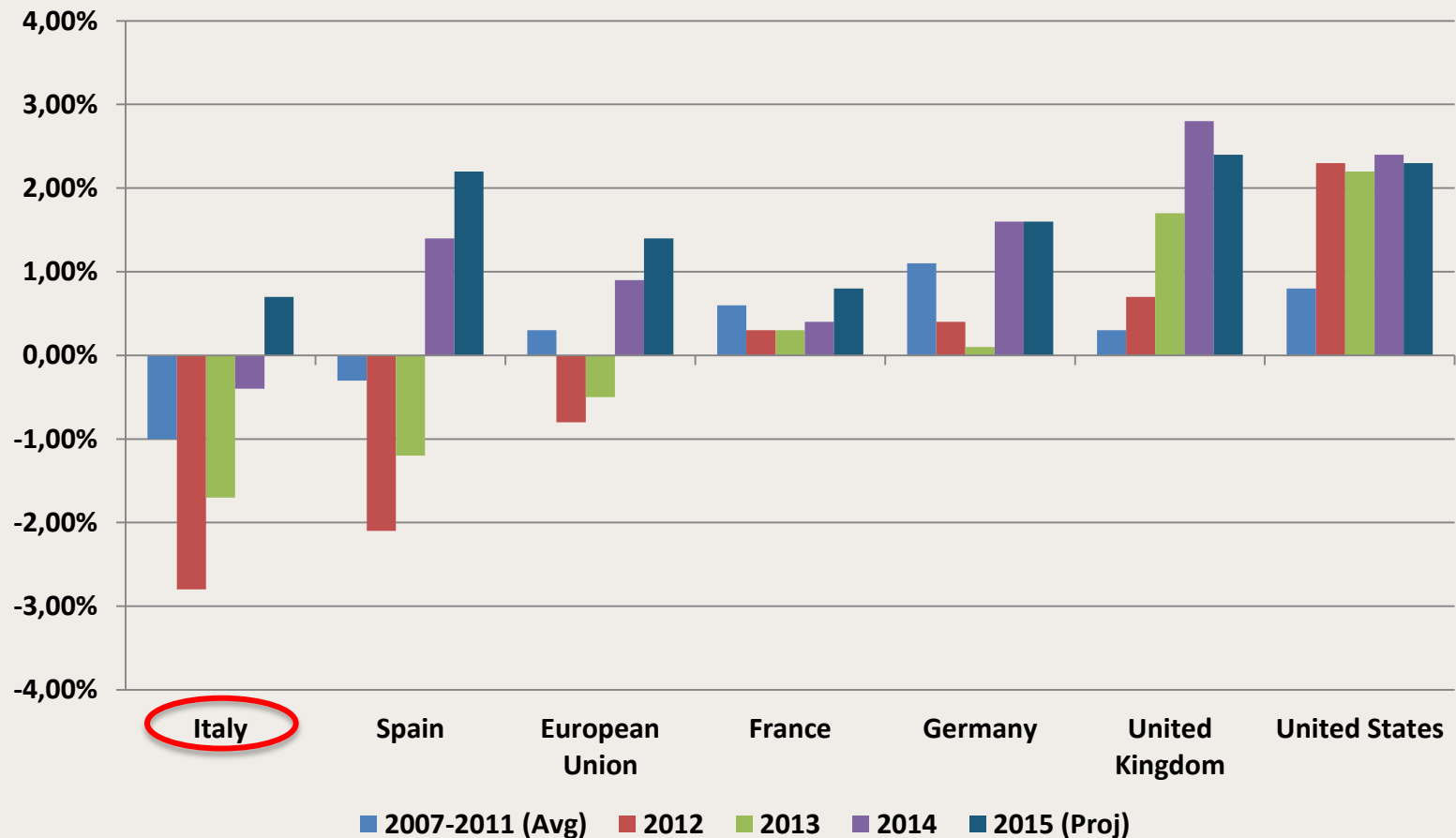
The Need and Role for Innovation Policy

Productivity and Economic Growth

- Productivity growth: Increases in output per unit of input.
- Economies increase productivity through two principal channels:
 - *Labor productivity*: Increases in output per labor hour worked.
 - *Multi-factor productivity*: Productivity growth from all factors, including labor, capital, and technology.

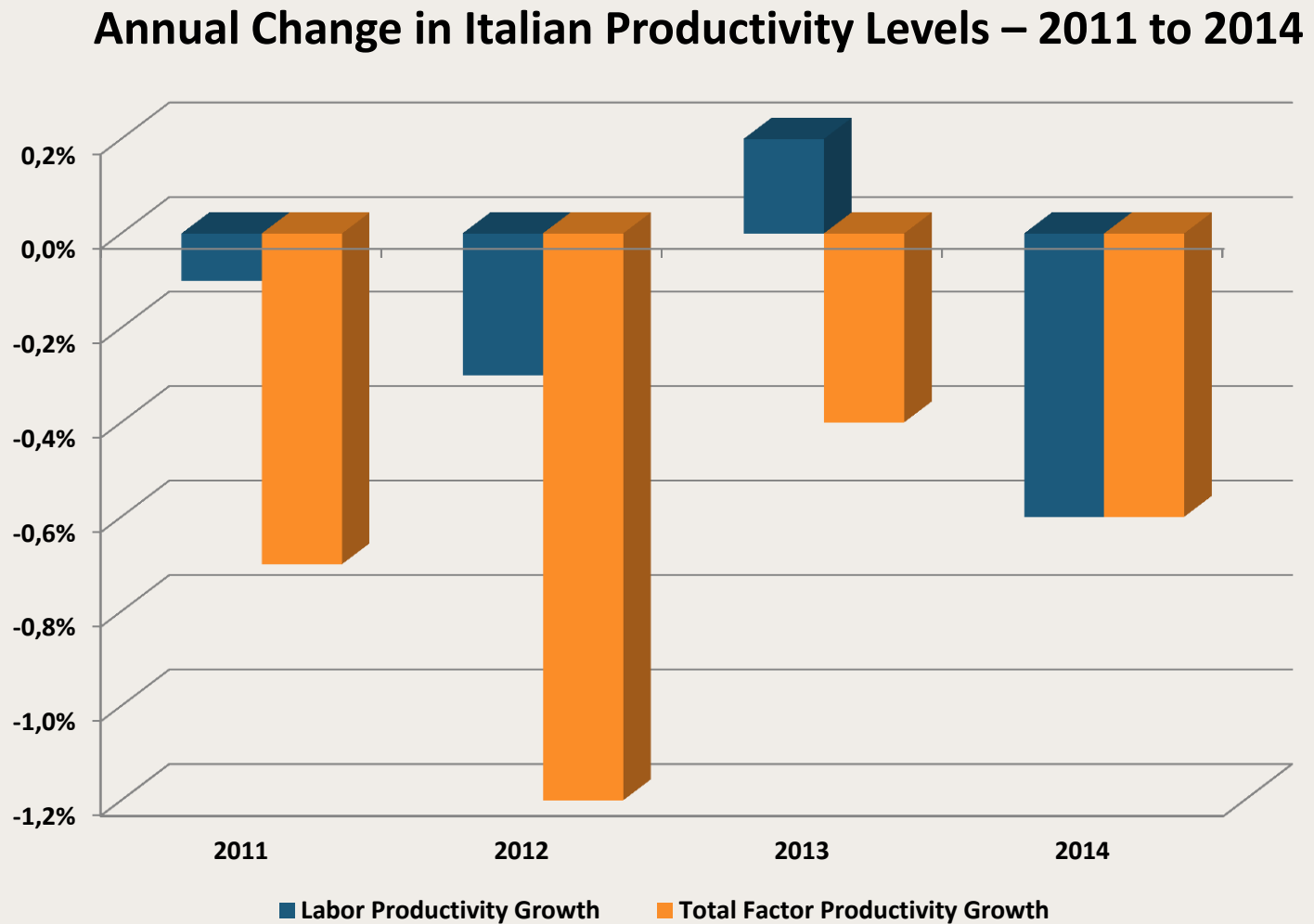
Italian Economic Growth Has Lagged That of Peers

Real GDP Growth: 2007-2015



Source: The Conference Board, *Total Economy Database*

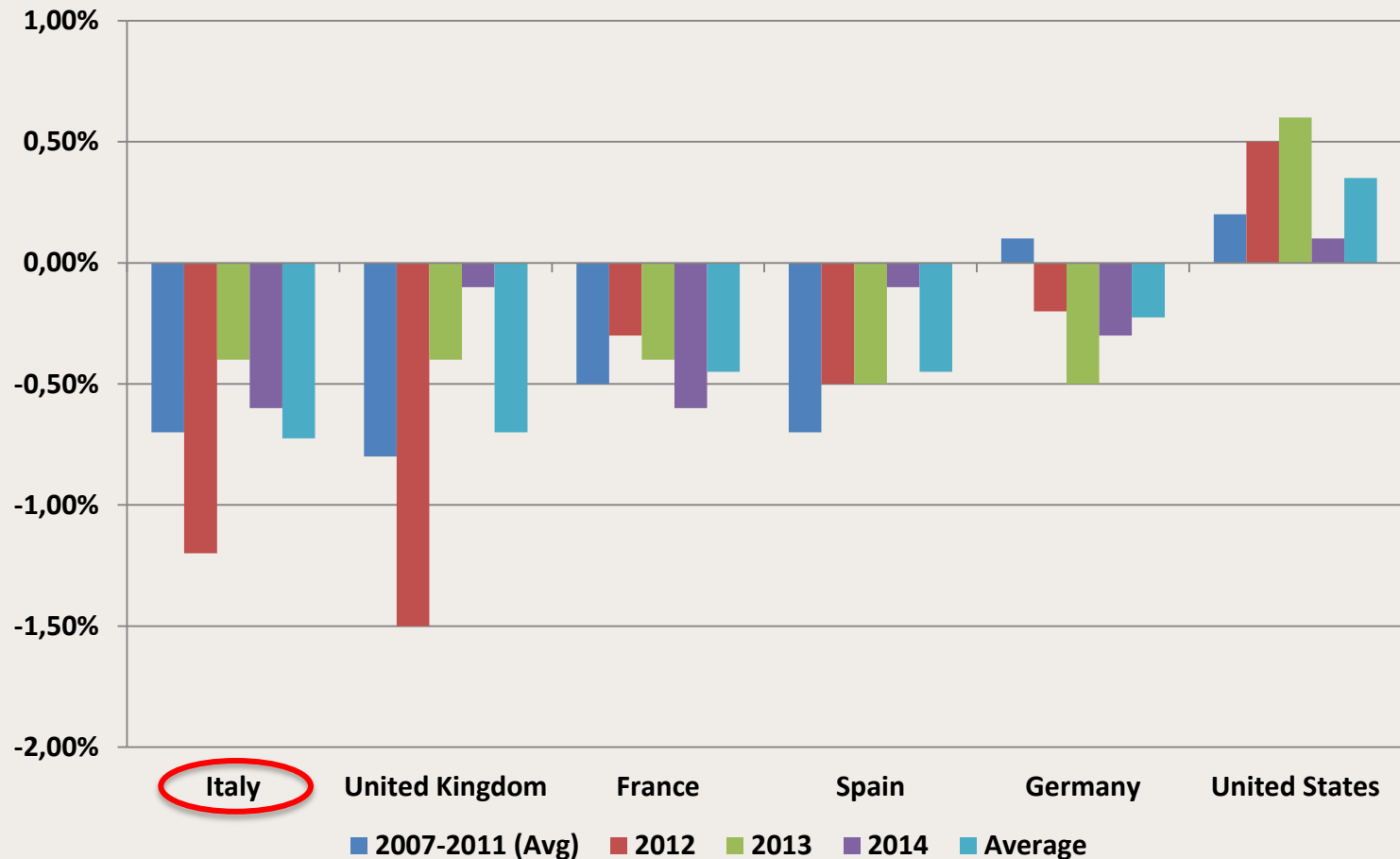
Italian Productivity Levels Declined This Decade



Source: The Conference Board, *Total Economy Database*

Italian Productivity Growth Has Lagged That of Peers

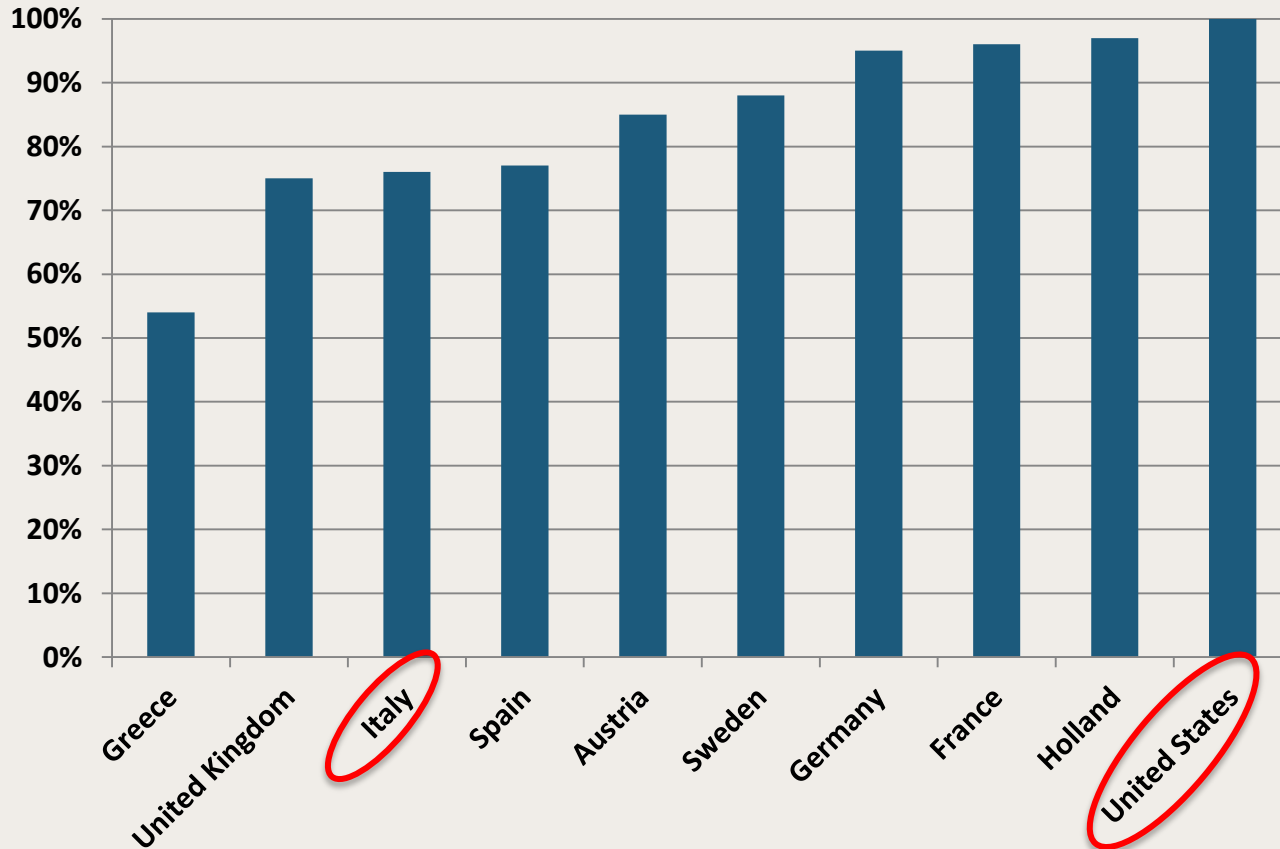
Total Factor Productivity Growth: 2007-2014



Source: The Conference Board, *Total Economy Database*

Italian Labor Productivity Levels Lag OECD Peers

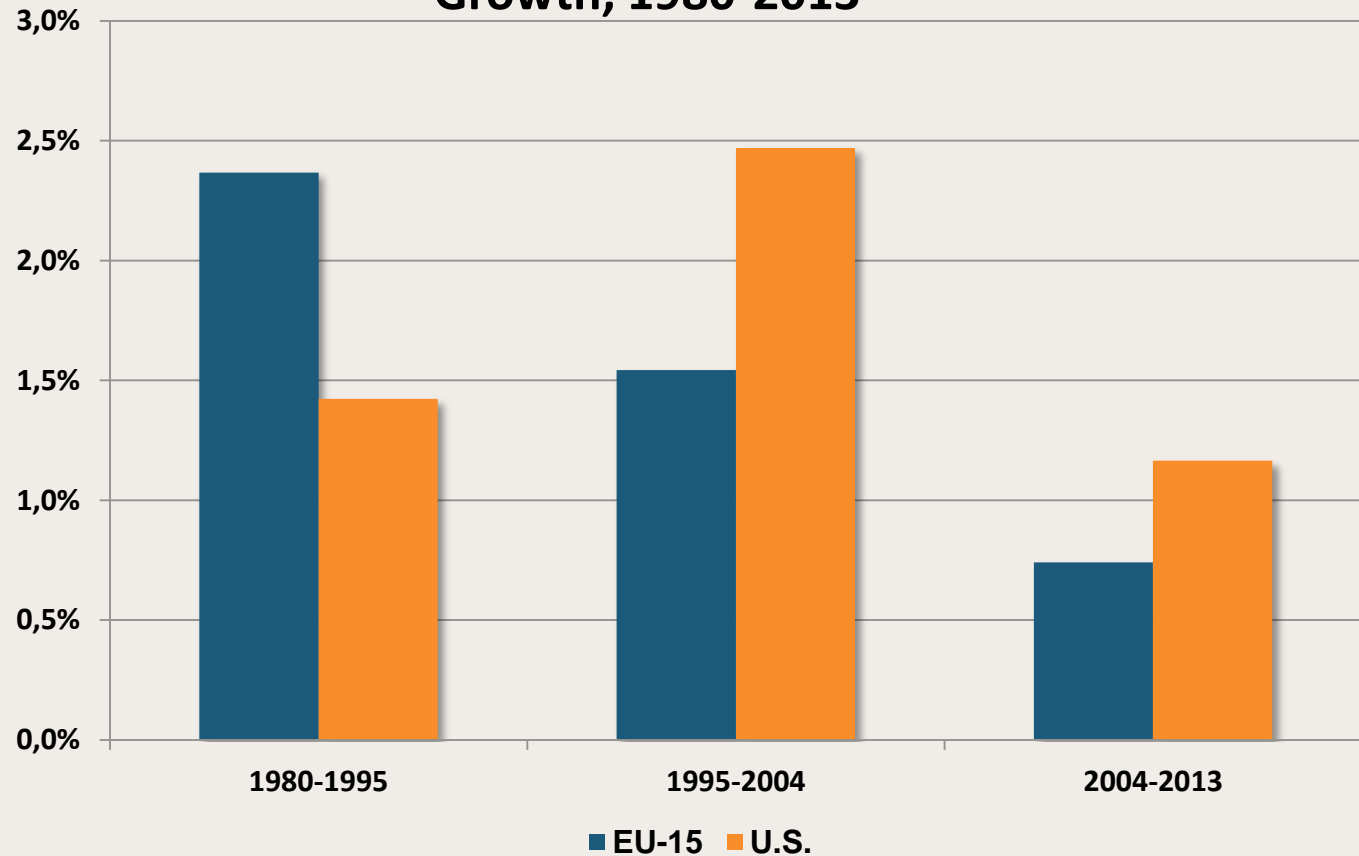
Labor Productivity as Percentage of U.S. Level, 2014



Source: The Conference Board, *Total Economy Database*

European – U.S. Productivity Gap Widening

EU-15 and U.S. Average Annual Labor Productivity Growth, 1980-2013



Source: The Conference Board, *Total Economy Database*, Annual Labor Productivity Growth

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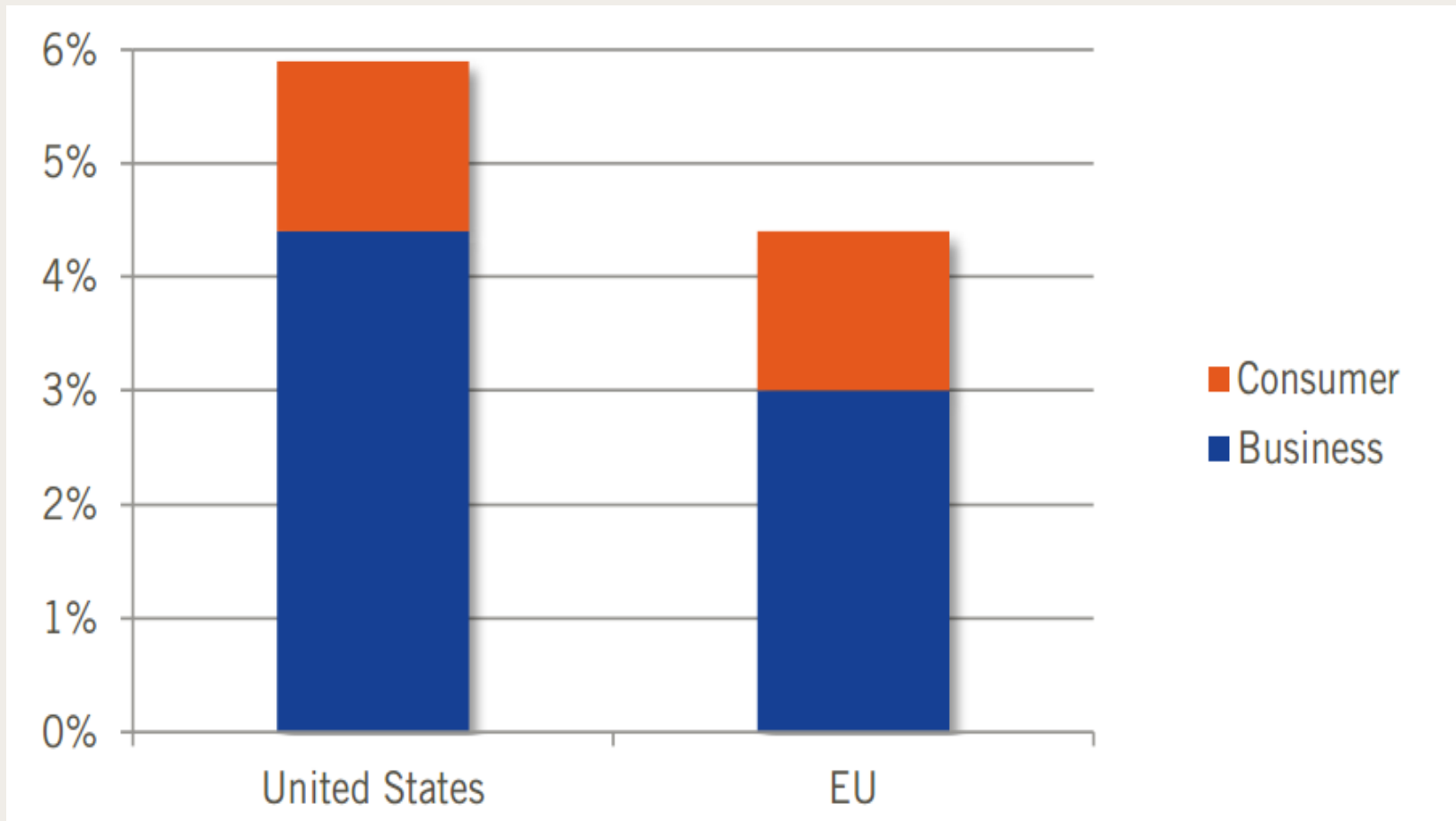
The Need and Role for Innovation Policy

ICTs Drive Productivity and Economic Growth

- ICT represents “super capital” that has a much larger impact on productivity than other forms of capital.
- ICT workers contribute 3 to 5 times more productivity than non-ICT workers.
- A 10% increase in a country’s IT capital stock adds approximately 0.45 percentage points to GDP.

But U.S. Businesses Invest More in ICT...

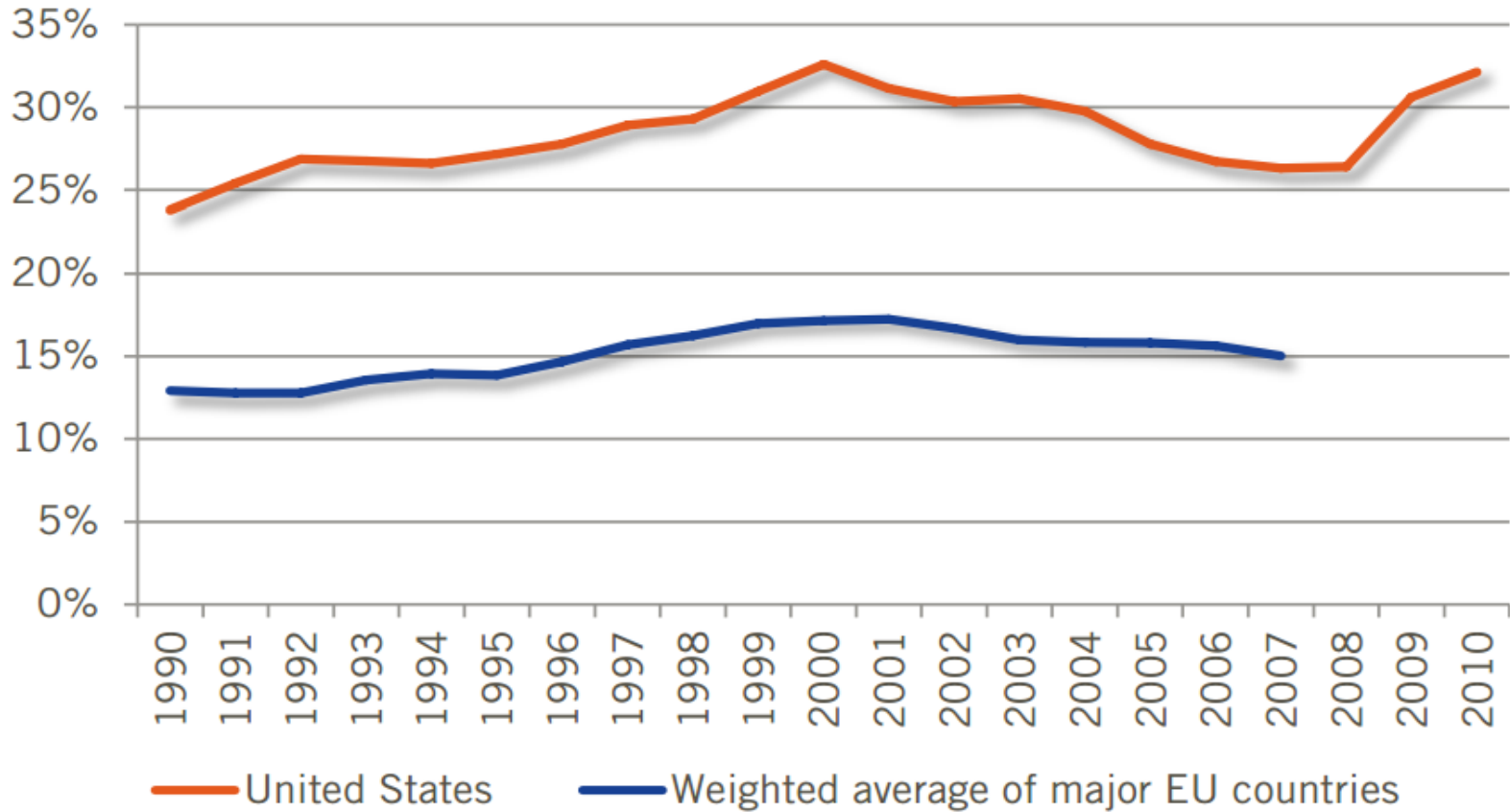
Enterprise Investment in ICT as Share GDP, 2010



Source: National Science Foundation, *Science and Engineering Indicators 2014*

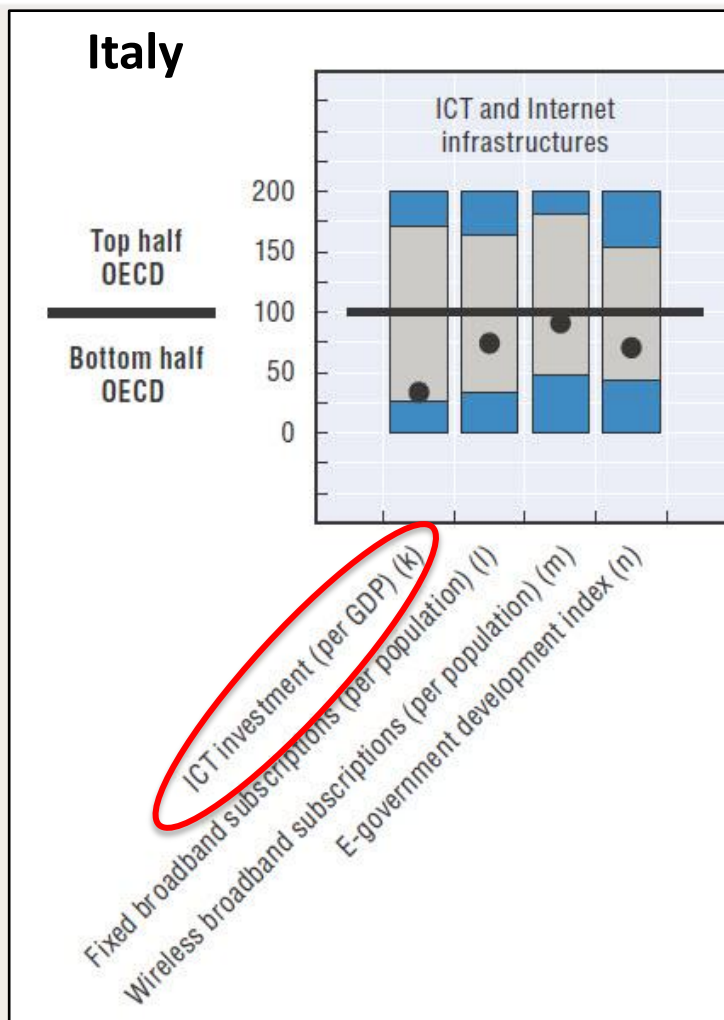
And Have Been Doing So For Some Time

Share of ICT Investment as Percent of Non-residential Investment



Source: OECD StatExtracts, Country Statistical Profiles 2012

Italy Trails OECD Peers in ICT Investment/Access



Source: OECD Science, Technology, and Industry Outlook 2014



Explaining Why Italy Gets Less Growth from ICTs

ICT Contribution to Annual GDP Growth, 1985-2010



Source: OECD StatExtracts, Country Statistical Profile 2012

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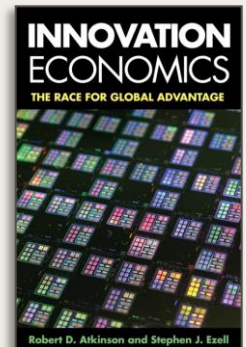
The Need and Role for Innovation Policy

Countries Must Get the “Innovation Triangle” Right

**Business
Environment**

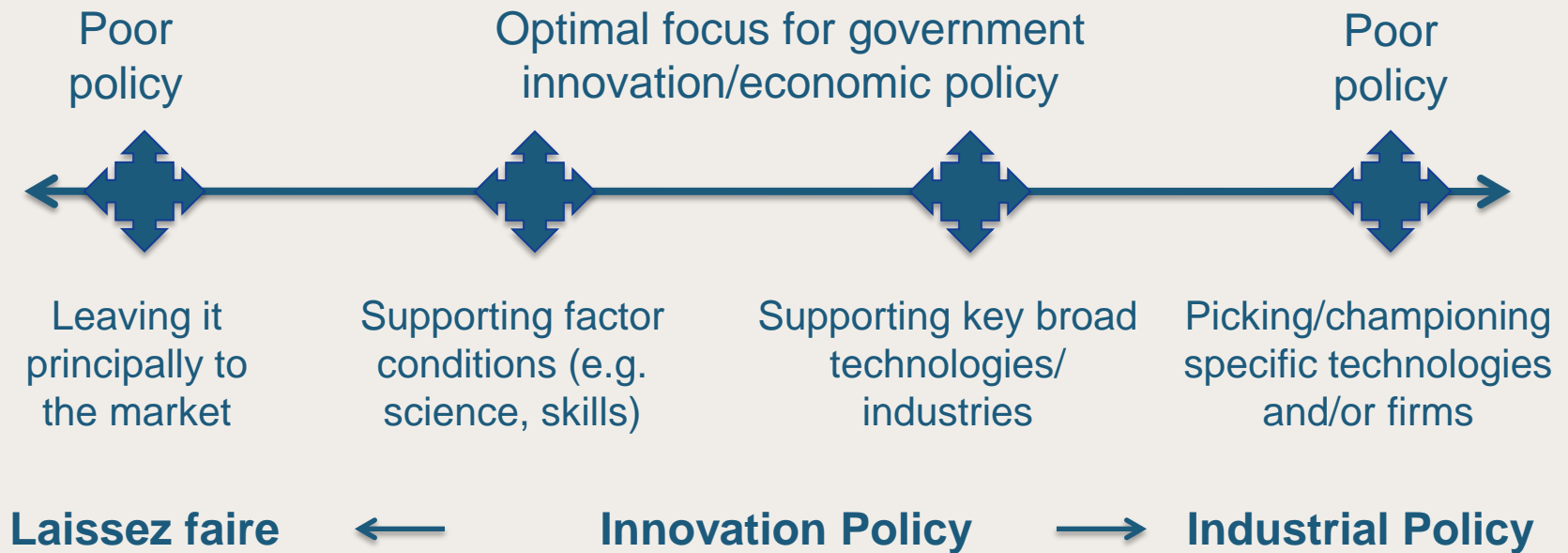
**Regulatory
Environment**

**Innovation Policy
Environment**



What Role for Government in Supporting Innovation?

The Innovation Policy Continuum



What is a National Innovation Strategy?

- *“Elements of science, technology, and economic policy that explicitly aim at promoting the development, spread, and efficient use of new products, processes, and services.”*
- Coordinates policies toward scientific research, technology commercialization, ICTs, education and skills, tax, trade, IP, regulatory, and competition policies in an integrated fashion that drives economic growth through fostering innovation.
- ***Intentionally links science, technology, and innovation with economic (and employment) growth.***

Countries with(out) a National Innovation Foundation

Countries with a National Innovation Foundation			Countries without a National Innovation Foundation
Argentina	Hungary	Poland	Costa Rica
Australia	Iceland	Portugal	Greece
Austria	India	Russia	Italy
Belgium	Indonesia	Singapore	Latvia
Brazil	Ireland	Slovak Republic	Romania
Bulgaria	Israel	Slovenia	Ukraine
Canada	Japan	South Africa	United States
Chile	Kenya	Spain	
China	Korea	Sweden	
Colombia	Lithuania	Switzerland	
Czech Republic	Malaysia	Taiwan	
Denmark	Mexico	Thailand	
Estonia	Netherlands	Turkey	
Finland	New Zealand	United Kingdom	
France	Norway	Vietnam	
Germany	Peru		
Hong Kong	Philippines		

Source: ITIF, The Global Flourishing of National Innovation Foundations

Policy Recommendations

1. Articulate an Italian Productivity and Innovation Strategy
2. Incent greater enterprise investment in ICTs:
 - Expand tax credits for investment in new capital equipment, machinery, and ICTs, especially for SMEs.
3. Have every agency of the Italian government craft its own *ICT and Innovation Strategy*.
 - Demonstrating how ICTs can transform key economic sectors (E.g. Telehealth, smart electric grid, intelligent transportation).
 - Allocate 5% of agencies' funding to deploy disruptive techs.
4. Digitize citizen-government interactions and create shared ICT resource to facilitate gov. agencies with digital transformation.
5. Complete T-TIP and Safe Harbor 2.0 Agreements with the U.S.

The Importance of Data and Cross-Border Data Flows

- Value will increasingly be created by generating actionable insight from data. ½ of all value created digitally by 2025.
- If Italy raised its “digital density”—the amount of data used per capita—to U.S. levels, its GDP would increase by 4 percent.
- Cross-border data flows between the U.S. and Europe are the world’s most intense.
- Data analytics are vital to 60% of U.S. and European SMEs.

It’s imperative the EU and U.S. work out a reliable framework for the Transatlantic movement of data.

Thank You

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