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Response to call for evidence -
Business and Trade Select Committee
Inquiry: Industrial policy

January 15, 2024

I am a Senior Lecturer at the Institute for Creative and Cultural Entrepreneurship (ICCE), Goldsmiths, University of London with a PhD in economics. My research addresses innovation policy in the form of Intellectual Property (IP) policies. I focus on the economics of trade secrets and economic espionage, examining the role of the protection of industrial secrets in innovation.

I am Chair of the EPSRC Digital Security and Resilience Interim Advisory Board and a member of the UK Intellectual Property Office's (IPO) Research Experts Advisory Group. I hold a Thomas Edison Innovation Policy Fellowship at the Center for Intellectual Policy and Innovation Policy at George Mason University, USA and am a Visiting Fellow at the Centre for Innovation Management Research at Birkbeck, University of London. I served as a government economist at the UK IPO from 2013 to 2015.

My response to this call for evidence focuses on Economic security, and more specifically on IP policies and regulations, including the National Security Act 2023's implications for innovation.

Key points

1. The protection of UK intellectual property is important for a *healthy innovation ecosystem*.

2. This *protection must be balanced*: a healthy innovation ecosystem requires knowledge flows and the mobility of highly skilled employees, however protecting IP often means limiting precisely those flows.

3. The government should prioritize economic security policies that *foster long-term innovation rather than restricting the flow of knowledge for short-term gains*. Ensure that stringent protections, intended to safeguard UK innovation, do not inadvertently hinder its progress—avoid throwing the baby [valuable innovation] out with the bathwater [restrictive measures].

4. The government should focus policy interventions on preventing knowledge theft by implementing *awareness programs* and providing *business support*. Empower firms to effectively manage their knowledge so they can both protect against theft and unlock their full innovation potential.

1. What should the UK protect in order to support its innovation ecosystem?

a) The UK's innovation success, which underpins its economic security, stems from knowledge arising from research and development. Some of this knowledge can be protected via well-established domestic and international IP laws and regulations. However, not all knowledge enjoys this protection. **Secret knowledge related to UK innovations** has weaker protection from existing IP frameworks and is vulnerable to theft.
b) Secret information held by firms is often referred to as trade secrets. Most trade secrets are business confidential information, such as pricing strategies and customer databases. However, they can also be information relating to manufacturing processes or secret formulas. **Trade secrets are a valuable tool** for innovative companies. They are a very flexible type of intellectual property and can be used to protect a very wide range of innovations. Regulatory protections for these secrets have traditionally been limited by design, for a variety of reasons including balancing the rights of innovative firms with public interests in access to information and enabling the natural evolution of knowledge and innovation.
c) However, unlike other IP rights, the protection of innovations afforded by **trade secrets can be lost by theft**. The theft of trade secrets takes many forms and is often referred to as industrial or corporate espionage. When there is a foreign actor involved, either a company or a nation state, that is also considered economic espionage. For example, during the height of the Covid pandemic, there was concern among research labs that overseas governments were organising attempts to access trade secrets associated with Covid vaccines. These types of espionage raise many concerns in terms of business ethics, the rights of firms and economic and national security.

2. How efforts to bolster economic security should be balanced with other competing objectives?

a) Innovation is increasingly seen as a part of national security. A country's innovations are intrinsic to its economy, and protecting the economy, and its status relative to other countries, is a matter of national security. For the UK, **the protection of innovation secrets has become an integral part of national security,** as reflected in the UK's National Security Act of 2023 which strengthened punishments for economic espionage, and the National Protective Security Authority's (NPSA) Trust Research program. These policy changes arose amidst emerging tensions between the UK and its allies and countries such China, where disputes over the theft of trade secrets in the form of economic espionage have become a central point of contention.
b) *Benefits of protections*

i. The impact of the National Security Act and similar policies to protect trade secrets will be wide-ranging. For firms, the legislation **expands the protection of their innovations**. Research-intensive and manufacturing firms, particularly in AI, computing and biology, will benefit from increased awareness and the deterrent effect of such laws. These policies may also translate into greater security for sensitive technologies.

ii. The National Security Act and surrounding narrative acts as a **useful diplomatic tool** and **provides assurances** to innovators that economic espionage is being taken seriously. For instance, if a firm's largest market is China, having the UK government, not the firm, pursue an alleged Chinese misappropriation would shield the firm from retaliation. Similarly, the cautious approach advocated by the NPSA's Trusted Research program helps firms be aware of the threats to their secret information. Protecting UK innovation from rampant theft of valuable information by hostile states is a welcomed measure, as firms would struggle financially in the face of competition from others using stolen information.

c) Drawbacks of protections

i. However, there may be **unintended consequences** for innovation, as the limits on the dissemination of knowledge afforded by trade secret protection, including the National Security Act and the NPSA's Trusted Research program, will have a **chilling effect on UK research and development**. Innovation flourishes when knowledge flows freely and firms recruit the top talent. This is true for information at the firm, country and global levels. A focus on economic espionage and industrial espionage more generally, by encouraging firms to not share information, restricting the recruitment of highly skilled overseas workers, and government awareness programs to encourage researchers to work with 'trusted' collaborators, all raise the barriers to international recruitment and collaboration. Additionally, these policies can **increase the cost to business** as complying with regulations creates an administrative burden and this may not be proportionate to the benefits.

ii. A useful way to express these challenges is **the PhD on the plane**. Governments are concerned that highly skilled workers (PhDs) will leave the country (on the plane) and take with them valuable knowledge and skills. The loss of these workers means the loss of their potential contribution to domestic innovation but can also lead to secret information crossing borders, with a negative impact on competitiveness and future innovations. However, governments also want to attract the PhD on the plane. The recruitment of overseas highly skilled workers translates to a more successful domestic innovation. The US is a success example of how international recruitment is a massive boost to domestic innovation. However, anxieties about the PhD on the plane leaving the country translate to limitations on the PhD on the plane coming to the country.

d) Recommendations

i. Given that most trade secrets do not relate to sensitive technologies, I urge caution when linking national security with economic and industrial espionage, as this could ultimately damage the UK innovation ecosystem**. A right balance needs to be struck between protecting a firm's secret knowledge through restrictive measures and supporting innovation by encouraging knowledge flows and collaboration**. While expanding protection benefits existing knowledge, enabling knowledge flows is important in the long-term.

ii. Achieving that balance is best served through policy interventions supporting firms in managing their knowledge and trade secrets**. Business support** in terms of

awareness of how trade secrets can be lost, and the measures to prevent that, should be funded. Addressing the threats to secret knowledge is also **an opportunity** to enable better use of that knowledge. Helping firms better identify and manage their knowledge will enable them to better use that knowledge for innovation and be more strategic about protections.