

The 2019 Technology Transfer Society Annual Conference

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Session 2.2 – Chair: Pablo D’Este

Location – 108N

Title: The emergence of the software outsourcing industry in Ukraine: Past developments and future outlook

Authors: Anwar Aridi, Christopher S. Hayter

Presenter: Christopher S. Hayter

Abstract:

Ukraine has emerged as an increasingly popular global software outsourcing destination for U.S. and European companies. While a robust strand of outsourcing policy research in the early 2000s focused on the emergence of the “3 I’s”—India, Ireland, and Israel—as rapidly-growing outsourcing destinations (Arora and Gambardella, 2005), Ukraine was viewed as a “third tier” nation (Carmel, 2003). However, by 2018, Ukraine exported \$4.5 billion in IT services, with 18 of the International Association of Outsourcing Professionals (IAOP) top 100 outsourcing companies with offices in Ukraine employing thousands of software engineers and personnel. After reviewing the empirical literature on global outsourcing and policy, this study will empirically explore factors responsible for the emergence of a Ukrainian software industry, including the role of human capital and legacy education systems, connectivity to the Ukrainian diaspora, and tax and self-employment policies that accelerated its rapid emergence. These factors will then be compared to the development experiences of other outsourcing countries discussed in the literature. Finally, the paper will examine the outlook for the Ukrainian outsourcing industry within the context of that country’s challenging economic and political context, including its prospects for moving up the global value chain and contributing to domestic productivity growth. Implications for policy and management will be discussed.

Title: The Return on Investment initiative of the National Institute of Standards and Technology (NIST)

Authors: Courtney Silverthorn, Christopher S. Hayter

Presenter: Courtney Silverthorn

Abstract:

In 2018, the National Institute of Standards and Technology (NIST) established the Return on Investment (ROI) initiative to improve the transfer and impact of U.S. federal R&D investments. The goals of the ROI initiative are to: remove barriers to innovation, modernize R&D partnering models and tools, expand entrepreneurial ecosystems, and create increased opportunities to realize economic and social returns stemming from federal R&D investments. The initiative is informed by responses to a Request for Information (RFI) published in the Federal Register, four public meetings, a summit hosted by NIST, and multiple meetings with stakeholder groups. Findings from the ROI initiative will inform actions implemented through the Lab-to-Market Cross Agency Priority (CAP) goal, part of the President’s Management Agenda.

This paper focuses on findings stemming from the second strategy under the Lab-to-Market CAP goal: Increasing Private Sector Engagement. The ROI initiative evaluated challenges related to a) partnerships between federal laboratories and the private sector and b) attracting private sector investment in federally-funded technologies. Following these challenges, the paper presents specific recommendations for how to encourage and support partnerships, including the use of non-profit foundations, Partnership Intermediary Agreements (PIAs), Other Transaction Authority (OTA), and facilities sharing agreements. In response to the need to develop further federally-funded technologies, the report also recommends the limited use of R&D funds for intellectual property protection and examine ways to improve the impact of the commercialization-related outcomes of the SBIR program. Adoption of ROI findings and best practices is likely to result in increased economic and social returns.

Title: Estimation of indirect effects of technological platforms as technology transfer tool: The impact of French Technological Research Institutes on non-beneficiary SMEs performance

Authors: Ruben Fotso

Presenter: Ruben Fotso

Abstract:

Although knowledge spillovers are at the core of the innovation policy's justification, they have never been properly measured by any impact evaluation. This paper fills this gap by estimating the spillover effects of the Technological Research Institute (TRI) policy in France. The objective of the paper is to analyze and evaluate the indirect impact of innovation programs based on science-industry transfer to improve innovation policy decisions. More specifically, it analyzes and estimates the effects of technological platforms used as technology transfer tools, on the performance of non-recipient SMEs. For that, we consider the French TRI called "Nanoélec", one of the TRIs based on technological platforms, located throughout France. To evaluate the indirect effects, we focus on geographical proximity by considering that the non-recipient companies located in treated department are likely to benefit from local knowledge spillovers. To the best of our knowledge, this empirical work is the first impact study that seeks to evaluate the indirect impact of a TRI on the performance of SMEs. Technological platforms are one of the preferred tools in France to accelerate the knowledge transfer from science to industry. Despite their proliferation, their real impact on performance of the companies remains un-evaluated. Therefore, this study contributes to the literature on the indirect impact of technological platforms. This work also contributes to the literature on the evaluation of innovation policies based on science-industry transfer. Indeed, one of the foundations of these innovation policies is to generate the knowledge spillover that can benefit non-direct beneficiaries. Despite the importance of this policy, no empirical study, to the best of our knowledge, has sought to evaluate the indirect effects of these policies. From a sample of 270 SMEs observed over the period 2008-2016, the difference-in-difference method combined with matching methods tend to show that the non-beneficiary companies, located in the treated department significantly improve their socio-economic performance (turnover, financial autonomy and share of managers) compared to control companies located in the control departments. The analysis of the dynamic of the effects indicates that performance does not improve immediately after the treatment but rather with a time delay. Furthermore, it should be noted that the indirect beneficiary companies that effectively benefit from knowledge spillovers are constituted of

local control companies, that is to say, the non-beneficiary companies, located in the control departments, with similar characteristics than those of treated companies.

Title: The Alacrity Accelerator Network: An innovative Canadian accelerator model

Authors: Ben Spigel, David A. Wolfe

Presenter: David A. Wolfe

Abstract:

Accelerators are economic development tools that help regions spur the creation of new, innovative ventures as well as profitable commercial endeavours sponsored by large companies to create high-growth firms that they have an equity stake in. Though accelerators are a new phenomenon, the literature has already developed well-defined models and frameworks for accelerators, ranging from publicly supported ones with specific economic development goals to private, corporate accelerators designed to produce a profit for the accelerator managers or the companies that sponsor them. In both cases, accelerators exhibit a regular structure in which existing firms apply to enter the accelerator to receive investment along with intensive training and mentorship for a set period in exchange for equity in the firm.

Judged against existing structures, the Alacrity Accelerator Network (AAN) offers a unique acceleration model that combines elements of both public and corporate accelerators as well as employs a different strategy based on building successful entrepreneurial teams rather than accelerating existing firms. AAN, founded by Canadian high-tech serial entrepreneur, Terry Mathews, through the auspices of his investment firm Wesley Clover, has grown from a single corporate accelerator based in Ottawa to a network of nine accelerators with locations ranging from Victoria, British Columbia, Cardiff, Wales, to Pune, India and Singapore. Its operations are funded by a combination of investment from Wesley Clover as well as funding from local governments or philanthropic foundations looking for the accelerator to act as a training site for new entrepreneurs, a catalyst for local entrepreneurship, and a hub to build the local entrepreneurial ecosystem.

Rather than accepting existing firms into their accelerator program, AAN managers instead endeavour to create teams of high-quality graduates. AAN draws on partnerships with local universities and dealmakers to identify young, highly-skilled potential founders and brings them together to create diverse founding teams. Beyond this, AAN also seeds them with an opportunity sourced from one of Wesley Clover's partner organizations. AAN works with entrepreneurs to identify an opportunity and source their first customer. The specific structure has changed over time in response to both local contextual needs, the strategic goals of Wesley Clover and its public partners, and the availability of talented accelerator managers.

AAN represents a novel model for accelerators in two ways. First, rather than acting as a judge and curating access to the accelerator from existing start-ups, AAN acts more as a music producer, bringing together talented individuals and providing them with resources and opportunities. This shifts the goals of acceleration from training and resource provision to network brokerage and talent identification. Second, it combines features of public and corporate accelerators, drawing on the resources of an international investment firm while at the same time attracting public investment to achieve economic development and ecosystem goals. This raises new questions about the relationship between individual profit and broader regional economic development goals.

Drawing on interviews with AAN managers and entrepreneurs along with contemporaneous media reports and government documents, we profile AAN's activities, evolution, and impact. This case study advances our understanding of new forms of accelerator networks and how they adjust their activities to correspond to local contexts and needs.