

Innovation and productivity in services

Thijs ten Raa*

Since it is ultimately productivity that determines the standard of living, a crucial question is what drives productivity growth. Since productivity growth is associated with technological change, the natural candidate for driving force is innovation. In an interesting study, Henry van der Wiel (*cf. CPB Report, 2001/1*), investigated the relationship between innovation and productivity in services. "Innovation" is measured quantitatively (innovation expenditures as a percentage of turnover) and qualitatively (firm reports of innovation projects: technological vs. non-technological and successful vs. non-successful). For "productivity" the author takes labour productivity, which remains undefined (if it is turnover per unit of labour, then "productivity" would be ill-defined, but on the same footing as "innovation". If labour productivity is defined correctly as (real) value-added per unit of labour, then it is on a different footing than "innovation").

The author finds a positive relationship between innovation and productivity across countries, and locates the Netherlands on the lower end of the curve, suggesting that too little innovation took place over the period of measurement, 1994-1996. Moreover, firms reporting innovation projects outperformed non-innovators, particularly when the projects were mixed blessings. The higher productivity growth of innovators is almost completely due to restricted employment growth. It seems to me that coping with labour market rigidities is more important (in terms of performance) than technological progress. Moreover, this intuition seems to be confirmed further down in van der Wiel's article, where he reports that the best productivity performers are the non-technological innovators.

The author is keenly aware that performance had better be measured by total factor productivity growth. In principle, the low labour productivity growth in the Dutch business services sector

could be explained by underinvestment in capital. He notes, however, that investments in ICT are relatively high, but only compared to investments in manufacturing and other services. I would like to know if these investments are also high compared to ICT investments by foreign business service sectors. If that is the case, then there is indeed a "Dutch productivity puzzle". On the other hand, if Dutch ICT investments in business services are low by international standards, then the puzzle is solved.

Swearing like a lord: Beyond I/O analysis

Theo Roelandt*

New markets emerge, industries decline, but the OECD Sector Classification will last forever. That feeling creeps up on an industrial economist when using existing statistics to gain more insight in the emerging network economy. During the last decades industrial organisation has changed substantively. The importance of R&D cooperation and strategic alliances for innovation has increased. Nowadays, innovation demands the combining of technologies across existing industries, whatever statistical conventions tell us. The distinction between manufacturing and service sectors has faded away, and firms increasingly integrate services and manufacturing components in their products in order to better match customers' needs. As a consequence, official sector statistics block our view of economic reality. Not only does this impede the ability of researchers to understand economic reality; it also hinders policymakers when they design innovation policies for the new economy.

This is the main reason for the increase in attention paid to both industrial clustering in innovation research and innovation policy.¹ The cluster approach questions the sectoral perspective to be the right starting point for innovation research as well as innovation policy. Industrial clusters can be characterised as networks

* Strategy, Policy Research & International Cooperation DG Innovation

Ministry of Economic Affairs

* Faculty of Economics and Business Administration, Tilburg University