

Chapter 1.12

Government Funding of E–Collaboration Research in the European Union: A Comparison with the United States Model

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ABSTRACT

Government funding of e-collaboration research in both the US and EU seems to be growing. In the EU, a key initiative to promote governmental investment in e-collaboration research is the Collaboration@Work initiative. This initiative is one of the EU's Information Society Technologies Directorate General's main priorities. In the US, government investment in e-collaboration research is channeled through several government branches and organizations, notably the National Science Foundation. There are key differences in the approaches used for government funding of e-collaboration research in the EU and US. Some of these differences are discussed here, as well as related implications.

INVESTMENT IN ICT RESEARCH IN THE US AND EU

Information and communication technologies (ICT) have been among the main drivers of both the European Union (EU) and United States (US) economies. In the last 30 years, they have been the source of a significant growth in labor productivity in the manufacturing sectors of both the EU and US. In the service sector, ICT have not had the same impact in terms of labor productivity improvement. Yet, they have revolutionized delivery models, and allowed for a tremendous growth in revenues generated by service organizations. This is reflected in the size of the service sector of the economy, which now account for most of the jobs and wealth generated in both the US and EU.

Given the aforementioned, one would expect investment in research on ICT to be significant, which seems to be the case in both the EU and the US. There have been many estimates of investment in ICT research in the EU, and in both the public and private sectors (EC, 2005). Some of those estimates point at \$28 billion as a recent figure for total annual private sector investment in ICT research. The same estimates put the EU's public sector investment in ICT research at around \$10 billion. By comparison, the private sector in the US invests over 3 times more; and the public sector about 2.5 times more.

The above differences become even more significant when we take into account differences in population size. While in the EU the total investment in ICT research per person annually is estimated at about \$100, including both the private and public sectors. In the US, that investment is likely to be over \$400.

Not surprisingly, there is a general perception among research funding agencies in the EU that it is lagging behind the US in terms of its ICT development and use capabilities. This is a major source of concern in the EU, because ICT are perceived as a major driver of labor productivity improvement (EC, 2005b), accounting for as much as 40 percent of the variation in labor productivity in recent years. (In the US, ICT are perceived as accounting for an even higher percentage of variation in labor productivity, namely 60 percent).

E-COLLABORATION VERSUS ICT RESEARCH

E-collaboration can be defined as collaboration among individuals engaged in a common task using electronic technologies. As such, e-collaboration can be seen as an "umbrella" term that can be used to refer to a range of fields of research, such as those of computer-mediated communication, computer-supported cooperative work, and group support systems (Kock, 2005).

Some examples of e-collaboration technologies are e-mail, group decision support systems, instant messaging, web-based bulletin boards, teleconferencing suites, and supply-chain management systems. E-mail, arguably one of the most widely used computer applications today, is an e-collaboration technology aimed at supporting fast and relatively simple forms of communication. Certain e-collaboration technologies are more geared at supporting complex communication and decision making, such as group decision support systems. Other e-collaboration technologies, such as supply-chain management systems, are aimed at supporting the flow of information among various departments engaged in the production and delivery of goods and services.

There are many areas of ICT that are not seen as directly related to e-collaboration. Some examples are database and telecommunications technologies. There is a great deal of research being conducted aimed at the development of new database technologies. The same is true for telecommunications technologies. Incidentally, both database and telecommunications technologies are necessary for the implementation of e-collaboration technologies.

Nevertheless, research on e-collaboration has been steadily increasing in importance recently. Evidence of this, as recently as 2005, comes from two key publication initiatives. One is the establishment of a new journal dedicated to e-collaboration research, the *International Journal of e-Collaboration* (Kock, 2005). The other initiative is the publication the Special Issue on Expanding the Boundaries of E-Collaboration of the prestigious journal *IEEE Transactions on Professional Communication* (Kock & Nosek, 2005).

Much of the past and recent research on e-collaboration falls into one of two broad categories: (a) Applied research, which often attempts to provide solutions to technological problems; and (b) behavioral research, whose main goal is

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