

## Innovation and economic reform in Europe and Japan

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### First session: Innovation review from Europe and Japan

This event aimed at identifying some realistic economic proposals about innovation and productivity, to support the move of the European and Japanese economies away from the current stagnation.

The first session started with the intervention of Taiji Hagiwara from Kobe University, who analysed the loss of international competitiveness of some sectors of the Japanese economy, as electric industry and precision instruments.

Even though the amount of investments in R&D and the number of registered patents have remained consistent over time, important factors that might explain the decline of competitiveness are: the appreciation of the Japanese currency, the shortage of global standards with innovation cumulated in Japan over the years, but in different directions from the World trend (so called Galápagos syndrome), and too large investments in high quality products that become quickly outdated due to markets evolution.

The decreasing number of small and medium-sized enterprises (SMEs) is another element affecting the level of the country's innovation level.

This decrease might be explained by: lack of entrepreneurship, barriers to create new businesses and a high risk to face failure. Some consistent public policy interventions are therefore needed in order to revitalise the sector.

The second intervention was by J. Scott Marcus from Bruegel, which analysed the main strengths and weaknesses of the European innovation scenario.

A talented, well-educated and creative population, together with an important technology base, make the European territory an ideal field to implement innovation policies.

On the other hand, insufficient private investments in R&D have represented an important obstacle to the innovation process over the last years, together with a general too severe social attitude to business failure and too punitive bankruptcy laws.

Looking at the number of EU start-ups, this is comparable to the one in the US. The main European problem is related to the so-called scale-up process: bring innovative firms to the next level.

An important obstacle to this can be identified in the weak role of venture capital as form of investment: EU start-ups still rely too much on debt-financing rather than venture capital financing. Venture capitalists have usually a long term vision, which enables them to offer greater flexibility and longer term vision to the firms they fund.

The main European instrument to drive progress on innovation is the Horizon 2020 programme, which might still present some weakness points as a complex administration, a too high concentration of funding (75% going to the UK, France, Germany, Spain, the Netherlands and Italy) and a difficulty in estimating and tracking the real long-term results.

## **Second session: Innovation, labour market transformation and socio-economic reconstruction in Europe and Japan**

This session focused on innovation and labour markets. Georgios Petropoulos questioned whether the EU 2020 targets are too ambitious or not. Looking back at the 2010 Lisbon Strategy, none of the targets have been achieved, leading to an overall failure. What went wrong? First of all, it was an overloaded agenda, there were many asymmetries between EU countries, poor coordination and conflicting views, to be coupled with US stock market bubble and the subsequent financial crisis. What can we learn? Governance must be improved, transparency, coordination and surveillance increased, role of the EU Parliament enhanced together with a higher level of decentralization. The EU also needs to increase R&D expenditure as % of GDP (while Japan's one is much higher). Not surprisingly, Japan also has a lower unemployment rate and Asia in general has a higher number of platform companies, with higher market capitalization and number of employees.

Yoichi Matsubayashi explored the topic of stagnation, relevant to both EU and Japan. Since the 2000s, and even more after the collapse of Lehman Brothers, there has been a shrinking of private investments in both regions. The key factors driving innovation are population and technological progress, energy prices and future demand, which can all be summarized with expected profitability, not the current one. To measure expected profitability he relied on a proxy, the Tobin's marginal  $q$ . Using panel data, he found Germany's median  $q$  to be around 0.65, with France, UK and other Nordic countries around the same level, while for Italy, Greece and other Southern European countries values were lower. Moreover, such values have been shrinking over time, leading us to think that secular stagnation will continue.

Kazufumi Yugami talked about the wage and job polarization issue. He notes an increase in the upper and lower tails of the distribution, with shrinking of the middling part of it. As a possible cause, he identified skill-biased technological change for the upper tail, at the expense of middle skilled jobs (especially routine ones), which suffer the increasing substitution role of ICT. He also pointed out that there are wage differences within groups, with increasing wages for abstract work, lower pay to women, and, among routine (cognitive and manual) jobs, having a college degree and the number of years of experience are negative predictors.

John Cave explained the difference between unemployment and underemployment: human capital depreciates if not in use, thus the quality of work and the ability to contribute to innovation is crucial. Moreover, governments tend to keep people employed longer to reduce health care costs. Reduced labour mobility also reduces happiness and efficiency, leading to a wrong allocation of labour and of value to wages. There is a tendency to see decentralization and polarization of jobs, both between and within classes: the adjustment of jobs is too slow to keep up with innovation. Technological displacement (machines now can do also non-routine jobs), demographic changes and wrong use of ICT skills all lead to stagnation. In a complex system where emergent behaviours lead to unpredictable multiple equilibria, also policies must be broader and more tolerant. In Europe there is a lack of expertise in teaching transferrable skills: coding, e.g. agent-based simulation, and entrepreneurial culture should be boosted.

### Session 3 – Policy considerations and conclusions

The purpose of the third session was to address the issue of innovation and economic reform at a macro-level and to use the comparison between France and Japan to emphasize what should be implemented in terms of public policies at the national and European levels.

The session started with a presentation by Mr. Koji Nakamura, current associate Director-General and Division head of the Economic Research Division at the Bank of Japan. What comes out from theoretical models is the strong connection between innovation, economic growth and productivity. The figures show that Japan suffers from decreasing level of productivity and from a high level of heterogeneity across firms. Even if some Japanese firms are at the frontier, many remain as laggards. In order to fully take benefits from innovation and its diffusion, and to promote growth, Japan faces several challenges: Japanese firms are stick to their own R&D and tend not to collaborate a lot, there is a lack of appetite for entrepreneurship, and “the more you work in the same firm, the higher your wage” statement is true for Japan and it gives incentives to stay in the same firm forever. In the end Japan suffers from a lack of workers’ mobility (rigidities in the labour market) and difficulties to promote entre/exit movements of innovative firms. The main targets for future reforms should be: education (mid carrier training program), labour market, income (more pro-active), government expenditure, trade and immigration (integration in the labour market), monetary policy (what does “unconventional” mean now?), and macro-prudential policy.

It was followed by a second presentation by Mr. Remy Lecat, current head of the Structural Policy Analysis Division at the Banque de France. He emphasized the importance of innovation and especially its necessary diffusion. Innovation and competition policies and the institutional environment are the key tools to promote a better diffusion of new technologies. By decomposing the labour productivity, he showed pretty clearly the lack of diffusion of innovation in Europe and makes the point of seeing this as an opportunity for convergence. He also showed that current innovation policies such as direct financing of fundamental research or subsidies to private research are effective but patent and intellectual property policies remain hard to implement due to the existence of multiple protection regimes. He finally devotes some time explaining the crucial role of the institutional context. He highlights the need of having at the same time: competition policies, improvement of the high education system, and appropriate funding (sensitivity of ICT intensive firms to financial conditions).

Mr. Benat Bilbao Osorio, Senior Economist at the European Commission (DG RTD), stated that the main challenge is to reconcile national and European strategies. Efforts have to be made at both level and governments need to find a balance between the implementation of innovation policies at the national level that are obviously needed (but are country-specific – huge heterogeneity: lack of private investment, link between business and research, better allocation of resource) and the integration of European policies that are also crucial to promote innovation and economic growth (achievement of the internal market, free movement of knowledge, capital union - through additional funding, new framework programs, 2020 Horizon).

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