STOCKHOLM SCHOOL OF ECONOMICS
Department of Economics
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Differences in Altruistic Behaviour in Dictator Games: An Effect of Education or Selection?*

Abstract

In this study we have investigated whether there are any differences in altruistic behaviour between business and medical students by observing their behaviour in a dictator game. We also investigate whether any educational effects influence senior students to behave differently compared to their junior peers. To better be able to isolate altruistic behaviour the dictator game is designed such that the counterpart is a well-known charity organization. We find that there indeed is a significant difference such that medical students act more generous than business students in terms donating a larger amount of the initial endowment. However, we fail to verify that this effect is due to educational experience and can consequently only conclude that the behaviour must be derived from environmental effects or dissimilarities in genetics.

Key words: Altruism, dictator game, education, economic rationality

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Table of contents

1. Introduction 1
2. Theoretical concepts 4
   2.1 Utility and preferences 4
   2.2 Game Theory 5
      2.2.1 The dictator and ultimatum games 6
   2.3 Literature 7
3. Experimental design and methods 11
   3.1 Data and population specifics 11
   3.2 Pilot study 12
   3.3 Conducting the survey 13
   3.4 Statistical analysis 13
   3.5 Limitations to our method 14
4. Predictive conclusions 17
5. Results 18
   5.1 Comparison between business and medicine students 20
   5.2 Comparison between first and third year business students 22
   5.3 Comparison between first and third or higher year medicine students 23
   5.4 Regressions 25
6. Synthesis and discussion 27
   6.1 Differences between business and medicine students 27
   6.2 Educational effects 28
   6.3 Discussion of supplementary findings 30
   6.4 Summary of implications for further research 31
7. Conclusions 32
8. References 33
9. Appendix 36
   9.1 Appendix A: Results for the organizations 36
   9.2 Appendix B: Comparison between younger and older students 37
   9.3 Appendix C: Survey 38

1. Introduction

The concept of the economically rational human being, *homo economicus,* on which a significant portion of the economic theories is founded, can in many cases be challenged. [1] That people do not take decisions that are utterly rational and completely self-interested is well established (Levitt and List, 2008). We recognize however that decisions are commonly affected by incentive structures. People regularly face incentives directed towards certain behaviour and consciously or non-consciously people weigh and evaluate what actions are best for them in a particular situation. Depending on the specific incentive structures and on our preferences, we prioritize and make our choice. Incentive structures, in turn, can be conceptualized as institutions as clarified by North (1991): "Institutions are the humanly devised constraints that structure… social interaction".

Culture and social norms (traditions, customs, taboos and codes of conduct etc.) are often considered as informal institutions (as opposed to formal institutions, such as laws and regulations) and as such they are a factor to be considered when analysing what incentive structures are prevailing in a society. It is of course true that different societies create and nurture different cultures. Also within countries and even cities diverging cultures are prevalent. In modern theory of management and organizational decision making, even corporate culture is a well-known concept that explains how the culture within a given organization affects and shapes how people behave (Schein, 2009).

As different companies possess different corporate cultures that steer the employees to behave in a certain manner, there most certainly exist similar effects within organizations such as schools and universities. Schein (2009) identifies three different levels of culture, one of which is *Espoused Values* which are the strategies, goals and philosophies shared by individuals that belong to a specific culture. It is likely that students within distinctly different educational domains have divergent philosophies of how to reach their goals and as such, at least to some extent, therefore also share different cultures.

The research question and purpose for this thesis is connected to the effects culture and norms have on students in the case of altruistic behaviour. We will investigate whether there are any differences in altruistic behaviour on the aggregate level between business and medical students,

[1] Homo economicus is a term used to describe individuals acting to maximize only their own wealth and profit, disregarding other actors' outcomes.

and additionally, we will investigate whether there are any tendencies for senior students to differ in behaviour relative to their junior peers. Specifically, we will investigate behaviour of business students at Stockholm School of Economics (SSE) and medical students at Karolinska Institutet (KI). The latter part of our research question will enable us to analyse potential direct effects that the education, or educational environment, may have on the behaviour of the students. We will thus be able to isolate behavioural differences to a selection effect and an educational effect, respectively. Finally, we will discuss the generalizability of our results in relation to previous findings. As for collecting data of the behaviour of the students, we will conduct a survey in which the students will play a specific version of the dictator game where the counterpart is a charity organization.

By learning more about the differences between how and why people are altruistic we believe that organizations can create institutions that promote people to act more prosaically, or, if wanted, more economically rational.

In summary, what we shall examine is the following: Firstly, we will investigate differences in altruistic behaviour between business students at SSE and medical students at KI. Secondly, we will investigate differences in altruistic behaviour between students with different educational experience, or more specifically, if senior students behave differently compared to junior students at SSE and KI respectively. Note that in the latter research question no comparisons are made between students at the two different educational institutions. In both cases, the students will play a dictator game (the same game) versus a charity organization.

Our naïve initial hypothesis is that business students will act more in line with the concept of *homo economicus* and consequently, at least superficially, act less altruistically compared to medical students. This effect is also assumed to be amplified by a stronger tendency among medical students to value altruistic traits than what is the case for the average citizen. We thus expect a result such that the business students on average keep a larger amount of the initial endowment than do the medical students. The latter statement is motivated by the idea that medical students have chosen their education partly because of a willingness to help other people in need and as such are believed to receive greater utility from behaving altruistically. Moreover, as for our hypothesis regarding the comparison between students with different educational experience within their particular science field, we believe business students to act more in line with the concept of economic rationality with increased experience and consequently keep a larger share of the endowment. The opposite effect is assumed to be predominant among medical students, perhaps due to greater exposure to people in need which could induce a feeling of increased

responsibility. These hypotheses are of course highly speculative, but if data will tend to a specific direction, we believe one stated is the most probable.

We begin this paper by discussing some theoretical concepts that underlie some of the frameworks used in analysis and experiments in this science field. Subsequently, we present a brief literature overview followed by a discussion of the statistical methods and experimental designs used this paper. Finally, we present our results and discuss their relevance in connection to previous findings.

2. Theoretical concepts

As we shall see, a number of studies regarding differences in behaviour between several populations in terms of altruism and economically rational behaviour have been conducted. The idea of modelling human behaviour with game theoretic models to produce simple yet intriguing results has even made its way into popular culture through books such as Superfreakonomics (Levitt and Dubner, 2009). Levitt and Dubner devote a chapter labelled *Unbelievable stories about apathy and altruism* to investigation of the results that has been revealed in recent research in this particular scientific field. We will return to present an overview of relevant literature on this subject. First however, we will present some of the theoretic ideas that help us understand analysis of these behavioural phenomena better.

2.1 Utility and preferences

By introducing a utility function as a model for how people make decisions, it is possible to use mathematical reasoning to get an indication of how people will behave given that they are considered to be rational. Rational behaviour is here, somewhat sketchy clarified, considered as behaviour by the decision-maker such that he or she optimizes his or hers actions given some set of preferences for the alternatives at hand (Osborne and Rubinstein, 1994). The function that relates an action to some preference is called a utility function.

A utility function for an individual is sometimes modelled as a concave and monotonically increasing function in terms of increasing monetary reward (Pratt, 1964). The concavity is motivated by the idea that most people receive reduced marginal utility in a state of higher wealth compared to a state of lower wealth – SEK 10 000 is better if it doubles your wealth than if it constitutes your weekly shopping budget.[2] However, the function is always increasing since even though the marginal utility is reduced for states of higher wealth, more is always better. Concavity in a utility function of an individual also imply risk averse behaviour of this individual, since a increase of a fixed amount of wealth results in a smaller absolute change in the utility than the corresponding decrease in wealth. Thus a lottery ticket offering a 50 per cent chance to double a given amount of money together with a 50 per cent chance to lose it all would not be considered acceptable for this particular individual.

[2] 1 SEK = 0.11 EUR (Bloomberg, 2011)

It should be noted though that the ideas above are just an excerpt of a large theory explaining people's preferences. Daniel Kahneman received The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel in 2002 partly for developing what he calls prospect theory (Nobelprize, 2011). The theory was developed together with Amos Tversky and criticizes ordinary expected utility theory as they mean, among other things, that people do not accurately calculate and incorporate stochastic outcomes in taking decisions. Furthermore, they note that people's preferences are indeed inconsistent when the same choice is presented in different settings. The resulting utility function is consequently a function that is concave for gains but convex for losses (Kahneman and Tversky, 1979).

In summary, an individual's preferences can differ in a multitude of ways and as a consequence, modelling of behaviour through utility functions is complex. As for preferences of altruistic behaviour, it is of course true that these also vary across individuals and cultures. One implication of this theory onto modelling economic behaviour is that a completely altruistic individual would allocate resources to whoever has the highest marginal utility. A completely economically rational individual would, on the other hand, act in a manner that always maximizes personal wealth and therefore allocate all resources directly into his or her own pocket (there could evidently be inter-temporal decisions that force transitory reallocation of resources to other parties).

2.2 Game Theory

Some concepts relating to what we at the present time call game theory can be traced back to the 18th century. The scientific breakthrough however, came in the 20th century in connection to the works of mathematicians such as John von Neumann and John Nash. The concept of Nash equilibrium led to a substantial increase in the study of human behaviour in economic, political and even biological contexts (Osborne, 2004).

The game theoretic modelling is most commonly under one of the forms, strategic or extensive. The differences between these game forms are for the purpose of our study not important. Both game forms though, include a set of possible actions to which preferences, (through the eventual outcome of the actions that are taken by both players) are defined for each player. Actions are taken in turns or simultaneously depending on game form, which under a set of assumptions of

e.g. rationality and common knowledge yield outcomes suitable for analysis (Osborne and Rubinstein, 1994). [3]

Today, game theoretic models are widely used in different economic and social sciences. Some examples of areas of application are monopoly/oligopoly analysis or common property analysis within economic science and collective decision making analysis within political science. A common focal point for most applications however, is that the models are used to analyse interactions among decision makers. For a more thorough introduction to the subject, see for instance Osborne (2004).

2.2.1 The dictator and ultimatum games

As hinted earlier, a myriad of different games have been created to study different social phenomena. A common game used for a variety of purposes, originally presented by Güth et al. (1982), studies a process of interaction between players labelled ultimatum bargaining, which features a situation where only one player acts at each stage of a sequential game. After a number of such stages the players reach one of the two predefined outcomes and the game is over. The simplest and perhaps most common form of the game includes two players and two stages. In the first stage one players offer a split of an endowment (typically money) between the players, which in the following stage can be rejected or accepted by the second player. If the offer is rejected, the common split is a zero-zero allocation between the players, which evidently is suboptimal.

According to the concept of *homo economicus*, the first player should split the money in such a way that he or she can keep the largest possible amount in his own pocket while still offering a large enough amount to persuade the second player to accept the offer. If the second player also acts in line with the above concept, he or she will reckon that any small amount larger than zero is acceptable. Understandably, this only holds if the game is played no more than once, since if repeated, the second player might benefit from punishing the first player in some of the earlier rounds.

A modified version of the ultimatum game, commonly known as the dictator game, has the same features as the game presented above but with the important distinction that the game is played

[3] Common knowledge is a term used to describe a situation or event in a game where both players, in a given state of the game, not only knows the event, but also know that all other individuals know it and furthermore each individual knows that all other individuals know that all the individuals know it, and so on.

by one player, unilaterally. As such there is no second player that can reject the split, even though the first player has a counterpart towards whom he or she addresses his or her actions. In this case the choice of the purely selfish and economically rational individual is perhaps even more obvious as there certainly is not anything stopping the first player from keeping all of the initial endowment. Consequently a deviation from the above described behaviour clearly cannot be motivated by strategic aspects and so any deviation must be connected to, if not altruism, an increase in utility from other factors such as fairness, or adherence to social norms.

2.3 Literature

There are several studies that analyse how people behave in different versions of the ultimatum and dictator games. The results are strikingly, seldom in line with the extreme allocations that should be proposed and accepted by individuals with strict economically rational behaviour (Stanton, 2006). In standard ultimatum games played by Western university students, offers typically lie between 40 and 50 per cent of the initial endowment given to the first player (Samuelson, 2005). Moreover, in Samuelson's article, which is a review of literature on the subject, it is also noted that as compared to outcomes of the ultimatum game in other cultures, results are not extremely different from the behaviour of the students. The cultures in question belong to tribe societies and similar groups in a range of countries across several continents, such as Ecuador, Tanzania, Mongolia and Indonesia. As for the variability, the mean offers in these groups lie between 25 and 57 per cent, with a median offer in the range of 15 to 50 per cent, which indeed is a comparable result to what is found for Western citizens. The behaviour of the second player varies considerably across cultures with four out of the fifteen studied groups rejecting no offers, whereas in other groups a common result was to reject an offer even though it was over 50 per cent of the initial endowment. In line with the above findings, Stanton (2006) also concludes that humans show comparable behaviour across different cultures in terms of other-regarding behaviour.

Henrich et al. (2004) suggest that preference for fairness and reciprocity as candidate explanations as to why people do not act economically rational in dictator and ultimatum games. Behavioural reciprocity is the notion of acting encouraging towards positive behaviour of other individuals as well as acting with resentment towards hostile individuals or actions (Fehr and Gächter, 2000). Furthermore, it has even been found that there is a tendency to punish negative behaviour even

when there is no direct future reward for the punisher. As such, reciprocity is most likely an important factor for withholds social norms and for overcoming problems with collective action.

Obviously, several factors are at work when people take decisions in game theoretic environments. One such factor that has been mentioned is the degree of social distance that is perceived between the players in the game. Bohnet and Frey (1999) mean that the influence of social distance is separated from factors such as reciprocity and as such is independent of social norms. The notion of social distance is intuitively described as the phenomena when an unknown person is increasingly perceived as identifiable as the social distance decreases. Perhaps not surprisingly, the authors find that offers increase as the social distance decreases. The authors note that this fact has been used by organizations such as charities to get people to increase their donations. Other studies have found that expectations about how much other will give, matter for the individual choice. Frey and Meier (2004) find that people increase their average contributions if they believe others will do the same.

Altruism have by some authors (e.g. Eckel and Grossman, 1996), been pointed out as a motivating factor for increased giving in a dictator game which is played against a charity organization. It is noted that donations increase significantly (in this case, by a factor three) when an anonymous individual is replaced by an established charity. Others however, argue that there might be other factors operating which in turn are easily perceived as altruism. Andreoni (1990) summarizes some factors such as prestige, respect, friendship and even guilt as possible factors resulting in behaviour that resembles altruism. When donating money, people thus not only act altruistically, but they gain utility from the very act of giving.

As for the effect of gender, Croson and Gneezy (2009) study what general implications there might be for dissimilarities in preferences between the two genders. They summarize findings from previous studies and observe notable differences in terms of risk taking, social preferences and attitudes toward competition. Regarding risk taking and competitive behaviour, women are in general found to be more averse both in relation to risk and to competitive situations. Whether the differences are due to biological or environmental factors is however unclear. As for social preferences, the variability among female behaviour is generally larger than for male behaviour. The authors argue that the reason for this effect might be a consequence of women being more sensitive to social cues than are men. As for the literature on dictator games however, the overwhelmingly most common result is such that if there are significant differences, women are the more generous party.

Having concluded that behaviour differs across societies we now look for differences between groups of people within the same society and in particular between economists and other groups of people. Lunquist et al. (2009) study the aversion to lying among several Swedish students and conclude that such a phenomena indeed is observable, and moreover, that the aversion for a particular individual shows small tendency (however non-significant for one of the student groups studied) to increase with the importance of the lie. One of the groups studied were students from SSE for which the authors found, as compared to the other student groups, an increased propensity to act opportunistically and as such also more in line with economic rationality.

This kind of result has been found earlier, e.g. by Marwell and Ames (1981) who found that free riding were more common among economics students than other students groups, and by Carter and Irons (1991) who note that economics students are more selfish than other students. The latterly named authors also hint that there might also be educational effects from learning about the classical assumptions made in economic analysis. They find by comparing the behaviour of freshmen students majoring in economics with students majoring in another scientific field, that there is a selection effect implying economists being more selfish. In other words, this would indicate that economists are acting more rational in economic terms either due to factors exposed to them earlier in life or due to genetic differences. The latter hypothesis is discussed in terms of preferences for both giving and risk taking in a study by Cesarini et al. (2009). Furthermore, they investigate what they call the learning hypothesis, which would answer the question of whether economics training shape behaviour into being more economically rational. They fail however to verify the learning hypothesis. Meier and Frey (2004) study this same phenomenon but in line with the above results, find nothing but the selection effect. Indeed, they conclude that pro-social behaviour is generally lower for economists than for non-economists but that the effect originates from the fact that business studies in general attract people who initially show less pro-social behaviour. According to these studies it thus seems that education is in fact not affecting the students to behave more selfish and economically rational.

As for the interpretation of studies involving behaviour in game theoretic experiments, List (2007) points out that behaviour in e.g. the dictator game can be affected by altering the framing of the game. In particular, the author modifies the origin of the endowment to include variations in which it is in fact possible to take money from the other player, which in turn induce different behaviour among the subjects. List speculates that these differences could be due to the effect different framings of the game might have in appealing to different social norms. In summary he

argues that the interpretation of results in the dictator game should be done with caution, especially when trying to generalize to behaviour outside the experimental environment in which the game is played.

3. Experimental design and methods

To be able to infer as distinct effects as possible, we will gather our own data over the populations we are studying. This will be done through letting a number of students respond to a survey consisting of a special version of the dictator game. In the game we have constructed, the respondent will be asked to allocate SEK 100 between himself (or herself) and a charity organization. This method, first used by Eckel and Grossman (1996), will most likely help us to conclude whether altruistic behaviour significantly differs across population groups, due to the link between donations to charity and altruism. Eckel and Grossman find that the amount allocated to the counterparty (charity) in the dictator game increased significantly when it is commonly perceived as a legitimate recipient. Cesarini et al. (2009) also used this method for analysing genetic and environmental effects on preferences for risk taking and giving. The rationale for assigning a charity as counterpart in the dictator game is thus that donations to a charity may be stronger related to empathy and altruism as compared to giving in a standard dictator game where the counterpart is any other human being. Furthermore, Fong (2007) has also shown that empathy is indeed an important factor of consideration for the players in the dictator game. The author concludes that donations are largely dependent on to what extent the counterpart can be considered worthy of increased donation.

3.1 Data and population specifics

In our analysis our subjects will be business students from the SSE and medical students from KI. We will need four different population groups in order to be able to establish differences in behaviour between business and medical students as well as the potential indoctrination effect the education might have on the students. The groups with less educational experience will be students in their first year of study for both institutions. As for the senior students they will be in their third year of study at SSE and in at least their third year of study at KI. Thereby we will be able to analyse whether increased experience and training within these science fields alter the choices the students make when playing this particular dictator game.

It could obviously be argued that it would be favourable to study groups of students with greater difference in educational experience. However, students in their fourth year at SSE (the first year of the M.Sc. program) are mixed together with students from abroad and from other schools in Sweden which, if included, would render our analysis more complex as our aim is to study the

specific impact the education and educational environment have on the students. To be able to compare late year students at SSE with late year students at KI, we have chosen the groups so that the subjects studied have been enrolled approximately for the same time span.

3.2 Pilot study

To confirm that the respondents can understand the survey and to safeguard against potential extreme outcomes as a result of the design of the game we conducted a pilot study. Eleven people with backgrounds within engineering, law and business studies were asked to answer the survey. Subsequently we held informal interviews asking these people how they perceived the survey. Input from these interviews led us to remove an example we had given of how to fill in the survey as the numbers given in the example may affect people's choice. The effect of taking different decisions depending on how the magnitude of some suggested starting point related to the decision is sometimes referred to as anchoring (Tversky and Kahneman, 1974). From the survey we saw that some of the respondents gave all the money to some organizations but kept everything when confronted with others. We had anticipated that this would happen and that was the reason for why we had four different organizations in our survey.

In *Table 1* we have averaged over the amounts kept for the respondents in the pilot study and calculated some descriptive statistics for this group.

Table 1: Descriptive statistics for the answers of the pilot study
(All values in SEK except for rightmost column)

	Average kept Amount	**Median Kept Amount**	**Standard Deviation**	**Number of Observations**
Pilot	45.3	50.0	35.1	11

The results solidified our belief that the survey would yield interesting data for a larger population since there was rather large deviation in the answers for the respondents and the fact that the average amount kept was close to SEK 50.

3.3 Conducting the survey

As explained above, the respondents will play a dictator game with a charity as counterpart. To correct for variability in attitudes towards particular charities we let the respondents play the game four times in the same survey, versus four different organizations. With these four different games the motives for our research is further clouded for the respondents which otherwise, if obvious, might affect decisions of how to allocate the endowment. The charities that we chose were, Röda korset, Cancerfonden, Rädda barnen and UNICEF all well-established organizations. To correct for possible factors that might influence decisions, respondents were asked to state, besides details regarding their education, age and gender. The four population groups were contacted via e-mail. For the reader who wishes to examine the survey, it has been attached in Appendix C.

The respondents in the survey were not in fact given SEK 100 to allocate between themselves and their counterpart. Instead the players were asked to act as if they had been given this money and as a motivational factor they were told that ten respondents were to be chosen randomly to have one of their four their choices selected for actual payments. All ten respondents who had been selected were notified via e-mail.

3.4 Statistical analysis

To answer our hypothesis we will perform hypothesis test on the sample of averages of the amounts that the respondents keep, when dividing the SEK 100, between themselves and the four charity organization. We do this to minimize any noise in the data and to average out any organization preferences that the respondents might have. The tests we will use are the Wilcoxon rank sum test and the two sample t-test. The Wilcoxon rank sum test is equivalent to the Mann-Whitney U test. Since the data that we have collected is not normally distributed we use the Wilcoxon test as the main test since this is nonparametric.[4] There is though an on-going discussion about the applicability of the Wilcoxon rank sum test and the t-test so we have chosen to report both values as suggested in Sawilowsky (2005). All the hypothesis tests we perform will be two sided with 5 per cent significance level.

[4] We performed a Kolmogorov Smirnov test on the average kept amounts for the whole sample and got a p-value less than 0.0000. We therefore reject the null hypothesis that the data is normally distributed at the one per cent significance level.

We also perform three OLS (Ordinary Least Square) multiple regression to further investigate if our hypotheses should be rejected or not. The dependent variable is the amount that the students keep and we will have four explanatory variables of which three are dummy variables. We will create dummy variables for senior respondents (*senior*), for male respondents (*men*) and for business respondents (*business*). There will also be one continuous variable age (*age*). The variable *senior* will therefore be one if the respondents are studying in the third or higher year. The variable *men* will be one for male respondents and the variable *business* will be one for business respondents. The regression performed is for the whole sample:

$$KeptAmount = \alpha_0 + \delta_0 male + \delta_1 business + \delta_2 senior + \beta_1 age + u$$

By using a regression analysis we can see potential effects of the variables for the whole sample and see how the variables affect the amount kept holding the other variables constant.

We will also perform one regression for the sample of business students and one for the sample of medicine students. The regression for these samples will be:

$$KeptAmount = \alpha_0 + \delta_0 male + \delta_1 senior + \beta_1 age + u$$

We have naturally dropped the dummy for business, but otherwise the regression is the same as for the whole sample. We perform the regressions on the two different education groups to analyze specific effects of the variables for these two subgroups.

3.5 Limitations to our method

There is an on-going discussion on whether there are any significant differences with conducting real or hypothetical experiments. Forsythe et al. (1994) obtain ambiguous results when performing experiments with hypothetical games and therefore argue that interpretations could be misleading. Sefton (1992) found that subjects playing the dictator game are less generous when a higher proportion of the subjects are paid with real money. In other studies, the implications of performing a hypothetical experiment have shown to be more complex. Ben-Ner and Levy (2004) has compared the behaviour in the dictator game where experiments are carried out with real money with experiments where the subjects only indicate how they would act if real money would have been exchanged. They find that the average amounts transferred are similar in the two cases but with different implications for different test-subjects. People that are extrovert are found to be generous whenever the costs of acting accordingly are low. On the other hand,

people identified as kind, unselfish and cooperative actually increased their proposals when shifting from a hypothetical to a real setting.

Levitt and List (2007) argue that, in general, results generated through experiments in laboratory contexts should be carefully generalized to the real world i.e. a typical behaviour observed when playing a dictator game in a classroom may not necessarily be representative for real-world contexts. They emphasize that people in an experiment undergo a special type of scrutiny that puts more focus on the decision process than what might occur in the real world and as a consequence, behaviour could also differ.

Whether or not effects of performing our experiment in a semi-hypothetical setting have any significant implications, we assume these effects to be consistently appearing within the subpopulations of students at SSE and KI. Medical students might possess stronger traits of generosity which could be a potential problem if differences between the groups are small. Otherwise we find no reason to believe that this issue may interfere negatively, as we believe it unlikely that students of a certain educational experience would be more or less inclined to display altruistic traits. In effect, this potential singularity would not yield any conflicting results unless values are studied in absolute terms.

Moreover, one might argue that there are potential drawbacks with letting respondents fill in the survey electronically since there is no possibility to control for light-hearted or overly casual behaviour which to a larger extent is possible if students are gathered in a lecture hall. Furthermore, there are some problems with anonymity, both in relation to us as administrators of the survey and in relation to other people that might be in physical proximity to the respondent when the survey is answered. In both cases, but presumably more prominent in the latter relation, the respondents might be inclined to act in such a way that they are perceived more generous than they otherwise are as social norms generally encourage behaviour such as altruism and kindness. Another drawback with conducting the survey electronically could be that respondents cannot as easily ask for clarification if there is something that is not completely evident. This effect however, is presumably negligible since the questionnaire is designed in such a simplistic format.

As always in statistical analysis there is a risk of not accounting for enough explanatory variables which in some cases might lead to problems with omitted variable bias. Such factors could in our survey include wealth or potential incomes that may differ considerably across students. We have nonetheless deliberately ignored to account for such variables as we believe it might have a

negative impact on the willingness to respond to the survey. Hence, we have prioritized an increased number of observations and have as consequence left out a number of supplementary variables. A related limitation to our analysis is that we, by conducting many different hypothesis tests for the same sample, can be data dredging. The results we find in some of the tests could thus be falsely rejected or not rejected. This problem is also dependent on the fact that for some of the tests the groups are small.

As noted above, we sent out the surveys using e-mail, in which we also presented ourselves as students from SSE. For people with a certain perception or perhaps prejudice in relation to SSE, this might induce behaviour that differ from what otherwise would have been observed. We believe it unrealistic however, that this could have any significant impact on our data.

4. Predictive conclusions

Before we continue onto presenting results, we reconnect to the introduction and again motivate our initial hypotheses.

Assuming an individual is optimizing social utility and that the amount of money is small enough not to change the marginal utility for either player or recipient, then the entire endowment given to the subject playing the game, should be allocated to the party with the highest current marginal utility. Consequently, no division of the money between the parties would be motivated even if the player highly appreciates social equality. More specifically, in our case this would imply that an allocation of SEK 100 to either the player or the charity organization (all money to the party with the highest marginal utility) would be the most common observation or strictly speaking, the only plausible observation. However, this kind of modelling of economic rationality has indeed proven not particularly accurate in its predictions. The more possible result would be to see a split of the endowment between the two players as the most frequent outcome as this is what is found in previous research. However, there is of course still possible to define a utility function according to which the player can act and split the money, without being irrational. One sensible modification of the utility function that could justify such behaviour is to account for impure or warm-gloving altruism. Such preferences may very well be characterized by fast diminishing marginal utility for increased generosity, which would imply that splitting the endowment is the rational choice.

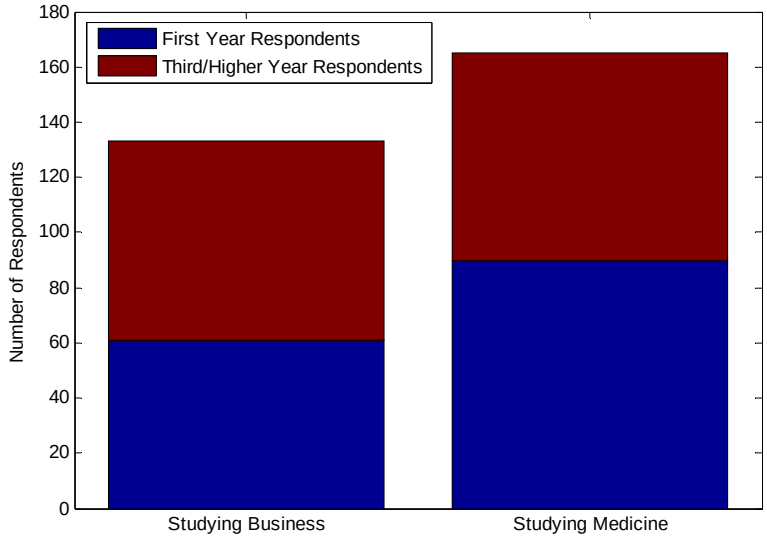
Furthermore, it is reasonable to assume that the business students would donate less money in general, compared to the medical students as this result has, as noted above, shown up before. As for the hypothesis of whether there is any educational effect the intuitive hypothesis might be that education indeed has an effect. The effect would presumably at least have an effect on business students due to the idea that the education is to some extent could be perceived normative, as noted by Kay (2011). This statement however is rather speculative, especially since previous studies have not been able to confirm this hypothesis.

5. Results

The data used in this report comprises observations from 298 respondents that meet the criteria for the study. For each respondent there are 8 variables corresponding to 8 of the 16 questions asked in the questionnaire. These 8 variables used correspond to the questions: how much money do *you* keep of 100 when choosing between *you* and 1. Röda Korset; 2. Cancerfonden; 3. Rädda Barnen; 4. UNICEF, gender, age, education, number of years studied.

Of the 298 respondents, 133 study business and 165 study medicine. From *Graph 1* we can see that there is a even split between students studying their first year and students studying their third or higher year within both areas of study.

Graph 1: Number of respondents studying business and medicine split by first year students and third/higher year students



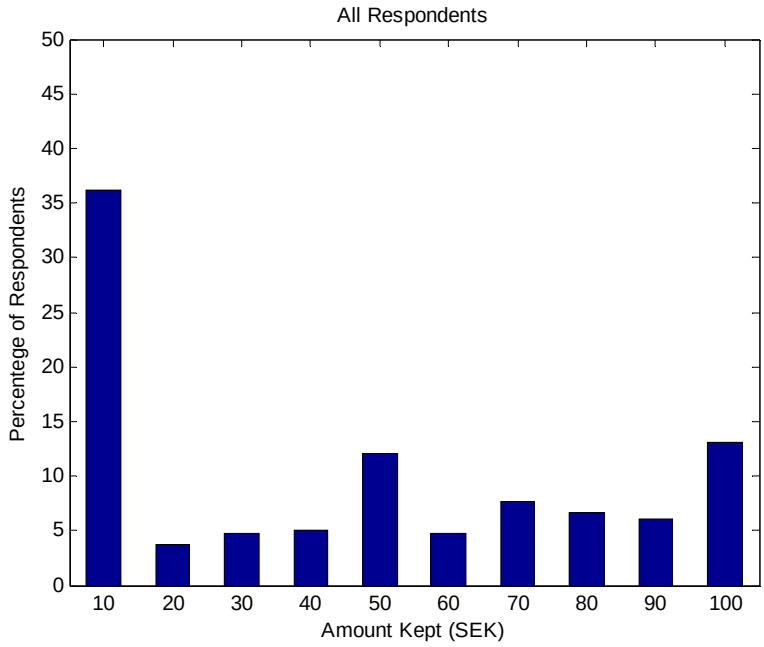
In our sample the percentage of medicine students that are female is 64 per cent, and thus 36 per cent male. For KI students the actual percentage females for all years are 55 per cent (Jansson, 2011). For students studying business there were 57 per cent male and 43 per cent female. The actual percentage of females at SSE that started in 2008, 2009 and 2010 was 44 per cent (Olsson, 2011).

In the sample there were a total of 18 respondents that answered that they had studied two years. The answers from these 18 students will be used in tests concerning our first hypothesis, when testing if there are differences between the business and medicine students. These 18 respondents will be taken out from the sample when we test our second hypothesis, if educational experience

has an effect. In the regressions we have also taken out the respondents that have studied two years since we here are interested in seeing effects of the education and to be consistent with the other tests we therefore drop these observations.

All respondents answered four questions of how to allocate SEK 100 between themselves and a charity organization. For every respondent we have averaged the amount that they chose to keep. *Graph 2* show how the answers for the whole sample is distributed, each bar representing an interval of width SEK 10 and highest value in the interval being the value in the graph. When examining the data we see that there are three answers that are more frequently occurring than others, corresponding to the amounts SEK 0, 50 and 100. Of all the 298 respondents 34.9 per cent keep 0 SEK, 7.4 per cent keep 50 SEK and 10.0 per cent keep SEK 100.

Graph 2: Distribution of amount kept for all respondents



Note: The values for the x-axis are intervals width of SEK 10. The value denoted on the x-axis corresponds to the largest value for each interval.

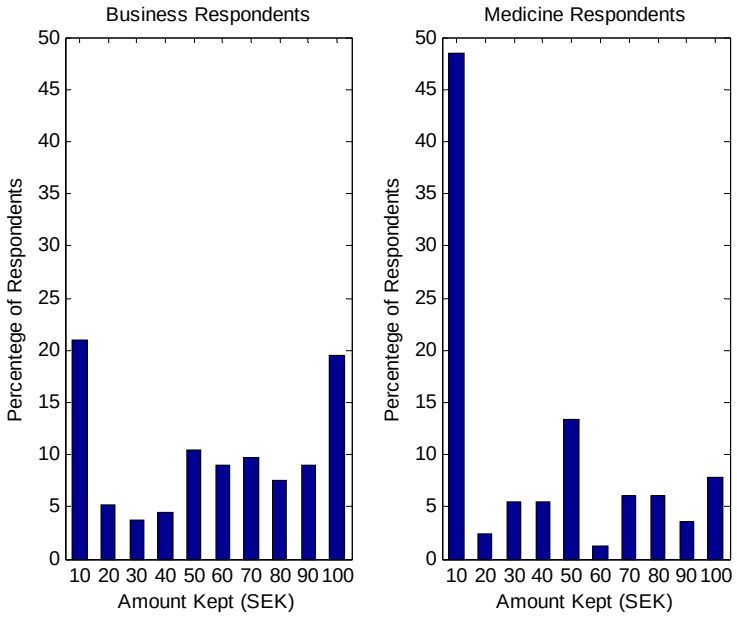
5.1 Comparison between business and medicine students

Table 2: Descriptive statistics for the answers of business and medicine respondents (All values in SEK except for rightmost column)

	Average kept Amount	Median Kept Amount	Standard Deviation	Number of Observations
Business	52.5	55.0	35.7	133
Medicine	30.3	12.5	34.4	165

We first examine if there are any differences between respondents that study business and medicine. From the *Table 2* we can see that there is a rather large difference in both mean and median amounts that the two groups keep. On average business students keep SEK 22.2 more than medicine students. Looking at *Graph 3* we can see the distribution in averaged kept amounts. Almost 50 per cent of the medicine students keep between SEK 0-10 but less than 8 per cent keep all SEK 100. For business students there is a little more than 20 per cent that keep SEK 0-10 but there is almost as many keeping SEK 90-100. The difference between the two groups is significant using both the Wilcoxon rank sum test (p=0.00000) and the t-test (p=0.00000).

Graph 3: Distribution of amount kept for business and medicine respondents



Note: The values for the x-axis are intervals width of SEK 10. The value denoted on the x-axis corresponds to the largest value for each interval.

Table 3: Descriptive statistics for the answers of male and female respondents
(All values in SEK except for rightmost column)

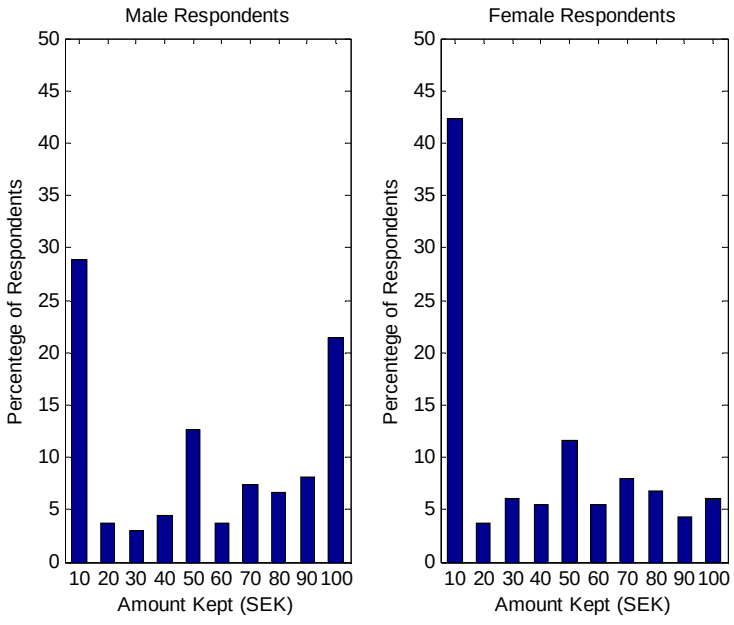
	Average kept Amount		**Median Kept Amount**		**Standard Deviation**		**Number of Observations**	
	Male	Female	Male	Female	Male	Female	Male	Female
All Respondents	49.3	32.6	50.0	27.5	38.6	33.2	135	163
Business	60.2	42.2	65.0	50.0	35.2	38.4	76	57
Medicine	35.4	27.6	25.0	12.5	33.9	31.8	57	106

For all respondents women keep on average SEK 16.7 less than men. The difference is significant for both the Wilcoxon test (p=0.0001) and the t-test (p=0.0000).

From *Table 3* we see that there seem to be a difference between male and female business students. Male students keep on average SEK 18.0 more than do females studying business. The difference is also significant since the Wilcoxon test yielded a p=0.0031 and the t-test p=0.0036.

For medicine students the difference between male and female answers is not as large as for business students. For respondents that studied medicine men on average only kept SEK 7.8 more than women. This difference is not statistically significant for neither the Wilcoxon test (p=0.2849) nor the t-test (p=0.1622).

Graph 4: Distribution of amount kept for males and females



Note: The values for the x-axis are intervals width of SEK 10. The value denoted on the x-axis corresponds to the largest value for each interval.

5.2 Comparison between first and third year business students

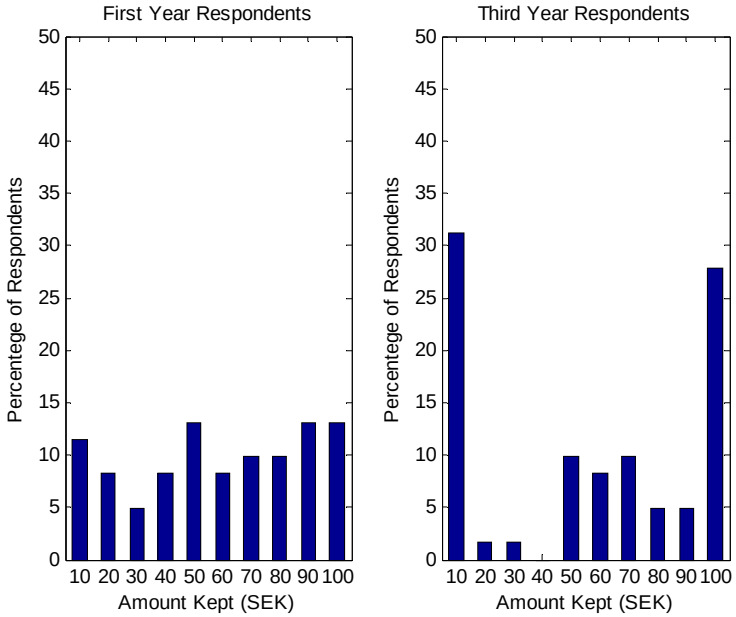
Table 4: Descriptive statistics for the answers of first and third year respondents that study business (All values in SEK except for rightmost column)

	Average kept Amount		**Median Kept Amount**		**Standard Deviation**		**Number of Observations**	
	First Year	Third Year	First Year	Third Year	First Year	Third Year	First Year	Third Year
All Business Respondents	54.2	51.9	55.0	56.3	31.2	40.4	61	61
Men	58.0	67.0	62.5	75.0	30.9	37.5	33	35
Women	49.7	31.5	51.3	12.5	31.6	35.4	28	26

We begin by pointing out that second year students are omitted from the sample. From *Table 4* no large difference can be identified in either average or median between the first year students and the third year students for the whole sample of first and third year business respondents. In average the first year respondents keep SEK 2.3 more than third year respondents but the median for third year respondents is SEK 1.6 higher than for first year respondents. Using the Wilcoxon rank sum test to test for a significant difference between the groups yields a p-value of 0.9691 and the t-test gives a p-value of 0.7264, so the null hypothesis is not rejected.

In *Graph 5* we see that third year students have a more extreme answer distribution. For the third year students a little more than 30 per cent keep SEK 0-10 and a little less than 30 per cent keep SEK 90-100. For first year students the amount kept is more evenly distributed. For third year students the standard deviation in the answers thus becomes larger than for the first year students.

Graph 5: Distribution of amount kept by business respondents split by years studied



Note: The values for the x-axis are intervals width of SEK 10. The value denoted on the x-axis corresponds to the largest value for each interval.

For male business respondents the third year students keep on average SEK 9 more than the first year respondents. For female respondents the third year students keep on average less than the first year respondents, a difference of SEK 18.2 is observed in *Table 4*. For male respondents the difference is not statistically significant. The Wilcoxon test yielded a p=0.1160 and the t-test p=0.2857. For females the difference is significant for the Wilcoxon test (p=0.0376) but not significant for the t-test (p=0.0519).

5.3 Comparison between first and third or higher year medicine students

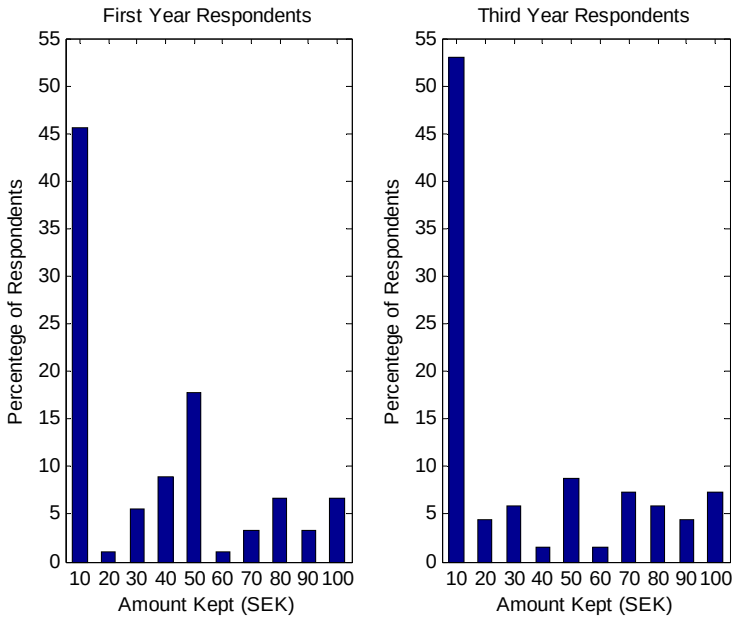
Table 5: Descriptive statistics for the answers of first and third year respondents that study medicine (All values in SEK except for rightmost column)

	Average kept Amount		**Median Kept Amount**		**Standard Deviation**		**Number of Observations**	
	First Year	Third/Higher Year	First Year	Third/Higher Year	First Year	Third/Higher Year	First Year	Third/Higher Year
All Medicine Respondents	30.9	27.9	28.1	0	32.9	35.1	90	68
Men	37.3	25.4	38.8	0	39.2	35.1	36	20
Women	26.6	29.0	25.6	0	27.7	35.4	54	48

Note: For medicine respondents higher year means that respondents have studied at least two full years

For all medicine respondents there is no large difference between first and senior year in average amount kept but the difference in median is more substantial, being SEK 28.1 between the two groups. From *Graph 6* we can see that there in both groups are a large percentage of respondents that chose to keep 0-10 SEK. Third year respondents have a more even spread in the answers than first year. For first and third year medicine respondents there is no significant difference between the groups since the p-value for the Wilcoxon rank sum test is 0.4437 and for the t-test 0.5894.

Graph 6: Amount kept by medicine respondents split by years studied



Note: The values for the x-axis are intervals width of SEK 10. The value denoted on the x-axis corresponds to the largest value for each interval.

For male medicine students the difference between first and third year respondents is not statistically significant since neither the Wilcoxon test (p=0.3004) or the t-test (p=0.2660) rejects the null hypothesis. For female respondents the Wilcoxon test yielded a p-value of 0.9521 and the t-test a p-value of 0.7077.

5.4 Regressions

To test our findings using another method we estimate three linear regression models using OLS with the amount kept by respondents as the dependent variable. The first regression is evaluated on the whole sample of respondents, second year respondents omitted. The second regression is evaluated only on business respondents and the third on medicine respondents. There are three dummy variables in the regression: *male*, *business* and *senior*. Male is one if the respondent is a *male*, *business* is one if the respondents study business and *senior* is one if the respondent is studying his third year (or higher for medicine students). The coefficients corresponding to these variables will therefore affect the intercept for the regression. A positive coefficient will imply that the variable increases the amount kept.

$$KeptAmount = \alpha_0 + \delta_0 male + \delta_1 business + \delta_2 senior + \beta_1 age + u \quad (1)$$

$$KeptAmount = \alpha_0 + \delta_0 male + \delta_1 senior + \beta_1 age + u \quad (2) - (3)$$

Table 6: Regression statistics for the three regressions performed (Coefficient and Standard Error denoted in SEK)

	Coefficient	Standard Error	t Statistic	p-value
(1) Regression for whole sample R-sq: 0.13				
α_0	34.6	12.3	2.8	0.0055
δ_0	12.8	4.2	3.1	0.0026
δ_1	19.9	4.6	4.4	0.0000
δ_2	-2.5	3.9	-0.6	0.5285
β_1	-0.3	0.5	-0.6	0.4852
(2) Regression for business respondents R-sq: 0.09				
α_0	35.5	29.7	1.2	0.2353
δ_1	22.0	6.4	3.5	0.0008
δ_2	-3.6	6.7	-0.5	0.5961
β_1	0.3	1.4	0.2	0.8126
(3) Regression for medicine respondents R-sq: 0.01				
α_0	36.9	13.2	2.8	0.0060
δ_1	5.6	5.7	0.9	0.3318
δ_2	-1.3	5.6	-0.2	0.8101
β_1	-0.4	0.5	-0.7	0.4983

From the regression analysis of the whole sample we see that the dummy variable for business students and the male dummy variable have large absolute effects on the amount kept. The negative coefficient for the dummy variable for *senior*, being one if the student is in his third year or higher, indicates that students in the higher years of study would keep less money than the respondents in the first year of study. The effect of the variable is not statistically significant, having a p-value of 0.5285, and the absolute effect for the variable is small in comparison to the effect of the *business* dummy variable. The negative sign in front of the *age* coefficient indicates that older students keep less of the endowment, however the absolute effect of the *age* variable is small, increasing only SEK 0.3 for an age difference of one year. The age coefficient is also not statistically significant with a p-value for the t-statistic of 0.4852.

We next look at the regression for business students. The coefficient for the dummy variable *senior* is here negative, indicating that senior students would keep less than students in the lower years of study. The effect of the coefficient is SEK -3.6 and is small compared to the effect of the male dummy variable that increases the amount kept with SEK 22.0. The coefficient for the *senior* variable is not statistically significant with a p-value of 0.5961. The age variable is positive for business students indicating that older students would keep more, but the effect is small in absolute terms and the coefficient is not significant.

The last regression is the same as the one performed on business students, but now it is only run on medicine students. The coefficient for the dummy variable *senior* is again negative indicating that the students that have studied longer would keep less of the endowment. The coefficient is not significant with a p-value of 0.5961. The coefficient for the dummy variable male is in this regression not significant, and neither is the coefficient for the age variable.

6. Synthesis and discussion

From our results we see that there is a significant difference between business students and medicine students, such that medical students are more generous. Our initial hypothesis that medical and business students do differ in altruistic behaviour could therefore be confirmed by our data. Our second hypothesis that increased educational experience would affect business students to act more economically rational and thus keep more of the initial endowment and affect medicine students such that they would act more generous could however not be supported by the data.

We will in this section primarily address the two major hypothesis put forward. Under each hypothesis we will also discuss other factors that we have examined in an effort to isolate desirable effects and to extend our research.

6.1 Differences between business and medicine students

From our findings we can conclude that our initial hypothesis that business students would be less altruistic than medicine students is confirmed. The large difference between the mean and median values in terms of how much of the endowment is kept between the groups and the fact that just under 50 per cent of the medicine students but only 20 per cent of business students gave away almost all the money is strong evidence supporting this conclusion. Both the statistical tests and the regression for the whole sample further support this hypothesis.

Moreover, by investigation of the histograms, one can deduce that the idea of allocating the total endowment to whoever has the highest marginal utility at least have some superficial support. For the whole sample in *Graph 2* there are three distinct peaks. The first and overwhelmingly largest peak is to keep SEK 0-10, an interval to which we assign slightly over a third of the total sample. The second largest peak is located at keeping SEK 90-100 which roughly 13 per cent of the respondents did. This result is indeed in line with the idea of locating the entire endowment to whoever has the highest marginal utility. However, it is perhaps unlikely that this is what has happened as still too large per centage share is allocated to individual students with most certainly a lower marginal utility. Another story that would support this behaviour, in the case of retaining all money, is that the respondent is acting completely economically rational. Thus the total result might be a combination of these postulates.

The last out of the three peaks is located around a fifty-fifty split of the endowment which could not be motivated by acting according to some utility function with completely altruistic preferences. This effect is perhaps more likely to be an effect due to social norms regarding monetary equality, i.e. a split of fifty-fifty is most certainly not going to upset anyone in the respondent's proximity. Impure altruism with diminishing marginal utility could also be a factor motivating this behaviour.

By further investigating *Graph 3* it is clear that there is a difference in distribution between the two educational groups. By studying the histograms for the two populations isolated, two peaks instead of three are visible for each of the populations. Both business and medicine students have a peak at SEK 0-10, but business students have their second peak at SEK 90-100 while as medicine students have their second peak at SEK 40-50. If the idea of social norms as motivator for splitting equally is accurate, SSE students clearly do not adhere as strongly to such norms as students at KI. It seems however thus that there is a difference in preferences other than just in average endowment allocations.

In general, our results are in line with previous studies, e.g. with the work from Meier and Frey (2004) who found that pro-social behaviour usually is lower for economists than for non-economists. However, we can from this analysis not draw any general conclusions about the absolute amounts retained for the two groups as there could be a myriad of other factors skewing the data. As for the differences between the two groups however, the results should be more robust.

6.2 Educational effects

Our second hypothesis that education would affect altruism in terms of a shift in average or median allocation is not supported by data for neither business nor medicine students.

Even though we find no difference in mean or median for first and third year business students we, after investigating the distribution in *Graph 5*, conclude that the third year students have more extreme answers than first year business students which had a much more even distribution in their answers, in fact close to a uniform distribution. A completely uniform distribution would indicate that all answers would be equally likely. As a cohort, the first year students thus have no clearly defined preferences as opposed to the third year students of which 30 per cent kept SEK 0-10 and a little less than 30 per cent kept SEK 90-100. Even though a difference in mean

allocation between the first and third year business respondents could not be statistically verified, their behaviour seems to have changed in other ways. The two peaks that appeared with increased educational experience could of course be due to random effects, but as the difference in distribution is appearing in such a compelling manner, we cannot but think that these effects have some connection to institutional influences. The strength of these hypothetical connections as well as the full story of why these differences appear is however unclear, and also beyond the scope of this study. One theory, however, could be that increased economics training creates some kind of uniformity in preferences among subgroups of students.

As there were some evidence from Croson and Gneezy (2009) that females are more generous than males, we tested if splitting the first and third year business students into groups of males and females would yield any different results than the ones above. Since we have split our sample into small subgroups we recognize that these tests may become subject to data dredging and we are therefore inclined to not generalize on these tests. So, even though female first and third year students had a statistically significant difference for the Wilcoxon rank sum test, we do believe this to be a random effect.[5] By conducting regression on the group of business students we could control for gender by using a dummy variable for men while testing the effect of education, and did not have to split the sample into too small subgroups. The regression analysis did though not yield any significant results for the dummy variable *senior*.

Therefore, after conducting these different tests and analysis on business students, we could not find any evidence that studying business would make students behave more economically rational. In general, our results are in line with previous research. As noted, Carter and Irons (1991) also investigate if there is any learning effect from studying economics i.e. if economics training shapes behaviour into being more economically rational, but fail to verify this hypothesis.

Perhaps a statistically significant effect, as a consequence of increased educational experience, would be visible if instead of third year students, fourth or fifth year students would be included in the sample. However, due to practical reasons this was not possible for the sample from SSE. Moreover, the first year business students had, when the survey was conducted, already spent over three quarters of the first year at SSE and thus may already have been affected by the educational norms that prevail at this specific institution. This effect has most certainly a smaller impact on the KI sample since students are enrolled once every semester. Preferably, instead of first year students, one would study and compare the behaviour of students not yet enrolled with students in senior years.

[5] A belief that is strengthens by the fact that the t-test did not yield a statistical significance for the difference.

The difference between the first and senior medicine students is also not significant. The direction we looked for, i.e. that medicine students would become more altruistic after studying medicine, is visible in the regression for medicine respondents. Here the coefficient for the *senior* dummy variable is negative but its absolute value is nevertheless small and the coefficient is not statistically significant which supports the idea that what we observe is only noise. We could also not find any significant difference when we split the medicine studying groups in males and females and tested for differences between junior and senior students within the sexes. In summary, medical students seem to have stable preferences in all aspects examined in this thesis. Here the distributions in *Graph 6* also look very similar which further undermine any conclusion that there would be differences between the groups.

For both medicine and business respondents we could therefore not find evidence that students are affected by the education they study when looking at their altruistic traits. The differences found earlier between business and medicine students could therefore instead be a consequence of the selection effect, i.e. students differ in preferences and due to factors exposed to them earlier in life. Possible factors include parental attitudes and other childhood influences, income, wealth and similar socioeconomic factors. Alternatively, different sets of genetics could also influence behaviour, as noted by Cesarini et al. (2009). To evaluate this learning effect we would propose a test on a sample of students just before they enrol at the schools in question and then study the behaviour of the same students three or more years ahead.

6.3 Discussion of supplementary findings

Croson and Gneezy (2009) conclude that when there are significant differences due to gender, women are typically the more generous party. From our results we see a significant difference between male and female students considering the whole sample. Female students keep on average less than male students. This result is therefore in line with the conclusion of Croson and Gneezy. Moreover, we test if differences due to gender appear within the two educations and find a significant difference between male and female business students but not significant for male and female medicine students. The effect of gender is also not significant in the regression for medicine students. Even though we cannot find statistical differences between medical students due to gender, the sign for the male dummy suggests an increase in selfishness for male medicine respondents compared to female respondents. We recognize however, that this effect could also be a consequence of noise in the data.

6.4 Summary of implications for further research

Even though we find no significant effect regarding educational influences on the students in terms of a shift in the average amounts of the initial endowment retained, we find this area interesting for further research. Similar investigations as ours should be undertaken, but as noted above, preferably with larger samples and on the same cohorts for the two time points in question. The number of observations in time might as well be increased to obtain intermediary observations that might facilitate trend analysis. Moreover, it is not unlikely that a potential normative impact has the most profound effects the very first semester. Therefore, we argue that the junior group should optimally be studied just before or in connection to the enrolment to ensure no significant effects already altered the behaviour of the students.

Variations of our study might also reveal other features that could be essential in explaining behaviour of the students. Such variations would include controlling for different majors for the business students and perhaps also investigating how different specializations among medicine students, or physicians, affect behaviour. One step to further confirm our results would be to advance in the above direction and compare completely different educations.

Finally, improvements can be made by further guaranteeing anonymity of the respondents and controlling for other factors related to the fact that the survey was conducted electronically.

7. Conclusions

In this study we have investigated whether there are any significant differences in altruistic behaviour between business students at SSE and medical students at KI by observing their behaviour in a dictator game. The game was designed with a charity organization as the counterpart to better be able to isolate for altruistic behaviour. Comparisons were then made between and within these populations. Firstly, we find a significant difference such that the medical students at KI act more generous compared to business students at SSE. Secondly, we try to identify a potential educational effect that might have affected this outcome, by comparing behaviour of junior and senior students within the same educational institution. We fail, however, to reject the null hypothesis that there are no differences between students with different educational experience. It seems thus, that the selection effect is what causes the observed difference between business and medical students which indeed is a result that confirm earlier research. Generalization of these results to real world situations should be done with caution, but it is likely that, at least the results on the aggregate level can be replicated. Further research regarding potential educational effects would be necessary to completely discard the theory that any normative effects might influence students to behave in a certain manner. A study repeatedly observing the behaviour of the same number of students in their educational progress would be perhaps shed new light on this question.

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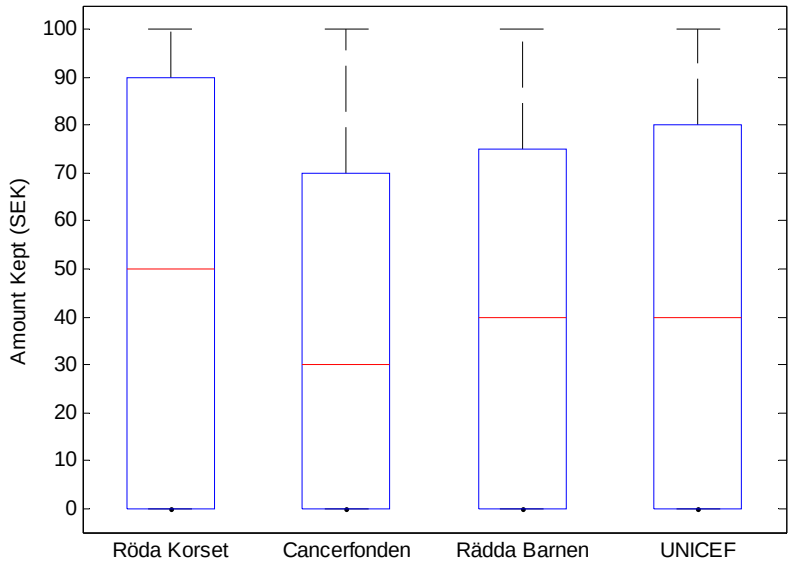
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9. Appendix

9.1 Appendix A: Results for the organizations

The difference between Röda Korset and Cancerfonden is significant both for the Wilcoxon test (p=0.0128) and the t-test (0.009). The difference is though not significant for neither Rädda Barnen (Wilcoxon p-value 0.0964, t-test p-value 0.079) nor for UNICEF (Wilcoxon p-value 0.0609, t-test p-value 0.0564).

Graph 7: Amount kept for all respondents split between organizations



9.2 Appendix B: Comparison between younger and older students

Table 7: Descriptive statistics for the answers of young and old respondents (All values in SEK except for rightmost column)

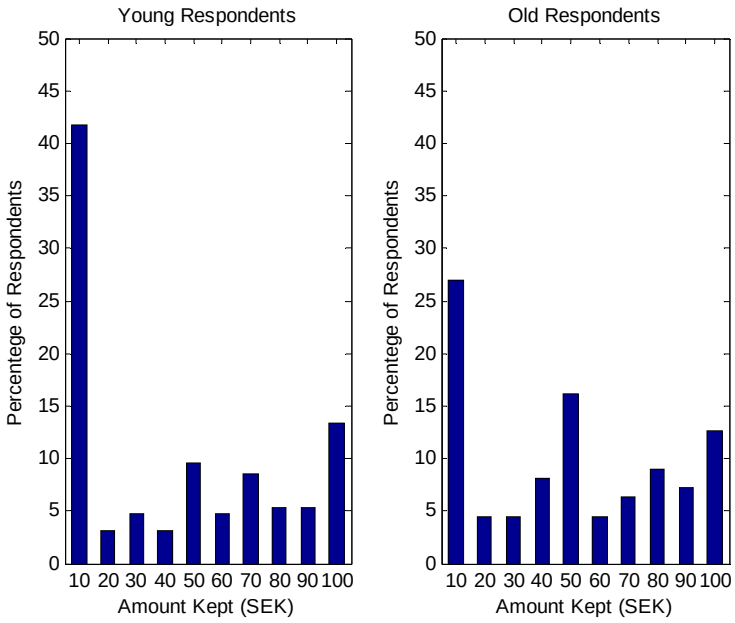
	Average kept Amount		**Median Kept Amount**		**Standard Deviation**		**Number of Observations**	
	Young	Old	Young	Old	Young	Old	Young	Old
All Respondents	44.4	37.7	47.5	32.8	34.5	37.7	111	187
Business	49.3	55.8	50	62.5	33.5	37.9	69	64
Medicine	36.3	28.3	38.8	0.3	35	34	42	123

Note: Young respondents are not older than 22 years

The difference between the young and old students is for the whole sample not significant with a p-value for the Wilcoxon rank sum test of 0.12 and for the t-test 0.13.

For business students the Wilcoxon rank sum test has a p-value of 0.2075 and the t-test a p-value of 0.2960, so the result is not statistically significant. For medicine students the difference is not significant for either the Wilcoxon test (p=0.2143) or the t-test (0.1987).

Graph 7: Distribution of amount kept for young and old respondents (denoted young when not older than 22 years)



Note: The values for the x-axis are intervals width of SEK 10. The value denoted on the x-axis corresponds to the largest value for each interval.

9.3 Appendix C: Survey

Allmän information

Detta är ett experiment i ekonomiskt beslutsfattande. Det är viktigt att du läser igenom instruktionerna noggrant. Du kan tjäna pengar på detta experiment och hur mycket du kan tjäna beror på dina val. Av de som gör undersökningen kommer 10 personer slumpmässigt att väljas ut för faktiska utbetalningar. Det är därför viktigt att du följer instruktionerna noga och fyller i enkäten sanningsenligt. Ditt svar kommer enbart att användas i denna undersökning och inte för några andra syften.

Information om hur du fyller i enkäten

Du kommer nedan att ställas inför 4 olika beslut om hur du vill fördela 100 kr mellan dig och en viss välgörenhetsorganisation. Det kommer att vara 3 rutor för varje beslut:

Ruta 1: Här fyller du i hur mycket du behåller av de 100 kronorna.
Ruta 2: Här fyller du i hur mycket du ger till välgörenhetsorganisationen av de 100 kronorna.
Ruta 3: Här summerar du ovanstående tal och ser till att summan är 100.

I varje ruta ska du bara skriva in siffror, inga bokstäver

Information om utbetalning

För 10 personer av de som gör undersökningen kommer ett av de 4 beslut som görs i enkäten att slumpmässigt väljas ut för faktisk betalning. Om ett beslut väljs ut för faktisk betalning, kommer de pengar som du behåller av de 100 kronorna att betalas till dig och resten kommer att skickas till den välgörenhetsorganisation som beslutet rörde.

Längst ner på sidan kommer du att fylla i en epostadress som vi **enbart** kommer att använda för att meddela dig om du får en utbetalning. Senast den 20 mars 2011 kommer vi att meddela om ditt beslut blivit utlottat för utbetalning.

1) Här ska du välja hur du ska fördela 100 kr mellan dig och *Röda Korset* Hur du fördelar pengarna är helt upp till dig. Ange fördelningen nedan (skriv bara in siffror i fälten):	
Jag behåller:	
Röda Korset får:	
Summera beloppen (skall bli 100)	

2) Här ska du välja hur du ska fördela 100 kr mellan dig och *Cancerfonden* Hur du fördelar pengarna är helt upp till dig. Ange fördelningen nedan (skriv bara in siffror i fälten):	
Jag behåller:	
Cancerfonden får:	
Summera beloppen (skall bli 100)	

3) Här ska du välja hur du ska fördela 100 kr mellan dig och *Rädda Barnen* Hur du fördelar pengarna är helt upp till dig. Ange fördelningen nedan (skriv bara in siffror i fälten):	
Jag behåller:	
Rädda Barnen får:	
Summera beloppen (skall bli 100)	

4) Här ska du välja hur du ska fördela 100 kr mellan dig och *UNICEF*. Hur du fördelar pengarna är helt upp till dig. Ange fördelningen nedan (skriv bara in siffror i fälten):	
Jag behåller:	
UNICEF får:	
Summera beloppen (skall bli 100)	

Bakgrundsfrågor

5) Jag är:	
Man	
Kvinna	

6) Skriv in din ålder:

7) Jag studerar till (välj det alternativ som stämmer bäst):	
Ekonom	
Läkare	
Jurist	
Civilingenjör	
Annat (var god fyll i nedan):	

8) Vilket är ditt nuvarande studieår (vid ditt nuvarande lärosäte)?

9) Skriv in en epostadress så att vi kan nå dig. För 10 personer av de som gör undersökningen kommer ett av de 4 beslut som görs i enkäten att slumpmässigt väljas ut för faktisk betalning. Om ett beslut väljs ut för faktisk betalning, kommer de pengar som du behåller av de 100 kronorna att betalas till dig och resten kommer att skickas till den välgörenhetsorganisation som beslutet rörde.