Productivity Challenge: the Role of Technology Standards
ESRC DTP Joint Studentship

University of Nottingham and University of Warwick

The Midlands Graduate School is an accredited Economic and Social Research Council (ESRC) Doctoral Training Partnership (DTP). We are inviting applications for an ESRC Doctoral Joint Studentship between University of Nottingham (where the student will be registered) and University of Warwick to commence in October 2019. This award is open to applicants with backgrounds in quantitative social science and related disciplines, such as economics, business and management studies, social statistics and applied mathematics.

If you are interested in applying, please:

- check your eligibility to hold an ESRC studentship – see below
- complete the Joint Studentship application form available online here
- email your application form, along with academic transcript(s), a cover letter and a CV (including marks awarded to date plus details of two referees), to Karen Maltby (Karen.Maltby@nottingham.ac.uk). Shortlisted applicants will be required to provide two references.

Application deadline: Thursday 14 March 2019

Please note that only strong candidates (at least 2.1/Merit with elements of first/distinction level) will be considered. Informal enquiries can be directed to Dr Cher Li (Cher.Li@nottingham.ac.uk) or Prof. Giuliana Battisti (Giuliana.Battisti@wbs.ac.uk).

Midlands Graduate School ESRC DTP

Our ESRC studentships cover fees and maintenance stipend and extensive support for research training, as well as research activity support grants. Support is available only to successful applicants who fulfil eligibility criteria. To check your eligibility, visit: www.mgsdtp.ac.uk/studentships/eligibility/

Project Summary

Productivity Challenge: the Role of Technology Standards in Innovation and Internationalisation

First Supervisor: Dr Cher Li (Industrial Economics, Nottingham University Business School)
Second Supervisor: Prof. Giuliana Battisti (Strategy and International Business, Warwick Business School)
Industry Partner: British Standards Institution (BSI Group)

Technological innovation is a key driver of productivity. The apparently weaker productivity growth experienced in the UK (and some European countries) vis-à-vis North America has been linked to slower diffusion in Information Communication Technologies (ICT) and the lack of uptake of digitisation opportunities uniformly across economic sectors.

Technology standards play a significant role in technology diffusion with important implications for innovation, internationalisation and attendant productivity growth. A recent study commissioned by the British Standards Institution (BSI) and the Department for Business, Energy and Industrial Strategy (BEIS) suggests that standards supported 37% of UK annual labour productivity growth over the 1921-2013 period (i.e., approximately 28% of annual GDP growth). Recent academic research has also highlighted the importance of developing open technology standards as a spur to productivity, innovation and firm profitability. However, business-level mechanisms underlying the standards-productivity relationship remain a black box - a gap this research seeks to address by considering two predominant channels whereby learning from standards can enable performance gains, viz. by catalysing innovation and internationalisation activities.

This PhD project will offer novel insight into standards and technology-led productivity growth, which is a complex interplay between many distinct influences including innovative inputs, knowledge diffusion, market incentives, economic geography and institutional governance. Working closely with Dr Li and Prof Battisti, the PhD candidate will conduct a comprehensive literature review and econometric analyses, drawing on large-scale secondary firm-level datasets such as the UK Innovation Survey (and other micro business datasets via the Secure Research Service by ONS). This project will also use the Searle Centre Database on Technology Standards and Standard Setting Organisations – the most comprehensive dataset on standards and firm participation in standards development collected by the Northwestern University (US) (Baron and Spulber, 2018), as well as data on intellectual property such as patents and trademarks. Finally, this project will be carried out in close collaboration with BSI, the UK's national standards body, to yield significant governance or policy implications for designing effective standards which expedite the diffusion of technologies to boost firm performance.

The PhD project will provide a significant contribution to the academic literature. It is also anticipated to achieve high impact and wider engagement with business practices (via a deeper understanding of efficiency gains through learning from standards) and policy bodies (via productivity growth and governance of standards development).