Cambridge Centre for Social Innovation

Research Report Summary

HOW SOCIAL ENTERPRISES SCALE TECHNOLOGY TO THE BOTTOM OF THE PYRAMID IN EMERGING MARKETS: A CASE STUDY OF SIMPRINTS

Tanner Taddeo

MSt Social Innovation, 2020

Edited by **Dr Michelle Fava**

Research supervised by **Professor Paul Tracey**

Cambridge
Centre for
Social
Innovation

UNIVERSITY OF CAMBRIDGE
Judge Business School

Contents

Key findings

Many tech-based social enterprises are headquartered in developed countries, whilst deploying technology to the bottom of the pyramid (BoP) in emerging markets. These social enterprises use significantly different strategies for growth, compared to traditional enterprises, or even large tech companies entering emerging markets. This case study provides insights into one example, Simprints, a Cambridge (UK) based social enterprise, which has successfully scaled, selling biometric identification technology (hardware and software) to the BoP in emerging markets, including to frontline humanitarian organisations.

The study identifies four key aspects as to how Simprints scaled:

1. Co-creation, with on-the-ground partners in the Global South and tech experts in the Global North.
2. Rapid iteration of multiple pilot projects, with a singular core product.
3. In-country training sessions, giving frontline workers a deep understanding of the technology, enabling a good user-experience.
4. Building legitimacy, through reputable funders and initial partners, and sustained through impact reporting.

Background

Biometric technology is needed because an estimated 1.1 billion people globally lack codified identity. That is, they have no birth certificates, dental records, passports, etc., which would enable access to basic services (e.g. bank accounts, housing, education, healthcare etc.). Further, frontline organisations can be more effective in delivering aid and support to BoP communities when they have access to biometric technology. For example, they can more effectively keep track of who has received vaccinations.

Simprints provides an example of good practice in scaling technology with social impact to the BoP in emerging markets, getting products and services to individuals who need them most. Scaling is important for Simprints, as it enables them to maintain financial viability by keeping unit costs down. Using a low-cost, high-volume model also means they can reach more beneficiaries.

While the BoP in various countries are significant in size, traditional enterprise has rarely developed technology primarily for their needs. Prior research into scaling technology for emerging markets has focused on how traditional enterprises scale via acquisitions, partnerships, or selling to premium market segments first before pushing the technology down to the BoP (Chen et al., 2009; Gulati and DeSantola, 2016). It is therefore important to better understand examples whose primary objective is to serve BoP communities.

We know that scaling tech solutions in fragmented, rural, or resource deprived BoP markets, presents additional challenges. These include price sensitivity, last-mile distribution, gaining community trust, poor infrastructure, environmental conditions and market capacity building (Bocken et al., 2016). This research sought to understand in more depth how these challenges could be navigated.

The researcher interviewed the Simprints senior management team, its partners, and other industry experts (including academics and impact investors). 13 interviews were conducted in 2018/19. Interviewees shared their insights into how Simprints scaled their technology, the challenges, and what they learned along the way, and, at a high level, their experiences regarding how social enterprises scale in emerging markets.

Emerging themes

The study identified four aspects of best practice, in how Simprints successfully scaled their technology to BoP Emerging markets market.

Simprints are a tech-based social enterprise who develop and provide biometric hardware and software to frontline humanitarian workers. Developing and scaling technology for people at the 'Bottom of the Pyramid' in emerging markets is not easy. Simprints achieved scale through these four steps. Achieving a high-volume low-cost model enabled them to reach more beneficiaries.

Figure 1. Four aspects of best practice in scaling tech to the BoP in emerging markets, based on the Simprints case study.

Co-creation with on-the-ground partners in the Global South and tech experts in the Global North

Simprints found a particular use case with a strategic partner (a large, reputable humanitarian NGO) in the Global South. With their insights from the field, Simprints was able to co-create solutions with end beneficiaries. They designed a biometric scanner and software, bringing in tech experts and tech firms in the Global North, in addition to their team's own expertise.

While co-creation is not a new concept for enterprise growth, what is notable about Simprints' case is the fact that they were simultaneously co-creating with both their Global North and South ecosystems, to create their initial 'minimum viable product'. This required a unique set of cultural competencies within the organisation, and a deep understanding of the users and their context.

One of their co-founder's noted:

> "We prepared a bunch of focus groups, did some rapid prototyping. Once we were in the country [with their strategic partner] we asked a bunch of comparative questions at length, different form factors, and interviewed potential beneficiaries, and frontline workers and managers that would be using the technology. We did a lot of observation as well."

Rapid iteration of multiple pilot projects, with a singular core product

The way in which Simprints developed their product followed the principles of the lean methodology: test – learn - iterate. While this is nothing original, Simprints took on multiple pilot projects at once, yielding rapid product performance data, across a number of geographies, sector verticals and cultural contexts.

Existing literature describes how enterprises with a single-product offering scale using a breadth approach. That is, organisations penetrate specific markets, and then enter new markets to grow and scale. Simprints took a different approach. Having multiple pilot projects across different geographies and sector verticals at the same time, meant they were able to design their products and services with a focus on BoP users and beneficiaries, while identifying potential obstacles early on.

> "…because we had so many small pilots, they showed us a very wide range of basically all of the issues that we were going to have" – Simprints co-founder.

In-country training sessions, giving frontline workers a deep understanding of the technology.

Simprints realised that it couldn't just "chuck tech over the wall". Capacity needed to be built to ensure successful use of the technology. As such, Simprints used a "train-the-trainers" model, hosting in-country training sessions with frontline employees who would be using their technology in the field. As a result of these sessions, teaching programmes were designed to teach correct use of the technology and employees developed a deep understanding of the tech. They became comfortable with its use and were able to troubleshoot. This confidence allowed quality communication of the tech's purpose and benefits to end-beneficiaries, which resulted in a good user experience for those in the BoP. This was especially important when gaining users' consent, which was needed before using the technology.

As one of Simprints' partners noted:

> "Simprints was great, in that they sent a team out as well to prepare us for deployment. We did training with our field workers and some community based events together as well. That really made a big difference in making people [frontline workers] feel comfortable with this new technology."

Traditional enterprise growth literature focuses on scaling through network effects, partnerships, advertisements, acquisitions etc. (Chen et al., 2009; Gulati and DeSantola, 2016; Ries, 2001). However, for Simprints, the frontline workers were pivotal to their success in scaling. They not only used the technology day-to-day but were also responsible for the communication of its benefits to the beneficiaries, for gaining consent and trust, and enabling a good user-experience. From a scaling

perspective, Simprints scaled *through* the frontline workers, who were often seen as the "trust-broker" in BoP communities, and ambassadors for the technology.

Building legitimacy, through reputable funders and initial partners, and sustained through impact reporting

The case demonstrates the importance of impact reporting for social enterprise legitimacy. Simprints won business plan competitions early in their development. This, together with their partnerships with reputable name brand institutions, signalled credibility and helped them gain early funding for developing their technology.

Upon deployment, Simprints used data frameworks to capture, assess, and report on their impact. As imperfect as these frameworks were initially, Simprints (formally and informally) communicated impact data to their funders and stakeholders. This helped establish their legitimacy which, in turn, led to unsolicited media exposure and organic inbound leads that helped Simprints to scale.

As Simprints' Co-founder noted:

> "We worked closely with them [first strategic partner] to make sure that [impact metrics] was part of the pilot, because we knew this would be the selling point of Simprints."

Implications and future research

Simprints represents a blueprint for tech-based social enterprise scaling. It may be most useful to other technology-focused social enterprises straddling the Global North and South. However, caution must always be exercised when applying such models in different contexts. The implications of this research highlight the fact that we still do not know very much about how social enterprises scale in various contexts. Towards this end, further case studies of other social enterprises scaling technology across various sector verticals and geographical contexts would help us understand the range of challenges social enterprises face when scaling technology, and the potential pitfalls.

From this study, some future areas of research may include:

- how (social) enterprises *simultaneously* co-create with multiple actors across various cultural contexts and its implications for growth
- comparative research on how social enterprises scale by assessing enterprises that have used different approaches to growth i.e. breadth vs depth
- how frontline workers build capacity and/or help social enterprises scale and reach their end beneficiaries
- how impact data capturing and reporting lead to social enterprise legitimacy.

Key references

Bocken, N. M., Fil, A. and Prabhu, J. (2016) 'Scaling up social businesses in developing markets'. *Journal of Cleaner Production*, *139*, 295-308.

Chen, X., Zou, H. and Wang, D. T. (2009) 'How do new ventures grow? Firm capabilities, growth strategies and performance'. *International Journal of Research in Marketing*, 26 (4), 294-303.

Deeds, D. L., Mang, P. Y. and Frandsen, M. L. (2004) The influence of firms' and industries' legitimacy on the flow of capital into high-technology ventures. *Strategic Organization*, 2 (1), 9-34.

Desa, G. and Koch, J. L. (2014) 'Scaling social impact: Building sustainable social ventures at the base-of-the-pyramid'. *Journal of Social Entrepreneurship*, 5 (2), 146-174.

About the project

This research is based on an analysis of Simprints. It was carried out with the support of the Cambridge Centre for Social Innovation.

This research was designed and conducted by graduates of the MSt Social Innovation, with the support of faculty and fellows of the programme. The Centre is committed to ensuring wide access to our research findings. We welcome your feedback and ongoing support. The views of the authors do not represent those of their employers or CJBS. If you wish to discuss this research or access the full report, please contact the Centre at: socialinnovation@jbs.cam.ac.uk.

The Cambridge Centre for Social Innovation builds best practices across business, civil society, policy and academia for a more equitable, inclusive and sustainable world.

Cambridge Centre for Social Innovation
Cambridge Judge Business School
University of Cambridge
Trumpington Street
Cambridge
CB2 1AG
United Kingdom

T +44(0)1223 339700
socialinnovation@jbs.cam.ac.uk
www.jbs.cam.ac.uk/centreforsocialinnovation