Achieving the Lisbon Agenda: the contribution of ICT
Executive Summary

A report for the Brussels Round Table
Indepen and Ovum
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This report was prepared by Indepen and Ovum for the Brussels Round Table (BRT). Members of the BRT are: Alcatel, BT, Deutsche Telekom, Ericsson, France Télécom, Philips, Siemens, Telefónica and Telecom Italia.

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Introduction

The Lisbon Strategy for Europe to become the world's most competitive and dynamic knowledge-based economy by 2010, with improved employment levels and social cohesion, will not be achieved unless Europe's productivity performance improves. ICT (information and communications technology) should be at the centre of the discussion about how to achieve the Lisbon Strategy.

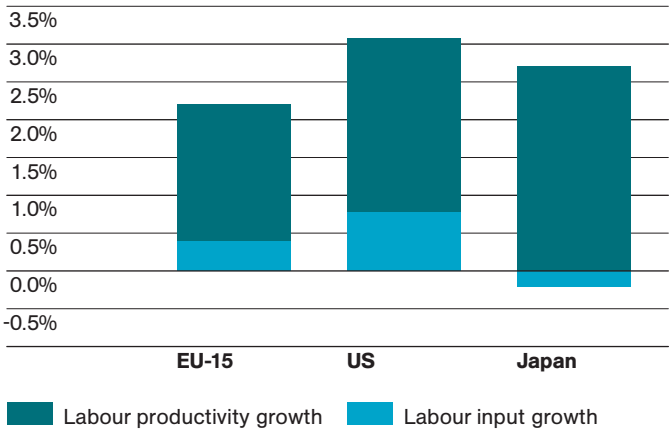
Recent productivity performance in Europe has been poor compared with that in the US and a number of Asian countries, and it is increasingly recognised that ICT will underpin future economic growth. This report addresses the issue of what policies are required to stimulate the diffusion and adoption of ICT in Europe. If no action is taken, Europe's relative performance will fall even further behind.

Copies of the full report are available from the Indepen and Ovum websites.

The problem: Europe's productivity gap

The Lisbon Strategy target of Europe becoming the world's most competitive and dynamic knowledge-based economy will not be achieved by 2010 unless Europe's productivity performance improves significantly. Productivity matters because it is the main source of medium-term income growth. After 50 years of catching up with the US, European productivity growth has recently declined relative to the US. By 1995, European productivity was 94% of the US level, but since then one fifth of the catch-up has been lost. If no action is taken, Europe's relative economic performance will fall even further behind. Our medium-term forecasts show that real GDP growth in the EU-15 over the period to 2010 will be about 60% of that in the US and below that in Japan (see Figure 1). This is even after assuming some catch-up to US levels of productivity.

Figure 1:
Forecast Average Annual GDP Growth for EU-15, the US and Japan 2005-2010



Source: Indepen forecasts

ICT has the potential to close the productivity gap

In the "information age", investment in information and communications technology (ICT) will underpin future economic growth. Consumers will benefit from the new services created, improved service quality and lower prices for existing services. Citizens' well-being will benefit from better public services and enhanced democratic processes. Moreover, ICT can facilitate European integration by allowing more effective cross-border provision and procurement of services.

So far, we have only seen the very beginning of the changes that will occur. ICT investment has had a major impact on the operation of only about one quarter of the private sector. Its use in the public sector is even more limited. ICT production is only a small part of the overall economy (about 6% of GDP) but it accounts for a much larger share of investment and productivity growth (18% and around 42% respectively in Europe). Figure 2 shows the opportunity that ICT offers, with the triangles scaled by GDP/capita.

Many of the productivity benefits of ICT have, and will come from networking computers, access to networked resources (such as the internet), e-commerce and the provision of public services online. Indeed, the take-off in the contribution of ICT to economic growth in 1995 coincided with widespread networking and use of the internet. The fact that communications services cannot be traded means a world class domestic sector is essential to reap the ongoing productivity dividend from ICT.

Investment in ICT in Europe has been low

Figure 2 shows a marked divergence in the pay-off to ICT investment in the EU compared to the US. ICT investment per head in Europe is currently at levels seen in the US twenty years ago. Simply increasing total investment in ICT will not in itself, however, deliver improvements in productivity and economic growth. To be productive, this investment also requires complementary changes in the way organisations are structured and function, and in human capital. Evidence suggests these changes can take more than five years to achieve.

So why is ICT investment lower in Europe as compared with the US? We argue this is a symptom of the lower profitability and effectiveness of ICT investment in Europe. This is caused by:

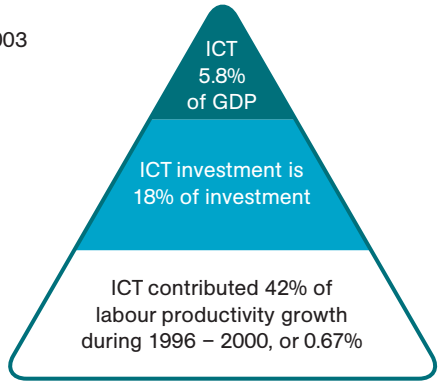
- difficulties in making investments in organisational change
- employment protection
- inappropriate educational and skill levels
- product market regulation
- low levels of service market integration across Europe.

These problems affect both the private and public sectors.

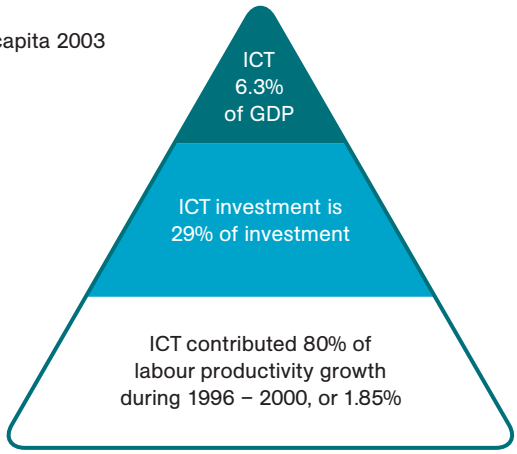
If ICT is to play a major role in accelerating productivity and economic growth in Europe, much as rail (and steam power), electricity and road networks fuelled growth in the past, policy change is required. If Europe fails to exploit the full potential of ICT, then it will not meet the Lisbon Agenda. This report addresses the issue of what policies are required to stimulate the efficient diffusion and adoption of ICT in Europe.

Figure 2:
ICT as a share of the economy

EU-15
€24,400 GDP/capita 2003



US
€33,400 GDP/capita 2003



Source: OECD, Indepen analysis

How will the ICT sector in Europe change over the next five years?

Looking at the ICT sector as a whole, we will see modest growth in spend by end-users on ICT over the next five years. Nevertheless, by 2010, ICT spend will purchase roughly twice as much use of ICT equipment and services as it does today, as prices continue to fall and performance improves.

Over the next five years the European telecommunications market will change rapidly. We have identified twelve possible transformations, assuming no change in public policy. In summary

- Consumers will increasingly be able to access any content, anywhere, anytime. This will be made possible by:
  - investment in next generation IP networks and next generation access (fibre), though the extent of investment depends on regulation
  - interoperability between different platforms achieved through industry-led standardisation
  - continuing investment in ICT research and development (R&D).
- Competition will intensify with increasing cross-platform competition – between fixed, mobile, new wireless technologies and cable TV.
- Operators will seek revenue growth from a profusion of new value added services made possible by next generation networks (NGNs).
- Operators will face increased competition in the corporate market from IT companies.
- The sector will grow and consolidate to create pan-European operators as smaller players seek to achieve scale economies. Some players will exit the market as traditional services become less profitable or disappear.

There are considerable risks and uncertainties associated with these transformations. New wireless access technologies could fail, demand for 3G data services may be weak, and consumers may not buy the new content services NGNs can deliver. Regulation could inhibit these transformations and increase risk.

The need for policy change

Policy changes are needed to address both demand and supply side issues if Europe is to fully realise the economic benefits of ICT and, given the time lag associated with the necessary complementary changes in organisation structure and in human capital, action is needed now if Europe is to meet the Lisbon Agenda.

The next phase in ICT development has the potential to change communications infrastructure fundamentally. To invest in such circumstances, telecommunications operators will need a regulatory framework which gives assurances that, if risky investment succeeds, the return will not be regulated away. Operators need freedom to explore different retail pricing models to find those that succeed in growing the market. They also need to be able to migrate customers from legacy products to new technology-based services efficiently. They need to be able to do this without undue regulatory intervention.

Market flexibility, in particular labour and product market flexibility, has also been identified as an important factor enabling profitable use of ICT. Labour and product market policies that worked in the past now appear costly. Changes are required.

The extent of reforms required in the public sector is even greater than in the private sector. This is because of the political nature of public sector organisations and their inter-relationships, budget rigidities and difficulties in providing public sector employees with incentives to make the “right” choices when investing in ICT.

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Policy recommendations

A theme that we develop in this report is the need to provide all users of ICT (private and public sectors, individuals and organisations) and network operators with appropriate incentives to invest in and use ICT, so as to promote innovation and economic growth.

The European framework for communications sector regulation provides a strong foundation, but we propose that some aspects are interpreted in a different way and that it is enhanced in some areas.

Promoting innovation and investment

Our first three recommendations are aimed at reframing the policy and regulatory framework for the communications sector so that it takes explicit account of the dynamic nature of communications markets and the wider economic benefits from ICT investment.

Key enabler 1:

Take account of the spillover benefits from ICT

We recommend that when developing new legislation and policy the European Commission and national governments take account of the impacts on the ICT sector and use of ICT. Examples of areas to which this principle should be applied include e-money legislation, patents for computer-implemented inventions and EU funding for research and development.

Key enabler 2:

Focus on the dynamic gains from market expansion

We recommend that NRAs are required to take account of the dynamic impacts of their decisions. This will involve placing more weight on innovation and investment relative to short-term price objectives. In particular, when balancing the risks between over- and under-investment, NRAs should make decisions in favour of promoting investment in communications infrastructure.

Key enabler 3:

Allow operators to have retail price flexibility

We recommend that regulators should allow operators to have retail price flexibility for new services and flexibility to jointly price new and old services that can be provided over new common infrastructure.

Our fourth recommendation addresses the circumstances in which sector specific ex ante regulation should be applied. There is a presumption by NRAs that, whenever an operator has significant market power (SMP), ex ante regulation should be applied, leaving no room for competition policy to work. We argue that there is considerable scope for ex ante regulation to result in unintended and unanticipated adverse consequences. To limit these effects regulation should be focused on non-replicable facilities. This is a major departure from the current approach under which replicable facilities owned by SMP operators are generally subject to ex ante regulation.

Key enabler 4:

Focus regulation on non-replicable facilities and use competition policy more

We recommend that ex ante regulation is focused on non-replicable facilities. This would ensure regulation was focused on areas where an operator clearly has monopoly power and so abuse is most likely to occur. Otherwise regulation by competition policy would apply.

We propose that regulators should pre-commit to roll-back regulation once regulated facilities are replicated in a given locality. Pre-defined triggers for the removal of regulation need to be decided and regulated prices must be set appropriately, taking due account of market risks, price dynamics and the external benefits of infrastructure competition.

As a short-term measure, the ERG Guidance could be changed so that NRAs must justify ex ante remedies on SMP operators in terms of the net benefits relative to the application of competition law.

Policy recommendations continued

Emerging markets

Emerging markets are treated differently from existing markets under the Framework Directive. The Directive states that market leaders in emerging markets should not be subject to inappropriate ex ante regulation but it leaves open the possibility that NRAs could intervene. Regulation of new content-based services is also under consideration by the European Commission, following the recent review of the Television Without Frontiers Directive (TVWF). Our fifth and sixth recommendations address these issues.

Key enabler 5:

Commit not to apply sector specific regulation to emerging markets

We recommend that the European Commission commits not to add markets to the list given in the Recommendation on Relevant Markets and that NRAs commit not to regulate emerging markets, either for a fixed period of time or until certain market penetration levels are reached. When these triggers are reached the onus would be on the NRA to demonstrate the net benefits of ex ante regulation relative to the continued application of ex post competition policy.

Key enabler 6:

Do not extend the scope of content and advertising regulation to audio-visual services offered over new communications platforms

The Television Without Frontiers Directive, and content and advertising regulation more generally, should not be extended to audio-visual services offered over new platforms, such as DSL, the internet and mobile phones.

Sector taxation

The communications sector is "taxed" by the imposition of universal service obligations (USO) which could in principle be funded from general taxation. Another current example of an ICT sector tax is given by the proposals to set levies on ICT equipment (e.g. mobile handsets and storage devices) to fund payment for content and to tax text messages. All such taxes risk inhibiting investment in ICT.

Key enabler 7:

Do not apply sector specific taxes to ICT

We recommend that the ICT sector should not be subject to any sector specific taxes or levies (e.g. on devices), regardless of whether they are used to fund the achievement of public policy or other objectives.

Access to key resources

New broadband services are likely to require the provision of attractive content, and new broadband infrastructures are likely to be based on wireless technology.

Key enabler 8:

Remove unjustified restrictions on access to premium content

The European Commission should continue its efforts to remove unjustified restrictions on access to premium content, so as to promote competition in markets for content services.

Key enabler 9:

Adopt more flexible spectrum management

We support moves to introduce spectrum trading in Europe. The European Commission should facilitate the identification and dissemination of best practice in spectrum trading. The Commission should also adopt a technology neutral approach to the allocation of harmonised bands which takes account of convergence.

Making ICT investment effective in the private sector

Key enabler 10:

Seek to achieve greater labour market flexibility

We recommend that those Member States with restrictive labour laws seek to make these more flexible, so as to give incentives for firms to invest in ICT, to enable "creative destruction" and to retain domestic employment. This may need to be twinned with policies for retraining displaced workers to speed up movement between jobs.

Key enabler 11:

Promote product market flexibility

Member states should actively review regulations that impede product market flexibility with a view to determining areas where some relaxation would be beneficial. The proposed European Services Directive, which is aimed at achieving greater integration of services markets in Europe, will assist the effective use of ICT by business.

ICT use in the public sector

In the report, we identify a long list of impediments to the effective use of ICT in the public sector. There are EU-level policy initiatives aimed at addressing some of these issues and our recommendations given below seek to supplement these. We note, however, that many of the significant changes required can only be made at a national level.

Key enabler 12:

Enable use of ICT in the public sector

In respect of the deployment of ICT in the public sector we recommend that:

- more rigorous analysis of the costs and benefits of e-policy projects is undertaken at a national and pan-European level. A comprehensive measurement methodology is required and the European Commission could fund research in this area. Otherwise it will be difficult to know what constitutes good practice
- the benchmarking undertaken by the European Commission is reviewed with the aim of including the best practice countries outside Europe and collecting more data on the use of, rather than the supply of, e-policy services
- the European Commission develops and disseminates ideas on how to make government budgetary processes and fiscal policies more supportive of capital investment, including ICT investment
- the European Commission promotes e-policy services that are "joined up" across traditional departmental or agency boundaries by targeting its funding of e-policy initiatives on such projects.

Glossary

3G	Third generation of mobile telephony systems. 3G provides high-speed data transmission and supporting multimedia applications such as full-motion video, video-conferencing and internet access
BRT	Brussels Round Table
BT	British Telecommunications plc
CATV	Cable television
DSL	Digital Subscriber Line. A family of technologies generally referred to as DSL, or xDSL, capable of transforming ordinary telephone lines (also known as 'twisted copper pairs') into high-speed digital lines, capable of supporting advanced services such as fast internet access and video-on-demand. ADSL, HDSL (High data rate Digital Subscriber Line) and VDSL (Very high data rate Digital Subscriber Line) are all variants of xDSL
EC	European Commission
ERG	European Regulators Group
EU	European Union
EU-15	Refers to the pre-1st May 2004 fifteen-member EU: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom
Ex ante	Before an event takes place
Ex post	After an event takes place
GDP	Gross Domestic Product
ICT	Information and Communications Technology
IP	Internet Protocol. The packet data protocol used for routing and carriage of messages across the internet and similar networks
IT	Information Technology
NGN	Next Generation Network
NRA	National Regulatory Authority
R&D	Research and Development
SMP	Significant Market Power. This test is set out in the EU Framework Directive, and is aligned with the competition law definition of 'dominance'
TV	Television
TVWF	Television Without Frontiers Directive
Universal Service	A minimum set of services that should be provided to all citizens, or those with special needs
USO	Universal Service Obligation. The set of Universal Services that Universal Service Providers are required to supply

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