

# Chapter 11

## Preference Reversal Under Vulnerability: An Application of Neural Networks in Mexican Family Firms

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### ABSTRACT

*The behavioral agency theory explains that preferences have not always been stable over time and might change with the framing of the problem. A concept largely used in behavioral economics has been recently adopted in family firms' literature: preference reversal. Preference reversal explains that in the presence of vulnerability, family firms are willing to change their most critical point of reference, socioemotional wealth, and that they are willing to focus on financial wealth. This chapter introduces the concept of preference reversal, explains the application of preference reversal in family firms, and makes an empirical exploration of the presence of preference reversal. The study explores one of the cases of firm vulnerability: a low financial performance by applying neural networks. The study applies to Mexican family firms and finds indications of preference reversal.*

### INTRODUCTION

Preference reversal is a concept from behavioral economics that explains the discrepancy between gamble-choices and prices assigned to those gambles (Tversky & Thaler; 1990; Tversky, Slovic, & Kahneman, 1990). More recently, the concept has been used in family business literature to refer to the change in priorities in loss avoidance from the preservation of socioemotional wealth to the preservation of financial wealth (Zellweger, 2017). The preservation of the stock of socioemotional investment is, in the context of family firms, the most critical point of reference that guides decision making (Cennamo, Berrone, Cruz, & Gómez-Mejía, 2012; Gómez-Mejía, Cruz, Berrone, & De Castro, 2011; Gómez-Mejía et al., 2007).

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Preference reversal has been applied in behavioral economics studies and psychology studies (Yurkalo & Sornette, 2015; Tsetsos, Usher, & Chater, 2010). Family firm scholars have concluded that socioemotional wealth is the primary referent for decision making in family firms (Cennamo et al., 2012; Gómez-Mejía et al., 2011; Gómez-Mejía et al., 2007). Gains or losses in socioemotional wealth constitute the reference for problem framing in family firms (Berrone, Cruz, & Gómez-Mejía, 2012). In other words, socioemotional wealth is a high priority referent in family firms' decision making. Literature shows that family principals shift their concerns about losses of their socioemotional wealth when a firm faces vulnerability (Gómez-Mejía et al., 2014). Under conditions of a family firm's vulnerability, when firm survival is at risk (Gómez-Mejía et al., 2014), decision-makers solve the dilemma (socioemotional wealth versus financial wealth) by focusing on the preservation of future financial wealth and are willing to take a risk on socioemotional wealth. This change of priorities is called preference reversal.

Behavioral agency theory has long been used as a theoretical framework for explaining the decision making in the family firm. Socioemotional wealth is a concept derived from the behavioral agency theory. Some empirical studies use mixed gambles, another concept derived from behavioral agency theory, to explain how family firms consider both socioemotional wealth and financial wealth (Gómez-Mejía et al., 2014; Gómez-Mejía et al., 2007; Campbell, Campbell, Sirmon, Bierman, & Tuggle, 2012). What remains unexplored is the empirical application of preference reversal, which, unlike mixed gambles, explains a total focus on financial wealth.

The purpose of this chapter is twofold. First, to introduce the concept of preference reversal, and to explain its theoretical application in family firms. Second, to explore the presence of preference reversal in family firms when there is a vulnerability. The study is applied to Mexican family firms. This study is exploratory, and by using neural networks, it explores one of the cases of firm vulnerability: low financial performance. The findings indicate that there is a presence of reversal preference.

This chapter extends and applies the behavioral agency model by empirically exploring the presence of preference reversal. Preference reversal is not easy to study because it implies a decision-making process. It has been measured empirically by using experiments where subjects are informed to make a gamble following some instructions (Van Horen & Pieters, 2013). The study of a firm is entirely different because firms cannot make a choice and cannot be instructed as subjects can to make a decision. So, the chapter uses neural networks to advance preference reversal. This implies a huge extension to the study of family firms because preference reversal can be tested.

The chapter goes as follows. Section 1 contains the theoretical background, which explains the basic theoretical ground of behavioral agency theory and socioemotional wealth. This section also introduces the concept of preference reversal. Section 2 contains a literature review of the applications of behavioral theories to family firms. This section focuses on the differences between mixed gamble perspective and preference reversal. Section 3 contains the methods (neural networks), data collection, variable explanation, and analysis. Section 4 describes the discussion. Moreover, section 5 shows the conclusions and future research.

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