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The impact of a common good model of the firm on prosocial business decision-making of students: An experimental investigation

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Abstract: Due to the involvement of graduates from prominent business schools in high profile corporate scandals since the turn of the century, there has been a clamor from various quarters, including business scholars and the United Nations, for a fundamental rethinking of business education curricula. A core component of business education is instruction in the economics of the firm, which depicts the firm's pursuit of maximum profit given the cost of its various inputs, including labor. Empirical research in the last two decades has shown the tendency of students who are exposed to self-interest models of economics to develop self-oriented, less socially cooperative and more greed-tolerant attitudes. This stream of research, combined with the concerns about recurrent involvement of business-educated leaders in high-profile scandals led Abueg, Sauler and Teehankee (2014) to develop a common good model of the firm. This model incorporates the provision of living wages to employees of the firm and those of its suppliers, a departure from the standard model of the firm, while pursuing conventional profit goals.

This paper investigates the effect of exposure to the common good model of the firm on students' decisions given a social ethical dilemma confronted by business leaders and the resulting sense of well-being after the decision. Undergraduates who have recently started taking a basic economics course are experimentally exposed to the standard model of the firm, the common good model of the firm, and a neutral description of economic history. Prosocial behavior is measured using the number of employees retained given a business dilemma. The results confirmed a positive impact of the common good model on employee retention. Higher employee retention decision, in turn, tended to result in higher sense of well-being for the participants.

Key Words: common good model of the firm, economics education, experiment

1. INTRODUCTION

1.1. Background

In 2007, as the global financial crisis unfolded, the United Nations coordinated an international task force of deans, presidents and representatives of leading business schools and academic institutions in developing the Principles for Responsible Management Education (2013) or PRME. The purpose was to engage business

schools globally in educating students in the principles of sustainability and social responsibility. UN Secretary-General Ban Ki-moon remarked that "the Principles for Responsible Management Education have the capacity to take the case for universal values and business into classrooms on every continent."

De La Salle University joined PRME in 2009 and thereby committed to creating "educational frameworks ... that enable effective learning experiences for responsible leadership"



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and engaging “conceptual and empirical research in that advances understanding about the role, dynamics and impact of corporations in the creation of sustainable social, environmental and economic value” (Principles for Responsible Management Education, 2013). In line with these principles, Abueg, Sauler and Teehankee (2014a, 2014b) developed a multi-stakeholder model of the firm (hereafter simply referred to as the Common Good Model) which considers benefits for employees, suppliers, and customers, in addition to the traditional consideration of profits for the business owner.

Various scholars have reported the tendency of economics education, especially through frameworks and standard models of the firm premised on rational self-interest, to negatively affect students’ social attitudes (Frank, Gilovich & Regan, 1993; Wang, Malhotra, & Murnighan, 2011; Rubinstein, 2011). A number of prominent management scholars have called for reforms in how students are educated in the field of business and economics. Ghoshal (2005) argued that the constant exposure of business students to purely self-interest models have seriously negative impacts on the outlook of students and their subsequent ability to make sound business decisions. He admonished management educators for over-emphasizing in the curriculum the concerns of shareholders over those of stakeholders (Rubin & Dierdorff, 2013).

1.2 Related Literature

Frank, Gilovich and Regan (1993) initiated the stream of research looking into the influence of economics education on social attitudes. The authors conducted a quasi-experiment to determine whether exposure to standard economics instruction on self-interest models tends to inhibit social cooperation. They conducted honesty surveys, during the first week of classes and again in the last week of the term, among students in two microeconomics classes and a control group of students in an astronomy class. Include in the survey was an ethical dilemma posed to the students who were asked to take the role of a business owner who had received a delivery of 10 computers from a supplier but billed for only 9. The question was whether the owner should inform the supplier of the error. The results showed a higher proportion of less honest responses at the end of the term compared to the start of the term

for the two microeconomics classes (41.7% and 34.8%) versus the control group astronomy class (23.3%). The authors interpreted the results as supporting their hypothesis that self-interest models in economics tend to encourage less socially desirable attitudes among students. It should be noted that the students were not randomly assigned to the classes and, therefore, the possibility of self-selection among the economics students could not be ruled out.

Other researchers have found similar negative impacts of standard economic models of the firm on student social attitudes. Rubinstein (2011) runs a similar experiment to assess students’ views on profit maximization, based on the premise that economic students tend to develop self-interested tendencies. The study finds that students of economics did indeed tend to focus on profit maximization, as compared with business students.

Wang, Malhotra, & Murnighan (2011) also found that an economics education tends to develop attitudes towards greed, even after controlling for the possible effects of self-selection.

1.3 Problem and hypotheses

The present study experimentally investigated whether exposure to the Common Good Model of the firm positively influences the prosocial attitudes of students when making business-related decisions as compared to exposure to the Standard Model of the firm. It also investigated the influence of such prosocial decisions on students’ sense of well-being as argued by Van Der Linden (2011), who drew a link between altruism toward others and personal utility.

Specifically, the study addressed the following research questions and hypotheses:

Does exposure to the Common Good Model positively influence the prosocial decision-making of students as compared to exposure to the Standard Model of the firm?

Hypotheses 1: Students exposed to the Common Good Model will tend to make more prosocial business decisions.

Hypotheses 2: Students exposed to the Standard Model will tend to make less prosocial business decisions.

Does prosocial decision-making lead to a higher sense of well-being among students? Does this relationship vary across the experimental conditions?



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Hypothesis 3: Students who make more prosocial decisions will tend to have a higher sense of well-being.

Hypothesis 4: Students who make more prosocial decisions will tend to have a higher sense of well-being across the experimental decisions.

2. METHODOLOGY

2.1 Design

The study utilized a basic randomized design comparing two treatments and a control described by Shadish & Cook (2001). Adapting their research design notation with R indicating randomization, Xg indicating exposure to the Common Good Model, Xs indicating exposure to the Standard Model, C indicating the Control group (exposed to a History narrative), and O indicating outcome measures, the design may be depicted as follows:

R	Xg	O
R	Xs	O
R	C	O

The experimental treatments used in the study were text readings on the Common Good Model, the Standard Model and a History of Economics text for the Control.

The outcome measure for prosocial decision-making is the number of employees a student respondent decided to retain by recording a number, out of a total of 196, on a brief questionnaire after exposure to the experimental conditions. Subsequently, we examined levels of happiness reported immediately after the decision to retain or release employees. This is to test the hypothesis that one's utility is influenced by the welfare of others as well. We elicit data on happiness by administering a single question: "Now that you have made your decision, would you say you are (a) very happy, (b) moderately happy, or (c) not so happy?", which follows the format and scale used in the US General Social Survey.

2.2 Procedure

The experiment was conducted involving 191 students enrolled in Introduction to Microeconomics, the course where business and economics students are first exposed to the standard theory of the firm, in De La Salle University.

In the experiment, the students were randomly assigned one of three treatments: (1) the Standard Model, (2) the Common Good Model, and (3) the Control. A treatment check was also conducted prior to the experiment to ensure that the students' proper comprehension of the texts given to them. The treatment check was conducted in a class of 39 students, all enrolled in Introduction to Macroeconomics, which implies that these students had taken Introduction to Microeconomics and have, therefore, been exposed to the standard model. The results of the treatment check show that students encountered difficulties in fully understanding the conditions for profit maximization using marginal analysis. The expositions in the treatments were then simplified for the actual experiment.

2.3 Data Analysis

To address the first research problem, one-way analysis of variance was performed to compare the mean employee retention decisions of the students under the three experimental conditions. Tukey's range test was used to test Hypotheses 1 and 2 and identify significant mean differences between the control and treatment groups. This test corrects for the family-wise error rate which tends to increase the probability of Type I errors during multiple t-tests (Tukey, 1949).

The second research problem was analyzed in two ways. The nonparametric Spearman rho rank correlation coefficient was used to test Hypothesis 3 of a positive correlation between employee retention and sense of well-being (happiness). This was used because the self-reported level of happiness was only an ordinal scale with three levels.

Hypothesis 4 was addressed by first transforming employee retention into a new binary variable, Retention Level, which is equal to 1 if the student retained 170 (the median retention) or more employees. The variable was coded 0, otherwise. This binary variable was used as a factor in a 2-way analysis of variance to test for interaction with experimental group in terms effects on well-being. The absence of an interaction effect would support Hypothesis 4.

3. RESULTS

Did exposure to the Common Good Model positively influence the prosocial decision-making of students as compared to exposure to the Standard Model of the firm? Table 1 reports the descriptive statistics for number of employees retained per experimental group and overall. Fig. 1 charts the average number of employees retained

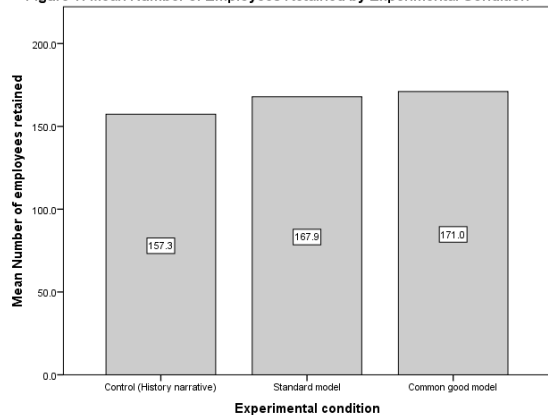


per group. Across the three groups, the average number of employees retained was high, at least 77% of the total available workforce.

Table 1. Descriptive Statistics on No. of Employees Retained

	N	Mean	Std. Dev.	Std. Err.
Standard Model	63	167.87	28.9346	3.6454
Common Good model	61	171.00	30.5461	3.9110
Control (History)	65	157.32	35.5459	4.4089
Total	189	165.25	32.2304	2.3444

Figure 1: Mean Number of Employees Retained by Experimental Condition



The analysis of variance on the group means (Table 2) yielded significance, $F(2,186) = 3.221, p = .042$. The Tukey range test (Table 3) indicated that the difference in the mean number of employees retained under the Common Good Model vs. the Control Group (13.7 employees) was significant ($p = .044$). Hypothesis 1 was, thus, supported. Students exposed to the Common Good Model did tend to retain more employees, indicating higher prosocial behavior vs. the Control.

The mean number of employees retained under the Standard Model did not emerge in the hypothesized direction based on past literature, being 10.5 employees higher than Control. Thus, Hypothesis 2 was not supported. There was no evidence that exposure to the Standard Model influenced the students to terminate more employees than the Control group. (Note: The Tukey range test also did not indicate statistical significance for this mean difference ($p = .149$))

Table 2. Analysis of Variance on No. of employees retained

	Sum of Squares	df	Mean Square	F	p
Between Groups	6538.338	2	3269.169	3.221	.042
Within Groups	188755.655	186	1014.815		
Total	195293.992	188			

Table 3. Multiple Comparisons on Number of Employees Retained using Tukey's Range Test

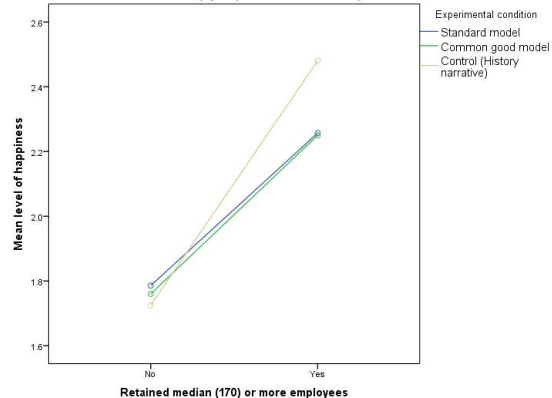
(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Control (History narrative)	Standard model	-10.5482	5.6321	.149	-23.855	2.758
Control (History narrative)	Common good model	13.6831	5.6788	.044	-27.100	-.266

*The mean difference is significant at the 0.05 level.

Did prosocial decision-making (in terms of higher employee retention) lead to a higher sense of well-being among students? The computed Spearman rho was significant, $r = .322, 0 < .001$. Hypothesis 3 was, thus, strongly supported.

Did the positive relationship between prosocial behavior and well-being hold irrespective of experimental group? Fig. 2 compares the average happiness per treatment group of those who retained fewer than 170 employees (the sample median) against those who retained 170 or more. The mean diagram indicates that the mean level of happiness was higher for those students who retained more employees and this was true for all three experimental conditions.

Figure 2: Level of Happiness as a Function of Employee Retention Level (by Experimental Condition)



Two-way analysis of variance applied to Hypothesis 4 revealed that while Retention Level is a highly significant factor, $F(1,183) = 46.43, p <$



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.001 (mirroring the Spearman rho result), the interaction between Retention Level and Treatment did not reach significance, $F(4,183) = .786$, $p = .536$. Hypothesis 4 is, thus, supported. The positive effect of employee retention on well-being holds with equal force for all experimental conditions.

In summary, students exposed to the Common Good Model tend to retain more employees. Students who retain more employees, tend to be happier, irrespective of treatment condition.

4. DISCUSSION

Why would the average rates of retention be higher for those exposed to the Common Good, rather than economic history (Control)? While it is possible that the effect is merely an artifact of teaching, or the lack of comprehension of participants resulting in random or “safe” responses, we do not believe this is the explanation for our findings. The participants were all presented with material to read rather than a lecture to listen to, which dealt with possible teacher effects, and the material was simplified significantly following an early pilot (original drafts available upon request).

Instead, we believe that explicit instruction in the Common Good Model more clearly triggered latent prosocial tendencies in participants, than exposure to an account of economic history. In particular, describing a firm in terms of its human constituents may have primed their natural inclination to behave in a way that preserves not just one’s own utility, but the utility of others as well. The evidence of this natural and elevated inclination toward prosocial behavior is that even those participants in the control group, whose average was significantly lower than both treatment groups, chose to retain over three-fourths of their employees. The priming effect may be inferred from the significantly higher levels of prosocial behavior in the Common Good Model that used the more overtly pro-social terms; e.g., “employees” instead of “workers” etc., although this effect is not a statistically significant result when compared to the Standard Model, whose material used human, but not overtly prosocial terms; e.g., “workers”, “capitalists”, etc.

This interpretation is further supported by the findings on happiness. Our findings support

research that altruism toward others is linked to one’s own utility (Van Der Linden, 2011) and that this tendency is related to a desire for mutual relationships from a very young age (Carey, 2014).

Our findings provide a platform upon which the question “can we form more prosocial business students?” may be examined more systematically. Our evidence that a sample of first-year students exhibits high levels of prosocial behavior when faced with a hypothetical situation points to future experiments. Specifically,

1. An exact replication this time administered to senior business students, to test the hypothesis that as students go through the business or economics curriculum, they may have their prosocial tendencies suppressed or worse, “leached” from them;
2. An experiment based on longer teaching contact time (while still preventing participants in each treatment group from communicating with each other), to test the robustness of the teaching effect;
3. An economic experiment in which participants are incentivized with actual monetary payoffs for their decisions. If these are designed to mimic the decision to retain or release employees, they would further test the robustness of a participant’s pro-social tendencies.

A drawback of the experiment is the issue of incentives, which begs the question of being unbiased (in estimates) and the randomization of the process.

In the rendition of the experiments, the students were only instructed to attend an additional meeting, and no demographics or information were obtained from them. Since this is considered as a classroom activity, student attendance was not even monitored. It is indeed very likely that none of the classes have had perfect attendance. It is only by virtue of student’s willingness that they have participated in such activity. This is to avoid the self-selection bias in the sample. Otherwise, students would generally participate because they will get something in return, but not because of what the experiment would like to answer: whether the additional information on the common good model would change the (hypothetical) setting of how do businesses decide on decisions, pertaining on labor employment and welfare.

5. CONCLUSIONS

Designing and implementing a randomized controlled trial in which first-year participants are exposed to our Common Good Model, the Standard Model of a Firm, and control has yielded



experimental evidence of high levels of prosocial tendencies in general. Interestingly, we have confirmed a positive effect of exposure to the Common Good Model on prosocial behavior. This indicates much educational potential for forming more prosocial behavior among business students. Finally, we garnered evidence that these prosocial tendencies have provided higher levels of satisfaction for those who practiced them. They suggest a “reserve” of prosocial behavior among first-year university students that may be preserved and developed, but also more carefully theorized about and experimentally tested.

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