



Higher education institutions and entrepreneurship in underserved communities

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Abstract

This study examines the experiences of business development centers in higher education institutions (HEIs) to promote entrepreneurship in underserved communities. It draws experiences and perspectives from multiple stakeholders to examine the contribution of HEIs toward equitable economic development and social renewal. Based on extensive qualitative data analyses, this study highlights the role of HEIs as anchor institutions and intermediary enablers of economic development in bridging traditionally split efforts between different university missions. The findings contribute to research and practice on entrepreneurship education and universities' engagement in fostering inclusive entrepreneurial ecosystems and equitable growth through entrepreneurship.

Keywords Anchor institution · Inclusive entrepreneurial ecosystem · Entrepreneurship education · Underserved community

Introduction

With the increasing importance of higher education institutions (HEIs) in the regional innovation and governance system, entrepreneurship and business development programs institutionalized within universities have thrived unprecedentedly in recent years (Dill 1995; Morris et al. 2013; Sá 2011; Sam and Van Der Sijde 2014). These university centers create innovative curricula and provide experiential learning to train current and next-generation entrepreneurs. They also incubate new firms and foster their growth through collaboration with governments, business communities, and different organizations (CFEE 2014). Despite the rapid growth of these programs and accumulation of literature in this area, few studies have focused on entrepreneurship education in underserved communities (O'Brien et al. 2019).

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The underserved community in this study is defined by two dimensions. First, it refers to racial or ethnic minority and women owned businesses because disparities across ethnic and gender groups have severely impeded ethnic minorities' and women's social, economic, and political advancement through entrepreneurship (Bates et al. 2018; Fairlie and Robb 2008). Second, it encompasses entrepreneurs in geographic areas characterized by high rates of unemployment, poverty, and lack of resources for entrepreneurship. Because segregation by race and class remains prevalent in many U.S. cities, geographic and socioeconomic disadvantages often overlap with race and ethnicity in disadvantaged neighborhoods (Connor et al. 2019). Therefore, the businesses in underserved communities in this study comprise ethnic minority and women owned businesses, as well as businesses in disadvantaged neighborhoods who face great challenges in starting and scaling up their businesses.

This study examines emerging, but vibrant efforts from a group of business development centers in HEIs that explicitly focus on promoting entrepreneurship in underserved communities. Based on the experiences from multiple stakeholders, it examines the contribution of HEIs toward equitable economic development and social renewal through entrepreneurship education in underserved communities. Specifically, it addresses the questions:

- How do these programs impact the underserved communities?
- What major factors are key for these programs to develop?
- What do their experiences contribute to our understanding of HEIs' roles in society through entrepreneurship education programs?

It finds that, although still nascent, these types of programs have great potential to stimulate growth in traditionally disadvantaged communities, sustain private sector and government support, and foster trans-disciplinary collaboration and community engagement.

Given that there is little research regarding universities' role in fostering entrepreneurship initiatives among underserved communities (for an exception see O'Brien et al. 2019), this study expands existing knowledge on university-led collaborative entrepreneurship support programs that are traditionally dominated by practices of technology transfer and university spin-offs. It provides an exceptional case of HEIs' involvement in communities that can bridge split efforts of economic development and community engagement. It also extends the focus of entrepreneurship practices from mainly economic and technology measurement to include such dimensions as quality of life, sense of community, equitable growth, and inclusiveness (Blenker et al. 2012; Brush et al. 2019). In addition, by focusing on businesses in underserved communities, findings from this study will help inform public policy and practice in addressing disparities and inequality issues, poverty alleviation, and neighborhood revitalization through entrepreneurship education programs.

University, entrepreneurship, and underserved communities

HEI's role in economic development and university entrepreneurship centers

Extant research and practices have long espoused the concept of entrepreneurial university and HEIs' role as drivers of economic development (Buchbinder and Newson 1990; Sá 2011; Sam and Van Der Sijde 2014). Beginning in the 1970s, universities have increasingly emphasized

more applied research of greater relevance to industry, technical knowledge diffusion, and provision of technical support to industry (Huggins and Johnston 2009). Particularly in the high-tech sectors, collaboration between universities and their local stakeholders is becoming a key success factor for innovation, entrepreneurship, and regional development (Audretsch 2014; Audretsch et al. 2019; Jongbloed et al. 2008). A triple helix model of “university–industry–government” is often employed to describe the interactions and intermediation between government, industry, and universities (Brem and Radziwon 2017; Todeva 2013).

Entrepreneurship education programs have especially proliferated since the 1980s (Solomon 2007). These university-based entrepreneurship centers are an important vehicle for a range of programs and services to advance entrepreneurship and economic development (Béchar and Grégoire 2005). Linking universities and communities, these centers “organize, facilitate, support and direct faculty involvement with small and emerging businesses” (Katz 1991, p. 92). Incubators, pitching opportunities, training, consulting, facilitating access to funding, and assisting with business plan preparation are just a few examples of how a university-based entrepreneurship center plays a role in entrepreneurship and business development (Rauch and Hulsink 2015; Zhang and Hamilton 2010).

Research has suggested that these centers have multiple impacts. For students, the programs can develop an entrepreneurial culture by increasing students’ knowledge about, and interest in, identifying and exploiting entrepreneurial opportunities. They can also help students gain self-confidence and learn how to work on a team (Pittaway and Cope 2007; Rauch and Hulsink 2015). For businesses, these programs can help increase profitability, implement organizational change, and help them grow (Gartner and Vesper 1994; Plewa et al. 2015). For universities, entrepreneurship centers can be an excellent source of revenue, encourage student–faculty engagement, and engage stakeholders to create networks with multiple partners for outreach and economic development (Finkle et al. 2013; Nowak 2016).

However, these entrepreneurship centers’ activities seldom have an explicit commitment to the underserved communities (O’Brien et al. 2019; Pugh et al. 2016). As an exceptional case based on the experiences of two university-sponsored centers for women entrepreneurs in the U.S., Riebe (2012) argued that these centers offer distinctive and considerable benefits for women learners and local communities, and provide innovative and powerful opportunities for HEIs to advance their educational missions. However, efforts to address opportunities for diverse populations related to economic and social equity in underserved communities, have largely been overlooked (Farrant 2001; Gunasekara 2006; Nabi et al. 2017).

University community engagement

In addition to economic development, universities are also expected to contribute to the social well-being of local communities (Brennan 2008; Brown-Luthango 2013; Kimmel et al. 2012). Under the mission of community engagement, HEIs have played key roles in resolving local issues, supporting equity and diversity, building social capital, and functioning as “sites of citizenship” (Jongbloed et al. 2008). Researchers have called upon HEIs to take the proactive position of addressing pressing social challenges such as poverty, inequality, and sustainability, as they are unlikely to be undertaken purely through responsiveness to market forces (Boyer et al. 2015; Brown-Luthango 2013; McCowan 2016). Indeed, over the past two decades, university investment in neighborhoods as “anchor institutions” has become a critical revitalization tool, creating jobs, generating innovation, and supporting the “back to the city”

movement (Ehlenz 2018). Rather than simply driving economic development, HEIs value and advance the social development of their cities through institutional initiatives that target neighborhood-wide quality of life issues, such as crime and safety, public infrastructure and amenities, socioeconomic conditions, and/or public services (Ehlenz 2019).

Engaged HEIs have cultivated strong community–university partnerships in neighborhoods facing socioeconomic marginalization, such as systemic poverty and racialization, homelessness, and crime (Allahwala et al. 2013). Similar to their role in economic development, engaged HEIs are embedded within multi-scaled networks of learning and governance with broad-based coalitions of state and non-state actors, and act as “nodes,” able to combine external resources and influences with local needs (Benneworth and Jongbloed 2010; Pugh et al. 2016). Therefore, HEIs’ experiences in both economic development and community engagement have granted them a unique position to potentially address issues of entrepreneurship in underserved communities.

Entrepreneurship in underserved communities

Ethnic minority and women owned enterprises have boomed significantly during the past several decades in the U.S. However, substantial barriers remain that impede their start up, survival, and growth (Bates et al. 2018; Fairlie and Robb 2008; Wang 2018). Lack of human capital (e.g., language proficiency, education, and prior business experience) and limited access to social and financial capital are the major challenges faced by ethnic minorities, women, and the poor (Hanson and Blake 2009; Unger et al. 2011). The social capital approach argues that belonging to a particular ethnic group and using its associated network could provide varying physical and intellectual ethnic resources (Zhou 2004). However, a structuralism perspective proposes that discrimination and marginalization force some racial minorities and women to become business owners (Waldinger et al. 1990). In particular, underserved communities are often stripped of capital, market, and entrepreneurial talent. For example, both Fischer and Massey (2000) and Fairchild (2009) found that high levels of residential segregation have a negative influence on Black self-employment likelihood. Likewise, Bates and Robb (2014) also showed that serving local clientele in minority neighborhoods is strongly related to firm closure and low profitability.

O’Brien et al. (2019) argued that entrepreneurship education should not only be limited to fostering the creation of new firms but also encourage enhancing self-efficacy and improving the ability of individuals, groups, and communities to take control of their own life and situation. As such, among very few studies, they explicitly challenge the traditional role of universities in supporting entrepreneurship as focusing mainly on economic growth and new venture creation, and call to position universities to provide greater civic support to entrepreneurial learning among under-represented communities. Built upon their arguments and suggested research agenda. This study argues that HEIs can play a significant role due to their institutional advantages in fostering an inclusive entrepreneurship ecosystem: their rich experiences in promoting entrepreneurship (Blenker et al. 2012; Brush et al. 2019; Shaheen 2016) the cross-disciplinary expertise and well-equipped facilities that reside on campus; a long tradition of engagement in local and regional communities; their flexible roles as a link between top-down government policies and practices with bottom-up civil society and grassroots initiatives (Hazelkorn and Gibson 2019).

For these advantages, universities are ideally positioned to leverage various forms of capital to advance the well-being of their local communities (Hodges and Dubb 2012). Beyond the

traditional triple helix model (Todeva 2013), universities are embedded in multiple-scaled networks and with a wide range of stakeholders involved in equitable growth and socioeconomic sustainability. As shown in Fig. 1, by working with public and private institutions, government agencies, and independent organizations, universities have the possibility to fulfill multiple missions through entrepreneurship education in the underserved communities: As an educator to build individual professional development for both students and community residents; as a generator of commercializable knowledge and contributor to the labor market and economy; as an engaged community player to build social trust among different stakeholders, and as an agent to promote social entrepreneurship for traditionally underserved communities (Jongbloed et al. 2008).

Research design

Since the 2010s, the Consulting and Business Development Center (CBDC) at the University of Washington Seattle (UW Seattle) has been building a national network of four-year universities that support business development centers focused on underserved communities. These universities are diverse in their size, student population, geographic location, and national rankings. The author attended two annual conferences, observed their panel discussions, and built relationships with the program directors and practitioners. Based on the framework depicted in Fig. 1, qualitative data were collected from three groups of stakeholders: university program directors, businesses participating in these programs, and local partners (non-profit organizations, government agencies, and corporations) who work with the university programs. Table 1 provides an overview of data sources.

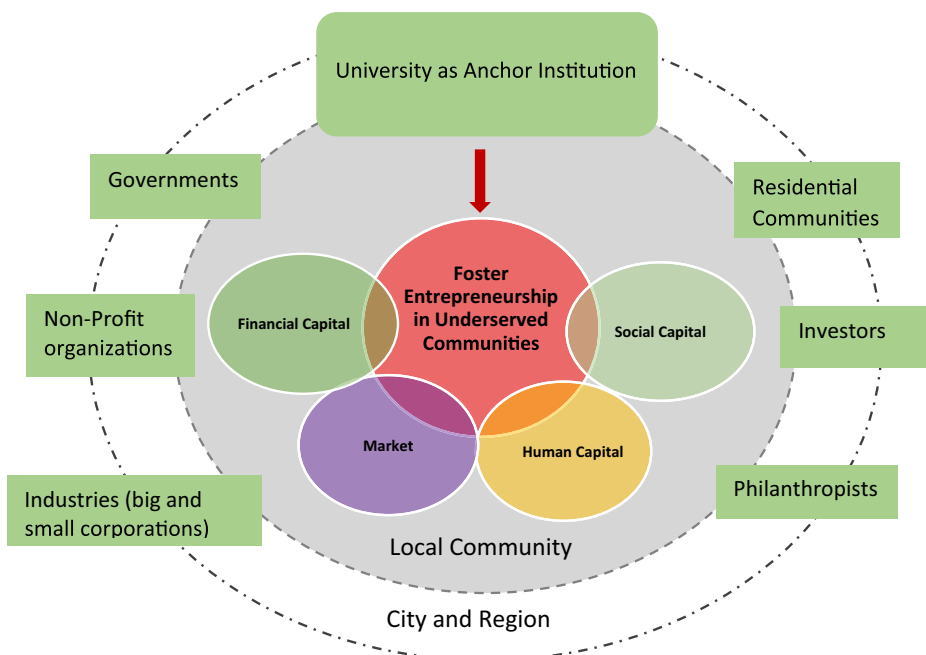


Fig. 1 Stakeholders to foster entrepreneurship in underserved communities

Table 1 Type and source of data

Type of data		Stakeholders		
		Programs and centers	Businesses	Partners
Documents	Source	Website or directly provided	Website and fieldwork	Website and fieldwork
	Format or content	<ul style="list-style-type: none"> • University and Center mission and strategic plan • White paper • Annual report • Archive evaluation data • Documentary film • Public media coverage 	<ul style="list-style-type: none"> • Business goals and mission • Product and service • Promotion material • Public media coverage 	<ul style="list-style-type: none"> • Activity information • Brochure • Promotion material • Public media coverage
Interview	Participant	Program director or directing faculty, University Officials	Businesses currently in the programs or as past participants	Government agencies; organization directors; business partners
	Size	18	30	15

The 24 universities who attended the national conference in 2014 and 2015 were contacted for interviews. Of these, 18 in-depth interviews were conducted with program directors in 2016–2017. The business participants were recruited randomly from the programs being interviewed. The local partners were recruited purposively through the program directors who provided contact information. Interviews with businesses and partners occurred in 2017–2018. Within each group, a same set of open-ended questions were presented to each participant, which permitted a high degree of flexibility and allowed informants to move their narratives to topics outside the immediate scope of the guide (Flick 2014). Document data were either collected online or shared by the participants. They are in the format of text, photos, and videos. Observation and fieldwork were conducted with two purposively selected programs.

As indicated by Fig. 1, to investigate the roles of university, it is important to compare and relate the experiences of different stakeholders. Tracing convergences and divergences among them allowed for triangulation of results to determine commonalities as well as differences in opinions and experiences (Saldaña 2015). Using the software package QSR nVivo, this study employed narrative analysis techniques outlined by Strauss and Corbin (1998) and Smith (2000) to code each interview transcript, document, and other qualitative data. For each type of data, the researcher began data analysis by reviewing all data repeatedly both to achieve immersion in data and to obtain a sense of the whole dataset. After the initial coding, the codes were sorted into categories based on how they are related and linked, particularly with the values and meanings of each role for each participant (Flick 2014). After all transcripts were coded, the common themes were organized for each group of participants. The themes were then compared and connected among the three stakeholder groups in order to testify and adjust the findings from different data sources. Figure 2 lists the common themes derived from different data sources and how they are connected. Category 1 and 4 address research question 1, Category 1, 2, and 3 address research question 2, and all together they address research question 3.

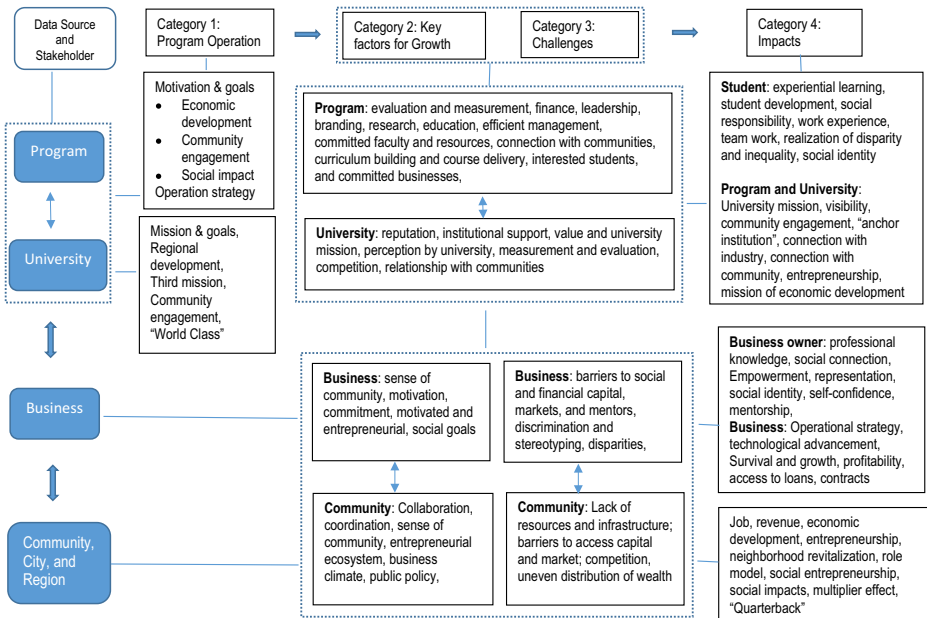


Fig. 2 Common themes derived from different stakeholders

Findings and discussion

Multiple direct and indirect impacts on underserved communities

Due to the embeddedness of universities in the local and regional entrepreneurial ecosystem (Fig. 1), the impacts of their entrepreneurship educational programs are both direct and indirect, and at different levels. Data from the three groups suggest that these programs have directly strengthened women- and minority-owned businesses, contributed to community building and economic development, as well as fostered social entrepreneurship and an inclusive entrepreneurship ecosystem in the city. The activities have also indirectly helped serve unmet market needs of certain neighborhoods and households, jumpstarted development in abandoned communities, organized and promoted social life and cultural diversity, as well as stimulated structural change from inside communities. Although it is impossible to identify every impact, Table 2 provides a glimpse of the multi-dimensional impacts at multiple scales and interconnections among them.

Strengthen women and ethnic minority owned businesses

Although the specific program design and curriculum differ significantly across universities, the centers' activities normally involve classes, seminars, workshops, problem-based projects, social networking events, consulting services, and mentoring or coaching. These programs look similar to traditional entrepreneurship education programs; however, they focus on the challenges faced by businesses owned by women and ethnic/racial minorities or those in poverty-concentrated areas. By focusing on their needs, these programs have contributed to building three forms of capital: human, financial, and social.

Table 2 Multi-dimensional and multi-scaled impacts

Impacts	Different dimensions/ formats	Examples
Strengthen businesses in underserved communities	Human capital	Professional knowledge needed for business to grow
	Social support & social capital	Connections with peers and financial institutions, empowerment and self-confidence, mentorship
	Access to financial capital & markets	Access to loans, government contracts
Socioeconomic impacts on neighborhoods	Economic	Job creation and revenue generation
	Social & cultural	Role model in community, promote social life and cultural diversity, stimulate structural change from inside
	Neighborhood revitalization	Newark Business Hub to revitalize downtown through art and cultural businesses owned by ethnic minority and women owned businesses
Social entrepreneurship & inclusive entrepreneurship ecosystem at the city and region level	Serve unmet market	Serving immigrant communities
	Foster social entrepreneurship	Activist businesses focused on traditionally underrepresented populations, such as black women and the LGBTQ community; training to help former prisoners transition back to society; education programs for disadvantaged youth
	“Quarterback” and enabler	<i>Ascend 2020</i> Initiative through collaborations among multiple universities, banks, city government agencies, and community-based organizations

First and foremost is building human capital, i.e., the professional knowledge needed for business to grow. This knowledge includes but is not limited to finance and accounting analysis, marketing and branding strategy, human resources management, innovation strategy, leadership building, media communication, and compliance with licensing and government regulations. Although the knowledge and skillsets are fundamental for any small business, businesses from underserved communities face greater challenges in access to financial capital, social capital, information, and resources. They also face discrimination and stereotyping, lack mentoring, and have difficulty adapting to technology changes (Bates et al. 2018).

For example, The Center for Urban Entrepreneurship & Economic Development (CUEED) at Rutgers University mainly focuses on entrepreneurs who lack the benefit of having a family history of formal entrepreneurship, including minorities, recent immigrants, women, and/or individuals with low levels of education (Osorio and Cordero 2014). Indeed, many participants of these programs never went to university for education, the majority are first time entrepreneurs, some do not speak English fluently, and some are undocumented immigrants. Essentially, without an explicit focus on these communities, entrepreneurship training is largely “unimaginable to access” for them (director interview).

Building human capital for owners and their businesses significantly improves their management skills and access to money and markets. At the same time, the majority of

programs have made direct and indirect efforts to help build social capital, including making connections with possible financial backers. Equally important is the confidence built from these programs for minorities and women. One program director commented that, “So it is not [only] what they have learned in class but they start seeing themselves in a different way. [...] It also demystifies the university for them and encourages their kids to go to college.” Business owners echoed similar sentiments. As one business interviewee stated, “[...the program] gave me the confidence...I didn’t know what my worth was. So I learned all of that through [...the program]: my worth, my confidence, and mentorship.”

Socioeconomic impacts on local communities

The program directors are eager to promote their contribution to local and regional economic development through strengthening small businesses, job creation, and revenue generation. For example, the CBDC at UW Seattle indicated from their website that, “... we grow business revenues and jobs with a focus on businesses owned by people of color, women, LGBTQ, veterans, and those located in under-served communities. Since our inception in 1995, we have generated more than \$210 million in new revenue and retained over 200,000 jobs” (UWCBDC 2020). At New York University, “we are very proud of the track record of our MWBE [Minority and Women-Owned Business Enterprise] programming, Strategic Steps for Growth. Since 2010, the companies that have taken the class have secured \$130 million in public funding and have created 225 new jobs” (from email exchange with the director).

In addition to job creation and revenue growth, these programs provide disadvantaged individuals with opportunities to realize their vision and dreams, which may not be possible anywhere else. Participants from all groups talked about the “bond” between the university and businesses through these training programs as many of the business owners never had the chance to study at universities. They talked about how people from agricultural industries, meat-packing houses, and public housing projects empowered themselves by attending the programs. Further, these business owners “serve their communities by providing jobs and being good role models of their own right in terms of how they are supporting their communities” (director interview). Many business interviewees agreed, as one stated, that, “I think the work that we do is empowering and showcases the work of a lot of *the community*.” For example, one Hispanic immigrant female business owner shared that owning an automobile body shop provides her a unique opportunity to pursue her own interest and serve a niche market by building trust between community members who “are always very afraid.” Her business goals are not only to make money but also to help other people in the community whose needs have not been met.

The CUEED at Rutgers University has strategically focused on making the intentional connection between entrepreneurship and urban community revitalization. The program director explained that, “at least eighty percent of the people that we work with are not students of Rutgers business school. So we, the university, in some respect with the business schools specifically, are the front door to community engagement and social impact by hosting entrepreneurship programs and coaching in capacity building.” Interviews and document data on the business side support the program director’s argument. For example, as Newark develops and changes, art and cultural industries are leading the redefinition of Newark’s cultural identity. One African American business owner said, “I love Newark. I’m a third generation Newarker... Starting this small business was a reaction to everybody saying that Newark wasn’t a good place to do business.” Other entrepreneurs expressed similar

sentiments. In many ways, social entrepreneurship is naturally intertwined with creative businesses' community-based activities (Waddock and Post 1991). Through teaching others or mentoring, these businesses are growing the local community via a transmittance of skills and enhancing the professional network of mentorship, thereby cultivating a community of creative entrepreneurs and a skilled labor force.

Fostering social entrepreneurship and inclusive entrepreneurial ecosystems

The focus on underserved populations and businesses has significant implications for fostering an inclusive entrepreneurial ecosystem in cities where universities are located. As the programs directly provide education and the opportunity to “start and commercialize their business ideas when they may not have other opportunities elsewhere,” it is believed to be “an important way for a business school to contribute to the economic health of the community and creates a just society” (quoted from one program director). In many ways, social entrepreneurship is fostered in these underserved communities through entrepreneurship training programs.

For example, a business owner who focuses on multicultural marketing explains that her company wants to focus on traditionally ignored populations, such as black women and the LGBTQ community, as traditional corporations are out of touch and have failed to fill these gaps. She argues that marketing can act as a tool for change and transformation of cities, communities, and perceptions of individuals. She explicitly emphasized social entrepreneurship, that “... my business is an activist business. [...] It recognizes and specializes in reaching people who identify as people of color and people of groups that have been marginalized. So in a lot of ways, it's a social justice agency, you know? ... I use my business in a way that is social entrepreneurial, where I want to be a catalyst so that not only my business benefits but all businesses benefit.”

Another business owner teaches film to former prisoners transitioning back into society. At the end of the course, the business owner will offer jobs to those who showed promise. Yet another business owner emphasizes the value of shared knowledge within immigrant communities and uses art as a means of connecting with not only oneself but with the surrounding community. In all of these cases, businesses are at the forefront of their communities and add value through authentic connection and engagement with traditionally underserved markets and populations.

To foster entrepreneurship and assist these businesses, the university centers have worked as a “quarterback”. In this intermediary role, they have collaborated with government agencies, community organizations, big corporations, financial institutions, and other stakeholders to bring resources to underserved communities. One director probably best described their role in this aspect, “Our goal is to have the relationships with those corporations and organizations where we can help bring our clients to the table.”

As an example, the CBDC at the University of Washington Seattle initiated *Ascend 2020* through support from JP Morgan Chase, city government agencies, multiple universities, and community-based organizations. *Ascend 2020*'s goal is to grow businesses owned by people of color, women, veterans, and inner-city businesses in 11 cities using the center's “3 M” model of Management education, Money through loans and investments, and Market access through contracts with anchor institutions such as universities and hospitals, government agencies and large corporations. This initiative exemplifies the partnership between universities, financial institutions, businesses, governments, and local organizations in building “a national network of people and organizations, who are working to address systemic challenges

by creating new opportunities that enable minority business owners to grow and thrive” (director interview).

Key factors for program growth and associated challenges

Table 3 summarizes the key factors for the growth and development of these centers at three levels: center/program, university, and local community and region.

Take advantage of university resources

The majority of the program directors credited the reputation of their universities as key, as expressed by this program director, “the university has a respected reputation platform that allows us to recruit entrepreneurs, to marshal resources, and to operate in a way we are now actively and aggressively competing for resources.” Furthermore, compared to government agencies and other organizations, universities have better resources and space. Interviews with local organizations also recognized the university’s strength in these areas. In particular, research on business management and entrepreneurship provides benefits for practice in business development. One program director stated that, “We have esteemed scholars who write, publish, and create new knowledge in entrepreneurship ... So we are also creating knowledge as well as implementing a program which is none of the other competing programs are doing.”

However, because of the special challenges faced by underserved communities, these programs often demand extra resources, long-term commitment, and typically do not bring

Table 3 Factors for program development and growth

Stakeholders	Factors for growth	Major challenges
Center or program level	Proper evaluation, financial support and resources, leadership, branding, balance between education (student-oriented) and practice (business-oriented), program delivery in hard-to-reach communities, efficient management and operation of the program is important: committed faculty, a key person to connect university and local communities, proper and effective curriculum building and course delivery, interested students, and committed businesses	Hard to evaluate and measure the outcomes produced by these program which further impact how the programs perceived and valued by the university and community stakeholders; lack of rich research components
University	Institutional support, reputation, education resources, faculty, students, state-of-art research and education facilities, space, specialized resources, connections with communities, research and technology development, institutional support to facilitate the commercialization of new research findings, research on business management and entrepreneurship	Difficult to gain sufficient institutional support because programs in underserved communities often demand extra resources, long-term commitment, and often times do not bring quantifiable economic impacts; competition within universities
Business, community, city, region	Extensive partnership between university and community stakeholders, effective collaboration, business recruiting is challenging	“a great deal of duplication” of programs, limited resources and markets, hard to coordinate

quantifiable economic impacts as compared to traditional entrepreneurship centers. One program director elaborated on this challenge:

“I think early on, there was a hurdle of what is this working with small mom-and-pop operations in low income communities; they are not going to create any jobs and our students aren’t going to get any internships or jobs there, you know, why are you doing this? ... that was certain early-on obstacle for us but I think there is also for a lack of a better term sort of ‘a sexiness of it.’...because we are working with inner city communities or poor rural communities in the US, it is not as sexy and as attractive as if we were doing things either high tech entrepreneurship or if we were doing things in developing countries.”

Within the university, how the programs are valued and perceived directly impacts how resources and funding are allocated. Most program directors reported that they either do not have resources to evaluate their programs’ impacts or do not have “appropriate” metrics to measure. The most commonly used and practiced measures by most entrepreneurship centers are the number of jobs created and newly generated revenue. However, these measures significantly mismatch with the focus of these programs and raise questions. For instance, what should be measured? What is a good timeframe? How should the measurement occur? Addressing these issues is beyond the current capacities of most programs. Therefore, although measurement focused on new jobs and revenue cannot properly reflect the value of these programs and its narrow focus may even be detrimental to future development, it is still the “easiest” and most commonly adopted measurement.

Extensive partnerships

Consistent with our framework depicted by Fig. 1, there are extensive partnerships between a university and other stakeholders, particularly for larger universities. These multiple stakeholders include but are not limited to community organizations, government agencies, big corporations and banks, and small business communities. A partnership example could entail getting operating support from banks and financial insurance companies; recruiting and providing services to small businesses; delivering entrepreneurship support services to disabled populations or low-income populations; and connecting k-12 schools to conduct after-school youth entrepreneurship programs. Sometimes they also work with organizations that are culturally literate to ensure that programing is culturally relevant and will have a direct relationship to the economic stability and development of the target community.

Collaboration among stakeholders also causes challenges for implementation, as there are duplications between different organizations and agencies, as well as “silos.” For example, although many entrepreneurship centers, incubators, and accelerators do not particularly focus on underserved communities, there is always some overlap especially within the same HEI. They may also overlap with the university’s other outreach and community engagement initiatives. How to coordinate these different programs at the university level and how to define target communities among different stakeholders are critical for a long-term collaboration and university outreach strategies.

Factors at the program level

In all the programs, there is always a “key person,” the program director, who is wholeheartedly devoted to non-traditional practices under academic settings. In addition to daily program management—and perhaps more importantly—this key person has a vision that values the special work and the particular contribution that differs from mainstream academic programs; learns how to negotiate with multiple stakeholders; and builds connections with local communities. With commitment and hard work, many of them operate with small budgets and only a few (or no) staff members to recruit businesses, to meet philanthropic parties for support, to find space, and to hire students and service providers among others. As one program director commented,

“I think it’s a little ironic but we’ve really been operating in a very entrepreneurial fashion here. ... It’s not a lot of resources in terms of money but it’s been a lot of sweat equity if you will. A lot of time and energy put in to get this up and running, and really demonstrate to our campus community and business community our ‘proof of concept’, and demonstrate that students can absolutely do consulting projects and add value.”

Another key factor is financial support and resources. As institutional support at the higher educational level is extremely limited in comparison to the urgent and long-term needs, continuing funding and adequate resources is a struggle for most of these programs. While at least half of our participants received funding from banks to start their programs, “sustainable” corporate support is extremely rare. Competition for philanthropic investment is high, especially considering that universities are often perceived as “rich” and “don’t need money” (director interview quote). In some universities, programs are not allowed to solicit from local community foundations, which further constrains financial capacity and thus program building.

Furthermore, efficient management and program operation is critical, including several fundamental components: committed faculty who can provide quality teaching and professional services, a key person that can connect university and local communities, targeted and effective curriculum, high quality interested students, and committed businesses that are willing to be involved. In particular, as these programs are practice-oriented and do not have a research component, time spent on building HEI-business relationships is not deemed worthwhile for many tenure-track faculty as they are often regarded as not viable for career development. The lack of a research component exacerbates the marginalization of these programs, especially in research intensive universities.

Discussion: HEIs’ roles in society

The university business development centers in this study stand out from general entrepreneurship centers for their explicit focus on promoting inclusive, equitable growth among under-represented businesses and traditionally disadvantaged neighborhoods. Their experiences and impacts call for reflection on HEIs’ roles in society through entrepreneurship education.

First, this study provides an exceptional case of HEIs’ involvement in communities to bridging traditionally split efforts between innovation and economic development, and community engagement to promote social equity. Typical university entrepreneurship centers place greater weight upon developing closer links to industry; promoting products such as patents, spinoff business parks; and generating external funds (Brown-Luthango 2013). This is

consistent with the trend that HEIs have been restructured to capture new funding sources. In contrast, community outreach and extension programs generally fare poorly in this context because they typically do not generate significant revenue (Kimmel et al. 2012; Subotzky 1999). Within HEIs, discussions of equity and diversity issues are more likely to be associated with community engagement activities, instead of entrepreneurship education and economic development.

Business development programs focused on underserved communities are not necessarily completely different from traditional entrepreneurship centers or community engagement activities. Instead, they can complement activities in both fields and align very well with multiple components of university missions and strategic plans, i.e., education, community engagement, social justice, innovation, and regional development. Indeed, program directors often explicitly discussed university missions along the lines of social justice, inclusiveness, as well as economic development. For example, one director from a private university commented that the program serves the university's mission to "create a more just humane and sustainable world" for more people who may not be able "to get the economic opportunity in any other way." Another informant from a public university recalled that in the early 1990s their school started an entrepreneurship center that focused on high-tech, high-growth potential businesses. However, later "we recognized that there was a large segment of the state's business population that we weren't serving." Thus, starting programs to reach underserved communities became one way of fulfilling the mission of community engagement. A business school dean underscored this perspective, commenting that "we're a public [university] business school and have an obligation to reach out to support the community." Therefore, investing in the entrepreneurship programs in underserved communities provides HEIs great opportunities to simultaneously fulfill multiple institutional goals and missions.

Second, this study highlights different dimensions of HEIs as anchor institutions in their communities (Fig. 1). Different from existing studies in this field that have focused on neighborhood revitalization (Ehlenz 2019), the current work focuses on racial minorities, women, and the poor who have long lagged behind in entrepreneurship activities. Meanwhile, Entrepreneurship studies have long focused on various aspects of the rare process of "going public" and "VC networks" with emphases on high growth and innovation in high-technology industries, instead of paying sufficient attention to the more mundane aspects of business start-ups and the sociocultural, historical, and institutional contexts of businesses and business owners (Aldrich and Ruef 2018; Hanson 2009; Wang 2013). Experiences from the centers under study emphasize the diversity and fluidity of the entrepreneurial process. They call to shift the focal point of entrepreneurship education and measurement from purely economic outcomes to the overall social-spatial processes: the creation of social spaces, formation of social capital, placemaking and community building, and enhancing the quality of life.

Finally, these practices are highly reliant on the "intermediary" role of HEIs in both economic development and community engagement. Research has examined universities as a "knowledge-hub" and mediator to enhance high-tech development and entrepreneurship in the region (Audretsch 2014). Likewise, for their boundary-spanning and intermediate role in the region and local communities, universities are able to moderate processes leading to changes in values, norms, and beliefs, which have been identified as core dimensions of social learning (Sedlacek 2013). The practices involved in fostering inclusive entrepreneurial ecosystems suggest that universities possess local connections and community relationships as well as the ability to scale resources that can serve as a valuable foundation for development

strategies (Fig. 1). It also calls for a fundamental shift of perception from regarding HEIs as only providing communities with technical assistance, to one in which universities are responsible for social change in partnership with relevant bodies in the community (O'Brien et al. 2019; Tierney 1998). Cases from this study suggest that such a shift is not only necessary but possible, as well as provides an opportunity to integrate multiple roles of HEIs in regional and local community development.

Conclusion

This study has examined the practices led by HEIs—the university centers and programs promoting entrepreneurship and business development in underserved communities. These programs have made significant direct and indirect impacts on multiple dimensions and at multiple scales. As businesses in underserved communities face tremendous difficulty in accessing information and resources, participation in these university-led programs have improved their level of human capital and social capital, as well as provided a greater ability to access financial capital. Business owners have gained the knowledge and capacity to understand themselves, their business, and the business operation context. For the particular situations in the underserved communities, many of these entrepreneurs also act as bold catalysts even with limited resources, and hold themselves to a heightened sense of accountability to continue serving those to whom their social mission pertains. Whether these entrepreneurs are people of color, LGBTQ, immigrants, or women looking for equal footing, through entrepreneurship, they transformed the feeling of marginalization into a sense of drive and they have been able to build businesses that allow their identity to take its place in their communities. Therefore, much beyond the business level, these activities not only have helped increase employment opportunities and incomes, as most entrepreneurship initiatives would argue, but also provided a means of presentation and empowerment, and fostered equitable growth and inclusive entrepreneurial ecosystems locally. In this sense, entrepreneurship in underserved communities has the potential to change structures of opportunity and bring social, physical, cultural, and political benefits to their respective communities, thus multiplying the long-term benefits.

A university's reputation, resources in education and research, and institutional support have been the key elements in supporting the success of these programs. Partnerships between the university and other multiple stakeholders are also critical in providing resources and facilitating service delivery. Within the programs, visionary leadership, strategic management, relationships with local communities, an effective curriculum, interested students, and committed businesses are all important factors for success. They also face significant challenges. The fundamental issue is how to generate sufficient interest and properly evaluate these programs within HEIs and in entrepreneurship practices in general. I firmly believe the challenge of measurement is not simply a "technical" issue; it is about how "entrepreneurship" is conceptualized and how these programs *should* be valued. Only when the multiple dimensions of socioeconomic impacts are properly recognized, will these programs be valued and measured appropriately and thus further promoted. However, if these programs must operate under misconceptions and be evaluated using extremely limited economic terms, it can only reinforce the current difficult situation.

These findings call for reflection on the university's role in regional and community development, as well as redefining entrepreneurship education practices from both equity

and socioeconomic sustainability perspectives. This is particularly urgent under the current uneven impacts of pandemic disruptions (Fairlie 2020). Today, HEIs are under primitive influences from distinctive institutional settings, governance regimes, market-driven forces, and the contradictory and evolving broader societal environments. For instance, at the time of writing, the “Black Lives Matter” movement is sweeping over the globe, especially in the U.S. #ShutDownAcademia#ShutDownSTEM, an initiative from a multi-identity, intersectional coalition of STEM professionals and academics taking action for Black lives, has drawn rapid supports from higher education institutions (Burke 2020; Blackburn 2020). How do HEIs react to these social movements and strategize institutional priorities in both short-term and long-term ways? The programs under study have great potential to function in a bridging role between the university and particular communities, between the economic and social expectations placed on higher education, and between developing the entrepreneurial university and actualizing the contribution of higher education toward social renewal and the public good.

This study has some limitations due to its small sample size and lack of a control group of entrepreneurship centers without the focus in underserved communities. More studies are needed to compare the entrepreneurship education programs with and without such a focus. In addition, although this study highlights the importance of a regional inclusive entrepreneurship ecosystem, it does not examine the mechanisms through which the ecosystem works. Future research should examine the components of the ecosystem, how different stakeholders function through partnership, and particularly how university plays a role in fostering the inclusive entrepreneurship ecosystem. Furthermore, it is imperative to examine how these programs possibly develop a sustainable model of “research–practice–policy making” to mutually benefit teaching, research, and community services of HEIs.

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