Tough Love and Discounting: Empirical Evidence

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Abstract

This paper presents empirical evidence concerning the tough love model of intergenerational altruism from U.S. and Japanese survey data. Our main finding is that parents' tendencies for tough love behavior depend on different measures of discount factors. We also investigate the hypotheses that parents' tendencies for tough love behavior is affected by their religious affiliations, religiosity, and their worldviews.

Keywords: Culture, worldview, intergenerational altruism, tough love, religion

JEL Classification Numbers: D03, D64

1. Introduction

This paper presents empirical evidence concerning Bhatt and Ogaki's (2008) tough love model of intergenerational altruism from unique U.S. and Japanese survey data collected by the Osaka University Center of Excellence (COE) project. How different generations are connected is an important economic issue with implications for individual economic behavior like savings, investment in human and physical capital and bequests which in turn affect aggregate savings and growth. It also has nontrivial policy implications as in Barro (1974), who has found that there will be no net wealth effect of a change in government debt in the standard altruism model. Infinite horizon dynamic macro models are typically based on the standard altruism model proposed by Barro (1974) and Becker (1974) in which the current generation derives utility from its own consumption and the utility level attainable by its descendant.

A striking implication of the standard altruism model is that when the child becomes impatient, transfers from the parent to the child do not change when the child is borrowing constrained as we shown in Bhatt and Ogaki (2008, Section III). This implication of the model is not consistent with recent empirical evidence on pecuniary and non-pecuniary parental punishments (see Weinberg (2001), Hao et al. (2008), and Bhatt (2011) for empirical evidence). For example, imagine that a child befriends a group of impatient children and suddenly becomes impatient because of their influence. As a result the child starts to spend more time with the new friends and less time studying. In worse cases, the child starts to smoke, drink, or consume illegal drugs (see Ida and Goto (2009) for empirical evidence that shows association of low discount factor and smoking). At least some parents are likely to respond by pecuniary punishments such as lowering allowances or non-pecuniary punishments such as grounding.

Bhatt and Ogaki (2008) modified the standard model to develop the tough love model of intergenerational altruism, so that it implies that the parent lowers transfers to the child when the child exogenously becomes impatient under a wide range of reasonable parameters. They modeled parental tough love by combining the two ideas that have been studied in the literature in various contexts. First, the child's discount factor is endogenously determined, so that low consumption at young age leads to a higher discount factor later in her life. This was based on the endogenous discount factor models of Uzawa (1968) except that the change in the discount factor is immediate in Uzawa's formulation whereas a spoiled child with high consumption progressively grows to become impatient in our formulation. Recent theoretical models that adopt the Uzawa-type formulation include Schmitt-Grohé and Uribe (2003) and Choi et al. (2008). Second, the parent evaluates the child's lifetime utility function with a constant discount factor that is higher than that of the child. Since the parent is the social planner in our simple model, this feature is related to recent models (see Caplin and Leahy (2004); Sleet and Yeltekin (2005, 2007); Phelan (2006), and Farhi and Werning (2007)) in which the discount factor of the social planner is higher than that of the agents.

We use the Osaka University COE survey data for Japan and the United States, which include two hypothetical questions concerning tough love behavior. We use answers to these questions as dependent variables in our regressions. The main question we ask is how parents' tendencies for tough love behavior depend on

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various measures of time discounting for parents' own lending and borrowing over different time horizons. We also investigate whether or not parents’ income, religious affiliation, religiosity, and beliefs concerning their worldviews affect their tendencies for tough love behavior.

2. Tough Love Altruism

This section presents a tough love altruism model that provides for a channel through which parents can influence the child's economic behavior. The model introduce the tough love motive of the parent via asymmetric time 1 preferences between generations and endogenous discounting. This model predicts that the transfer to the child in period 1 will decrease when the child's discount factor exogenously decreases for a wide range of parameters.

Imagine a three-period model economy with two agents, the parent and the child. For simplicity we consider the case of a single parent and a single child. The three periods considered are childhood, work and retirement. The model has six features. First, the parent cares about his own consumption but is also altruistic toward the child. He assigns a weight of his own consumption but is also altruistic toward the child. The model has six features. First, the parent cares about his own consumption but is also altruistic toward the child. He assigns a weight of his own consumption but is also altruistic toward the child.

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In this model, the parent uses a constant and high discount factor to evaluate the child's lifetime utility for parents' own consumption stream \((C_t)\) for high discount factor, the parent decreases the transfer to the child. The underlying motivation for this type of endogeneity of the child's discount factor is the belief that the parent can spoil the child by giving her very high consumption of the child. The underlining motivation for this type of endogeneity of the child's discount factor is the belief that the parent can spoil the child by giving her very high consumption of the child. The underlining motivation for this type of endogeneity of the child's discount factor is the belief that the parent can spoil the child by giving her very high consumption of the child. The underlining motivation for this type of endogeneity of the child's discount factor is the belief that the parent can spoil the child by giving her very high consumption of the child.


