Chapter 27
ICT: A Resource for Bricolage in Social Entrepreneurship

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ABSTRACT
This chapter highlights the use of ICT as a resource for making do with what is on hand (bricolage) in social entrepreneurship. A growing proportion of social entrepreneurs are starting in fundamentally resource-constrained yet dynamic and uncertain environments. This chapter investigates the role of ICT as a bricolagable resource that provides malleability and scalability for social entrepreneurship. However, findings suggest that implementing ICT alone is a resource model set for failure. Such a tactic ignores the need for co-evolution with complementary human capital of the entrepreneur(s). These insights are valuable not only for the building of social entrepreneurship ventures, but more broadly for resource-constrained firms in dynamic and uncertain environments that are required to leverage resources for competitive advantage.

INTRODUCTION
The main difference between entrepreneurship in the business sector and social entrepreneurship has been identified as the relative priority given to social wealth creation versus economic wealth creation (Mair & Marti, 2006). In business entrepreneurship, social wealth is a by-product of the economic value created (Venkataraman, 1997), whereas in social entrepreneurship it is the main focus (Mair & Marti, 2006). In other words, social entrepreneurship is the creation and growth of an organization that applies commercial strategies to maximize improvements in human and environmental well-being, rather than just maximizing profits for external shareholders. Therefore, social entrepreneurial firms must create value and obtain competitive advantage as much as and even more so than pure business firms (Porter, 1995; Porter & Kramer, 1999). In order to capture value, the resource-based view of the firm encourages firms to invest in those inputs that are seen to provide sustainable competitive advantage (Wernerfelt, 1984). Such strategic resources should be VRIN resources: valuable, rare, inimitable, and non-substitutable (Barney, 1991).
However, the environment in which social entrepreneurial firms operate is resource-constrained as well as dynamic and uncertain. New social entrepreneurial firms often cannot afford (due to resource-constraints) or cannot identify (due to uncertainty and dynamism) such VRIN resources. As Zahra et al. (2008) describe: demographic shifts, liberalization of national economies and attendant markets, institutional and state failures and technological advances have combined to increase the impetus and fuel the formation of social ventures. In such circumstances, instead of identifying and acquiring VRIN resources, it is more advisable to invest in resources that have the potential to become VRIN resources. The entrepreneur(s) can then work with these resources to develop them into VRIN resources. Thus, such resources should be adaptable for scalability and multi-faceted for malleability, so that they can be used in specific ways that are valuable, rare, imitable and non-substitutable. One resource that has been identified to be a source of competitive advantage in management literature is internet and communication technology (ICT) (Powell & Dent-Micallef, 1997). However, ICT that is truly VRIN cannot often be afforded or even initially implemented due to the resource-constraints and dynamic and uncertain environments in which social entrepreneurs operate. ICT is a resource that when on hand can be leveraged in multiple ways or *bricolage*, where *bricolage* is the making do of resources at hand (Baker & Nelson, 2005). Thus, ICT cannot provide value and competitive advantage alone; it must be implemented in a malleable, scalable way and co-evolved with the complementary skills in the social entrepreneurial venture. In his seminal article, Teece (1986) identified that a necessary condition for firms to profit from innovative behavior is that their innovations must be coupled with a variety of complementary assets that allow firms to successfully implement, sell, or otherwise extract value from the innovation. Teece’s argument complements Milgrom and Roberts’ conceptualization of complementary assets (1990, 1995) which defines assets as mutually complementary if the marginal return of an asset increases with the level of the other asset. In other words $x$ and $y$ are complementary if when a firm increases their amount of asset $x$, the marginal benefit of $y$ increases. Thus, the implication of complementary assets is that firms that possess complementary assets will outperform rivals that do not. In this context, the skills of the employee(s) are necessary for deriving value from the ICT, such as salespeople who can sell a new product or engineers that can implement a more efficient production technology or financial-savvy that can be used to build better business models (Campbell & Banerjee, in press). This chapter will explicate the importance of ICT as a bricolagable resource for social entrepreneurship.

In what follows, we review the traditional roles of ICT in business, which are multi-faceted. We then build the perspective of ICT as a bricolagable resource and argue, using the resource-based view, that ICT can truly create competitive advantage for social entrepreneurship. In order to do so, ICT must be malleable, scalable and co-evolvable. We define these three terms and explore them using the case of Ananda Dhara Creations to provide solutions and future research directions in developing models of competitive advantage based on ICT as bricolagable resources. Dynamic and uncertain environments can be seen as a positive for creating sustainable competitive advantage through developing isolating mechanisms. Future research must bridge the gap between creativity and implementation in regards to *bricolage*.

This chapter has important implications for students, academics, entrepreneurs and policymakers alike. When making a resource choice, social entrepreneurs face a key trade-off. Should they invest in a resource with easily visible advantages that are easily valued by the entrepreneur and by the entrepreneur’s rivals, or should the entrepreneur invest in a resource with hard to observe but potentially valuable in multiple facets? The entrepreneur’s ability to engage successfully