Project Boost: Addressing the "Socio" in a Socio-Technical System to Improve Income-Earning Opportunities in Urban America

Vaishnav Kameswaran
University of Michigan
vaikam@umich.edu

Meghana Marathe
University of Michigan
marathem@umich.edu

Tawanna Dillahunt
University of Michigan
tdillahu@umich.edu

Joyojeet Pal
University of Michigan
joyojeet@umich.edu

Katharina Reinecke
University of Washington
reinecke@cs.washington.edu

Kentaro Toyama
University of Michigan
toyama@umich.edu

Abstract

"Sharing economy" ventures such as Uber and Airbnb use rhetoric that claims to provide income-earning opportunities for those seeking them. Research to-date, however, suggests that the people who most benefit from these services are those with significant advantages to begin with. In other words, even effective, widely accessible technology isn't enough to address socio-economic divides on its own. We propose Project Boost, which seeks to document all of the non-technological elements required for citizens of Detroit to benefit from online income opportunities. In particular, we seek to understand what residents who wish to earn income by giving local tours require beyond a website. We have already begun on the project, and at the workshop, we would like to continue planning with our geographically scattered team, and invite others to work with us or attempt similar programs in other cities.

Author Keywords

HCI4D; ICT4D; Sharing Economy; Sociotechnical system.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

The last few years have seen the rapid rise of sharing economy ventures such as Uber and Airbnb, which often market themselves as tools for earning income. Uber workers, for example, are lured by the promise of incomes as high as $90,000 a year and flexible work hours [7].

But while the lure is evident, the reality is very different. Far from guaranteeing a consistently high income, workers suffer from low pay, uncertainty, and poor morale. Critics cite a range of problems. Uber, for example, is widely seen as an aggressive company seeking to maximize profits by taking as large a portion of the fare as possible, thereby leaving less for drivers [11]. Others point to the dangers of "micro-outsourcing," which tends to create low-paid work with no job security, no retirement plan, and no health insurance [8].

What is most contrary to the rhetoric, however, is that the people who could most benefit from a new source of income are often unable to do so on these platforms. Research by Hall and Kruger shows, for example, that almost two thirds of Uber drivers workforce already have a part-time or full-time job and use the service only to augment their income [5]. Uber requires drivers to have their own vehicles; to pass background checks; and to have sufficient customer service skills to maintain a high average rating from passengers. Similarly, Airbnb requires that a person have an additional room to rent. Softer constraints include the ability to provide basic hospitality, as well as owning a house in a reasonably safe neighborhood. In other words, what economics and sociologists call "structural" advantages are a prerequisite to earning income from sharing economy services.

HCI for Social Change

Increasingly, human-computer interaction has turned towards projects intended to cause some kind of social change. One brand of this, for example, is HCI-for-development (HCI4D), in which the goal is to design technology to support socio-economic development, often in the developing world [9,10]. Projects include the use of digital technology in rural education, e-governance for political transparency, and IT systems for disaster management, among others [1].

Approaches in HCI4D aim to make interfaces accessible to low-resource settings while being sensitive to local meaning and culture. Researchers make extensive efforts to understand the local social context, and often employ participatory methods whereby technologies are designed alongside potential users.

Nevertheless, these projects are characterized by an emphasis on the clever gadget or the user-centered design of technology – the "C" in "HCI" – with little attention paid to nurturing the "H," the social side of the socio-technical system that they are necessarily a part of [2][6]. One argument along these lines suggests that technology alone, even when well-designed, is not sufficient for social change [12]. Social change requires that people themselves undergo some kind of transformation, whether it is more learning, increased ability to work together, or something else.

Background

In the proposed project, we seek to understand the social elements that are required for people to fully take advantage of online opportunities to earn income. We propose to study this in the context of urban America. We start in Detroit, where a multi-decade economic decline has taken its toll on the city. Two thirds of its residents have left the city from its peak, and its median household income is $26,095, about half of the national average [13]. Many residents are eager to find new or supplemental forms of income.

Potential income-earning opportunities abound online, precisely because the Internet is so far-reaching and convenient that it is a superb means to connect buyers with sellers. Given the wide range of opportunities, we would like to focus on one that is unique to the residents of Detroit: It should be something that Detroiters have special insight into or skill for; it should be something requiring minimal start-up cost; and ideally, it should be something that brings revenue into communities [3] in addition to the city.

After considering several ideas such as generating local stock photography or supporting food carts, we settled on a project to assist Detroit residents to give tours of their neighborhood. This idea satisfies all of the constraints mentioned above, and it is a service that can be readily marketed online via a website. Our research aims to explore what it will take to support individuals (or groups) who are interested in giving such tours: technical support (i.e., a website with marketing content, a payment system, and a means to book tours), but also other kinds of support required for the tour guides to earn a consistent stream of income. In light of our dual emphasis on causing change while also observing the work required, we place our research methodology within the action research paradigm [4].

Our project crosses borders in at least two ways: First, it is a collaboration between people for whom the Internet provides obvious opportunities and those for whom the opportunities are more opaque. Second, it crosses the socio-technical divide by taking "socio" issues seriously: not merely as unexpected quirks to design for or around, but as forces requiring nurturing in themselves for the whole system to have impact.

Preliminary Investigation

Several of us have already begun preliminary investigations along the lines outlined above. We met with a family interested in the project, as well as with a non-profit organization that supports community development. Below, we discuss some of the initial meetings with the family.

P1 contacted us by phone and expressed interest in working with us. She mentioned that there were at least three more people who would be interested in the idea - her brother (P2), an aunt (P3), and a family friend (P4). We met with the four participants on Detroit's Grand River Avenue, in an area rich with graffiti and street art. They gave us a tour of the neighborhood that took about 45 minutes. They told us a bit about the history of the area, and P2, who has a history as a graffiti artist, explained something about the techniques that graffiti artists use. The participants were warm, friendly, and knowledgeable – P3 and P4, for example, spoke at length about their childhood memories of the 1967 Detroit riots, answering all the questions we had for them – about the neighborhood

and the artwork. At lunch, we discussed the potential of a graffiti tour. Among some of the concerns expressed were…

- Lack of technical know-how: Who would build the technology solution to aid/market their endeavor? Would it be easy to use?
- Uniqueness: How could they set themselves apart from the rest of their competition? There are other tours in Detroit.
- Tour specifics: Should tours be given by one person or as a group? Who would handle transportation infrastructure if the tour were to extend beyond a single neighborhood? How much should they charge?

These are questions we expect to collaboratively answer as we continue the project.

Proposal

For the workshop, we propose to gather all of the initial research participants of this project (currently at separate institutions), and to seek additional collaborators. Among other things, there is no reason why the online platform couldn't be shared among multiple sites.

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