EDITORIAL ESSAY

Global Funding of E-Collaboration Research: Challenges and Opportunities

Ned Kock, Editor-in-Chief, USA

ABSTRACT

Global funding of e-collaboration research seems to be on the rise. There are many possible reasons for this phenomenon, one of which is that e-collaboration technologies support key contemporary economic trends. A key trend is that of international outsourcing, which itself is part of another more generic trend—the one toward increasing global trade. This article looks at what seem to be some of the current trends in global funding of e-collaboration research, and explores challenges and opportunities associated with these trends.

Keywords: e-collaboration; global trade; international business; national culture; outsourcing; research funding

GLOBAL DRIVERS OF THE USE OF E-COLLABORATION TECHNOLOGIES

The term “e-collaboration” refers to collaboration among individuals involved in the execution of common tasks using electronic technologies. Therefore, e-collaboration can be seen as a broad term that refers to a range of technology-supported activities, such as those using computer-mediated communication technologies, telephone and telephone-like devices, and group support systems (Kock, 2005). Those technologies are generally referred to as e-collaboration technologies.

E-collaboration technologies that build on the infrastructure provided by the Internet have undoubtedly revolutionized business (Kock & Nosek, 2005). They support a vast number of business transactions, whether they are business-to-business or business-to-consumer transactions. E-collaboration technologies also support the creation of communities of consumers, a trend that is becoming increasingly common among certain interest groups—e.g., personal health product buyers, music aficionados, avid book readers.

The current trend toward increased global trade owes much of its existence to e-collaboration technologies. Many of the information and knowledge exchanges that precede the flow of goods and services within a country takes place in large part—and in some cases in their
entirety—through e-collaboration technologies. This is also true in connection with the flow of goods and services across national boundaries. Large US automakers, for example, jointly design engine parts with offshore contractors using sophisticated e-collaboration suites. Those parts are then manufactured by the contractors, shipped to the automakers, and incorporated into car engines.

The rising price of oil has added another advantage to the use of e-collaboration technologies in business. As oil prices go up so does the cost of face-to-face interaction between individuals located in different cities, states, or countries. The farther those individuals are, geographically speaking, the more expensive it is to have them interact face-to-face. Since almost no trade can effectively take place without the exchange of information and knowledge, the potential return on investment in e-collaboration technologies is likely to increase as time goes by.

Of course, the aforementioned scenario may not become a reality if oil prices were to go down, or cheap oil alternatives hit the market in the next few years. Even if that were the case, there would also be other related drivers toward an increasing use of e-collaboration technologies as alternatives to commuting and travel for face-to-face interaction. One such driver is the growing body of evidence that burning fossil fuels leads to a rise in global temperatures, with potentially disastrous consequences looming on the horizon.

Alternatives to fossil fuels have their problems as well. One of them is that they regularly end up consuming a great deal of the very same fossil fuels that they are meant to replace. Electricity, for example, which is used to power hybrid cars, is often produced by burning coal or natural gas. Ethanol may be an exception, but recent studies suggest that its production on a scale large enough to replace fossil fuels may have a dramatic negative impact on the availability of grains used for human and animal food consumption. It seems that instead of trying to reduce fossil fuel emissions related to a higher demand for transportation, the use of e-collaboration technologies should be promoted as a replacement for at least some of the face-to-face interaction among geographically distributed workers.

**DIVERSE NATIONAL GOVERNMENT FUNDING AGENDAS**

Technologies with great e-collaboration potential usually attract government interest, and soon become the target of organized government research funding. This is particularly true in countries like the US and New Zealand, and country groups like the European Union (EU). A significant amount of government funding is channeled to research on e-collaboration every year. This is often done indirectly through the creation of funded research programs in much broader areas such as information and communication technologies.

Because different countries and country groups vary in their industry composition and natural culture, it is no surprise that they end up having markedly different agendas. For example, a number of companies that develop and commercialize e-collaboration software are primarily based in the US; much more
than in Europe. Thus, it would be natural to see a stronger emphasis on e-collaboration research using open source software in Europe than in the US—which seems to be what is currently happening.

A good example of clearly divergent agendas in government research funding in the area of e-collaboration is the comparison between the EU and the US models. In the EU, emphasis is placed on applied results, such as interconnection of rural businesses, in terms of government funding of e-collaboration research. In contrast, the US tends to favor projects that will lead to original findings, which are expected to be published in selective academic publication outlets such as conferences and journals. A more detailed comparison of the EU and US models for government funding of e-collaboration research is provided in an article included in this issue of the *International Journal of e-Collaboration*, authored by Kock and Antunes.

**CHALLENGES AND OPPORTUNITIES**

The challenges stemming from divergent government funding agendas can be placed in three main categories—divergent standards, unfair subsidies, and poor security. The challenge of divergent standards can already be seen in many governmental efforts, such as the support for different digital mobile communication methods, which in turn may make it impossible (or very costly) for different e-collaboration technologies to interact with each other.

When a country imposes a relatively high tariff on a good in order to protect and stimulate a local industry, more often than not it is accused of unfair competition. This is particularly true when a trading partner country has no similar tariff. Another more subtle way of boosting a local industry is to subsidize it through research funding, which may happen with e-collaboration technologies as well as related products and services. This is what the unfair subsidies challenge refers to. This may lead to inferior e-collaboration technologies being offered in the marketplace, because of their reduced cost enabled by subsidies, and adopted by various organizations. The final outcome will likely be a poor return on investment on those e-collaboration technologies.

Finally, the challenge of poor security refers to the difficulty of e-collaboration technology developers to secure their technologies (e.g., make them less prone to attacks by viruses, worms, spyware) if other developers use different standards. Even if the same standards are used, but different enforcement approaches exist (e.g., more relaxed laws in some countries than others), secure multi-country e-collaboration will be difficult to support in an effective manner. This will pose obstacles to multi-country use of e-collaboration technologies, which is unfortunate because of those technologies’ abilities to bridge large physical and temporal distance.

Divergent funding of e-collaboration research can also create a number of opportunities, particularly if the challenges above are properly addressed. A key opportunity that comes to mind here is that of innovation. That is, divergent approaches to funding may lead to different ideas to be developed, which may in turn lead to technological breakthroughs and findings in the area of e-collaboration.
In conclusion, different approaches to funding adopted by various countries may have their pros and cons. The fact that those approaches differ may bring about challenges and opportunities. It seems unlikely that funding models used by different countries will converge in the foreseeable future. Therefore, governments may want to start funding a new form of e-collaboration research, namely the study of global integration of different national e-collaboration tools development and investigation initiatives. This meta-research topic has been largely neglected in the past.

ACKNOWLEDGMENT
That author would like to thank Jaime Ortiz for comments and suggestions on an earlier version of this article. The opinions expressed in this article, as well as any errors and omissions, are the sole responsibility of the author.

REFERENCES