Presentation Overview

– Project context: why analyse intangible assets?

– Issues the NSG project will address.

– All of what is said here is described in greater detail in DSTI/IND(2011)2 – ‘New Sources of Growth: Intangible Assets – Preliminary evidence and policy Issues’
What are intangible assets?

- Claims on future benefits that do not have a physical or financial embodiment (Lev, 2001).

Recent analyses focus on 3 types of intangible asset:

- Computerised information (software, data);
- Innovative property (patents, copyrights, trademarks, designs, etc).
- Economic competencies (brand equity, firm-specific human capital, business networks, organisational know-how that increases enterprise efficiency, etc).
A relatively recent body of research, beginning with Nakamura (2001), and spurred in particular by Corrado, Hulten and Sichel (2005) has:

- Sought to quantify business spending on intangibles, and to place these expenditures in a growth accounting framework - treating them as *investments* rather than spending on intermediates.
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By accounting convention, if an acquired good contributes to production longer than the taxable year, the cost of the good is capitalised.

Corporate and national income accounting have historically treated intangible inputs as an intermediate and not as capital.
**Project context: why analyse intangibles?**

Recent analyses focus on 3 types of intangible asset

<table>
<thead>
<tr>
<th>Asset type</th>
<th>Current status in national accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computerised information</strong> (software; databases)</td>
<td>Software is capitalised</td>
</tr>
<tr>
<td><strong>Innovative property</strong> (patents, copyrights, trademarks, designs, etc)</td>
<td>R&amp;D - on the way to being capitalised; Mineral exploration; Entertainment, literary or artistic originals.</td>
</tr>
<tr>
<td><strong>Economic competencies</strong> (brand equity, firm-specific human capital, business networks, organisational know-how that increases enterprise efficiency, etc)</td>
<td>No items recognised as assets.</td>
</tr>
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- Sought to quantify business spending on intangibles, and to place these expenditures in a growth accounting framework - treating them as *investments* rather than spending on intermediates.

Some stylised findings of the research
Many advanced economies have become progressively intensive in investment in intangible assets

Rising U.S. non-farm business investment in intangible assets (% output)

Source: Corrado and Hulten (2010)
Rising educational attainment in OECD economies.

Many products becoming more knowledge intensive.

With globalisation and deregulation, competitive advantage increasingly driven by innovation....in turn driven by investments in intangibles.

Fragmentation of value chains – and increasing sophistication of production in many industries – increase the importance of intangibles, particularly organisational capital.

New ICTs may itself increase the value of some intangibles to firms.

Growth of the services sector, as many service sector firms rely highly on the use of intangibles.
Why this increased business investment in intangibles?

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Automotive manufacturers view leadership in control software as vital.

Chevrolet Volt has 10,000,000 lines of code.
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E.g. patentable technology is only about 25% of the value of the iPhone (Korkeamaki and Takalo (2010))
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E.g. Wal-Mart’s computerised supply chains; Merck’s multiple R&D alliances; 100s of subcontractors in aerospace.
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Growth of the services sector of intangibles.

99% of the time, at least one Internet bookseller offers a lower price than Amazon! But Amazon retains a large market share due to reputation for customer service. (Brynjolfsson and Smith, 2000).
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Growth of the services sector, as many service sector firms rely highly on the use of intangibles.
In some countries business investment in intangibles exceeds that in machinery, equipment and buildings.

**Investment in tangible and intangible assets as a share of GDP (2006)**

![Investment in tangible and intangible assets as a share of GDP (2006)](chart)

Big differences across countries in share of investment in intangibles - positively correlated with income per capita

Intangible Investment and GDP per Capita (2001-04)

Source: Van Ark et al (2009)
Included in national accounts, intangibles can significantly change the observed scale and sources of growth

- Corrado and Hulten (2010) – by omitting intangibles, in 2007 USD 4.1 trillion excluded from published national accounts data.

- BEA (2010) estimates GDP in the United States would have been, on average, 2.7 per cent higher between 1998 and 2007 if R&D was treated as investment in NIPA.

- Labour productivity growth increases – through capital deepening - and a lower contribution to growth from increases in multi-factor productivity.
Intangibles can change observed sources of growth


2. Issues the NSG Project will address

- Measurement
- Taxation
- Data
- Corporate Reporting
- Competition
- Knowledge networks and markets
- Global value chains
2. Issues the NSG Project will address

- Critically review the methods for measuring flows and stocks of intangibles.
- Work to develop measurement guidelines for selected intangibles at firm level.
- Review and produce new evidence on the contribution of intangibles to firm, sectoral and aggregate performance.
- Analyse value creation from intangibles. e.g. relationship between investment in intangibles and knowledge output (IP)
2. Issues the NSG Project will address

CTPA

- Better assess the tax burden on knowledge capital, factoring in the effects of tax policy and MNE tax strategies.

- Drawing on the above, examine challenges for policy in encouraging investment while also taxing returns on mobile intangibles.
2. Issues the NSG Project will address

STI/ICCP + EAS

- Personal data is now heavily processed, analysed, shared and transferred across the globe and around the clock.

- Explore measurement of investments in data.

- Explore broader policy implications of the growing value of personal and public data.

E.g. Scope for spillovers? (some commercial data might be used for scientific purposes); how to value public data?; the balance between privacy and innovation?
2. Issues the NSG Project will address

- Review progress in reforms to corporate reporting of intangibles since OECD’s most recent work in this area (2008);

- Identify where reforms have lagged and explain factors retarding reform;

- Outline prospects for further reform and how progress might best be realised.
2. Issues the NSG Project will address

- Measurement
- Taxation
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- Global value chains

DAF/COMP
-Scope of work yet to be defined – possibly a Roundtable on on-line Commerce in autumn 2011.
2. Issues the NSG Project will address

- Measurement
- Taxation
- Data
- Corporate Reporting
- Competition
- Knowledge networks and markets
- Global value chains

STI/EAS-CSTP

Which policy settings will best facilitate the circulation (sharing, trading or joint production) and exchange of knowledge among independent parties?

Shapes the conditions under which companies access and generate the key intangibles of knowledge and innovative property.
2. Issues the NSG Project will address

**STI/SPD**

-iPod, ‘made in China’, but most of the value accrues to retail/distribution service providers in the US and Apple, based on innovations in design, marketing and supply-chain management.

“Our clothes are Italian, French and German, so the profits are all leaving China…We need to create brands, and fast”.

SG, China Industrial Overseas Development and Planning Assoc.
Upcoming events + project outputs

- Policy-oriented conference in the autumn 2012.

Reports on:

- Measurement of intangibles and their effects on economic growth.
- Improving tax policy for intangible assets.
- Progress in reforming corporate reporting of intangible assets.
- The role of intangible assets in global value chains.
- Developing knowledge networks and markets (KNMs).
- The creation of economic value from new forms of data.
- Synthesis report, with prioritized recommendations for government.
Are there other themes that CIIE suggests this project should tackle?
Further information

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<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Estimated Productive Life (Years)</th>
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<tbody>
<tr>
<td>Training</td>
<td>2.7</td>
</tr>
<tr>
<td>Software</td>
<td>3.2</td>
</tr>
<tr>
<td>Branding</td>
<td>2.8</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>4.6</td>
</tr>
<tr>
<td>Design</td>
<td>4</td>
</tr>
<tr>
<td>Business Process Improvement</td>
<td>4.2</td>
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