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Session 4.3 – Chair: Sandra Schillo

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Title: Genesis at work: Advancing inclusive innovation through manufacturing extension

Authors: Nichola Lowe, Greg Schrock, Ranita Jain, Maureen Conway

Presenter: Nichola Lowe

Abstract:

Inclusive innovation is a generative concept that offers a hopeful portrait of our economic future—not one in which technological advances displace up to half the current workforce, with little mercy for those already struggling to make ends meet—but one that instead repositions potentially vulnerable segments of the working population as critical actors in an on-going drive to support new product development and process improvements. This concept of inclusive innovation is particularly inspiring for U.S. manufacturing, helping challenge a dystopian narrative in which frontline production workers will be displaced by advances in automation and robotics and thus at risk of further economic marginalization.

But this inclusive turn within innovation studies also has its limits, most notably the tendency to narrowly focus at the individual worker level, pushing investments in higher education as a panacea for extending economic opportunity. What this educational-fix obscures are a deeper set of organizational challenges that keep many businesses from fully engaging their frontline workforce and with it, tapping their creativity and ingenuity, regardless of formal educational attainment. While workforce training can play a critical role in that effort, such investments—in isolation—do little to transform established business practice in order to ensure there is organizational capacity and wherewithal to “pull in” and inspire a skilled workforce.

This paper draws on a three-year, mixed-method evaluation of a novel business-facing initiative called the Genesis Movement, to understand its role in reshaping the workforce experience within SME manufacturing businesses in Chicago, Illinois. Genesis was launched in 2014 by the Illinois Manufacturing Excellence Center (IMEC), with seed funding from local and national foundations. Housed at Bradley University in northern Illinois, IMEC is part of the Manufacturing Extension Partnership—a nation-wide network that was established by the U.S. Department of Commerce in the early 1990s to improve the competitiveness of small- and medium-sized manufacturing enterprises.

Genesis represents a major departure to more conventional approaches to manufacturing extension, which often focus on short-term projects to promote efficiency and productivity improvement through “lean” manufacturing principles. By contrast, Genesis-enrolled firms commit to a 24 month strategic planning process with the ultimate goal of integrating concurrent improvements to job quality with advances in business performance. While non-profit workforce service providers have long attempted to secure a similar job quality commitment from smaller firms, the Genesis experiment is the first to involve a federally-funded manufacturing extension program—one with a successful history of promoting innovative business strategies and technological modernization. We find that Genesis firms adopt an inclusive organizational culture, using frontline worker engagement, skills training and job quality improvements to drive firm performance. As such, Genesis offers a scalable model with the potential to expand across a national MEP

network already serving thousands of manufacturing businesses that collectively employ hundreds of thousands of workers.

This paper supports Genesis diffusion by offering insights for how other North American regions can leverage government and university commitments to manufacturing extension to inform technological progress and in ways that are inclusive of the frontline workforce. It also suggests opportunities for manufacturing extension providers to partner with workforce-service and advocacy organizations in order to magnify their combined impact on inclusion and innovation.

Title: Responding to technological disruption: Active labour market policies and the problem of access bias

Authors: Alix Jansen

Presenter: Alix Jansen

Abstract:

In the face of labour market frictions and the “new” social risks of the 21st century, many countries have adopted a human-capital focused approach to welfare in which upskilling a country’s population is seen as a path to inclusive economic growth (Gingrich & Ansell, 2015; Hemerijck, 2015). Active labour market policies and programs are a central tenet of the social investment approach worldwide, and a core pillar of the Canadian Government’s Inclusive Innovation strategy. By providing work experience and skills training to unemployed people, activation policies present a plausible policy mechanism for responding to technological disruption of the labour market. While much can be said about the *effectiveness* of active labour market policies, my work analyzes active labour market policies from a different angle. I ask, if ALMPs are to support displaced workers, do all unemployed people have equal access to this form of retraining?

My work is centrally concerned with the possibility of access bias in activation policies. Access bias occurs when some social group is better able to access a given social policy tool. Access bias is representative of the accusation that social investment policies have Matthew Effects (Bonoli & Liechti, 2018; Cantillon, 2011): benefits accrue to the already-advantaged. In this paper, I identify how Canada compares with OECD countries when it comes to access to training for people who are unemployed. I analyse data from the OECD’s Survey of Adult Skills (PIAAC) to identify variations in who receives access to training out of the unemployed populations of each country. I analyse four main axes of potential access bias: education level, migrant status, length of unemployment spell, and gender. I then discuss how differences in access bias between countries reflects variations in the design and delivery of active labour market policies. In doing so, I provide an assessment of one aspect of inclusivity in response to technological disruption of work.

Title: Using convergent innovation to achieve inclusive innovation goals: A modular governance framework for addressing complex social problems

Authors: Srivardhini Jha, Richard Gold, Hassan P. Ebrahimi, Laurette Dube

Presenter: Hassan P. Ebrahimi

Abstract:

This paper presents a conceptual governance framework to address complex social problems at the base of communities more broadly. Using the Convergent Innovation (CI) approach as a basis and building on theoretical foundations in modularity, network brokerage and interdependence, we propose that modularization in these contexts is a dialectic, emergent process that brings together a convenor-led network formation with consultative problem definition and solution design. We also posit that social systems are imperfectly modular and need purposefully designed interface governance to integrate the modules. Finally, we elaborate on how modularity may be leveraged to simultaneously observe the interests of participating actors and deliver societal value, making the solution sustainable and scalable and addressing the distribution of value appropriation among innovating actors. The propositions together advance a governance framework for a modular, multi-actor adaptive system capable to offer innovative solutions for the dynamic diversified social problems.

Methods:

This paper develops a conceptual framework for governance of an innovation approach as solution for addressing complex social challenges. The governance framework draws out the key insights that would inform the development of the framework and identifying the critical gaps that exist. We build on convergent innovation as an extension of inclusive innovation as a starting point and complement this literature with two bodies of literature to advance the governance framework. First, we leveraged the literature on modularity. Modularity provides a way to break down complex systems into manageable components. Then, we married this with the literature on network governance. In such an approach, each module is perceived as a collaborative inter-organizational network that may have a range of governance mechanisms based on the characteristics of the network.

Results:

The developed governance framework enables to: first, manage the scale of the problem by involving a variety of actors in the solution, and breaking the problem down into a set of modules that each address a part of the overall problem; second, manage the modular interfaces to stitch components together to create a solution system; and third, in order to make these collaborations sustainable and effective on sufficient scale, it simultaneously creates value to participants and to society at large. CI proposes forming cross-sectoral, collaborative platforms between different actors. In such a scenario modularity can leverage the capability of the actors. We posit a convenor is required for understanding the larger problems, involving and orchestrating a network of actors.

Conclusions:

The governance framework advanced in this paper makes several important contributions. First, it provides a theoretically-grounded actionable framework for addressing complex social problems. Second, it extends modularity into the social sphere. Third, it paves the way for discussing how society can harmonize the engines of wealth creation and societal well-being. We advanced the conversation on addressing pressing complex social problems in three ways. First, while our paper takes CI as the entry point, the modularity-based governance mechanism we advanced can be extended to other solution types. Our framework resolves the dichotomy of whether a top-down or a bottom-up approach is more suitable to address complex social problems by arguing that a convener is needed to catalyze and facilitate solutions by bringing together

actors and positioning their respective interests, capabilities and actions in relation to that of others. Third, our framework contributes to research on collective action to address complex systemic challenges. Summarily, the framework provides an actionable and scalable solution to address inclusive innovation goals such as responsibility in innovation.

Title: Manufacturing space for inclusive innovation? A study of maker spaces in southern Ontario, Canada

Authors: Tara Vinodrai, Christian Zavarella, Brenton Nader

Presenter: Christian Zavarella, Brenton Nader

Abstract:

Is the maker economy a potential avenue for inclusive innovation and equitable economic development? Buoyed by growing public interest in do-it-yourself culture, localism, and sustainability, cities around the world – and, especially in North America – have witnessed growing interest in the maker economy. Policy think tanks and urban advocates, including the Brookings Institute and the National League of Cities, have observed the growth of maker spaces that provide access to affordable manufacturing technologies, like 3D printers, laser cutters, and CNC machines. Optimistic accounts suggest that these maker spaces provide foundational and inclusive spaces for learning, skill development and knowledge transfer, as well as business incubation and prototyping infrastructure for artisanal manufacturers, micro-manufacturers, and entrepreneurs. Moreover, such spaces offer potential institutional supports for would-be entrepreneurs, especially those from historically marginalized communities and low-income groups. These trends, coupled with the rise of digital platforms that connect designers with manufacturers or customers with artisanal and craft manufacturers, suggest that maker spaces may be a potential tool for pursuing more inclusive and equitable forms of urban innovation and economic development.

Yet, little is known about the practices of maker spaces, including how they support entrepreneurship and innovation or promote social and environmental sustainability. In an effort to address this gap, this paper asks if (and how) maker spaces promote inclusive forms of innovation and economic development. To explore these questions, this paper draws on a study of maker spaces in southern Ontario. The paper presents an analysis of a unique database of maker spaces across the Greater Golden Horseshoe (GGH) region, as well as findings from in-depth case studies exploring the economic, social and environmental goals and practices at leading maker spaces located in large and mid-sized cities in the GGH region.

The study finds that while there is some evidence that maker spaces actively and explicitly seek to be socially inclusive in their membership and activities, there is limited evidence that this translates into the entrepreneurial, business and economic outcomes touted by urban policy advocates. In other words, while the academic and policy literature on urban manufacturing and maker spaces suggests that these new local institutions hold promise as spaces for new economic potential, social inclusion and progressive environmental practices, it is unclear that this promise is fully realized. Thus, the paper raises questions about the current potential of maker spaces for creating higher quality jobs and inclusive innovation and economic development in North American cities.