

Intangible Capital and Economic Growth

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U.S.-European Summit on Science, Technology,
and Sustainable Economic Growth

September 28, 2010

Outline of Remarks

- The Conference Board
- The Conference Board's Total Economy Database (EUKLEMS)
- Our work with EU researchers on intangible investment and economic growth (COINVEST)
 - ✓ Key results
 - ✓ What's next?



The Conference Board

- A global, independent research and membership organization working in the public interest
 - ✓ ... global aspect of organization now paramount
- The Conference Board's research program centers on economic measurement and analysis of comparative performance.
 - ✓ the comparative study of productivity, technology and innovation is a key core capability



Total Economy Database (TED)

- TED -- data on productivity performance
- TED covers 123 countries, or 97 percent of the world's population and 99 percent of world GDP
 - ✓ Data on GDP, employment, hours, and labor productivity from 1950 on
 - ✓ Recognizing that decision makers need timely information, current year is estimated/projected, issued twice a year (Jan. & Sep.)
 - ✓ Data on total factor productivity (sources of growth) from 1980 to 2008
 - ✓ Publicly accessible from Conference Board website



TED is a product of cross-Atlantic partnerships

- The labor productivity module was
 - ✓ Developed at University of Groningen in the early 1990
 - ✓ Produced in partnership with the Conference Board beginning in the late 1990s
 - ✓ Transferred to the Conference Board in 2007
- The sources of growth module integrates
 - ✓ The EU-KLEMS database, developed with EC funding
 - ✓ The world productivity database produced by Dale Jorgenson and Khuong Vu of Harvard University





PERSPECTIVES ON COINVEST: Measuring Intangible Investment in European Countries



Intangibles, innovation, and productivity

- Traditional capital estimates are understated b/c many of the **inputs** to innovation are not counted as investment
 - ✓ “any use of resources today designed to increase the productive capacity of the firm in the future is investment.” Corrado, Hulten, and Sichel (2006).
- Implementing the CHS “economic” view of investment would modernize the portrayal of business activity in national accounting systems
- and provide policy-makers with a better tool for analysis.
 - ✓ e.g., Apple’s expenses on design and branding of a new product are business investment from an economic point of view.



When firms commit to innovation...

- The evidence of commitment is an **allocation of resources** to developing and implementing:

1. New products	3. New marketing methods
2. New production or distribution processes	4. New methods for organizing and executing business practices
Source: Oslo Manual	

- ... i.e., akin the “economic” view of macroeconomic investment and capital in CHS.



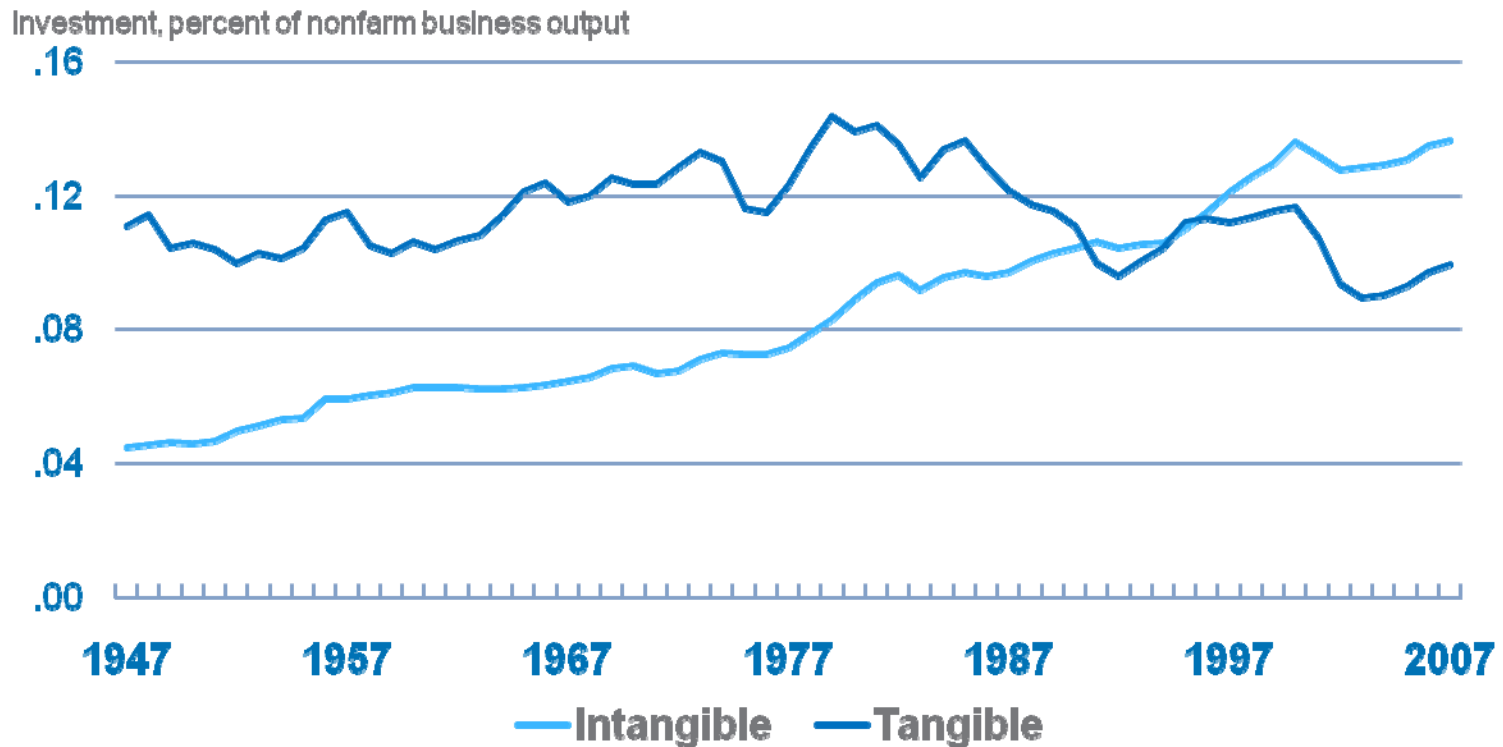
**Inputs to Innovation include more than ICT,
Intangible investments include more than R&D,
IPRs cover more than patents**

Broad category	Type of Investment	Type of Capital
Computerized Information	<ul style="list-style-type: none">• Software development• Database development	IPRs
Innovative Property	<ul style="list-style-type: none">• R&D• Mineral exploration• Copyright development• Design and other new product development costs	Forms of IPRs: <ul style="list-style-type: none">• Patent• License• Copyright• Design IPR• Trademark
Economic Competencies	<ul style="list-style-type: none">• Market research & advertising• Business process investment• Training & skill development	Strategic Capital



The U.S. intangible investment rate overtook the tangible rate in the mid-1990s.

U.S. Intangible and Tangible investment rates, 1947 to 2007



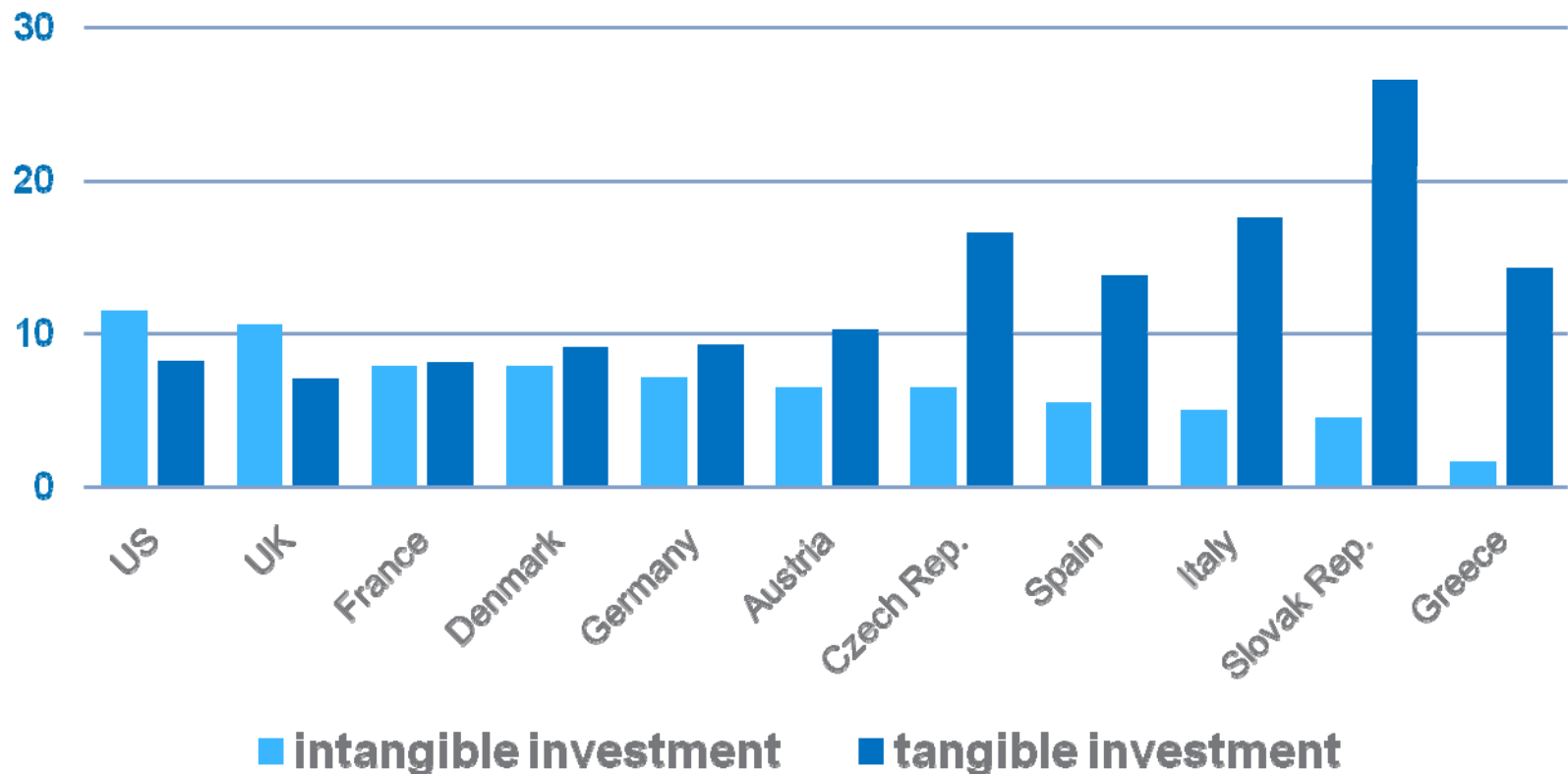
Source: Corrado and Hulten (2010) update of CHS.



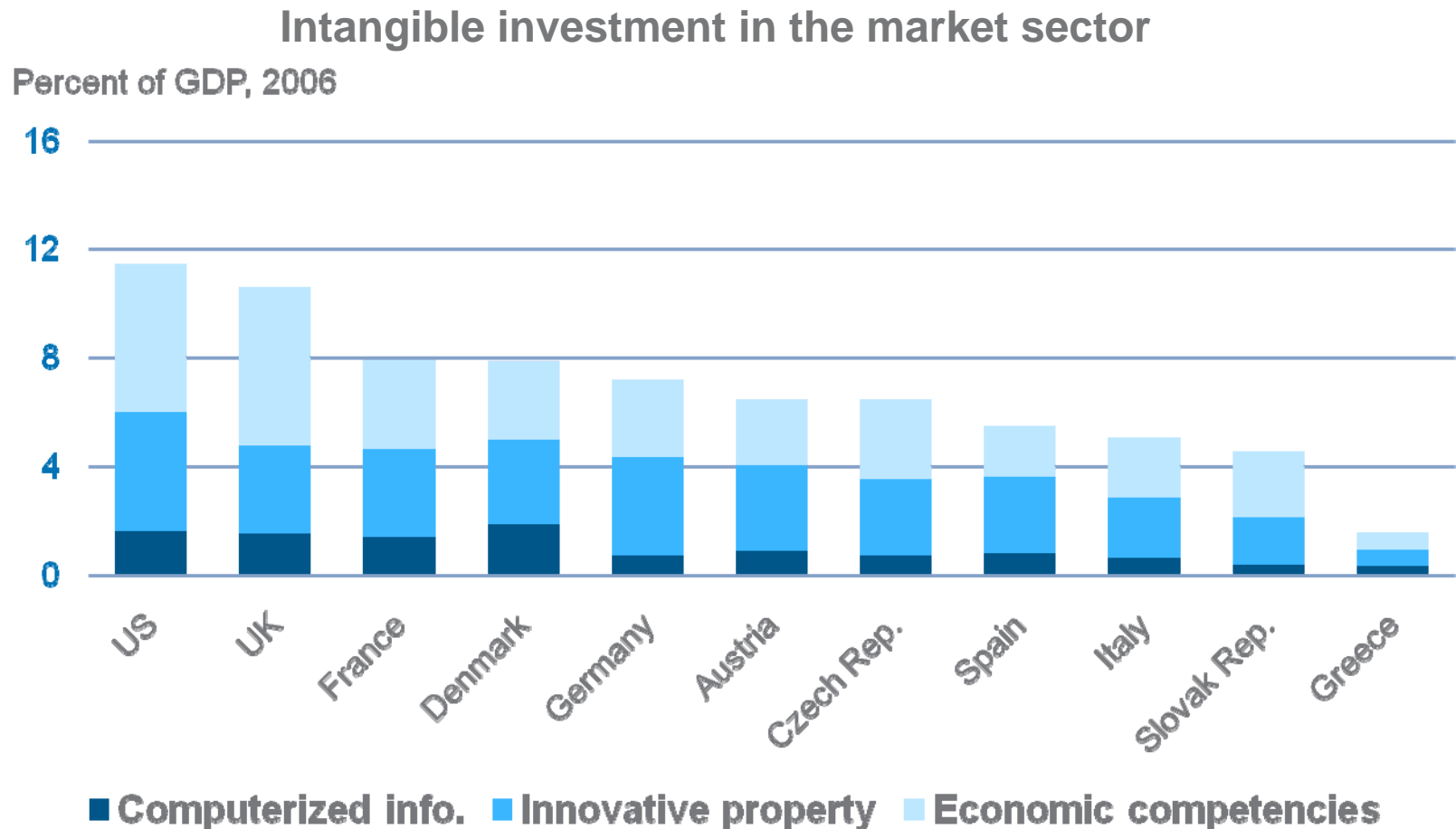
Some countries spend more (or nearly as much) on intangible capital than they do on tangible capital

Intangible and tangible investment in the market sector

Percent of GDP, 2006

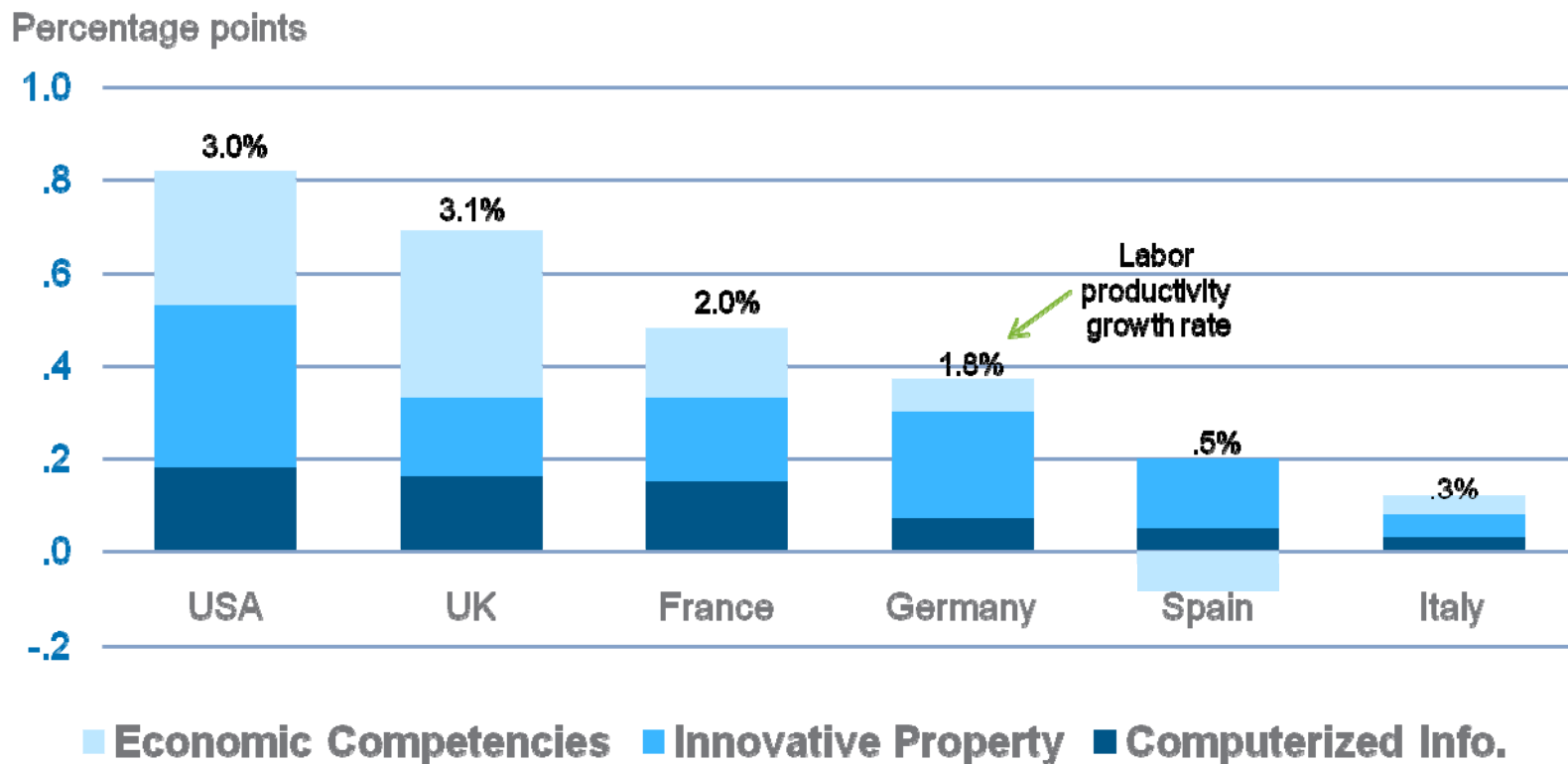


The composition of intangible investment across countries varies substantially



Intangible Investments are key to supporting innovation and productivity growth

Contribution of Intangible Assets to the Growth in Labor Productivity, Market Sector, 1995-2006



Next steps

- For the analysis of intangibles
- For the generation of data and findings needed for science and innovation policy



Higher quality data needed by policy-makers (1)

- R&D will soon be counted in investment and GDP. What price deflator should be used?
 - ✓ In work to be branded under COINVEST, an experimental index for private R&D in the UK falls 5 percent per year between 1981 to 2005.*
- The intangible investment framework
 - ✓ sets R&D and patents in macroeconomic context
 - ✓ ... and implies that to supply policymakers with convincing evidence on promoting innovation and growth, we must fill gaps in our knowledge of the prevalence and pattern of innovation co-investments

* Corrado, Goodridge, and Haskel (2010), paper prepared for the CRIW workshop at the 2010 NBER Summer Institute workshop.



Higher quality data needed by policy-makers (2)

- Increase the survey content of intangible investment measures
 - ✓ A natural extension of existing R&D and Innovation surveys
- Further develop the micro-data evidence base
 - ✓ Micro evidence on the returns to investments in new financial services products and services is being studied (think long-term care insurance, not credit derivatives!) with support from the NSF SciSIP program
 - ✓ Pay more attention to public intangibles



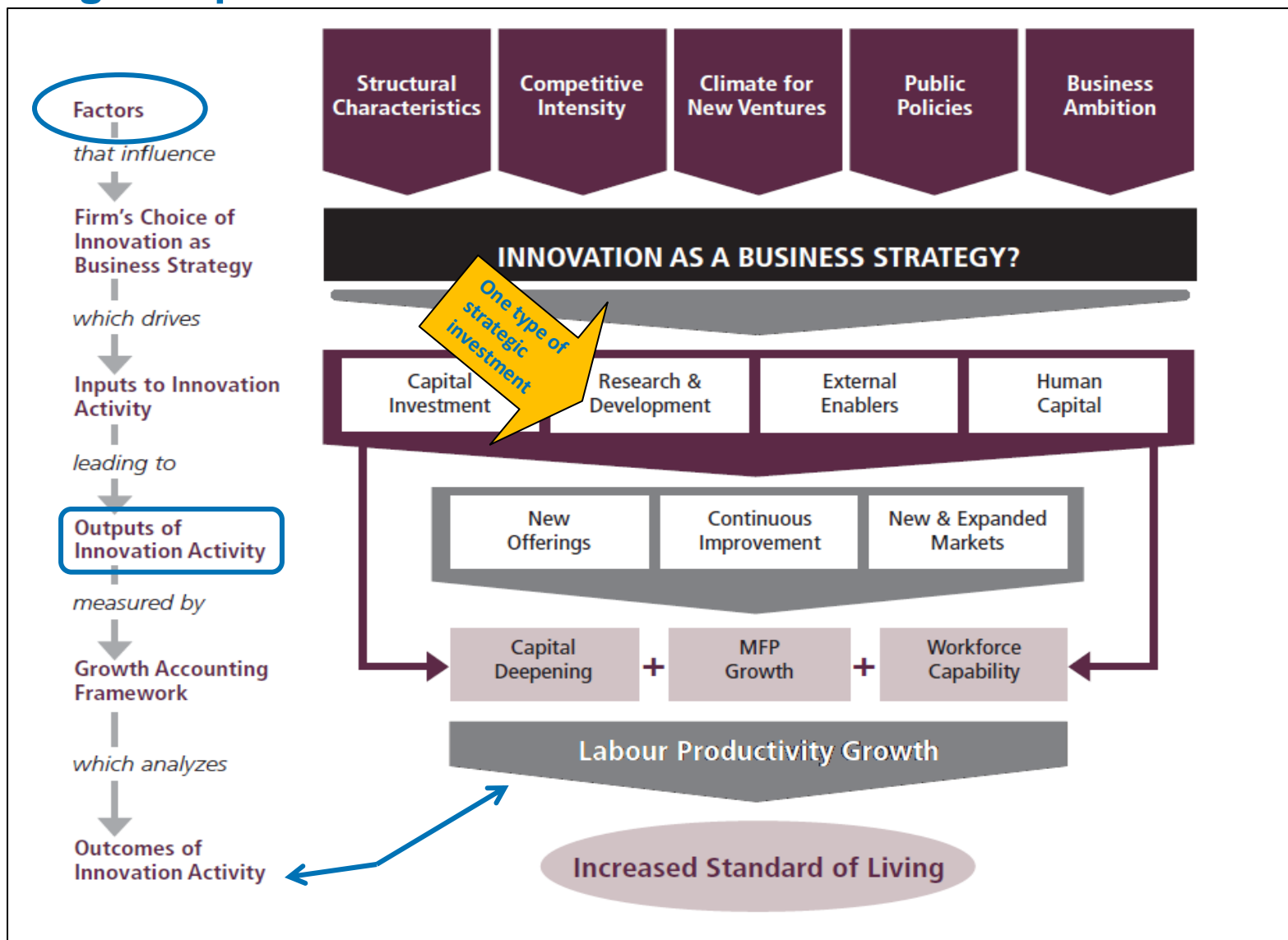
Science and Innovation Policy

- While the intangibles framework provides macro-aggregates useful for public dissemination, it does not provide answers to many topics that are important for understanding the dynamics of the market place for ideas and innovation.
 - ✓ e.g., the competitive framework companies operate in, how knowledge is transferred through networks and markets, the role of strategic versus legal instruments, etc.
- It does, however, provide building blocks for prioritizing the topics and framing data collection and empirical efforts. **

** see Clayton and Mitra-Kahn (2010), mimeo, UK Intellectual Property Office, for an example.



Logic Map of the Business Innovation Process



Source: Canadian Expert Panel on Innovation, 2009.



Thank you.

References provided upon request:
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