Temporal arbitrage: Managing intertemporal pressures for sustainability

Sustainability scholars have argued that intertemporal trade-offs are required to achieve sustainable outcomes (e.g., Hahn, Figge, Pinkse, & Preuss, 2010; Slawinski & Bansal, 2015). Intertemporal trade-offs are decisions "in which the timing of costs and benefits are spread out over time" (Loewenstein & Thaler, 1989: 181). In the context of sustainability, trade-offs might include consuming fewer resources to preserve resources for the future or making long-term investments into green infrastructure at the expense of a firm's present-day profits.

Although making intertemporal trade-offs is necessary for sustainability, making long-term investments at the expense of present-day profitability is a difficult proposition for many organizations (Reilly, Souder, & Ranucci, 2016). Prior theory has suggested that when faced with intertemporal trade-offs, organizations often take courses of action that prioritize the short term over the long term because many organizations are under short-term earnings pressure, are risk adverse, or face resource constraints ((DesJardine & Bansal, 2019; Marginson & McAulay, 2008; March, 1991).

Although there are some approaches to managing the tension between long-term investments and short-term profitability, these approaches are not feasible for all organizations (Kim, Bansal, & Haugh, 2019). One such approach is structural ambidexterity, which involves separating exploitation activities aimed at immediate revenue generation from exploration activities requiring long-term investment (Gibson & Birkinshaw, 2004). Approaches such as ambidexterity may not be feasible for many organizations, particularly those with limited resources or those facing intense pressure for short-term profits, because it still requires organizations to make long-term investments, even though those investments happen in a silo.

Since attending to the long term is necessary for sustainability, and we know that organizations often choose to prioritize the short term, understanding how organizations can attend to short-term pressures while still investing in sustainability initiatives is an important area of inquiry. Therefore, in this paper we ask: how do organizations make intertemporal trade-offs for sustainability when facing intense short-term profitability pressures?

To address our research question, we use data from an engaged scholarship project with a home insurance company operating in the Canadian market. The study spans an 18-month period during which the organization was launching a sustainability and resiliency program to address the impacts of climate change on their business. We analyze the organization's two largest sustainability projects, which made intentional sacrifices to generate present-day cost savings that were pooled and transferred to a third sustainability project. This third project was expected to generate long-term sustainable outcomes. Through our analysis, we develop a theory of temporal arbitrage, which is the replacing of intertemporal trade-offs-- which spread costs and benefits across time-- with intratemporal trade-offs-- which spread costs and benefits across space within the present. Through temporal arbitrage, the organization was able to make long-term investments for sustainability while still attending to present day profitability concerns.

We aim to make two theoretical contributions. First, the literature on sustainability and time argues for the need to make intertemporal trade-offs and our findings suggest how organizations can overcome the known barriers to making these trade-offs. We propose that intertemporal pressures can be managed by moving resources across space within an organization, rather than allocating resources across time. Secondly, we suggest that by integrating departmental goals, rather than segregating them like in other approaches such as structural ambidexterity, organizations can attend to both the short term and the long term.