Innovation Across Borders: Supporting Startups Globally

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Abstract
This research focuses on the role of accelerators in fostering startups globally. While the focus of these structures has typically been on promoting global expansion, local accelerators have a unique opportunity to teach local entrepreneurs and foster a focus on problems and solutions in specific contexts.

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ICT4D; HCI4D; innovation; entrepreneurship

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Global Startup Growth
The rise of modular software and the emergence of inexpensive cloud computing has set up the next generation of computing, and this is also the cornerstone for today's emergence of startup scenes globally [6] Accelerators are one key element helping shape startup innovation hubs all over the world. Accelerators, short-term incubators that foster technology startups, attempt to appropriate many elements of Silicon Valley and apply them in different global contexts. They bring together cohorts of technology startups in various global locations to help them develop their teams and prod-

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ucts and learn from and connect with others in the ecosystem in a limited-duration "bootcamp."

Since 2005, accelerators have exploded onto the global technology scene, playing a vital role in shifting flows of migration, influence, and ideas globally. As of early 2015, there are an estimated 230+ in 33+ countries now [2]. A 2013 survey of accelerators found that 73 percent were fewer than five years old [5]. And while the majority of research is largely limited to accelerators in North America and Europe, in the developing world, their annual growth rate is 20% [3].

Many founders come in focusing on a specific problem or user base with which they are familiar. But, in the accelerator world, the attitude is: "Successful entrepreneurship policies should acknowledge that the most successful startup and teams are 'born global'" [7]. Underlying this are some implicit assumptions that value created via global impact is greater than local impact. And this is fundamentally at odds with where the greatest potential impact for accelerators lies: the decentralization of technology production. Rather than functioning as worldwide scouts for the next big global, scalable technology product or pathways through which to take an existing technology to meet new markets, accelerators could have a much larger impact in creating value for different user groups— smaller, marginalized, or otherwise neglected groups, often where the startups are located. And it can do that by leveraging what it already has: teams with local knowledge from all over the globe.

Local Potential

Paul Graham of Y Combinator has equated the rise of startups as a significant revolutionary force on the scale of agriculture or industrialization. But unlike other revolutions, he argues, the startup revolution does not need local producers. Anyone can create software, Graham says, but it's most likely going to come from an ecosystem like Silicon Valley [8],p. 237). But most founders' ideas are drawn from their experiences or something in their personal lives. A major criticism of Silicon Valley startups is that they often design for themselves: middle- to upper-middle class, educated, fairly affluent. They are not particularly oriented to global scalability either; they just have the early adopters to show enough growth to justify investment. Not only are women and minorities underrepresented [9] there is an "echo chamber" that creates a closed system in terms of what is considered novel, useful, or innovative. But rather than technology being created by Silicon Valley startups for the rest of the world, the accelerator model has the potential to help foster entrepreneurs all over the globe.

One of the major potential benefits of the global expansion of accelerators is that they can enable local knowledge to play a role in innovation, which Brown and Duguid [1] have argued for. At a local level, entrepreneurs have a greater understanding of the context or problem space in which they are creating a product. Encouraging entrepreneurs in different regions to address problems that are local or regional first, rather than globally scalable has huge implications for the types of startup products that are created and the user groups that are focused on, particularly smaller, marginalized, or otherwise neglected groups. This does not mean they won't necessarily become scalable. Innovation need not be top-down. There are many examples of successful reverse- or resource-scarce innovations that have become widely adopted beyond their original

focus. However, this requires a system change in the way innovation is measured and funded. It requires different metrics that account for sustain-ability and long term benefits to society, such as an impact factor and dynamic needs/solutions evaluations. Research should look more closely at measures of failure and success, and also more closely at different types of accelerators— particularly those which are focused on social innovation. Which teams and products succeed and why?

Rather than functioning as worldwide scouts for the next big global, scalable technology product or pathways through which to take an existing technology to meet new markets, accelerators could play a role in enabling access to the methods, mentorship, education, networking, and funding that are needed in local or regional markets, where tailored technological solutions to problems are unlikely to come from a large multinational or other source. This could play a major role in developing regions.

Proposal

Lots of people talk about disruptive innovation and evolution versus revolution in the innovative product. The bigger debate about evolution versus revolution appears to be in the practices, the spreading of this model around the world. The explosion of accelerators over the last decade has been revolutionary in that it brought a little bit of Silicon Valley to places all over, for better or worse. But each of these places is now slowly evolving that model differently.

This research was the focus of my dissertation, which was conducted through ethnographic research at accelerators in Singapore and Buenos Aires. I would like to push this work further and collaborate with others to better understand the ways in which structures and processes (in HCI and beyond) could support local entrepreneurs focusing on challenges unique to their contexts. I have accelerator and startup contacts in a variety of ecosystems globally. What I seek are researchers interested in focusing on how to help startups conduct research and design activities in service of developing their locally- or regionally-focused startup projects.

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