Research Brief for the Lay Person: Measurement of Intangible Capital

Context

Our society is moving ever more towards a knowledge economy in which intangible assets such as innovation, brand, and information are the main sources of productivity and economic growth. The measurement of these assets therefore becomes a central task for researchers and policymakers concerned with the study of the knowledge economy. But intangible assets cannot easily be counted, and attaching a value to them raises several challenges.

My contribution

My research aims at improving the way we measure intangible assets and use such measures in practice. Most of my work so far concerns the measurement of technological innovations, with a focus on the use of patent data.

I have gone back to the root of the patent application process in order to develop and propose a new patent-based indicator: the worldwide count of priority patents. As the innovation process becomes more open and geographically fragmented, the usual practice of counting patents filed at a single country of reference becomes more difficult to justify. For example, inventions made by Swiss-based inventors are filed in many countries (see figure), which calls for a global measurement. The worldwide count of priority patents is particularly important for small open economies such as Switzerland but also large developing economies such as China. It is also particularly suited to the study of

Destination of patents by Swiss inventors

emerging technologies. (Together with Hélène Dernis, Dominique Guellec, Lucio Picci and Bruno van Pottelsberghe).
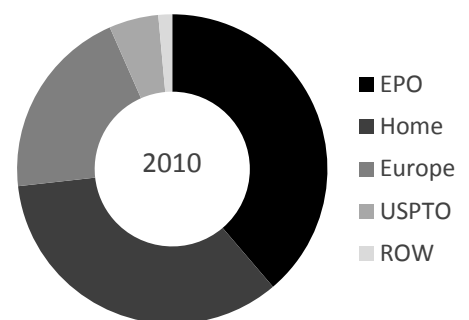
Yet many researchers still rely on patents filed at a single office of reference for their statistical analyses. For example, many studies of European firms rely on patents filed at the European Patent Office. The use of a single office of reference is sometimes conceptually appropriate, but more often the result of convenience sampling. I have also illustrated the pitfalls of such an approach and proposed a test to help researchers detect misleading statistical results. (Together with Anja Schoen and Annelies Wastyn).

Impact

The worldwide count of priority patents is regularly used in official reports. For example it was cited in a note from the *Conseil d'Analyse Economique*, a group of reputed economists advising the French Prime Minister. It is also regularly used in publications by the Institute for Prospective Technological Studies, a Joint Research Centre of the European Commission.

Ongoing research

Technological innovation is but one type of intangible asset, yet it has received most of the attention from the research community to date. I am currently studying how well we account for other types of assets such as brand equity and design. I am also involved in an international consortium which aims to provide a global view of trademark ownership using state-of-the-art image-matching technology. The resulting database will improve dramatically our understanding of global issues related to brand equity. (Together with Elizabeth Webster).

G. de Rassenfosse, H. Dernis, D. Guellec, L. Picci, B. van Pottelsberghe. 2013. The worldwide count of priority patents: A new indicator of inventive activity. *Research Policy*, 42(3):720–737

____, A. Schoen and A. Wastyn. 2014. Selection bias in innovation studies: A simple test. *Technological Forecasting and Social Change*, 81(1):287–299