

Philanthropically Funded Heroism Awards for Kidney Donors?

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I. Introduction

There are about 100,000 people on the waiting list for a deceased donor kidney transplant in the United States, a number that grows from year to year despite advances that have increased the availability of kidney transplantation. About 35,000 patients joined the waiting list in 2012, though only about 11,000 deceased donor transplants were performed, along with about 6,000 transplants from living donors. So the modal kidney donor in the United States is now a living donor, even though there are more transplants from deceased donors, who donate two kidneys.¹ While kidneys from deceased donors are allocated by UNOS to patients on the waiting list according to strict rules, living donors typically give a kidney to a relative or loved one in need. In this paper we explore possible ways to increase the number of living donors.

There have already been efforts to increase the number of living donors. *Kidney exchange* allows potential living donors whose kidney is incompatible with their intended recipient to nevertheless donate a kidney so that their recipient receives a compatible one. This is done by exchange between two or more incompatible patient-donor pairs such that each donor gives a compatible kidney to another donor's intended recipient.² In addition, kidney exchange has allowed non-directed living donors, who wish to donate a kidney without having a particular patient in mind, to donate a kidney in a way that initiates a chain of transplants that may lead to many donations.^{3 4} Some non-directed donors have initiated chains that have resulted in as many as 30 transplants, although average chain length is much shorter. So, while there is a general shortage of donors of all sorts, non-directed living donors are particularly valuable.

However increasing the number of living donors (directed or non-directed) is a complex project. On the one hand, there is a natural reluctance to actively recruit living donors, since donation is not risk free. On the other hand, some of the tools that might increase donation rates are not available, because the

¹ <http://www.unos.org/donation/index.php?topic=data>, accessed May 25, 2012.

² Roth, Alvin E., Tayfun Sönmez and M. Utku Ünver, "Kidney Exchange," *Quarterly Journal of Economics*, 119, 2, May, 2004, 457-488.

³ Rees, Michael A., Jonathan E. Kopke, Ronald P. Pelletier, Dorry L. Segev, Matthew E. Rutter, Alfredo J. Fabrega, Jeffrey Rogers, Oleh G. Pankewycz, Janet Hiller, Alvin E. Roth, Tuomas Sandholm, Utku Ünver, and Robert A. Montgomery, "A Non-Simultaneous Extended Altruistic Donor Chain," *New England Journal of Medicine*, 360;11, March 12, 2009, 1096-1101.

⁴ Ashlagi, Itai, Duncan S. Gilchrist, Alvin E. Roth, and Michael A. Rees, "Nonsimultaneous Chains and Dominos in Kidney Paired Donation – Revisited," *American Journal of Transplantation*, 11, 5, May 2011, 984-994.

1984 National Organ Transplant Act (NOTA) forbids giving “valuable consideration” for organs, so donors cannot be compensated, which prevents the usual way of raising the supply of scarce resources by raising the price paid.

The NOTA presents legal barriers to giving inducements to kidney donors, and, perhaps as important, reflects an underlying repugnance that led to the law being passed. The buying and selling of kidneys is a “repugnant transaction” in the specialized use of the term for a transaction that some people would like to engage in and that others would like to prevent.⁵ Many transactions are repugnant in this sense, some of which are or have been of great economic importance, but the list is different in different places and at different times. It is notable, however, that the only country that we know of in which there is an explicitly legal market for kidneys is the Islamic Republic of Iran. Whether kidney donors could or should be compensated is a contentious issue. A recent survey of the general American public published in a medical journal, which found mixed support and opposition for paying for kidneys under some circumstances,⁶ was published together with a signed editorial saying that it was a waste of resources even to conduct such a survey, since only the opinions of physicians matter, and they are opposed.⁷ This latter observation is not quite correct: surveys show a considerable variety of nuanced opinion among physicians, e.g. among members of the American Society of Transplant Surgeons.^{8 9}

In the face of these obstacles, inducements that might not be deemed “valuable consideration” in a legal sense have been proposed to increase the number of living donors. Deciding what is and isn’t valuable consideration may not always be trivial. Indeed, as the name kidney ‘exchange’ suggests (and other names such as “kidney paired donation” have been used to avoid this suggestion) kidney exchange itself involves an exchange that might be thought of as valuable consideration: a donor who is incompatible with his intended recipient agrees to donate a kidney to someone else in exchange for his intended recipient receiving another donor’s kidney. Is this in-kind exchange “valuable consideration” under the terms of the act? The ‘Charlie W. Norwood Living Organ Donation Act’ was passed specifically to say that it is not¹⁰ and the Department of Justice issued a long delayed memo saying that in fact kidney exchange had never been prohibited by the 1984 NOTA.¹¹ Perhaps because it is an in-kind exchange, kidney exchange has succeeded in increasing the supply of living donors without generating

⁵ Roth, Alvin E. “Repugnance as a constraint on markets,” *Journal of Economic Perspectives*, 21(3), Summer, 2007, 37-58.

⁶ Leider, Stephen and Alvin E. Roth, “Kidneys for sale: Who disapproves, and why?” *American Journal of Transplantation*, 10 (May), 2010, 1221-1227.

⁷ D. L. Segev and S. E. Gentry “Kidneys for Sale: Whose Attitudes Matter?” *American Journal of Transplantation* 2010; 10: 1113–1114

⁸ “ J. R. Rodrigue, K. Crist, J. P. Roberts, R. B. Freeman Jr., R. M. Merion and A. I. Reed, “Stimulus for Organ Donation: A Survey of the American Society of Transplant Surgeons Membership,” *American Journal of Transplantation*, 2009; 9 (September): 2172–176.

⁹ See also <http://marketdesigner.blogspot.com/2010/12/kidney-sales-and-incentives-for-donors.html>

¹⁰ ‘Charlie W. Norwood Living Organ Donation Act’ [Public Law 110-144]

¹¹ “Legality of Alternative Organ Donation Practices Under” 42 U.S.C. § 274e, Memorandum Opinion for the General Counsel Department of Health and Human Services, March 28, 2007, <http://www.justice.gov/olc/2007/organtransplant.pdf>

any of the repugnance faced by monetary payments for kidneys: the Norwood Act was ultimately passed without opposition.¹²

Other proposals have sought to find non-repugnant ways to reward kidney donors. One proposal has been to organize “altruism exchanges” that would allow kidneys to be donated in exchange for monetary donations to charities chosen by the kidney donors.¹³ Another, signed into law in 2008, makes any organ donor eligible for a Stephanie Tubbs Jones Gift of Life Medal.¹⁴ However the same law prohibits the use of any federal funds whatsoever to create or bestow this medal, and as far as we can tell it has never been awarded. Beard and Leitzel emphasize the heroic aspects of kidney donation in their discussion of a public, nationwide, monopsony kidney procurement system.¹⁵

The present paper explores another way to possibly ease the path towards non-directed kidney donation among those inclined to make such a donation by combining the appreciations of both philanthropy and heroism suggested by the proposals in the previous paragraph. Specifically we consider an award that recognizes a non-directed donor as a hero and comes with a prize of \$50,000.¹⁶ We report a brief preliminary survey designed to assess public reaction to various forms of heroism awards for non-directed kidney donors. There are two dimensions to our survey.

The first concerns whether the award is given by the federal government, as authorized by Congress, or by a private foundation. Members of the public may have preferences on this issue for at least two reasons, one of which is costs to the taxpayer, and the other is whether this is an appropriate role for government.

The second considers how many non-directed donors receive the award per year. One proposal has only a few (though at least one) donors recognized per year. It seems plausible that in this case the recognition and prize money may not be seen as ‘valuable consideration’ since donating a kidney does not automatically lead to recognition. The other proposal aims to recognize all non-directed living donors. In case of the awards being given by a private Foundation, we also add a category where the aim is to recognize every living non-directed donor, though the monetary prize may be determined by the total money available.

II. The Survey

The survey contained five questions, each of which was the first question on 200 surveys administered over the internet by Qualtrics.com (to a sample constructed by the firm of adult Americans, intended to

¹² Elsewhere, for example in Germany, however, kidney exchange is illegal, because current law only allows donation to “relatives of the first or second degree, spouses, registered life partners, fiancés or other persons with whom the donor obviously has a very close personal relationship.” Gesetz über die „Spende, Entnahme und Übertragung von Organen und Gewebe“ Transplantation Act – TPG). (1997, 2012) (§ 8 para. 1 no. 4 TPG).

¹³ Stephen J. Choi, G. Mitu Gulati, and Eric A. Posner, “Altruism Exchanges and the Kidney Shortage,” http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2202311, January 16, 2013.

¹⁴ Stephanie Tubbs-Jones Congressional Gift of Life Medal Act (HR 7198) (Public Law No: 110-413)

¹⁵ T. Randolph Beard and Jim Leitzel, “Designing a Compensated Kidney Donation System,” April 2013.

¹⁶ This would be a bargain for e.g. Medicare, even if we ignore the health benefits of transplantation and consider only the cost savings from transplantation as compared to dialysis.

be a representative sample). Each subject read the introduction below, and then one of the following five questions (followed by the other four questions in each survey).

Introduction

- There are almost 100,000 people in the United States on the waiting list for a kidney transplant from a deceased donor, and there are only about 11,000 such transplants a year. Not only is the wait long, the waiting list also grows longer each year, and thousands of people die each year while waiting for a kidney.
- But there is another source of kidneys for transplantation: healthy people have two kidneys, and can remain healthy with one, and so donation by living donors is also possible. Almost 6,000 people a year come forward and are found to be healthy enough to donate to a friend or relative.
- However not everyone who is healthy enough to donate a kidney can donate to a particular person, since kidneys have to be compatible with recipients. The fastest growing source of live donation is therefore *kidney exchange*, in which incompatible patient-donor pairs seek to find others with whom they can arrange transplants in which every patient receives a compatible kidney.
- This still leaves more people joining the waiting list for a kidney than being taken off because they received one. Not everyone has a loved one or relative that is healthy enough to donate.
- A final source of kidneys is *non-directed* living donors. These are donors who do not have a particular patient to whom they wish to donate. A non-directed donor can initiate a chain of donations among patient donor pairs, and sometimes a single non-directed donor has initiated a chain of as many as thirty life-saving transplants.
- Every living donor, be they a donor to a specific patient or a non-directed donor undergoes not only strict medical but also psychological evaluation to ensure that the decision is taken carefully.
- Transplantation is the best treatment for end-stage kidney disease: it saves the life of the patient, and also saves Medicare about half a million dollars compared to the alternative, less effective treatments such as dialysis.

On a scale of 1 (strongly disapprove) to 10 (strongly approve) evaluate the following proposals. (The names in parentheses are for later reference and were not presented to survey participants.)

1. **(Fed 50K) Federal compensation for American Kidney Heroes by an Act of Congress:** Congress will authorize the federal government to recognize all non-directed donors with a ceremony in Washington D.C., a medal and a payment of \$50,000.
2. **(Fed few) Federal compensation for American Heroes by an Act of Congress:** Congress will pass the American Heroes Act which will establish some generally recognized criteria for exceptional heroism, and each year will recognize qualifying American Heroes, who will be celebrated with a ceremony in Washington D.C. and will each receive a medal and a prize of \$50,000. While the

kinds of heroism celebrated may vary from year to year, the criteria of the Act will include particularly deserving policemen, firefighters, and non-directed kidney donors. The goal will be to recognize five American Heroes each year. The Act anticipates that a non-directed kidney donor will be honored every year.

3. **(Found 50K) American Kidney Heroes Foundation, a private non-profit philanthropy:** The Foundation will recognize non-directed kidney donors as American Heroes, who will be celebrated with a ceremony in Washington D.C. and will each receive a medal and a monetary prize. The Foundation expects to be able to include all the non-directed kidney donors every year. The Foundation expects to have sufficient funds to make the prize amount \$50,000.
4. **(Found div) American Kidney Heroes Foundation, a private non-profit philanthropy:** The Foundation will recognize non-directed kidney donors as American Heroes, who will be celebrated with a ceremony in Washington D.C. and will each receive a medal and a monetary prize. The Foundation expects to be able to include all the non-directed kidney donors every year. The available prize money will be divided equally among all the recipients.
5. **(Found few) American Heroes Foundation, a private non-profit philanthropy:** The Foundation will establish some generally recognized criteria for exceptional heroism, and each year will recognize qualifying American Heroes, who will be celebrated with a ceremony in Washington D.C. and will each receive a medal and a prize of \$50,000. While the kinds of heroism celebrated may vary from year to year, the Foundation's criteria will include particularly deserving policemen, firefighters, and non-directed kidney donors. The goal will be to recognize five American Heroes each year. The Foundation expects to be able to include a non-directed kidney donor every year.

After answering those five questions,¹⁷ participants filled out a questionnaire (in which answering was not forced) about their sex, age and the state they live in. Qualtrics, using their information on gender, made a perfectly balanced gender sample for each question (i.e. 100 men and 100 women). There is strong overlap between the gender as declared by Qualtrics and the answer to the sex question.¹⁸ The average age of the 990 participants who declared their age is 45.9 (s.d. 16.9, min 18, max 80, which were the lowest and highest possible answer, given by 1.4 and 0.6 percent of all respondents.) The mean age in each treatment is close to the total average, ranging from 45.5 to 47.1.

¹⁷ The order of the questions was such that if the first question was about money from a foundation, so were the next two, while if the first question was about a federally funded award, questions about compensation by foundation came last. Within awards from the same source, the subjects saw the same order in terms of size of compensation where Found div was between Found 50K and Found few. So, a subject in the Fed 50K condition would see Fed 50K, Fed few, Found 50K, Found div and then Found few. The exception to that order is the Found div treatment, where Found div was followed by Found 50K, Found few, Fed 50K, Fed few.

¹⁸ In our sample, 489 males and 498 females declared themselves. Of the 500 men given the Qualtrics-declared sex, 485 declared themselves as male, 10 as female and 5 declined to answer. Of the 500 females as declared by Qualtrics, 488 declared themselves as females, 4 as males, and 8 declined to answer.

Participants were also asked “How often do you attend religious services (excluding occasional weddings, funerals, etc.)” with possible answers being “Once or more a week”, “Once a month”, “For major holidays” “Never”. Overall, 30.4% of participants attend religious services once or more a week, 11.1% once a month, 18.6% for major holidays and 39.9% never, with only 4 participants not answering this question. There is some variation across questionnaires.¹⁹

We asked them whether “Generally speaking, do you think of yourself as a Republican, a Democrat, or an Independent?”. Overall, 24% answered Republican, 38% Democrat and 38% Independent with 7 not declaring (where by treatment we never had less than 21% republicans, and never more than 44% of either democrat or independent).

Finally, we asked participants about their social and economic attitudes: “On **social issues**, do you think of yourself as liberal or conservative?” and “On **economic issues**, do you think of yourself as liberal or conservative?”. 994 and 996 participants answered, respectively. The Table below shows the fraction of participants that hold these views over all those that answered this question.

Table 1: The economic and social views of participants in percent

	quite liberal	somewhat liberal	moderate	somewhat conservative	quite conservative
Social	14.7	17	39.1	18.1	11.1
Economic	8.5	15.1	39.9	22	14.5

The percentage (of the 994 and 996 respondents, respectively) who categorized themselves in each category regarding their views on social and economic issues.

These two measures are very correlated: a simple regression of the economic view on social views yields a coefficient of 0.74 ($p < 0.01$). Likewise, the Spearman rho of correlation is 0.75, $p < 0.01$. There is quite some variation in the fraction of participants that hold various social or economic views across treatments, with up to 12 and 10 percentage points difference in a single category between treatments, respectively.

III. Survey Results

III.A Main Result

We first present the results based on specific variables separately, and conclude the results section with an overall regression that confirms the main result. We present for each survey only the answer to the first question. This is because there were strong order effects; differences within subjects are much smaller than across subjects. On average, comparing any two questions, of the 200 subjects 106.7 would answer both questions the same way. Of the 1000 subjects, 314 answered all the questions exactly as they answered the first question.

¹⁹ There is some variation across treatments. Participants who go to church once or more a week range from being 27.6 to 37.7% of all participants who answer one of the 5 questionnaires. The two middle categories range from 9.1 to 14.5% and 16.1 to 20.2%, respectively. Participants who never go to church constitute 34.2 to 47.2 percent of all participants in a questionnaire.

Table 2 below shows for each of the proposals the mean response of the 200 participants in each treatment (underlined), where 1 corresponds to “strongly disapprove” while 10 corresponds to “strongly approve”, as well as the p-value of a two-sided t-test on the mean difference. Table 2 shows that the policy of the government paying \$50K (Fed 50K) to every non-directed kidney donor has significantly lower approvals than any other policy. The policies of the government recognizing just a few heroes of which one is a non-directed donor (Fed few), or a foundation recognizing all non-directed donors either with \$50K (Found 50K) or by dividing the available money equally (Found div) all receive the same approval ratings. The policy of a foundation recognizing a few heroes (Found few) has significantly more approval (though only marginally so compared to Found 50K) than any other proposal.

Furthermore, for each of the two proposal variants – be it 50K per non-directed living donor or honoring a few heroes – the proposal has more approval when it is implemented through a Foundation than by the government.

Table 2: Average Approval and significance of differences in mean approvals

	Fed 50K	Fed few	Found 50K	Found div	Found few
Fed 50K	<u>6.48</u>	<0.01	<0.01	<0.01	<0.01
Fed few		<u>7.28</u>	0.35	0.42	0.048
Found 50K			<u>7.37</u>	0.28	0.096
Found div.				<u>7.23</u>	0.029
Found few					<u>7.69</u>

For each policy the average approval (underlined) and for each cell above the diagonal the p-value of a two-sided t-test comparing the relevant policies where we have 200 respondents per policy.

The main result that Fed 50K has lower average approval rating than any other proposal is present not only in the mean, but is also reflected when considering extreme answers (such as the percent of participants who strongly disapprove or strongly approve) or moderate answers, see Table 3.

Table 3: Percentage of extreme and moderate answers on each proposal

	Fed 50K	Fed few	Found 50K	Found div	Found few
Strongly Disapprove	10	6	3.5	3.50	3.50
Disapprove (1-4)	17	11	11.5	11.50	10
Approve (7-10)	52.5	68	69	66	73
Strongly Approve	21	25	27.5	27	37

For each policy the percentage of the 200 subjects that answered with Strongly Disapprove (an answer of 1), a Disapprove (an answer of 1-4), an Approve (an answer of 7-10) and a Strongly Approve (an answer of 10).

III.B. Results for different subgroups

We now parse the results using specific subgroups, which by and large do not show large differences from the whole sample.

The main result that Fed 50K has less approval than any other treatment is true for women and men separately at the 5% level (except for men, Fed50K and Fed a few as well as Fed50K and Found 50K is different only at 0.060 and 0.064 respectively). Furthermore, there are no significant gender differences of approval ratings on any given proposal. Combining the data on all proposals, women have somewhat lower approvals (7.11 compared to 7.32, $p=0.103$), though the difference fails to be significant.

When considering the two largest subgroups of participants according to their answer to “How often do you attend religious services (excluding occasional weddings, funerals, etc.)”, namely those that answer “once or more a week” and “never”, we retain the main result that Fed 50K has significantly less approval than any other policy at the 5% level (though only at the 10% level when comparing Fed 50K to Found div). By and large, for a given policy, when grouping participants by whether they attend religious services once or more a week compared to others, or when grouping them whether they attend religious services at all or not, we find no significant differences in approval ratings.²⁰ Overall, participants that attend services once or more a week approve of all kidney-compensations significantly more than others (7.43 vs 7.11, $p=0.03$). Likewise, participants that never attend services approve less of kidney compensation than others (6.96 vs. 7.37, $p<0.01$). These differences are driven by participants that never attend services.²¹

Participants who declare themselves as democrats show the main result that Fed 50K has significantly less approval than any other policy at the 5% level. This is also the case for republicans, though p -values of the difference between Fed 50K and the policies Found 50K and Found div are only $p=0.075$ and $p=0.11$, respectively. However, comparing, for republicans, Fed 50K to the two Foundation questions that aim to reward any non-directed living donor does show a significant difference (6.21 vs 7, $p=0.058$). Independents judge both government policies (Fed 50K and Fed few) roughly the same way (6.49 vs 6.72, $p=0.30$) and also do not differentiate between Fed 50K and Found 50K (6.49 vs 6.88, $p=0.21$). However, Fed 50K has lower approvals than Found div (6.49 vs 7.20, $p=0.052$) and Found few (6.49 vs 7.56, $p<0.01$).²² Political affiliation does affect the approval rating even within a single proposal: First, note that Republicans and Independent are not significantly different in their preferences for each proposal. While all three groups agree on the rating of both Fed 50K and Found few, for all the other proposals are democrats more in favor than republican or independents (with the difference not being

²⁰ Only in Found few do we find differences in approval ratings across attendance of religious services. There, the results are that participants that never attend religious services have a significantly lower approval rating than those that have moderate religious behavior (7.18 vs 8, $p=0.02$), while participants that attend once or more a week do not significantly differ in their approval ratings from those with moderate religious behavior -i.e. attend once a month or for major holidays (8.05 vs 8, $p=0.45$). The Leider and Roth (2010) survey of attitudes towards purchasing kidneys found that more religious respondents disapproved more, so the difference found here may reflect something worth further exploration (e.g. regarding prizes versus payments).

²¹ Participants that attend religious services once a week compared to those with moderate attendance – i.e. once a month or for major holidays - agree on kidney compensations (7.43 vs. 7.31, $p=0.27$), while those that never attend have lower approvals compared to moderate attendance (6.96 vs. 7.31, $p=0.037$).

²² Comparing, for independents, Fed 50K to the two Foundation questions that aim to reward any non-directed living donor does show a significant difference (6.49 vs 7.05, $p=0.075$).

significant between independents and democrats for Found div).²³ Overall, combining all policies, democrats are more favorable towards these proposals than republicans (7.54 vs 7.02, $p < 0.01$) or independents (7.54 vs 6.98, $p < 0.01$) where the latter two groups do not differ from one another ($p = 0.43$).

In terms of views on social conservatism, we lump quite liberal and somewhat liberals together into liberal, as well as quite conservative and somewhat conservative into conservative. Social liberals and moderates show the main pattern, they approve less of Fed 50K than any other policy. Social conservatives do not show this pattern.²⁴ Each of those subgroups have views that are not significantly different from one another on each policy separately, the exception being on Found div that social liberals find more attractive than social conservatives (7.57 vs 6.78, $p = 0.04$). Overall, the differences in views that reward non-directed living donors between socially liberal, moderate or conservatives are not large.^{25 26}

In terms of views on economic conservatism, we lump quite liberal and somewhat liberals together into liberal, as well as quite conservative and somewhat conservative into conservative. Economic liberals and moderates show the main pattern, they approve less of Fed 50K than any other policy. While the views of social conservatives are slightly more approving of Fed few or Found div than Fed 50K, these two differences fail to be significant. However comparing Fed 50K to the two Foundation questions that aim to reward any non-directed living donor does show a significant difference (6.39 vs 7.06, $p = 0.052$). The different subgroups do not agree on their views even for a given policy: While there is no significant difference in approval of Fed 50K, economic liberals have higher approval ratings for any policy compared to conservatives, with the exception of Found 50K, though liberals have higher approval ratings than others when we combine the foundation policies that aim to reward all non-directed living

²³ For the Fed 50K proposal, no group is significantly different from each other (democrats (D) vs republicans (R): 6.61 vs 6.21, $p = 0.23$; D vs Independents (I): 6.61 vs 6.49, $p = 0.39$). For Found few, democrats are not significantly different from republicans (7.93 vs 7.51, $p = 0.17$) or independents (7.93 vs 7.56, $p = 0.18$). For Fed few, democrats are significantly more in favor than republicans (7.88 vs 7.25, $p = 0.07$) or independents (7.88 vs 6.72, $p < 0.01$). For Found 50, democrats are significantly more in favor than republicans (7.83 vs 7.11, $p = 0.04$) or independents (7.83 vs 6.88, $p < 0.01$). For Found div democrats are significantly more in favor than republicans (7.52 vs 6.91, $p = 0.076$), but no significantly more so than independents (7.52 vs 7.20, $p = 0.22$).

²⁴ Social conservatives do not approve significantly more of Fed few than Fed 50 (7.18 vs 6.56, $p = 0.14$), they do not even show a significant difference in approvals when comparing Fed 50K to the two Foundation questions that aim to reward any non-directed living donor (6.56 vs 7.11, $p = 0.11$).

²⁵ Social liberals are slightly more in favor for policies that reward non-directed living donors than moderates (7.38 vs 7.12, $p = 0.08$), though moderates are not significantly different from conservatives (7.12 vs 7.11, $p = 0.49$). Liberals are slightly more in favor than conservatives (7.38 vs 7.11, $p = 0.098$). A regression of the approval of payment for non-directed living donors on social views (from 1: quite liberal to 5: quite conservative) yields a constant of 7.58, $p < 0.01$, and a coefficient of -0.13, $p = 0.06$. This difference is driven by differences in views concerning the policies of foundations (-0.17, $p = 0.47$), there are basically no differences for government policies - 0.07, $p = 0.55$.

²⁶ Robertson, Christopher T., David V. Yokum and Megan S. Wright "Perceptions of Efficacy, Morality, and Politics of Potential Cadaveric Organ Transplantation Reforms," this issue, find in an online survey on Amazon Turk that political affiliation is correlated with approval of various proposed reforms of the deceased donor registration system.

donors.²⁷ Combining all policies, liberals have higher approval ratings than both moderates and conservatives, who do not differ from one another.²⁸

III.C. Results combining characteristics of participants

Because there is quite some variation in the distribution of characteristics of participants across treatments, we test the main result using regressions. In Table 4 we show the coefficients of a linear regression of the approval of the policy, when controlling for all the characteristics of participants we collected.

Table 4: Approval ratings of various Policies using OLS

	(1)	(2)
Economic	-0.308 (.12)	-0.286 (.14)
	<i>.011</i>	<i>.047</i>
Social	.114 (.12)	.119 (.14)
	<i>.342</i>	<i>.398</i>
Sex	-0.398 (.17)	-0.405 (.20)
	<i>.018</i>	<i>.039</i>
Church	-0.191 (.07)	-0.214 (.08)
	<i>.006</i>	<i>.009</i>
Democrats	.380 (.26)	.284 (.30)
	<i>.149</i>	<i>.347</i>
Independents	.052 (.24)	-0.031 (.28)
	<i>.830</i>	<i>.911</i>
Fed few	.900 (.27)	
	<i>.001</i>	
Found 50K	.790 (.27)	
	<i>.003</i>	
Found Divide	.661 (.27)	
	<i>.012</i>	
Found few	1.198 (.27)	
	<i>.000</i>	
Federal		-0.529 (.19)
		<i>.006</i>
State, Age	Yes	Yes
N	937	743

OLS regressions: Dependent variable: Approval rating of the policy (1: Strongly Disapprove to 10: Strongly Approve). The table shows the coefficient, the standard error in parentheses, and the p-values in italics under the coefficients. Economic represents the answer towards: "On economic issues, do you think of yourself as liberal

²⁷ Liberals evaluate both foundation policies that aim to reward any non-directed living donor higher than moderates (7.71 vs 7.26, p=0.064) and conservatives (7.71 vs 7.06, p=0.01).

²⁸ This is confirmed by regressions of the approval of payment for non-directed living donors on social views (from 1: quite liberal to 5: quite conservative) which yields a constant of 8.05, p<0.01, and a coefficient of -0.26, p<0.01.

or conservative?” where 1 is quite liberal and 5 is quite conservative. Social represents the answer towards: “On social issues, do you think of yourself as liberal or conservative?” where 1 is quite liberal and 5 is quite conservative. Sex is 1 for males and 2 for females. Church represents the answer to “How often do you attend religious services (excluding occasional weddings, funerals, etc.)” where 1 is “Once or more a week” and 4 is “Never”. Democrats is a dummy for democrats and Independent for independents (with Republicans being the omitted category from the answer “Generally speaking, do you think of yourself as a Republican, a Democrat or an Independent?”. Fed few, Found 50K, Found Divide, Found few are dummies for the various policies (where Fed 50K is the omitted category in regression (1). In regression (2) Federal is a dummy that equals 1 for the policies that use federal funds (so Fed 50K and Fed few). In regression (2) we exclude respondents from Found div.

In column (1) we compare all policies to each other using fixed effects for the state the participant lives in and for their political views, where Fed 50K, democrats and Alabama are the omitted categories. The coefficients on all the policies: Fed few, Found 50K, Found div and Found few are significant, confirming that Fed 50 has the lowest approval ratings, when controlling for participant characteristics. It is however not the case that Found few is universally more approved of than the other treatments: Testing the equality of coefficients Found few to Fed few yields $p=0.259$, Found few compared to Found 50K yields $p=0.123$, and Found few compared to Found div, yields $p=0.041$, respectively.

In column (2) we compared policies issued by the government to the other policies, and find that government policies have lower approval than other policies. To maintain comparability, we consider in regression (2) only Fed 50K and Fed few – which are lumped in the Federal variable - as well as Found 50 and Found few. The coefficients remain qualitatively the same when we add Found div as well.

IV. Conclusions

This paper reports results of a survey on approval ratings of various policies that reward non-directed living kidney donors. The reward is the recognition as a hero accompanied by a prize of \$50K. The policies differ on two dimensions: whether the reward is from the government (The Fed-policies) or from a private foundation (Found policies). The second difference is whether only one or a handful of non-directed living donors is to be so recognized and rewarded (the few policies) or whether all such donors should be recognized (the 50K policies). For the Foundation, we also added a Foundation divide (Found div) policy, in which all donors are recognized, but the monetary award is simply the total money available divided by all recognized donors, since such a policy might be useful for a Foundation in its startup phase.

One perhaps surprising result of the survey is the overall high approval ratings of all policies, although we hasten to note that this is not a “within experiment comparison,” and so could of course be a result

of the way the problem was posed. Nonetheless, it suggests repugnance towards such policies may be less severe than perhaps anticipated. The main result of our survey is that there is basically universal agreement that the Fed 50K policy receives less approval than any of the Hero Foundation proposals.

It is premature to do more than speculate on the reasons, but we can think of some hypotheses. Fed 50K is the option that looks closest to simple payment in return for kidney donation, and this may account for the fact that it meets with the lowest level of approval, and the highest level of strong disapproval. It is also the option that requires the most expenditure of taxpayer money. But Fed 50K is also the only one of our proposals that was not framed in terms of heroism or in terms of being a prize.

The idea of giving “hero” (or “champion”) awards exists in our culture in different kinds of combinations with monetary payments. We award medals to unusually heroic soldiers, sometimes posthumously but also to those who survive their heroic acts, and these medals bring great honor and acclaim but no cash reward, nor is much cash outlay required to make the award. We give champion Olympic athletes gold medals, which come with great honor and acclaim but no cash award, yet which are made of gold, which is part of what distinguishes them from lesser medals made of less expensive metals. And we give scientific prizes, like the Nobel prizes, which combine all of the above: honors and acclaim, a gold medal, and a substantial monetary award.

Prizes also come with the idea that they are awarded only to a few, and not necessarily even to all eligible contenders. They are not “consideration” in the sense that a prize does not automatically follow from prize-worthy performance, which may also be part of what differentiates Fed 50K from the other proposals.²⁹ And a monetary award in appreciation for the heroism involved in kidney donation is and can be seen to be different from a payment for a kidney.

While the survey we report here provides very limited ability to determine causes, it does suggest that payments to non-directed kidney donors would meet with more approval and less strong disapproval when included in awards for heroism, and when paid from a private foundation.³⁰ Consequently this may be an avenue worth further exploration in the effort to increase donation and relieve the shortage of kidneys and the burden of kidney disease.

²⁹ We hasten to note that we are not licensed to practice law in North Carolina, or anywhere else.

³⁰ Among the particular directions that seem worthy of further exploration would be direct comparison of approval rates for heroism awards and for explicit purchases of kidneys.