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Are you pro-social enough to work in the public sector?

- A study on altruistic behaviour among Swedish university students

Katarina Sandberg 22216 Linda Stoby Höglund 22366

Abstract

Previous research on altruism shows that people exhibit differences in pro-social behaviour. Recent studies have been concerned with pro-social behaviour in the professional world. Research further shows that individuals working in pro-social organizations, like the government, are more pro-social than those working in the private sector. This study explores how altruistic behaviour in Swedish university students varies with study major. Data was collected through an online survey in which respondents were asked to donate money in scenarios resembling dictator games. The findings reveal that students of social sciences were more likely to donate money than students majoring in business and economics. The explanation models control for demographics, personal preferences and background. The results buttress conclusions of prior studies, but offer new insights on the differences in pro-social behaviour between students aiming for a career in the public sector and students likely to find work in the private sector.

Keywords: Altruism, Donation, Students, Survey

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Tutor: Maria Carmela Perrotta

Examiner: Erik Meyersson

Discussants: Nina Jalava and Elisabet Ålander

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1. Introduction

Do you feel like a rational selfish egoist? According to neoclassical economic theory you are! The concept of homo economicus reasons that humans have rational preferences and evaluate possible outcomes to make fully informed decisions to maximize their personal utility (Bowles and Gintis 84; Colander 134). Consequently, in game theory players in noncooperative and nonrepeated games are predicted to act as selfish rationalists. Imagine yourself in a situation where you have the possibility of splitting an endowment of yours with a recipient. Would you? The rational decision would be to keep it all to yourself (Hoffmann, McCabe and Smith 653). Numerous studies examining the behaviour of individuals disclose that people often diverge from the neoclassical prediction and make a donation, an act of altruism (Eckel and Grossman, *Altruism* 181; Bekkers, *Measuring Altruistic Behavior* 139; Forsythe et al 347; Carpenter, Connolly and Knowles Myers 283; Hoffmann et al, *Preferences* 347).

Altruistic behaviour has been studied in numerous research fields, but has only recently caught the interest of economists (Fehr and Schmidt 1). Behavioural economics deviates from classical economic thought of humans as selfish rationalists. It is concerned with why people make decisions that appear irrational and studies how cognitive, social and emotional factors affect the decision making process.

Altruistic or pro-social behaviour can be measured with a dictator game¹ (Engel 584). A recent study by Sheheryar Banuri and Philip Keefer used the dictator game to research altruistic behaviour among government workers in Indonesia (8). The purpose was to examine if individuals pursuing a career in the public sector are more pro-social than those who work in the private sector. Their findings show that they are (Banuri and Keefer 1). Intrigued by the study of Banuri and Keefer, we decided to research if similar differences could be observed in Sweden. We set out to test whether students studying social science, likely to pursue a career in the public or civic sector, exhibit more pro-social behaviour than students of business and economics, likely to enter a career in the private sector. To our knowledge there has been no similar study to that of Banuri and Keefer conducted in Sweden. Our study also has a wider

¹The *dictator game* was developed by the psychologist Daniel Kahneman as a way of measuring pro-social behaviour, using the willingness to donate an allocated endowment as a proxy for altruism (Engel 584). Participants are randomly assigned the role of either allocator or recipient and the allocator has the power to divide the endowment between the two. The recipient has no right to decline the offer. When the allocation is made, the game is over (Bekkers, *Measuring Altruistic Behavior* 139).

societal significance as the findings disclose behavioural traits among a group of individuals who in essence represents the future employees of these sectors. Their behaviour and preferences will inevitably have future consequences for our society.

2. Problem formulation and research question

This study aims to examine pro-social behaviour among university students in Sweden to establish how altruistic behaviour varies with study major. Studies on pro-social behaviour have previously disclosed that students choosing a career in the public or civic sector are more likely to exhibit pro-social behaviour than students opting for a career in the private sector (Banuri and Keefer 11). Banuri and Keefer conducted a study on pro-social behaviour in the public sector by analysing the behaviour of university students in Indonesia. We aim to test the universal applicability of their findings and answer the question: are university students in Sweden majoring in social science more pro-social than those majoring in business and economics?

Our first hypothesis is that students studying social science exhibit more pro-social behaviour than students studying business and economics. If this hypothesis is true, our ambition is to explore the possible explanations for this outcome. Given that our first hypothesis is true, we also ask ourselves: are business students considering employment in the public sector, more altruistic than social science majors? Our second hypothesis is that business students who are opting out of a higher paying career, by entering the public or civic sector, are more pro-social than social science students pursuing a similar career (Jusek 13; Dept. of Market & Communications 8).

3. Theoretical framework

What is altruism?

The concepts of altruism and pro-social behaviour are found in a wide variety of scientific fields ranging from anthropology and neurobiology to psychology, sociology, economics and philosophy. In economics the majority of the models have long been based on the assumption that people are driven by self-interest only. A large number of studies, however, indicate that

pro-social behaviour is motivated by altruism, fairness, and reciprocity (Fehr and Schmidt 616).

Altruism has been defined as the willingness to sacrifice one's own resources to improve someone else's well being (Fehr and Schmidt 619). Jon Elster describes altruism as any kind of act that is a result of an altruistic motivation (184). Giving money to a beggar could be an altruistic act if it is the consequence of an altruistic motivation. Other underlying motives, such as social norms, warm glow² or a strive for self-esteem can often mimic altruism. It is thus hard to know for certain when an act is motivated purely by altruism (Elster 185).

Altruistic behaviour is a subtype of pro-social behaviour, implying that pro-social behaviour can also be the result of non-altruistic motivations (Lévy-Garboua, Meidinger and Rapoport 561; Bénabou and Tirole 5). An individual's pro-social behaviour tends to vary depending on the situation. A certain individual might be reluctant to donate to charity, but would show no hesitation in helping someone in an emergency situation. The presence of other people is often a depending factor (Eisenberg et al 974; Eckel and Grossman, *Altruism* 183). Other examples of pro-social behaviour include providing public goods, partake in a friendly or reciprocating act or avoid inflicting negative externalities on other people (Bénabou and Tirole 5). In this thesis the terms altruism and pro-social behaviour will be used interchangeably as will their definitions.

What is the source of altruistic behaviour?

The evolvement of altruistic behaviour in human beings has become a field of interest in behavioural economics. Dictator games played with youngsters reveal that children as young as four exhibit forms of altruistic behaviour. The studies on young children also demonstrate that altruistic behaviour increases rapidly with age during childhood (Benenson, Pascoe and Radmore 171). The theory of cultural transmission suggests that altruism is only in part formed genetically and to a great extent a behavioural trait transmitted through social interaction (Bisin and Verdier 299). According to Alberto Bisin and Thierry Verdier, cultural transmission has an essential role in determining fundamental preferences of an individual, such as risk aversion and altruism (299).

Bisin and Verdier present an economic model on cultural transmission that demonstrates the assumption of imperfect empathy, which is described as "...a form of myopic or paternalistic altruism..." (306). The reasoning behind the assumption is that parents

² *Warm glow* is the inner satisfaction that may arise from performing acts of altruism. If the strive for warm glow is the motive behind a pro-social act, it is not an act of altruism per say.

have the ability to anticipate different socio-economic choices of a child with certain personality traits. Parents are nevertheless not able to “...perfectly empathize with their children...” (306) meaning that they are not able to objectively evaluate personality traits. Although parents will be altruistic towards their children, the repercussion of imperfect empathy is that they will favour personality traits they themselves possess. Parents thus tend to socialise their children to gain the same traits as themselves (306). This claim is supported by Louis Lévy-Garboua, Claude Meidinger and Benoit Rapoport who also argue that pro-social behaviour is something that children learn from adults and that preferences of the parents are transmitted to the children through socialisation (562).

Although parents according to research have a significant role in the evolvement of a child's characteristics, cultural transmission does not only take place within the boundaries of family. Research shows that the environment or setting in which an individual socialises and the people one is socialising with, affect the development of personality traits (Van Maanen and Schein 3). For instance, Banuri and Keefer found that subjects who had worked for some time within the government, a pro-social organization, exhibited more pro-social behaviour than those who were about to start their work within the government (2). Their results indicate that socialising in a pro-social environment fosters pro-social behaviour in individuals.

Altruistic behaviour and motivations

It is important to notice that socialising in a pro-social environment may not simply instil altruistic behaviour. Research has shown that altruistic behaviour is often the result of adherence to social norms rather than an act of independent choice. A person breaking a social norm, for instance tipping a waiter ungenerously, often risks being thought badly of by others (Elster 194). The desire to be thought well of by others make people behave as others expect them to and the act can thus mimic altruism. The desire to achieve self-esteem is another motivation behind pro-social actions, which may cause individuals to donate money even though their motivation is not genuinely altruistic (Elster 204). Consequently, establishing and verifying the true motivation behind an individual's pro-social behaviour is notoriously difficult.

Intrinsic motivation and mission-orientation

Intrinsic motivation can be described as performing something because of the innate satisfaction of the performance itself. It means having an intrinsic propensity to make an effort even without tangible rewards (Ryan and Deci 70). For instance, some people may

agree to work for a lower salary in exchange for knowing that the effort they put in will contribute to an altruistic goal (Rose-Ackerman 719). Their intrinsic motivation could in fact be crowded out by extrinsic incentives. Reward as well as punishment tends to have a negative effect on intrinsic motivation (Bénabou and Tirole 35).

Intrinsic motivation that is driven by a strong connection to the mission of an organization is known as mission-orientation (Banuri and Keefer 1). Organizations providing public services are often known to have a mission that is thoroughly integrated in their organization. The mission becomes the central purpose of the organization as it replaces profit maximization as the essential reason for the organization's existence and function. If the organization of individuals around a common mission is well-functioning, it can be an even stronger incentive than monetary compensation (Besley and Ghatak 242). Previous literature suggests that there is a relationship between the pro-social behaviour of employees and mission-oriented organizations (Meier 2). This seems to be particularly relevant in public services like healthcare, education and social care (Hansmann 897). Consequently, theory suggests that people who work within the public and civic sectors exhibit pro-social behaviour to a greater extent than those working in the private sector.

4. Methodology

Collection of data: scope and delimitations

The data for this study was collected through online surveys targeted towards students enrolled in social science programmes at Uppsala University³ and students of business and economics at Stockholm School of Economics.⁴ The admission requirements to enter either of the programmes are equally competitive and thus comparable (Universitets- och högskolerådet). The decision to use these specific groups was made after having considered the destination of employment of recent graduates of both the bachelor and the master programmes. Data shows that a great majority of graduates of the social science programme at Uppsala University go into the public or civic sectors, while most students from Stockholm

³ The sample from Uppsala University includes students from the bachelor and master programmes in Political Science, the bachelor programme in Peace and Development studies and the master programme in Peace and Conflict Studies. These students are hereafter referred to as social science students or social science majors.

⁴ The sample from Stockholm School of Economics includes students from the bachelor and master programmes in Business and Economics. They will hereafter be referred to as business students or business majors.

School of Economics opt for employment in the private sector (Pol and Karriär; Dept of Market & Communications 6).

The option of using a survey to collect data, as opposed to interviews or focus groups, was made in order to receive a large and randomized representative sample of the population. The drawbacks of using a survey are the lack of possibilities of asking clarifying follow-up questions and the subjective interpretation it opens up for. To overcome the latter, and understand how the questions in the survey could be interpreted or misunderstood, a pilot study was made targeting both groups of university students. This resulted in alterations in both the formulation of the questions as well as to what questions were asked. An advantage of using a survey, however, is that there is no “interviewer effect”. The subjects answering the questions are not affected by the specific interviewer, which could influence the answers provided (Choi and Comstock 90).

Because of resource constraints, in place of an actual experiment, respondents in our study were asked to donate money in scenarios resembling dictator games in an online survey. The students' willingness to donate money to charity served as a proxy for pro-social behaviour (Kam, Cranmer and Fowler 9). The two scenarios were developed in order to measure pro-social behaviour without making it obvious that we were researching altruism. We believe that unless the students were familiar with the dictator game, the scenarios would not reveal the nature of the game, which we believed would generate a more accurate response. We used two different scenarios to detect if how the money was gained had any implication for students' willingness to donate.

The two scenarios were:

1. A new neighbour has just moved into your building. Although you don't know your new neighbour very well yet, he asks for your help. He offers you 1000 SEK in return for you spending the weekend helping him move his belongings. If you were given the option of giving some or all of this money to a charity of your choice, how much would you be willing to give? Examples of charities could include People for ethical treatment of animals, Save the children, Doctors without borders, Action Aid, World Wildlife Fund (WWF), Amnesty, Salvation army, etc.
2. You are walking along the sidewalk and by coincidence you find a watch lying on the street. You pick it up and turn it into the police station, which is just nearby. A week later you receive a call that the

grateful owner wants to give you a reward (hittelön) of 1000 SEK. If you were given the option of giving some or all of this money to a charity of your choice, how much would you be willing to give?

The scenarios were created to make the situation as real as possible in order for the students to act as they would have done in real life. It is of course possible that the situations described affect an individual's likelihood of making a donation. It is possible that had the situations described been different, our results might have differed as well. We did however, develop the scenarios carefully to ensure that they were "neutral" in the sense that there was no obvious morally right or wrong response. In both scenarios the money is earned and rewarded in a fair manner and the scenarios should thus facilitate for the individual to feel that they rightfully have this money at their disposal and it is fair that they may choose how to spend it.

In our study we assume, like numerous researchers have done before us, that the dictator game is a beneficial tool to help measure altruistic behaviour. There are nevertheless those who are critical to the dictator game's ability to measure altruism (Zizzo 4-5). They argue that there are other, more important factors, than altruism, that influence the allocator's decision to split his or her endowment. This is of course true. It is for instance highly likely that the immediate surroundings of the individual participating in the game will have an impact on the decision. The attitude or the personality of the experimenter, leading the experiment, has shown to have an influence on the allocator's decision. Other influencing factors include the differences in how the endowment has been received, the upward bias in generosity created when using students as subjects and variation in generosity depending on if the subjects were paid (Bekkers, *Measuring Altruistic Behavior* 143).

Although there are drawbacks of using the dictator game to study altruism, there are measures that may be taken to mitigate these disadvantages. Our version of the dictator game was conducted through an online survey, which eliminates the experimenter effect since the experimenter is not present and the allocator has the chance to make the decision in solitude. The recipient is a charity organization of the allocator's own choice, which further reduces the anonymity of the receiver and thus creates a context for engaging in altruistic behaviour. The participants in the study are students, but in this case it does not affect the outcome of the dictator game, since the research question concerns the characteristics of this particular group.

The participants in our study were furthermore not paid to respond. Because there were no payments, it is possible that there was a self-selection bias: taking the survey could be

regarded as an altruistic act in itself. Providing no reimbursements could also affect the accuracy of our data, as it is known that payments tend to increase subjects' efforts (Forsythe et al 359). Using a survey, as opposed to an experiment, should nevertheless not have considerable implications for the validity of our results. There are numerous examples of dictator games conducted through surveys that reach comparable conclusions to those of experiments (Bekkers, *Measuring Altruistic Behavior* 140).

Econometric approach

The econometric study in our thesis was conducted by using OLS regressions. To structure the econometric analysis three sets of explanatory models were used, controlling for variables of demographic characteristics, personal preferences and background. The variables in the models were selected because they have previously shown to affect pro-social behaviour (Bekkers, *Measuring Altruistic Behavior* 140). The first model included dummy variables for age, gender and study major.

The second model contained variables measuring preferences and attributes of the participants. These factors were used as proxies for pro-social values. We included questions regarding future career options⁵ as well as about the nature of any future occupation⁶ (for example how student rated the importance of a job that contributes to the public good). It has to be recognized that the students who participated in this study are still enrolled at university, and thus their chosen career paths are merely hypothetical. The strong record of past graduates' employment destinations at each of the universities nevertheless lends credibility to the students' aspirations.

The third model included variables for background factors. Pro-social behaviour is known for being transferred from parent to child through socialisation (Lévy-Garboua, Meidinger and Rapoport 562). To estimate the influence of parents' behaviour on their children, we posed questions regarding the parents' occupations. Jobs in certain sectors, such as healthcare, education and social care, are believed to be strongly associated with pro-social

⁵ Pro-social careers were defined as: charity and voluntary work, work within government and politics, environmental work and social care and guidance. These were chosen because they are among the most probable pro-social careers for social science students, which could potentially also constitute career options for business students.

⁶ Pro-social value orientation was defined as choosing "work that contributes to the betterment of society" as one of the three most important criteria when considering a future career.

behaviour (Hansmann 897). Children to parents in these occupations could thus be expected to exhibit more pro-social behaviour.

5. Contribution to prior research

Our thesis aims to continue on recent research conducted by Banuri and Keefer on pro-social behaviour among government employees in Indonesia. They study the difference in altruism of students entering employment in the government and students expected to work in the private sector. To measure pro-social behaviour they let subjects perform a version of the dictator game. Their results show that students entering government employment donate more. Thus, their conclusion is that government workers are more pro-social than workers within the private sector (Banuri and Keefer 11). By using a similar approach but applying it to a different sample in a new context, we expect to find support for previous findings but also provide new insights.

The method we apply in our study can offer new insights to current research in two particular ways. Firstly, applying the dictator game in a survey rids us of the experimenter effect,⁷ which is present in the studies that have completed actual games. Secondly, the recipient in our version of the dictator game is decided upon by the allocator. In the standard version of the game the recipient is usually either anonymous or a given.

Furthermore, the new context provided by our study also adds to prior research. For instance, by conducting the study with samples that have not been included in a similar study before offers new findings on the behaviour of the populations they represent. Our approach to study both earned and windfall endowments also contributes to previous research. How these different contexts affect generosity and possibly create different outcomes of the game has not been widely studied.

⁷ *The experimenter effect* implies that the presence of an observer will increase the generosity of allocators, as research shows that donations decrease in double-blind studies (Eckel and Grossman, *Altruism* 188).

6. Results

In this section we present the findings of our study. The results are divided into two sections: the first one explains the descriptive statistics of our sample and the second one describes the inference statistics. The inference results were obtained through OLS regressions, first analysing a basic model of objective characteristics and subsequently adding explanatory models controlling for personal preference and individual background.

Descriptive statistics

Our sample consists of 344 students from Stockholm School of Economics and Uppsala University. The response rates were 11.4% for the business students and 21.9% for the social science students. Not all participants answered all questions, resulting in some missing values, which is a concern for the validity and the reliability of our results. The missing data in our study does not appear to be systematic and though it may decrease the statistical significance, it is unlikely to create a bias. Thus we reckon that the validity of our results is satisfactory. Non-systematic missing values are nevertheless a concern for the results' reliability. An indication that our findings are reliable would be that we have found similar results to prior researchers. Hence, it appears likely that if our study was to be conducted again it would generate similar results.

In our version of the dictator game, students were asked to select a pre-determined donation-category that best matched the amount they wished to donate. Due to the constraints of this thesis we made the decision to focus our analysis on whether or not the students had made a donation at all, instead of studying the actual amounts given. The decision was made to study whether an individual exhibited pro-social behaviour or not, rather than measuring the individual's degree of altruism. Data on the amounts donated was nevertheless collected and could serve as an interesting starting point for further studies.

Furthermore, students were asked to donate money in two different scenarios. The graphs below display that a considerable number of students kept all of the money they had earned. This supports earlier studies that people tend to feel more entitled to keep money that they have worked for (Bekkers, *Measuring Altruistic Behavior* 141). In both scenarios a larger part of the social science students made the decision to donate, indicating greater altruism in this group (fig. 1). Due to the small difference between the amount of students who chose to

donate in each scenario, we made the decision to create a dummy variable that represented making a donation in either scenario.

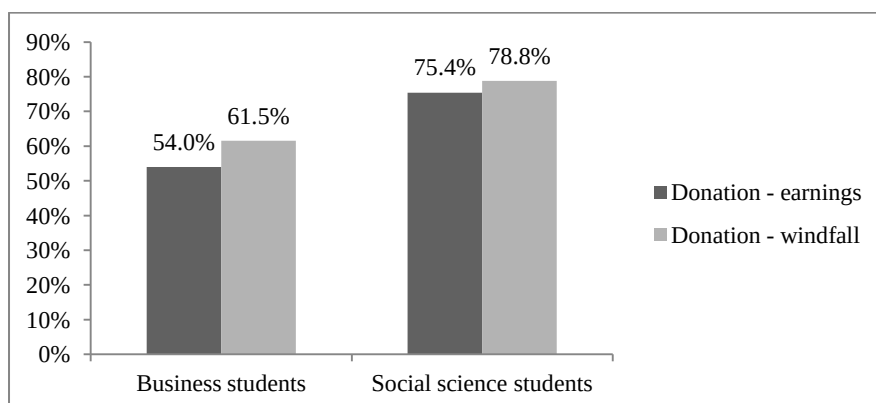


Fig.1 shows the proportion of students in each study major that chose to donate in the two scenarios.

A majority of the students, regardless of study major, chose to donate some of their endowment (fig. 2). In our study 70% of all participants opted to make a donation (fig. 5). According to prior research this share can vary between 0-93% but generally has an average of 20-30% among university students (Bekkers, *Measuring Altruistic Behavior* 139; Benenson, Pascoe and Radmore 169). When comparing the four groups of female business students, female social science students, male business students and male social science students in this study, it is clear that the male business students distinguish themselves as being the least pro-social (fig. 3). For women, study major appears to have less influence on the willingness to donate and consequently on pro-social behaviour. When comparing male students the difference is more substantial. This implies that pro-social behaviour in male students is, to a greater extent, dependent on study major.

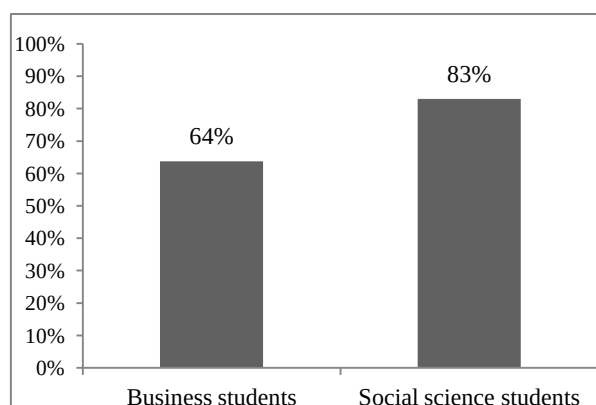


Fig. 2 shows the proportion of students within each study field that chose to donate in either of the two scenarios.

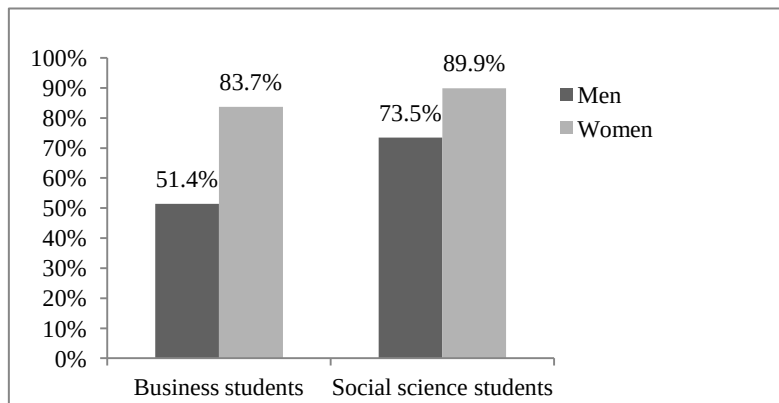


Fig. 3 shows the proportion of women and men within each study field that chose to donate in either of the two scenarios.

Inference Statistics

This section describes the outputs of the OLS regressions of our explanatory models. The outputs are tabulated in the appendix.

Demographics

The output of the demographic model demonstrates that students of social science are 15.2% more likely to donate money to charity than students of business and economics. This model also controls for gender as well as age. Prior research has shown that pro-social behaviour tends to increase with age (Bekkers, *Measuring Altruistic Behavior* 140). The effect of age is however insignificant in this study as the majority of the students that took the survey are similar in age. Gender is on the other hand a significant variable as women according to the model are 26% more likely than men to donate money (table 2-A).

Our results show that gender is more influential than study major on willingness to donate money. Extending the model to include an interactive variable for women studying business and economics reveals that there is a positive relationship between female business students and donating. The findings establish that female business students are 31.6% more likely to donate money than their fellow male students and 8.2% more likely to donate than male students studying social science. Regardless of study major our results show that women are more prone to donate money than men (table 2-B).

The results nevertheless lend support to our first hypothesis, as both men and women studying social science are more likely to donate than their counterparts studying business. Dividing the analysis by gender reveals that women studying social science are 7.4% more

likely to donate money than female business students and males studying social science are 23.4% more likely to donate than male business students (table 2-B).

Personal preferences and attributes

The willingness among students to donate money could also potentially depend on personal attributes and preferences. OLS regressions were run including variables measuring the level of individual trust, involvement in spare time activities, future employment ambitions and essential values in a future employer. Our findings reveal that although the level of trust does not have a statistical significant effect on the likelihood of donating, other personal preferences do.

Participating in voluntary activities outside of school increases the likelihood of donating by 15% (table 2-C). Involvement in other pro-social activities like environmental conservation or politics does however not exhibit a statistically significant effect, most likely due to the few observations in these categories. Examining the effect of future job ambition discloses that students seeing themselves working in a charity related field are 17.6% more likely to donate (table 2-D). Considering a career in environmental sustainability increases the probability of donating by 13.7% (table 2-E). Both charity and environmental sustainability are job categories that are positively correlated with being a social science major. In our results it could indicate an indirect relationship between wanting these jobs and being an altruistic social science student. Business students considering a career in charity, environmental sustainability or any of the other pro-social professions were not significantly more likely to make a donation.

Our results further reveal that 54.2% of social science students list “contribution to betterment of society” as a top three priority in a future job, while the corresponding figure for business students is 20.4% (fig. 4). Valuing a job that contributes to the public good increases the likelihood of making a donation by 19% (table 2-F). On the other hand, 44.7% of business students chose “a competitive salary” as a top three priority in a future job. The equivalent figure for social science majors was 18.6%. In this respect, our findings display a substantial difference in motivation between the study majors (fig.4).

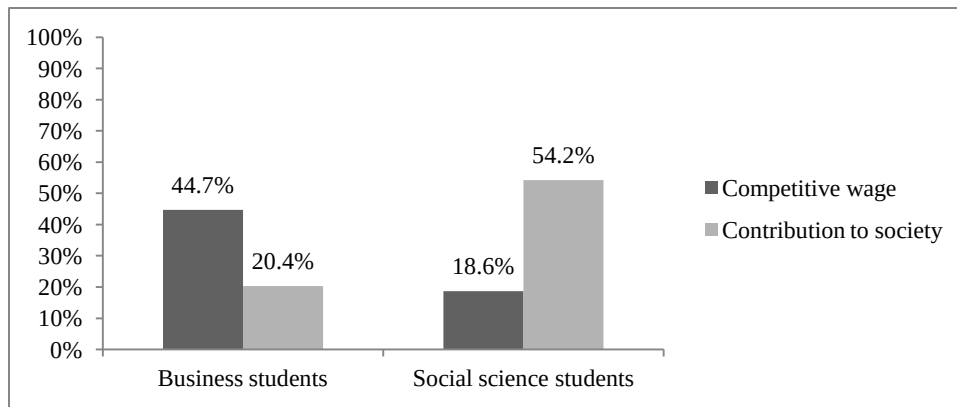


Fig. 4 shows the proportion of business and social science students who valued competitive wages and contribution to the betterment of society respectively as a top three priority in a future job.

Personal background

Research shows that personal background could influence an individual's habit of donating money to charity (Benenson, Pascoe and Radmore 174). This study thus examined the effect of wealth growing up, parents' occupations and having siblings. Having siblings at all, or controlling for different number of siblings, did not have a statistically significant effect on the likelihood of making a donation. Neither did growing up in a high-income⁸ household. However, the effect of parents' occupations revealed some surprising results. Individuals with at least one parent working in the healthcare sector were 9.6% (table 2-G) less likely to donate, while individuals with at least one parent working in management being 14.1% (table 2-H) more probable to make a donation.

These findings contradict the previous research that having parents in a caring profession would stir pro-social behaviour in the child. These unexpected results might however derive from the fact that the healthcare category suits a widespread number of occupations of various income levels. Management jobs are likely to be found in the higher end of the national income scale, and could somewhat lend support to part of the assumption that wealthier people donate more (Benenson, Pascoe and Radmore 174). We did however not find significant results that students from high income families donated more than students from low income families.

The OLS regressions also raise some interesting question for further research. For instance a look at the R squared reveals that our explanatory variables explain roughly 13-16% of the variance in Donations. These values were expected, as they are similar or slightly

⁸ Our subjects were asked about the gross income in the household they grew up in. We used the definition of high income provided by Skatteverket of 426 300 SEK per annum (Skatteverket).

above the explained variance in the study by Banuri and Keefer. It nevertheless suggests that there are other variables that could further explain the variance. It opens up for further research of other possible explanatory variables, not included in this study.

Our study nevertheless reveals some interesting results about Swedish students' willingness to donate money. Our findings show that our first hypothesis is true: students studying social science exhibit more pro-social behaviour than students studying business and economics, when controlling for the effect of gender. We did however not find significant support for our second hypothesis: that business students who are opting out of a higher paying career, by entering the public or civic sector, are more pro-social than social science students pursuing a similar career. In the following section we will ask ourselves why we have received these results and analyse the factors behind them.

7. Analysis

The influence of intrinsic motivation

It is rather difficult to single out the primary reason to why being a social science student increases the likelihood of donating money to charity. Banuri and Keefer state that "...the explanation for employee effort in the presence of weak monitoring and low-powered incentives implies that government employees exert effort because they are intrinsically pro-social and motivated to serve the public interest" (1). They further argue that the evidence that government workers are more pro-social is scarce. The results of our study nevertheless indicate a strongly significant positive relationship between expressing that pro-social values are important in a future employer and the likelihood of donating.

Valuing betterment of society in a prospective employment implies a degree of mission-orientation. A majority of the social science students selected this option to be among their top criteria. It indicates that social science students appear to recognize that their future job will have a greater mission with a purpose of contributing to the greater good, rather than simply having a profit maximizing goal. Furthermore this commitment to contribute to the public good suggests that social science students are more intrinsically motivated and pro-socially driven. In our version of the dictator game this behaviour shows in the increased likelihood of social science majors making a donation.

The reverse relationship appears when studying the beliefs among students on the importance of competitive wages. Of the business students 44.7% selected competitive wages as one of the top three most important factors in a future employer. For social science students this figure was significantly lower (fig. 4). Since earlier research argues that there is a positive relationship between pro-social behaviour and being intrinsically motivated, this implies that the opposite relationship should exist. Hence, expressing a preference for high salaries should lead to less altruism as the motivation for making an effort then comes from extrinsic incentives. This lends support to why business students exhibited less pro-social behaviour in the study.

The influence of parents

Given the theoretical framework on socialisation and how altruistic behaviour is thought to evolve, our results are in some ways rather surprising. Our study reveals no significant relationship between wealth growing up or parents' occupation and pro-social behaviour. According to previous research it would have been likely that students brought up with parents in pro-social professions would have had pro-social behaviour fostered in them through cultural transmission (Bisin and Verdier 299). On the contrary, our results reveal that students with parents in the healthcare sector, a distinctive pro-social sector, donated less. We do not believe that previous research has reached the wrong conclusions, but ask ourselves why our results were different.

A possible explanation is our subjective categorisation of parents' jobs. A different categorisation might have produced different results. Healthcare is a large category, and when considered subjectively can encompass a wide range of professions. For instance, in our survey it was not clear if a receptionist or accountant working in a hospital belonged to the healthcare or the administration category. Healthcare professions also incorporate a wide range of salaries which, if considering previous research that higher income corresponds to higher donations, could indicate that our sample contains parents in healthcare occupations with low income. Previous research has further shown that children with affluent backgrounds tend to exhibit more pro-social behaviour (Benenson, Pascoe and Radmore 169). Our study does not find support for this either. A possible explanation to our findings is perhaps that the subjects of our study were old enough to have had other sources of influence, beyond the family, which to a greater extent affected their willingness to donate money.

The influence of involvement

Intrinsic motivation can explain why pro-social individuals are motivated to work in spite of weak tangibles incentives. Although the students in this survey are not in full time employment, their engagement in voluntary activities may serve as a proxy for working in mission-oriented organizations and for socialising in a particular context. It can therefore be expected that students taking part in pro-social activities are more prone to exhibit pro-social behaviour compared to those who are not involved.

Our results show that individuals who are involved in voluntary activities were more likely to make a donation. These results support that socialising in a pro-social environment makes individuals more altruistic, as found by Banuri and Keefer. If this is true it could also explain why students studying social science appear to be more altruistic than business students. According to our study, social science students are to a greater extent involved in voluntary activities. Of social science students 33.1% are involved in voluntary activities, while the corresponding figure for business students is 9.3% (fig. 6). It is possible that this involvement could have similar effects to those of working in a mission-oriented organization. Banuri and Keefer conclude that mid-career government workers, due to socialisation, exhibit more pro-social behaviour than the students in their samples (18). This somewhat supports our results that individuals highly engaged in pro-social spare time activities are more altruistic.

Work and spare time activities are nevertheless different in nature and it is probable that more time is spent on the former, indicating that it may have a more profound effect on an individual. On the other hand, even work within the government offers monetary compensation, which is by definition not received in voluntary activities. It indicates that the intrinsic motivation could perhaps be even stronger among individuals involved in voluntary work.

There is of course the question of selection, and whether there are simply more pro-social individuals getting involved in voluntary activities. Although we do not find support for it in our findings, altruistic behaviour has been confirmed to partly depend on upbringing. It is not unlikely that individuals who already exhibit a certain amount of pro-social behaviour are attracted to voluntary activities. It is difficult to discern whether individuals engaged in voluntary activities in our study got involved in the first place because of their pro-social behaviour, or if their altruistic behaviour has developed through their involvement. Perhaps the answer draws from both explanations.

Our study does nevertheless control well for the effect of social norms. The subjects had the chance of completing the survey in complete privacy and since all results were

anonymous there would have been no risk of the individual looking bad in front of others if he or she chose not to donate anything. The reason to why many social science students chose to donate could be that there is a stronger social norm among these students to donate. Donating exhibits consideration of others and most of the social science majors are likely to pursue a career working for the public good. Consequently they appear to be more pro-social. Donating to charity might be regarded as something that is expected among social science students, while it might not be a social norm among business students. This explanation is nonetheless weakened by the fact that the choice of donating money was made in complete anonymity. There was no need for any student who took the survey to adhere to social norms and thus we may exclude it as a possible reason to why social science students donated more.

Businessmen keep money tight

Although others have observed it before us, the fact that male business students are least prone to donate money is in a way contradictory. Previous studies on altruistic behaviour have shown that pro-social behaviour increases with wealth, and males in business are likely to be the highest grossing individuals in our study (Civilekonomerna 33; Nandorf). It implies that wealth appears to take a backseat compared to gender in explaining altruistic behaviour, at least among young individuals. Catherine Eckel and Philip Grossman conducted what they refer to as a “pure” experiment, with the sole purpose of studying the effect of gender on altruistic behaviour. In a double-blind dictator game they found that women, on average, donated twice as much as men. Women were consequently also more likely to donate more than the average donation made of the entire group (Eckel and Grossman, *Are women less selfish* 732). According to Eckel and Grossman, this form of anonymous dictator game strips the explanation of any other possible variables and reveals a fundamental difference in altruistic behaviour between men and women (727).

Although it has been established that females and males differ in their pro-social behaviour, it does not offer a satisfactory explanation to why the males that participated in this survey displayed such a wide difference in their willingness to donate money. It does not explain why males studying social sciences were substantially less reluctant to donate money than male business students. However, reviewing the different explanation models shed some light over differences between them in personal preferences.

A possible suggestion to the difference in the amount donated could potentially be a considerable difference in personal preferences. A look at spare time activities for men shows that 42.9% of males studying social science are involved in voluntary activities,

environmental conservation or politics. The corresponding number of business students are 17.1% (fig. 7). These statistics lend further support to the theory of cultural transmission and that socialising in a pro-social environment can have an effect on an individual's behaviour outside of that particular setting.

Furthermore, male business students in the survey did not prioritize pro-social values in a future employer to the same extent as men majoring in social science. According to our study, more than half of male business majors listed competitive wages as a top priority in a future career. Among social science males only a fifth listed salary as a top three priority. Males majoring in social science were more concerned with having a job that contributes to the public good, as more than 40% of them recognized it as important. The equivalent figure for male business majors was just above 10% (fig. 8). Since the OLS regressions showed that there is a significant positive relation between valuing a job contributing to the public good and donating money, this could offer an explanation to why there is a difference in pro-social behaviour among men in different study majors (table 2-F).

The evident reluctance among male business students to donate is an interesting area for further research. For instance, it would be interesting to study how the behaviour of men is influenced by the presence of females, given that women in general exhibit a greater degree of altruism. Such a study is supported by our research, where a majority of the social science students that responded were women and social science males were significantly more prone to donate than male business students. Given that our sample is representative of the population, it is possible that the female social science students have influenced the behaviour of their male peers.

Are Swedish students generous?

Even though social science students proved to donate more than business students, it appears that altogether the students in our sample were generous compared to the average of dictator games. It is tempting to believe that this high donation rate indicates a great generosity and consideration for others among Swedish students. There are however other possible explanations. The high donation rate could for example be due to our choice of replacing the anonymous recipient or the lack of real transfers in our version of the dictator game. Despite the Swedish students' generosity our results show that they donated less than the students in the study by Banuri and Keefer.

Donations made in dictator games generally have an anonymous recipient, but giving students the option to donate to an organization is likely to increase their level of generosity.

A free choice of organization allows for everybody to donate regardless of preferences. For instance, some individuals may value an organization for its transparency and efficiency, while others might prefer to make a donation to a cause they personally feel strongly about. By not limiting the options of receiving charities we have reduced the reasons for why some individuals might choose not to make a donation and thus the survey could be regarded as a valid way of measuring pro-social behaviour.

Another explanation to the high donation rate could be that there were no real transfers of money in our study. A significant aspect of our method of collecting data is that the participants taking our survey did not risk or gain anything financially. When dictator games have been played in previous research the tokens that are kept when not donating often comes in the form of gift cards or lottery tickets (Banuri and Keefer 5). This might affect an individual's choice of donating as risk aversion and personal valuation of the vouchers may influence the decision of giving. In our study we chose to have a hypothetical monetary compensation to avoid other influences on the decision to keep money to oneself. The fictional scenarios of our study might however have affected individuals' willingness to donate. It is likely that there is a proliferation towards donating when there is no actualized personal loss. The fact that the survey was not a real experiment but simply a scenario could thus have increased students' propensity to donate. The fictional scenario and the lack of any real transfers of money are also likely to have had consequences for how seriously participants considered their answers. It is likely that donating is easier if one is not too concerned with reflecting over the personal loss a donation entails.

Although the individuals in our sample appeared to be generous compared to the average of dictator games, the abundance of pro-social behaviour in our sample was significantly less than in that of Banuri and Keefer. They found that 7% of the business students in their sample chose not to donate anything, while the corresponding figure in our study is 36%. For social science students, only 3% opted not to donate anything in the study by Banuri and Keefer and 17% did so in our study (Banuri and Keefer 30; fig. 2). It is difficult to point to where the difference in behaviour between Swedish and Indonesian students derives from. Since Banuri and Keefer made an actual experiment, where subjects were reimbursed for their participation, their figures nevertheless demonstrate that it is possible to receive a donation rate significantly higher than the average without a fictional scenario and with real monetary transfers. Considering the donation rates between business students and social science students separately, demonstrates that the business students in our sample donated close to the average donation rate in dictator games. It is the social science students

that appear to be particularly generous and their willingness to donate increases the average rate.

Business students and pro-social careers

Though we could not prove that business students that considered a career in the public or civic sector did exhibit greater pro-social behaviour than social science students, our data still offers some insights in this regard. The inference statistics provided no significant results when controlling for the relationship between study major and pro-social jobs (table 3). Simply looking at our observations nevertheless revealed that 72.6% of business majors who consider a pro-social career chose to donate, while the equivalent figure for social science majors was 86.7% (fig. 9). In this respect there appears to be a relatively small difference between study majors in willingness to donate if one considers a career in a pro-social profession.

Our findings are further affected by our division of what constitutes a pro-social job. Our survey does not, for instance, recognize someone who considers a career in accountancy or administration in a public or civic setting, as wanting a pro-social career. This is likely to give the business students a disadvantage as many of them might have selected such options. It is thus not unlikely that an experiment that controls for typical business or economics jobs in a public or private sector would yield different results. Perhaps it would even show that these individuals are more pro-social than professional counterparts in the private sector.

8. Discussion

When analysing our results, we begun contemplating the implications of our findings in a wider perspective. The behavioural traits of the students we studied will inevitably have repercussions for their future employers. If they are representative of their respective population, their characteristics will also have consequences for the future of the public, civic and private sectors. Questions arise as to how the public or civic sector will be able to attract individuals with business or economics competence if they cannot offer the satisfactory monetary compensation these individuals are motivated by. On the other hand, the private sector might be facing the opposite problem. With a growing concern for corporate social responsibility (CSR) the private sector has also been forced to recognize the public good. For

these divisions people with a background in the social sciences are valuable resources. The question is how the private sector may attract individuals who are intrinsically motivated.

The Swedish Ministry of Foreign Affairs, a popular employer among social science students, has stated that they are looking to employ more individuals with knowledge in business and economics (Utrikesdepartementet). Their level of compensation is however significantly lower than what is offered by comparable employment in the corporate sector. Considering the results of our survey, the dilemma of the lack in interest from business and economics students will prevail unless something is done to appeal to their extrinsic motivation. One may of course question if there is any way in which business majors can be fostered to behave more pro-socially. Including courses in ethics or CSR in the degree curriculum could perhaps be a solution in raising awareness and discussion. It is possible that it could generate an interest for these subjects and encourage further involvement in relating activities. Our results nevertheless show that socialisation appears to have the strongest effect on pro-social behaviour. It is thus questionable if further education on the subject alone would lead to any noticeable changes in the behaviour of business students.

In business, altruistic behaviour has rarely been related to success. However, in the wave of CSR awareness and the growing demand of stakeholders on corporations to make responsible investments, business corporations have been forced to work extensively on exhibiting more altruism. But is it enough to be a desirable employer for intrinsically motivated students? Individuals who are intrinsically rather than extrinsically motivated tend to perform worse as extrinsic incentives increase. The phenomenon is a form of crowding out effect where tangible compensations undermine, or crowd out, the intrinsic motivation. If our results correspond with reality, social science students will have a disadvantage in the private sector as their performance might worsen in a setting where individuals are expected to be driven by monetary or tangible means.

There are obviously challenges to be overcome to achieve a greater integration of intrinsically and extrinsically motivated individuals in both the public, civic and private sectors. Despite the demand of business competence in the public sector and of social science majors in the private sector, the greater majority of employment opportunities for students will of course be found within their respective field of studies. Perhaps, everything is how it ought to be then? It is possible that students have simply developed the skills they will need in order to thrive in a career related to their study. Our results support that students have been successful in this respect. However, if the ambition is to encourage changing behaviour to evoke more pro-social behaviour in the private sector and increase the knowledge on business

and economics in the public sector, our findings give an inclination about the measures that need to be taken in order to achieve such outcomes.

9. Conclusion

Using samples of Swedish university students, we found that students studying social science exhibit more pro-social behaviour than students studying business and economics. The findings of this study however point to that socialisation and involvement in pro-social activities are important underlying factors to why social science students exhibited more altruistic behaviour. Our findings further show that valuing work contributing to the betterment of society significantly increases the likelihood of pro-social behaviour. Another important disclosure in our study is the significance of gender. As expected, men displayed a lower level of altruism than women, but the result that stood out the most was the low level of altruism among future businessmen. Male business students displayed a significantly lower level of altruism than male social science students. In our study this could be explained by their low involvement in pro-social activities, their lack of socialisation in pro-social settings and their tendency to be extrinsically motivated.

In our study we could nevertheless not find support for that business students who are opting out of a higher paying career, by entering the public or civic sector, are more pro-social than social science students pursuing a similar career. We were not able to find a statistically significant relationship between being a business major with a desire to have a pro-social job and displaying more altruistic behaviour. The descriptive statistics nevertheless reveal that even though the social science majors were more pro-social than business students with pro-social career ambitions, the difference was rather small. These results are affected by our categorisation of what constitutes a pro-social job. Our categorisation does not control for typical business or economics jobs in the public or civic sector and a different division could perhaps yield different results.

Our findings support prior research on how altruistic behaviour varies with study major, while also offering new insights on pro-social behaviour by examining a new sample. It considers the effects of pro-social behaviour while also opening up for further research on how altruistic behaviour is formed and what consequences intrinsic motivation have for individual efficiency. The research raises questions on how compensation schemes should be

structured to suit all individuals, whether they be extrinsically or intrinsically motivated. It further raises questions regarding recruitment for both mission-oriented and profit driven organizations, as they try to attract people with the right talents. It is a game of match-making between being able to capture the right talent for your organization while meeting the motivational needs of these individuals, whether they be extrinsic or intrinsic.

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11. Appendix

Tables

Table 1: Descriptive statistics

	N	Mean	Std.Dev.
Donations	344	0.70	0.46
Businessmajor	344	0.66	0.48
Female	344	0.45	0.50
Young	344	0.74	0.44
Female businessmajor	344	0.25	0.43
Voluntary activity	344	0.17	0.38
Charity	344	0.12	0.32
Environment	344	0.11	0.32
Betterment of society	344	0.32	0.47
Parents in healthcare	344	0.22	0.42
Parents in management	344	0.08	0.27

Table 1 shows the variables that had a statistically significant effect on the willingness to donate. All variables are dummies. *Donations* indicates if an individual has made a donation in either of the two scenarios. *Young* takes on the value of 1 for individuals under the age of 25 or below. *Female and businessmajor* is an interaction variable, where the value 1 indicates a female business student. *Voluntary activity* takes on the value 1 for individuals who participate in voluntary spare time activities. *Charity* and *Environment* indicate a future career in charity and environmental sustainability respectively. *Betterment of society* shows if an individual values this criteria in a future occupation.

Table 2: Regression output for demographics, spare time activity, future career, personal values and background

VARIABLES	(A) Donations	(B) Donations	(C) Donations	(D) Donations	(E) Donations	(F) Donations	(G) Donations	(H) Donations
Businessmajor	-0.152*** (0.0469)	-0.234*** (0.0763)	-0.119** (0.0486)	-0.120** (0.0487)	-0.138*** (0.0477)	-0.0963** (0.0486)	-0.151*** (0.0470)	-0.160*** (0.0471)
Female	0.260*** (0.0462)	0.156** (0.0732)	0.243*** (0.0461)	0.248*** (0.0458)	0.252*** (0.0459)	0.218*** (0.0467)	0.261*** (0.0460)	0.254*** (0.0464)
Young	0.0981* (0.0553)	0.0984* (0.0552)	0.0954* (0.0547)	0.0979* (0.0550)	0.0963* (0.0550)	0.0997* (0.0555)	0.0880 (0.0556)	0.0888 (0.0560)
Female businessmajor		0.160* (0.0933)						
Voluntary activity			0.151*** (0.0491)					
Charity				0.176*** (0.0482)				
Environment					0.137** (0.0572)			
Betterment of society						0.190*** (0.0462)		
Parents in healthcare							-0.0959* (0.0577)	
Parents in management								0.141** (0.0669)
Constant	0.614*** (0.0592)	0.674*** (0.0729)	0.576*** (0.0615)	0.577*** (0.0616)	0.594*** (0.0610)	0.534*** (0.0623)	0.642*** (0.0619)	0.617*** (0.0593)
Observations	344	344	344	344	344	344	344	344
R-squared	0.131	0.137	0.145	0.145	0.139	0.162	0.138	0.137

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3: Regression outputs for business students and pro-social careers

VARIABLES	(A) Donations	(B) Donations	(C) Donations
Businessmajor	-0.131** (0.0542)	-0.128** (0.0525)	-0.0360 (0.0911)
Female	0.247*** (0.0460)	0.255*** (0.0462)	0.264*** (0.0465)
Young	0.0973* (0.0550)	0.0986* (0.0552)	0.0921* (0.0547)
Charity	0.145** (0.0584)		
Businessmajor Charity	0.0912 (0.101)		
Environment		0.173*** (0.0604)	
Businessmajor Environment		-0.0788 (0.120)	
Politics			0.165* (0.0914)
Businessmajor Politics			-0.101 (0.118)
Constant	0.586*** (0.0639)	0.584*** (0.0642)	0.487*** (0.0957)
Observations	344	344	344
R-squared	0.146	0.140	0.140

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3: the relationship between study major and pro-social jobs is not statistically significant. *Charity*, *Environment* and *Politics* are dummy variables for future jobs in these fields. *Businessmajor Charity* is an interaction variable taking on the value of 1 for business students who may consider a future career in charity. In the same manner, *Businessmajor Environment* and *Businessmajor Politics* are interaction variables where the value of 1 indicates that the individual is a business student with a wish to work within environmental sustainability and politics respectively.

Equations

Regression equations for demographics, spare time activity, future career, personal values and background

Demographics:

$$Donations = \alpha + \beta Businessmajor + \delta Female + \gamma Young + \varepsilon$$

Spare time activities:

$$Donations = \alpha + \beta Businessmajor + \delta Female + \gamma Young + \theta Voluntary\ activity + \varepsilon$$

Future careers:

$$Donations = \alpha + \beta Businessmajor + \delta Female + \gamma Young + \theta Charity + \varepsilon$$

$$Donations = \alpha + \beta Businessmajor + \delta Female + \gamma Young + \theta Environment + \varepsilon$$

Personal values:

$$Donations = \alpha + \beta Businessmajor + \delta Female + \gamma Young + \theta Betterment\ of\ society + \varepsilon$$

Background:

$$Donations = \alpha + \beta Businessmajor + \delta Female + \gamma Young + \theta Parents\ in\ healthcare + \varepsilon$$

$$Donations = \alpha + \beta Businessmajor + \delta Female + \gamma Young + \theta Parents\ in\ management + \varepsilon$$

Figures

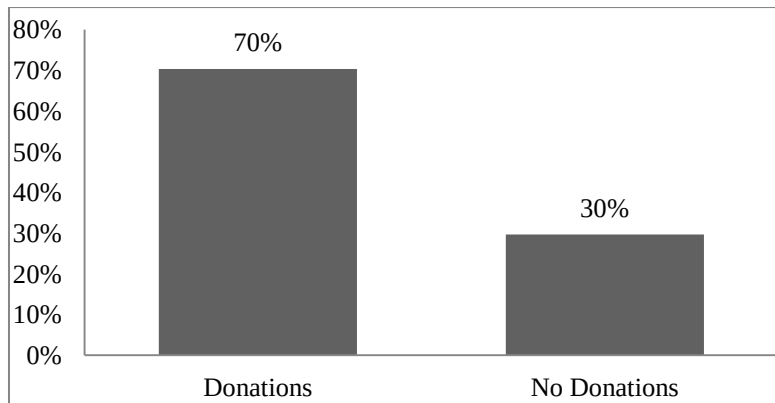


Fig. 5 shows the proportion of students who chose to make a donation in either of the scenarios regardless of study major.

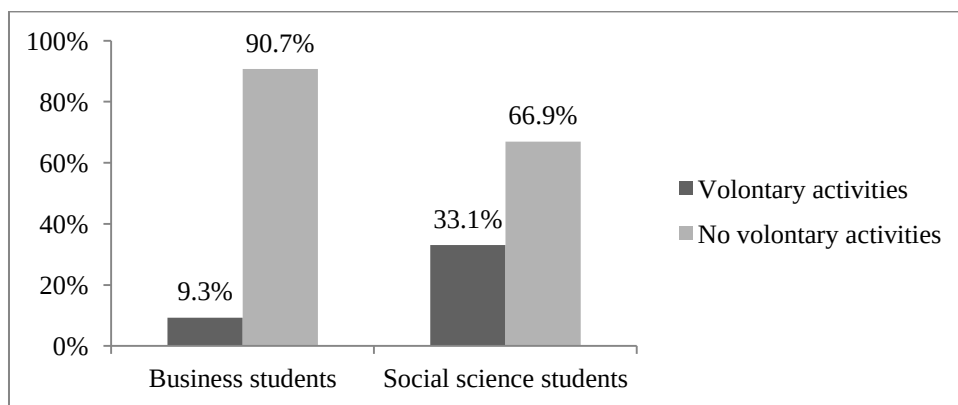


Fig. 6 shows the proportion of business and social science students involved in voluntary activities.

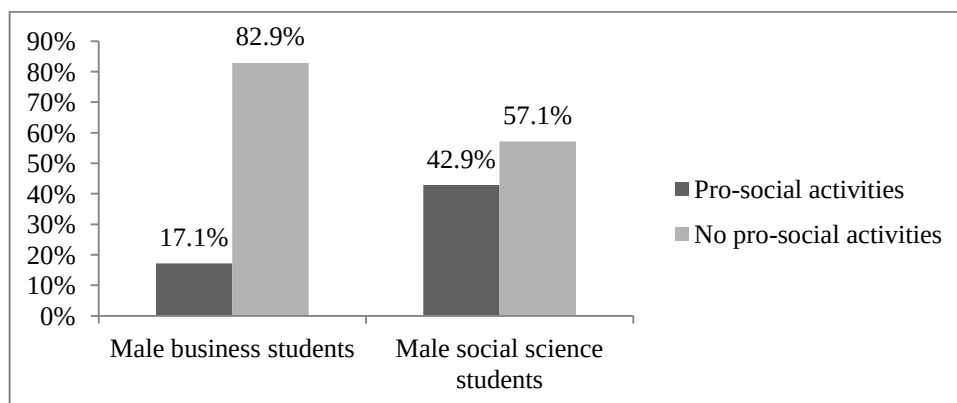


Fig. 7 shows the proportion of male students involved in pro-social activities depending on study major.

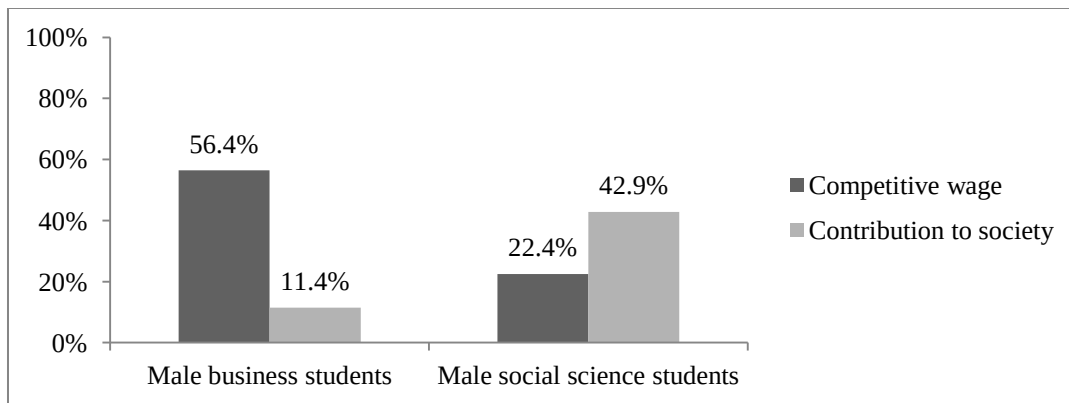


Fig. 8 shows the proportion of male students who valued competitive wages and contribution to the betterment of society respectively as a top three priority in a future job depending on study major.

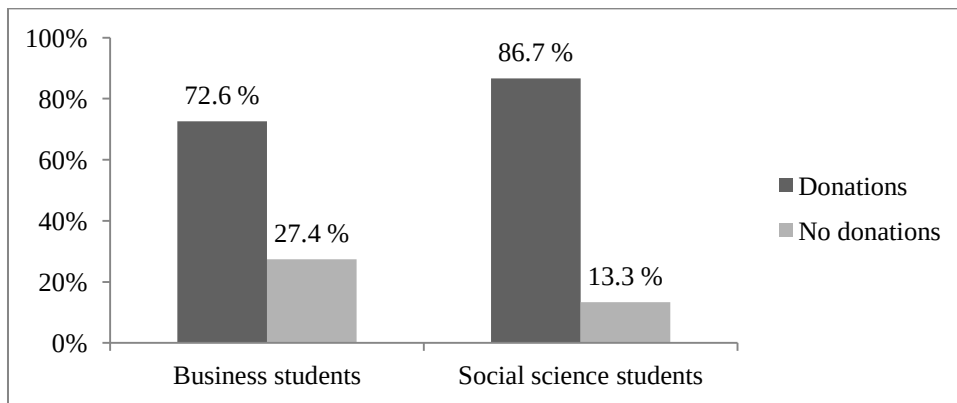


Fig. 9 shows the proportion of students who consider a pro-social career and also chose to make a donation.