

## Erkki Liikanen: Competition and productivity

Speech by Mr Erkki Liikanen, Governor of the Bank of Finland, at the European Productivity Conference, Espoo, 30 August 2006.

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As prime minister just said, competitiveness and productivity are closely linked.

In the first half of the 1990s, it was still common "knowledge" that productivity was growing since the oil crisis of the early 1970s, much faster in Europe than in the United States.

The situation changed in the middle of the 1990s; it was not noticed until later. In the United States economic growth surged, mainly because of an acceleration of productivity growth. In Europe economic growth was slowing down. One reason was a slowing of the flow of workers into the labour market. But even more important was a slowing of productivity growth.

Turning points are seldom detected until later on. Time lags are in fact a great challenge for policy-makers. At the Lisbon Summit in March 2000, there was no mention of the problems of slow productivity growth. Nor was the Asian challenge discussed. Nowadays, neither of these topics can be brushed aside.

Since 2000, the European Commission and also the ECB have been putting much effort into finding the reasons for the difference in productivity growth between Europe and the United States.

Research has revealed that the difference is related to the development of information and communication technology. This development is as important as the electrification that started about 100 years ago.

There are two reasons why ICT development explains the difference between productivity growth in Europe and in the United States.

First, the ICT industry is more important in the US economy than in Europe.

Therefore, favourable productivity developments in ICT are reflected much more clearly in the leading indicators for the US economy. In fact, one of the reasons why productivity figures in Finland are high compared with Europe as a whole is the weight of ICT in the Finnish economy.

The second important factor is developments in services. Information costs plunged when it became possible to distribute databases cheaply from anywhere. In the USA, productivity growth has been highest in retail and wholesale trade, but financial services have also experienced a robust improvement. The same has not happened in Europe.

What can be done? As regards private services, only competition can encourage companies to innovate and spur productivity increases. When competitive pressure strengthens in the market, it forces companies to make full use of the opportunities created by ICT to raise productivity.

Competition drives innovation and productivity growth. Competition also leads to lower prices, which in turn boosts real income. When real income increases, demand strengthens, which then stimulates job creation and investment. And these in turn improve growth and prosperity.

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Economic growth is a fairly new phenomenon in history. It started with the industrial revolution. Finland lagged behind at first but managed to catch up with other economies, thanks to robust growth in the 1900s.

Finland quickly learned to utilise electricity, which helped to process its forests and ore. This resulted in rapid productivity growth. When Finland was catching up other industrial states after the war, productivity growth attained rates as high as 5% per annum. The standard of living doubled in 14 years.

By the 1970s, Finland had made use of the vast possibilities of electricity to stimulate productivity.

A common feature of ICT and electricity is that they are multipurpose technologies. Industrialisation, which was based on the utilisation of electricity, provided people with machines and equipment for

processing raw materials into products more efficiently than with muscle power. The new IT revolution, for its part, provides the means to use information more effectively. It increases our brain power.

In advanced economies, productivity growth depends not only on technological innovations themselves, but also on the organisational changes that are made possible by technological innovation.

The wide utilisation of ICT and computers increasingly makes it possible to develop new and more efficient production and working methods in all economic sectors.

But to adopt successfully new technologies and production methods, further efforts are required in reorganisation of work and business practises. Investment in training is also needed.

Research on the effects of ICT has shown that the contribution of ICT to output growth initially corresponds to investment costs. However, over longer periods (3–7 years), output can exceed costs by large multiples. The output growth can be 2–5 times greater in the long run.

These figures help us to understand why companies operating in competitive markets have significant incentives to adopt new technologies and why they at the same time reorganise their work and processes.

Studies on the relationship between the introduction of ICT and organisational change have come to two conclusions: successful implementation of change requires innovative leaders and a staff that is well disposed towards the change.

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We come to the significance of education and training.

It is often seen that, besides organisational changes and restructuring of work processes, productivity gains from IT also require a rise in the education level of the workforce.

It is well-known that as ICT development has gained momentum, the demand for unskilled workers has decreased and unemployment correspondingly increased. The higher the education level of the workforce, the lower the level of unemployment.

A closer look reveals that the connection between education and IT utilisation is more complex. Higher education is very important when we are talking about companies that have made substantial investments in research and development. This is especially true of the ICT industry and of innovation activities.

But when we consider ICT utilisation and application, the matter is not so straightforward.

Still 20 years ago, a worker was a physical part of the process and performed mechanical tasks. These days workers monitor and oversee processes via computer terminals. The processes themselves have not changed very much, and therefore the worker must master them. The advantage of the new computer applications is that the software assists in controlling and monitoring the overall production process.

They collect information on the whole process and present it for user viewing. This enables the user to get a broader overview at a glance. The main characteristic of the most advanced companies is that they have shifted the focus of work, education and training from mechanical tasks to problem-solving and communication skills.

Previously when a problem arose, the worker told his superior. Today he is more likely to try to solve the problem himself, in order to avoid having a small problem become a large one.

As I noted earlier, since the adoption of IT, productivity has increased most in the service sector. What is paramount for productivity growth is that all employees involved in a given process be able to use the required IT.

The best solution to accelerate the implementation of changes is that the staff is involved in any project where new IT and related management systems are developed and applied.

The employees know the products and services and their flows. As regards ICT based management systems, the overall process becomes more transparent and more easily visualised. The same work is performed – but with more efficiency, and possibly also with more pleasure.

When a company is operating in a competitive environment, the pressure to be competitive is an important incentive to the company's management. If the company is unable to raise its productivity, new competitors will pose the threat of driving it out of the market.

But on the other hand, raising productivity requires investment, organisational change, restructuring of processes, training of personnel, and a broad-based commitment.

How can this be made to work?

It is vital that the entire staff know and understand the market situation and the in-herent challenges so that they will share the company's visions and values. This is the foundation of commitment.

The challenge lies in the unexpected speed at which external changes can take place. These are always a challenge for management.

However, if the staff does not believe that increased productivity will improve the company's prospects and thus increase their job security, the commitment may not be strong enough.

This is why, in an environment of change, the securing of trust is critical.

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That brings us to the public sector.

The increasing competition forces companies to be innovative and to raise their productivity. But what about the public sector, which is often sheltered from actual competition?

Ageing creates its own challenges for the public sector. Fewer people will be entering working life that will be entering retirement. Prosperity and its continuing development will depend even more on productivity growth.

For these very reasons – lack of competition and an ageing population – improvement of productivity in the public sector will pose a noteworthy challenge to our national economy.

But it also presents an opportunity, because many public services are highly information-intensive. Their digitalisation will enable robust productivity growth and the opportunity to provide better personalised services.

Finland has put much effort into measuring productivity in public services.

This is not without its problems. How does one take into account the quality of services? How does one measure safety and security? Productivity figures do not always tell the whole truth about the performance of public services.

But the same productivity logic should also apply to the public sector. Taxpayers' money should be put to ever better use. We should be able to either produce more services, or services of better quality, or preferably both.

Often in the public sector the organisational changes and restructuring of processes that are essential for productivity growth are cut down by resistance within the administration or become victim to internal turf battle.

A breakthrough can occur only if leaders have a strong vision and persistence. Productivity is not raised by IT specialists, although their input is necessary. Productivity starts to increase only when work and the related processes are reorganised. And this is something that leaders cannot delegate to anyone else.

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In conclusion, future prosperity will be based on productivity growth. Information and communication technology makes this growth possible, but restructuring within working and organisational processes, combined with personnel training, are equally necessary.

And behind all this is the requirement of innovative management and the employees' commitment to their organisation. Everyone must bear his or her own responsibility.