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Tonia Warnecke
Rollins College, twarnecke@rollins.edu

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Capabilities, Human Development, and Design Thinking:
A Framework for Gender-Sensitive Entrepreneurship Programs

Tonia Warnecke
Rollins College
twarnecke@rollins.edu

Abstract:
This paper discusses the ways that capabilities and human development theory can guide the creation of entrepreneurship programs, utilizing a framework of human-centered design thinking. It is well known that a variety of institutional factors shape gender outcomes and gender inequality within entrepreneurship, particularly with regard to necessity vs. opportunity entrepreneurship and informal vs. formal sector entrepreneurship. Failure to understand the diversity of entrepreneurial activity among women, and the connection (or lack thereof) of such activity to human freedom, leads to biased entrepreneurship programs. This paper links social economic theory and practice by: (1) discussing the ways that capabilities and human development theory relate to entrepreneurship programs; (2) demonstrating that human-centered design thinking reflects the capabilities approach; and (3) showing how the design thinking framework would be used to create a gender-sensitive entrepreneurship program.

KEYWORDS Gender; entrepreneurship; human development; capabilities; design thinking

It is well known that a variety of institutional factors shape gender outcomes and gender inequality within entrepreneurship. The public, private, and nongovernmental sectors offer an increasing number of programs to support female entrepreneurship, such as incubator projects, training, education, networking activities, credit, and other financial programs. However, failure to understand the diversity of entrepreneurial activity among women, and the connection (or lack thereof) of such activity to human freedom, leads to program bias. Social economic theory can help us remedy this problem, and formulate gender-sensitive interventions in this sphere.

To begin, I discuss the capabilities and human development approaches, noting how they can be used to conceptualize entrepreneurship programs. Next, I detail a potential framework for gender-sensitive program creation. Human-centered design thinking, a process which can be used to tackle any product-, space-, service-, or system-related challenge (Acumen 2014), reflects values embodied in the capabilities and human development approach. While reviewing the process of design thinking, I demonstrate how each step would be applied to design an entrepreneurship program and how it can be tailored for gender sensitivity. This approach is applicable to any sector or organization planning to create a program to support entrepreneurship, including national/local government, intergovernmental institutions, non-governmental organizations (NGOs), social enterprises, and corporations.

Entrepreneurship, Capabilities, and Human Freedom

Social economic methodology for entrepreneurship program design can be based on the human development approach and the capabilities approach (Sen 1999; Nussbaum 2000). While not synonymous, both approaches move past unidimensional conceptualizations of well-being and focus on development of the person as a critical goal in and of itself—not merely a means for

pursuing other goals such as economic growth. Both approaches also recognize the critical role of the state in providing a range of institutional supports for well-being and quality of life.

In the human development approach, Sen defines freedom by “what people can positively achieve [which] is influenced by economic opportunities, political liberties, social powers, and the enabling conditions of good health, basic education, and the encouragement and cultivation of initiatives” (Sen 1999, 5). While these instrumental freedoms (as Sen refers to them) are important singularly, it is their interaction and capacity to reinforce one another which attracts more of Sen’s interest.

By asking what each person is able to do and to be, Nussbaum’s capabilities approach illustrates that personal choice plays a crucial element in individual well-being (Nussbaum 2011, 18). Personal choice is shaped by internal and combined capabilities. Internal capabilities include personality characteristics, health and fitness, knowledge and skills, while combined capabilities refer to opportunities created by the interaction of internal capabilities with one’s social, political, and economic environment (Nussbaum 2011, 20-21). Nussbaum’s combined capabilities can be loosely compared to the interaction of Sen’s instrumental freedoms. As such, both emphasize “collective human agency in shaping social structures to advance individual well-being” (Figart 2013, 876).

The human development approach emphasizes quality over quantity (Padgett and Warnecke 2011). Although this argument often targets economic growth (ul Haq 2008), it is relevant to discussions of entrepreneurship programs. Firstly, who will be served by these programs? Such decisions reflect opinions about who is most worthy, a complicated assessment (Avsar 2014). Entrepreneurship programs could target opportunity entrepreneurs, necessity entrepreneurs, or a combination.[1]

Opportunity entrepreneurs generally operate in the formal sector, and are characterized by higher educational attainment, managerial experience, access to formal business networks and finance, and a choice of occupational tracks; they choose to become entrepreneurs because they spot an opportunity and have the skills and resources needed to exploit it. Necessity entrepreneurs, on the other hand, become entrepreneurs due to lack of other options; they typically operate in the informal sector, without significant education, access to finance or business networks (Hernandez et al. 2012).

Because opportunity entrepreneurship is generally associated with greater mobility and income generation (e.g. it is ‘higher quality’), one could argue that entrepreneurship programs should focus on this group. Nonetheless, doing so would leave out the sizable portion of necessity entrepreneurs who focus on survival rather than business growth. This violates Sen’s human development approach by widening existing gaps between the two groups, perpetuating “major sources of unfreedom” including “poverty as well as tyranny, poor economic opportunities as well as systematic social deprivation” (Sen 1999: 3-4). Excluding necessity entrepreneurs also violates the capabilities approach, because it magnifies “capability failures that are the result of discrimination or marginalization” (Nussbaum 2011, 19).

Another dimension of the quality vs. quantity debate revolves around the purpose and structure of policies and programs. Institutions “either work to cultivate free and independent agency” or they do not (Padgett and Warnecke 2011, 2; Sen 1999). Newbert and Stouder (2012, 247) explain that “entrepreneurship appears to embody many favorable predispositions for justice,” but this may not manifest into reality, given organizational culture, status of the legal

[1] Although they were first introduced in the 1980s, the concepts of opportunity and necessity entrepreneurship were institutionalized in the early 2000s, by the annual surveys of the Global Entrepreneurship Monitor (Cheung 2014).

system, and the extent of state support for social provisioning (Nega and Schneider 2014; Samuel et al. 2014). This suggests that entrepreneurship programs, rather than focusing on increasing absolute figures such as Gross Domestic Product or the number of entrepreneurs *per se*, should focus on cultivating individual and combined capabilities.

Individual capabilities, while crucial, are not sufficient for human freedom; possessing a skill may not amplify personal choice if (for example) social norms prohibit participation in the marketplace. Entrepreneurship programs should also work to support combined capabilities—the ability of an entrepreneur to successfully utilize her individual capabilities in a complex institutional environment. This is harder to accomplish, given the greater number of actors involved. Furthermore, institutional change needed to heighten combined capabilities "will not automatically occur" since institutions reflect patterns of behaviors correlated to specific social values (Elsner 2012, 3).

We can observe this when considering the gender dimension of entrepreneurship. In an institutional environment where men are most often prioritized for formal sector jobs, it is not surprising that women are more likely than men to be necessity-based entrepreneurs in the informal sector (Hernandez et al. 2012). Many factors contribute to this outcome; women lack equal access to education, finance, and other support services such as formal business networks. Even where loans are offered, women often must pay higher interest rates than men for loans of similar terms (van Staveren 2002).

It is "the combination of education, vocational and technical skills and work experience needed to support the development of highly productive businesses" which is often lacking for women (World Bank, 2013). Masculine conceptualizations of leadership, combined with the lack of female mentors and often, cultural barriers to cross-sex mentoring create further barriers (Ely, Ibarra, and Kolb 2011; Noe 1988). In many developing countries, women are unlikely to be exposed to the concept of negotiation; furthermore, there are few resources for female entrepreneurs in terms of day-to-day assistance in the early stages of running their businesses (Warnecke 2014). While such constraints tend to be more binding in developing countries, women are less likely to be opportunity-based entrepreneurs in nearly all countries (Warnecke 2013). This is confirmed by the annual reports of the Global Entrepreneurship Monitor. Women are also more likely to be early-stage entrepreneurs, and "less likely to stay in business beyond three and a half years" (Nallari et al. 2012, 127). Designing gender-sensitive programs is one way of addressing such gaps.

Design Thinking and Gender-Sensitive Programs

Given their emphasis on reducing inequalities and fostering personal choice, the human development and capabilities approaches underpin gender-sensitive entrepreneurship programs. Gender-sensitive programs systematically integrate "the gender dimension…into every step of the process," from problem definition to activities, staffing, budgeting, evaluation, and policy dialogue (Leduc and Ahmad 2009, 1). This is important because gender bias in entrepreneurship programming usually traces back to some element of program design. For example, programs may not consider enterprises in female-dominated spheres (Stevenson 1990); account for gender gaps in literacy or technology (Malhotra et al. 2012); or offer services at convenient times or locations for women.

An important characteristic of gender-sensitive entrepreneurship program design is its participatory and collaborative nature. Human-Centered Design (HCD), a paradigm closely associated with work at Stanford University, can be used as a framework for program

development. Most often used by private sector companies and NGOs, HCD is also relevant to public policy, as governments search for ways to be more responsive to citizen needs (Allio 2014). Countries such as Singapore, Denmark, the UK, and the US have integrated design thinking processes into public sector spheres ranging from waste management and prison tensions to tax form revision (Bason 2013; Allio 2014).

In the realm of international development, design thinking alters the process of entrepreneurship program creation and delivery. Instead of forging ahead with an already-formed program idea and working at the end stage to make it more attractive to end users, design thinking aims to create an idea which better targets their wants and needs from the beginning (Brown 2008). Effective problem identification is critical since entrepreneurship programs can target many different needs. Many well-meaning development programs fail because they do not consider end user preferences or cultural norms, or prototype the programs to obtain feedback (Anyaegbunam et al. 2004; Brown and Wyatt 2010; Allio 2014). An entrepreneurship program cannot satisfactorily increase personal choice if we do not know what it is that people want or need.

By taking "a comprehensive, holistic problem perspective," design thinking can deliver many benefits to policymaking and program development, reducing inconsistencies or duplicative activities while fostering "enhanced synergies and better addressed trade-offs; integrated and better-targeted solutions; stronger reality-checks at earlier stages;…and higher chances to deliver more complete and resilient solutions" (Allio 2014: 8). The following, adapted from IDEO (2014) and Allio (2014), illustrates how HCD principles can be applied to the design of gender-sensitive entrepreneurship programs.

Steps for Gender-Sensitive Human-Centered Design

Empathize

1. Determine what is known about the problem

We begin by drafting a list of general entrepreneurship constraints, and those specific to gender. Table 1 adapts the World Bank's Resource Point on Female Entrepreneurship (2013) to provide a sample list of constraints. However, this is not a one-size-fits-all table. Entrepreneurial and gender-specific constraints differ across locations and groups. If focusing on a more specific topic (e.g. financial literacy), the table may be much smaller.

2. Determine what additional knowledge is needed

Here we develop questions to tackle incomplete understanding of constraints, and ascertain people's behaviors related to them. We may not know people's opinions, actions, and values related to the problem, future needs, or impediments to program implementation (IDEO 2014). For gender-sensitive analysis, to sketch a more complete picture of individual and combined capabilities, questions should address power, resource allocation, household decision making, time use, and the external environment influencing business activities, such as transportation, access to credit, and where/how product is sold.

Table 1. Detailing the Problem: A Sample Chart

General Entrepreneurship Constraints	*Gender-Specific Constraints*
Weak property rights	Women less likely to own property; fewer asset ownership rights
Inconsistent regulatory environment	Women more likely to face discrimination; less knowledge of legal rights
Lack of relevant knowledge and skills	Women often have less educational attainment, work and managerial experience, and vocational training
Financing challenges	Higher interest rates charged to women; less formal bank access; requirement for male co-signer; lack of control over income
'Red tape'/business start-up costs	Women more likely to start informal sector businesses with less up-front cost, but less growth potential
Lack of business support services	Women less likely to have access to formal business networks or business support services; caretaking responsibilities create time poverty for women
Technology barriers	Women less likely to have access to/knowledge about technology
Insufficient market size	Informal businesses less likely to feature in global value chain, regional/national markets; occupational segregation increases competition between women, reduces income-earning opportunities
Suboptimal business or training location	Women less mobile due to primary role in unpaid household labor; limited transportation options

Adapted from World Bank (2013)

3. Identify people to learn from

It is important to consider diverse voices, but significant effort may be needed to accomplish this (particularly in rural areas, or for potential rather than actual entrepreneurs). Choose a wide range of stakeholders, including men and women in the community, community leaders, NGOs/other organizations dealing with similar issues, field/professional experts, and relevant government officials (World Bank 2013). This sheds light on Sen's instrumental freedoms, and whether entrepreneurs' feelings/interests are shared by the greater community.

Another group to learn from is called 'positive deviants' in the design thinking literature; these individuals already have good outcomes compared to others in the community (Brown and Wyatt 2010). Figuring out the reason can provide unique, local solutions to tricky problems. For female entrepreneurship, 'positive deviants' may include informal entrepreneurs with higher-than-average sales, larger market size, or better access to financial capital.

4. Choose method of engagement

After answering the question of 'who', the next question is 'how' this interaction will occur. Possibilities include interviews, case studies, journaling, observation or other immersive experiences, and videos (IDEO 2014; Allio 2014). Social norms should be considered (IDEO 2014), as women in some areas may not feel comfortable (or may be prohibited from) speaking with unknown/unrelated men. It is important to leave one's assumptions at the door and commit to learning from scratch.

A common tool for interviews in design thinking is the empathy map, otherwise known as the 'Say, Think, Do, Feel' framework (Chowdhury 2013). It enables the interviewer to reflect on the gathered information and determine what the person said, what they did/how they acted during the interview, what assumptions/beliefs their comments illustrated, and how they felt. The tool illustrates that people are complex creatures who do not always do what they say, or say what they think; gender-based social norms may influence participants' responses and behavior.

Ideation

Empathizing helps to define the problem and the specific needs to be focused upon by the entrepreneurship program. Next, the ideation process distills the gathered information "into insights that can lead to solutions or opportunities for change" (Brown and Wyatt 2010, 34). After offering as many ideas for solutions as possible, without judgment or evaluation, the design team sorts, groups, and builds upon each other's ideas; "good ideas naturally rise to the top" (Brown and Wyatt 2010, 34).

Participatory co-design directly involves community members in the brainstorming process for possible solutions (IDEO 2014). For a gender-sensitive entrepreneurship program aiming to increase financial literacy, participatory co-design may involve meeting with local literacy and banking experts, schoolteachers, business training coordinators, and household members—ensuring that equal amounts of time are spent engaging with women.

This multifaceted process of idea generation enables the design team to find patterns and consider multiple layers of the problem, discerning "the scale of the possible solutions that can address (parts of) it" (Allio 2014: 11). An entrepreneurship program could be very narrow or very broad; the choice of scale depends on the defined problem, the local institutional context, available resources, and expertise, including potential for external partnerships to fill in gaps. A realistic scale for the program is important. Programs work best when supported by public policy, existing complementary programs, and supportive social norms, but this will not always be the case, particularly where gender is concerned. As much as possible, the ideas generated in this stage should support individual and combined capabilities. For example, if the ideas are meant to train women, an entrepreneurship program may teach women skills (individual capabilities) but also support implementation of those skills, pairing them with a community mentor to augment their social capital.

Implementation

Prototyping and testing prepare for final implementation. Design thinking is often used to develop new products, where physical prototypes refine the model. Prototyping policies or services (including entrepreneurship services) requires more creativity, but a prototype "can take many forms, such as a graphical user scenario (a storyboard), a film, a play or enactment, or a mock-up of a web interface" (Allio 2014: 11). The prototyping process can assess whether a particular service or method of service delivery is better than other options, whether it addresses expressed concerns, what type of payment (quantity and form—monetary or in-kind) is most effective, and what means of communicating/recruiting is ideal.

When prototyping a gender-sensitive program, several issues should be considered, including women's access to appropriate resources and skills to utilize program facilities; location, timing, affordability, and cultural acceptability for women; and childcare (World Bank, 2013, 34). These questions address capabilities, access, context, and cost, demonstrating that form, function, and distribution channels are key aspects of the design process (Brown and Wyatt 2010, 33).

Women need significant input in developing and evaluating prototypes. Suppose that earlier stages of design thinking made it clear that transportation hurdles impacted business opportunities, and transportation safety rather than cost is the issue. Sample prototypes might include mobile sign-ups for walking partners; women-only shuttles; creation of pedestrian lanes; or increased street lighting. Taking prototypes out to community members who participated in the empathize and ideation stages, in addition to seeking new feedback, can "explore the generalizability of the solution" (IDEO 2014: 108) and highlight unforeseen barriers to implementation.

After revising the prototypes and creating a final entrepreneurship program, a communication strategy is developed, considering literacy, language and cultural barriers (Brown and Wyatt 2010). Possibilities include storytelling through skits, print media, film, and role play.

Monitoring & Impact Evaluation

Monitoring and impact evaluation can be neglected components of the program design process, particularly for non-profit organizations with limited resources. However, such evaluation is crucial in order to determine whether program outcomes coincide with program goals—and if not, why. The process will only be meaningful if a concrete plan exists to interpret evaluation results and incorporate changes back into the program. Specific gender-related goals and targets, along with various indicators for measuring progress, are required.

The World Bank (2013) reviews many possible indicators for entrepreneurship programs, grouped by output, outcome, and impact. Output indicators focus on the uptake and satisfaction with program services; outcome indicators highlight deeper institutional change; and impact indicators reflect longer-term effects. For a financial literacy program, gender-sensitive output indicators may include the ratio of men to women receiving training, or the proportion of men and women reporting satisfaction with the training; gender-sensitive outcome indicators may focus on the changes addressing gender-specific barriers to financial literacy—e.g., female-only savings group meetings (OECD 2013); and gender-sensitive impact indicators may include changes in male and female self-confidence regarding financial matters (National Endowment for Financial Education 2011).

To support the human development and capabilities approaches, monitoring and evaluation plans should focus not only on quantity served, but also quality of outcomes. This

ensures that we gauge not only the change in concrete skills or knowledge, but also the ability to successfully utilize that knowledge in the community.

Conclusion

In an era where policymakers are increasingly focused on increasing women's labor force participation, female entrepreneurship has been highlighted as an important source for economic growth and development. While more resources are being devoted to the support of female entrepreneurship, the structure and ultimate objectives of these programs are at times unclear. To promote sustainable development, the capabilities and human development approaches should guide the creation of entrepreneurship programs. Utilizing a framework of human-centered design thinking is compatible with this methodology, given its people-first approach to problem identification, ideation, implementation, and monitoring and impact evaluation. Human-centered design thinking can also be tailored to formulate gender-sensitive entrepreneurship programs, where gender is integrated into every step of the process. This would enable programs to better target the diversity of entrepreneurial activity among women, and be more inclusive of necessity entrepreneurs in the informal sector.

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