Community-based research: Engaging universities in technology-related knowledge exchanges

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ABSTRACT

Many universities are disengaged from their local regions. While universities are hotbeds of knowledge with the potential to generate new and disruptive technologies, their development strategies and public relations engagements rarely emphasize the potential of universities to act as local and regional economic engines. Similarly, information systems (IS) and other scholars generally aim to make international, not local impacts. Local contributions are often viewed as distractions from more visible and highly rewarded roles in the global scholarly community, such as publishing in international journals. This Global Challenge article argues that universities' local ecosystems are appropriate targets for IS scholarly activity, particularly when this is undertaken in the form of community-based research (CBR). Following conceptual discussions of 'community' and key elements of CBR, we draw on the authors' personal research experiences to evaluate the potential contributions of IS scholars in terms of CBR projects focused on technology-related knowledge exchange. After outlining implications and potential future directions for IS researchers, we close by presenting a call to IS scholars to intensify their local ecosystem research collaborations in technology-related knowledge exchanges contexts, in order to increase the relevance and local impact of their research.

1. Introduction

Many universities are disengaged from their local regions. While universities are hotbeds of knowledge with the potential to generate new and disruptive technologies, their development strategies and public relations engagements rarely emphasize the potential of universities to act as local and regional economic engines. The University of Cambridge public website, for example, has a section dedicated to 'Global Cambridge' (which describes Cambridge as 'a global university'), but no comparable section for 'Local Cambridge' (although there is a thriving 'Silicon Fen' established around the university). Similarly, the Queen's University website prominently highlights its international engagement but only recently created a brief 'Queen's and Kingston [the local community]' section.

Information systems (IS) and other scholars within the 'ivory towers' generally aim to make international, not local impacts. They seek to assist the university in achieving prized international rankings by gaining visibility as global scholars, principally by publishing in a select group of international academic journals. Local contributions are often viewed as distractions from these more visible and highly rewarded roles in the global scholarly community. This Global Challenge article argues for the importance of universities' local ecosystems as appropriate targets for IS scholarly activity. While global engagement is to be applauded, local challenges should not be overlooked. IS scholars can make significant contributions in the context of local crises (e.g., in the light of natural disasters and terror (Leong, Pan, Ractham, & Kaewkitipong, 2015; Levallet & Chan, 2018), economic opportunities (Chan, Jacobs, Dixon, and Ragetlie, 2013; Chan, Dixon, and Dukelow, 2013; Srivastava & Shainesh, 2015), and moral imperatives (e.g., the expectation that universities and scholars will be good citizens (Ahuja & Chan, 2014)).

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We argue that IS scholars in today's universities can increase the local relevance of their research by increasing their involvement with the communities and regions in which they are located. By working in multidisciplinary teams that incorporate industry representatives as well as academic staff, and by focusing on community challenges that involve IS-relevant themes (e.g., relating to technology, organizations, or knowledge management), IS researchers working in university contexts can become more effective citizens of their cities and economies.[1] In this article, we focus on the potential contribution of IS scholars to technology-related knowledge exchanges in universities' local ecosystems. Technology-related knowledge exchange involves the transfer and transformation of technological expertise, broadly interpreted to include, for example, technical knowledge, user experience and organizational insight, from one organizational location to another. We define university ecosystems as local systems constituted by inter-organizational exchanges and collaborations that address stakeholder needs and seek to advance the collective good by mobilizing scientific and technical insights from within academia (Nkhata, Breen, & Freimund, 2008). Ecosystems seek to tackle community meta-problems that transcend the boundary of any single organization, thus presenting rich opportunities for local engagement and transformative change. By engaging with these opportunities, IS scholars can make significant contributions to pressing challenges within their university ecosystems, while also contributing critical perspectives that acknowledge the limits of transformation in specific contexts.

Below, we first consider definitions of 'community' before outlining key elements of community-based research (CBR). We then outline the importance of community-university technology-related knowledge exchanges and consider the contributions that IS researchers can make in this context. To do so, we highlight the value of the mobilization of IS research findings that affect communities (e.g., on broadband deployment, digital platforms, digital ecosystems, and sustainability). We illustrate these exchanges using research that authors have personally conducted or coordinated. That is, we use both the literature and our own personal experience (e.g., Chan, Jacobs, Dixon, et al., 2013; Chan, Dixon, et al., 2013; Farrington, Isabel, Holland, Barrett, & Oborn, 2014). After outlining implications for IS researchers, we close by presenting a call to action to IS scholars to intensify their local ecosystem research collaborations in order to increase the relevance and impact of their research.

2. Defining community

While the term *community* is commonly used by scholars, practitioners, and citizens (Chavis & Wandersman, 1990), the term has multiple potential meanings depending on context. Gusfiled (1975) proposes a useful distinction, dividing potential meanings of the term into two main categories: (a) community as geographical place, based on neighborhood, city, region, state, or international region, and (b) community as a set of human relationships, which are not necessarily bounded by geographical limitations. The two categories are not mutually exclusive: individuals' sense of community is shaped both by relationships and locality, such that, for instance, integrating a focus on individuals' relational quality in the design of public spaces can build a holistic view of the community (McMillan & Chavis, 1986; Talen, 1999).

Additional dimensions of communities can also be canvassed, including linguistic, ethnic, political, environmental, and economic communities. Christopherson and Clark, for instance, define regions as spaces of 'coherent economic interests' and 'natural economic unit[s]', thus adding an economic dimension to the geographical and relational concept of community outlined by Gusfiled (1975). Consequently, in this article we use the term 'community' to allude to geographical place, locally-rooted relationships, and local economic activity, referring at once to local geographical regions in which universities are physically placed, the range of knowledge and technology exchange relationships that characterize local university ecosystems, and the economic dynamics that thereby arise.

3. Challenges and opportunities in community-based research (CBR)

Jason and Glenwick (2016: 2) discuss the challenges of studying community-based phenomena and undertaking community engagement, emphasizing in particular the need for multidisciplinary strategies to address complex challenges. They state, for example, that 'impediments that communities confront, such as inadequate resources or insufficient technical knowledge, may require a variety of different strategies'. Similarly, SSHRC (the Social Sciences and Humanities Research Council, a Canadian funding agency) argues that '[c]ommunities are presented with an increasingly complex mix of opportunities and challenges with multiple social, economic and cultural dimensions' (SSHRC, 2012). They go on to suggest that local challenges are 'best addressed at the local and regional levels by the local and regional groups that best understand the needs of, and the factors affecting, particular communities', and make particular reference to the potential for stronger linkages between universities and community organizations:

> [These alliances] can be enormously effective and yield important benefits for them both … [by] foster[ing] new knowledge, tools and methods to develop the best strategies for diverse aspects of intervention, action research, program delivery and policy development that will be appropriate for our rapidly changing times. (SSHRC, 2012).

Recognizing that universities typically prioritize international over local communities, Halseth et al. (2016: 5) note that 'universities are being prodded to be more relevant to the conditions and challenges facing [local] society,' adding that '[r]esearch should

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[1] The concept of university-industry collaboration is increasingly receiving widespread attention. It is argued that universities not only play a critical role in generating knowledge but also facilitate knowledge and technology transfers to industry domains. Researchers have studied various mechanisms (e.g., commercialization and collaborative research) that result in the transfer of knowledge from university to industry domains. For more information, see the review articles by Perkmann et al. (2013) and Ankrah and Al-Tabbaa (2015).