

Legalized Market for Human Kidneys: A Wrong Solution to a Right Problem

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Out of 113, 000 patients who are waiting for organ transplants, as of Feb. 8th 2012, almost 91,000 of them, more than 80%, are waiting for a kidney. Additionally, the number of kidney donors is 12,090, indicating that there are only thirteen donors for every 100 patients on the waiting list. Evidently, there is a severe kidney shortage in the US, thus creating the possibility of alleviating it through monetary incentives like paying donors. This paper discusses the suitability of such incentives as solutions to the shortage of human organs in general and kidneys in particular?

INTRODUCTION

You may have seen the TV commercial by MasterCard Company informing us that “There are some things money can't buy; for everything else, there's MasterCard.” Even though I do not agree with the implied premise of this advertisement—that MasterCard is some kind of money, which is not—the opening adage is of course accurate. We cannot buy everything with money, and I believe the human kidney is an example of just such a thing.

Markets are becoming the vehicle of choice for people to buy and sell anything or to earn income sometimes through questionable schemes. However, given what happened to this economy following the financial ruin of the 2000s, the faith in unfettered market has dwindled. With the growing intrusion of markets into every aspect of our life in this country, some people wonder if the free-enterprise system is devolving and being dragged into denigrating territory due to our obliviousness to the reckless deeds of greedy people who are taking us for a dangerous ride again. Everything can be bought and sold in real or virtual markets. To economists, this seems fine. For, as long as there is a demand there will be a supply. Should the society place limits on what money can buy? Isn't it time to question the appropriateness of market transactions involving things that should not be commoditized and their merit should be judged primarily by moral and ethical standards?

Even just the thought of trading objects like human kidneys in a market may sound repulsive to many, at least initially, demonstrating how difficult it is to establish a proper balance between economic inevitabilities and moral considerations. Some people seem to be disgusted even by the idea of trading kidneys in a market for money, mainly because they are deeply committed to their moral values and religious beliefs, or perhaps they are not aware of the ominous consequences of organ shortage here in the US. However, realizing that many lives can be saved often without destroying one, they may become more open to the idea of a legalized market for human organs. The statistical facts and figures concerning organ transplantations in general and kidney implant in particular are staggering. According to the Organ Procurement and Transplantation Network, <http://optn.transplant.hrsa.gov/> 18 people die each day because of the shortage of donated organs. A new name is added to the national organ transplant waiting

list every 10 minutes. Out of a total of 113, 000 patients who are waiting for organ transplants, as of February 8th 2012, almost 91,000 of them, more than 80%, are waiting for a kidney. Additionally, the number of kidney donors is 12,090, indicating that there are only thirteen donors for every 100 patients on the waiting list. Anticipating that they may not find a matching donor, many patients may not even bother to put their name on the waiting list, indicating that the shortage is even more severe than what is being reported. Almost 6,861 of donated kidneys come from cadavers and 5,229 from living donors. There is no question that with improvements in medical technology and the status of our public health, our life expectancy continues to increase, and so are the instances of kidney failure. Moreover, massive consumption of fatty and processed food and the ensuing increase in the rate of obesity can further increase the kidney diseases and hence intensifies the need for kidney transplantation. One of the other key contributors to the shortage is the ineffective procurement and allocation mechanism. However, I believe that regardless of the allocation system, there will always be a shortage of kidneys. Therefore, the critical question is: Will the shortage be eliminated, or at least alleviated, if we establish an active market for kidneys like the ones we have for ordinary products? This is the question to which we do not have a definitive answer yet because there is not such a market in any country with the exception of one, Iran. Iran is the only country in the world in which selling kidneys is legal. According to May 27, 2012 issue of Guardian, "In 2010, a total of 2,285 kidney transplants took place in the country [Iran] of which 1,690 kidneys were supplied from volunteers and 595 from those clinically brain-dead," This report provides evidence that legalization has, in fact, worked in Iran, the only country in which trading human kidneys in an open market is legal. In particular, such reports show that monetary reward did have a significant positive impact on supply by live donors. The same report claims that shortage in Iran is no longer a serious issue. (Please see this documentary for further information http://www.snagfilms.com/films/title/iranian_kidney_bargain_sale. It highlights the heart-wrenching problems that continue to overwhelm people even with a legalized market. Under the National Organ Transplant Act, selling kidneys or other human organs is outright illegal in the United States. There is, therefore, a severe shortage of kidneys. Many researchers believe that the shortage can be alleviated through monetary incentives.

PROPOSERS OF LEGALIZATION

Medical science tells us that we may be able to live a healthy life with only one kidney. Thank God we have been given two so we can donate or sell one of them—the one we don't need! There is, therefore, an opportunity for an open market to incentivize those who would like to sell a kidney thus increasing its supply not only by live donors but also from cadaveric sources. There are ample researches in support of legalization especially by medical professionals as well as economists (See specially Benjamin Hippen) This paper, however, neither condones nor refutes the legalized market a priori. It is rather an explorative endeavor intended to examine the available studies and to report what is out there with the hope of initiating a sensible debate on this controversial albeit critical issue. More essentially, to explore a solution to the shortage in the U. S. that is not only workable but also less agonizing. The proponents of legalization argue that without a market, the selling of human organs may go underground, in which case, grave exploitations of our most vulnerable people will result. This happens even in Iran where organ sales are legal. Often, needy patients end up paying a hefty price to the matching donors following intense negotiation between the two parties often through a middleman. Then again, there is no guarantee that such a system does not create undesirable consequences that may hurt those who are supposed to benefit from it. In other words, there are costs and benefits, and the open market system is rationally defensible if the expected benefits outweigh the expected costs; but there is no concrete evidence to support that they do. And, there are no reliable ways to quantify the costs and the benefits accurately. Some would even argue, oddly so, that a legal market may help our ailing economy which is in need of additional spending. This argument is as illogical as buying a cow just for a glass of milk or asking people to inject themselves with steroid just to look fit.

With everything said, levelheaded discussion of legalization may increase public awareness of the seriousness of the issue and the need for government to get deeply involved by providing healthy

environment so that the instances of kidney failure can be minimized and by providing funding for medical research aimed at developing human organs in laboratories using stem cells. This would be the least painful approach to dealing with this paradoxical issue. Even though the technology is in rudimentary stage, it could be a breakthrough for organ replacement in the future. (See http://www.ted.com/talks/anthony_atala_printing_a_human_kidney.html, and <http://ibnlive.in.com/news/scientists-develop-human-eyeball-liver-in-lab/267466-2.html>)

Like many other normative issue, trading human kidneys for money is a controversial question with no valid right or wrong answer. There are, however, plenty of pros and cons, depending on the angle from which you look at this issue, your moral values and religious beliefs, as well as your political persuasions. Nevertheless, there is no disagreement when it comes to the apparent shortage of kidneys in the US. Economists will argue that the reason we have a persistent shortage is because under our current distribution system, price has failed to function as a rationing mechanism. Had the United States allowed the selling of kidneys in a free market, we would not be facing this gloomy situation. They suggest that because people respond to monetary incentives. Given that such incentives are enticing enough, having a legal open market for kidneys would increase the number of donors. The thinking is that the higher the price, the larger the number of live donors/sellers and the better the chance that this shortage will be eliminated, or at least alleviated, especially in the long term. I believe that is a wishful thinking. While such an idea sounds plausible and works effectively for ordinary goods, it is doubtful that it works as expected for something as atypical as human kidneys. Even if such a suggestion does work in relation to kidneys, it generates a number of serious moral and ethical concerns. Mainly, human kidney is not an ordinary products, trading it in a market will alter its nature and may corrupt the entire system.

ARGUMENTS AGAINST LEGALIZATION

Foremost, there are many things people do charitably that they are not willing to do for money. Donating an organ is a compassionate act, while selling it is considered callous and mercenary and our society is not yet ready to sanction it. Even though the monetary reward is tempting, most people donate a kidney for the personal satisfaction, the pride that comes with a selfless act of kindness, and the joy of saving someone's life. Commoditization of the human body parts will undermine such altruistic gestures, and diminish the dignity and inviolability of human life. Moral and ethical values, according to these people, should not be sacrificed for monetary gain and there should be limits on how people can make money especially through questionable trades.

Second, people obviously do not sell their body parts unless they are economically desperate and doing so will help them to ease off the financial pressure they may be experiencing. According to a report by Guardian, 5/27/12, "Marzieh's [a poor widow in Iran] biggest challenge in life is to come up with money for her daughter's wedding" and "To achieve this, she is ready to sell one of her kidneys" Also, a person may not be aware of the impending health risks that can result from harvesting a kidney from a live donor. Poor individuals who sell organs under a market system may suffer from the very same illnesses that the buyers will pay good money to avoid. These are some of the reasons why most kidney transactions usually take place in the rural areas of poor countries, particularly in India and in Pakistan with no due attention given to the peripheral concerns and the related risks for the donors.

Third, if we start selling organs, chances are that many people who might otherwise consider organ donation will no longer offer to do so for free or even for money because they may not want to abandon their moral/religious convictions, thereby, exacerbating the shortage and leaving needy patients in bigger jeopardy. There is also a good basis to argue that more people would sell a kidney for money, but only if the price is really high enough to help them overcome the feeling of guilt attached to selling a kidney as it is viewed as a socially unacceptable deed. As such, in a legalized market, the price of a kidney will escalate as will the overall cost of organ transplantations since supply will never catch up with demand. According to some experts under a legalized market, price of a human kidney may escalate to about \$100,000 (see Ricahrd Epstein, 2006). Price hikes, therefore, will cause the exclusion of some people

who now can obtain a transplant under our current free system. In addition, who is going to absorb the additional costs, the patients or the insurance companies?

Needless to say, the persistent and growing demand for such a lifesaving commodity will bid up the price to a level where only the rich will be able to afford to buy a kidney. And, understandably, most people who are in need of a kidney are not usually rich so they will be priced out of the market. The rich can afford to buy the best kidneys offered on the market by healthier people, leaving less privileged patients with inferior kidneys offered by less suitable or deceased people. This would increase the chance of rejection and other complications for them. High costs may further deepen the class division in American society, which is already compartmentalized according to the money and wealth. One can, of course, argue that if there is no legal market, and regardless of the distribution scheme, the wealthy individual can still afford to purchase a kidney in a black market instead of going on a waiting list, or can afford to simply travel to other countries, like Iran or India, to get the implantation. In Iran “a healthy kidney retails for about \$6,000. The going rate is less than half that amount in India” TimeHealth Monday, July 27, 2009 Thus, creating another case in which the rich people can get ahead by using their monetary power.

Fourth, trafficking in human kidneys possibly will create a new generation of economic criminals who may even contemplate killing people just to sell organs for profit, or incentivize the involvement of various organized crime syndicates to kidnap and kill people to sell their organs. China was once accused of selling organs harvested from death row prisoners for hefty prices to foreign patients who needed organ transplants. A grisly tale that raised serious concerns about the possibility that repressive regimes may try to create a source of income by selling the organs taken from executed prisoners. Further information can be accessed from <http://www.dailymail.co.uk/news/article-407361/China-accused-selling-organs-executed-prisoners.html#ixzz1m9XaqBJi> Have you seen the movie *Repo Man*? It is the story of a man who works for a company that sells human organs to transplant patients on credit. If a patient fails to pay, the company sends its repo man to take back the organ and, as you probably guessed, in a very violent way! Likewise, high organ prices may create yet another possibility. For instance, if an identified organ donor is in a serious accident, there is fear that he or she will not receive earnest lifesaving efforts at the scene, or perhaps will be denied proper lifesaving follow-up treatments just to get an organ after the person is dead. Even the thought of something like that happening is very frightening; however, when there are no moral boundaries to the power of the market, every dreadful deed can happen. Such possibilities may sound unthinkable, but you cannot imagine the extent to which some people are willing to go for the sake of money.

Fifth, thank God that in the U.S. the payment for medical services is completely separate from the delivery of medical care to the patients. Who wants to think about upfront money while devastated by the serious illness of a loved one in need of a kidney or any other vital organ? If organ donation is turned into a for-profit business enterprise, price will be most likely negotiated between a donor and the family of the recipient, and because the family is in such dire need of this vital commodity, chances are they will be duped into paying a high price, especially if the transaction is brokered by greedy middlemen or procurement agencies such as the one in the movie *Repo Man*.

Finally, one can also argue that staying healthy is something of special merit. It not only benefits you personally, but your family and society in general as well. You have, therefore, an obligation to keep your body intact by avoiding health risk activities, including selling your body parts for money. There is guarantee that harvesting a kidney from a live person has no health risk especially in the long run. Some religions, in fact, teach us that your whole body should be preserved for the life after death. As stated by the teaching of Islam: “To God we Belong, To Him is our Return.” Accordingly, you belong to God and your body parts are not like the pieces of property you own and thus can be sold at your discretion. Except for maybe some fundamentalist sects, most Christians believe that organ donation is a charitable act of love that fits under “Love thy neighbor” and that the body at death is different from the whole, glorified, resurrected body in life after death. Buying and selling organs, however, are seen as illicit, abominable acts. Pope Benedict XVI said “the body can never be considered as a mere object” so the “logic of the market” cannot be applied to organ donation. See the article: *Pope Warns of Dangers of*

Selling Human Organs at http://www.catholic.org/international/international_story.php?id=30460 I think most Christian religions would believe the same.

Is there the probability that economic crimes will increase if there is a legal market for human organs? Will some profiteering entrepreneurs try to steal or incise organs from other people so as to sell them to the highest bidder? Is it probable that some villains will victimize vulnerable people by luring them into the trap of selling their kidneys? Will the legalized market intensify class divisions and polarization of the society? Considering these and similar questions, the market system may be prone to serious flaws and abuses unless there is vigorous government oversight and appropriate binding regulations. These and similar thorny issues need to be thought of and properly addressed before contemplating a free market.

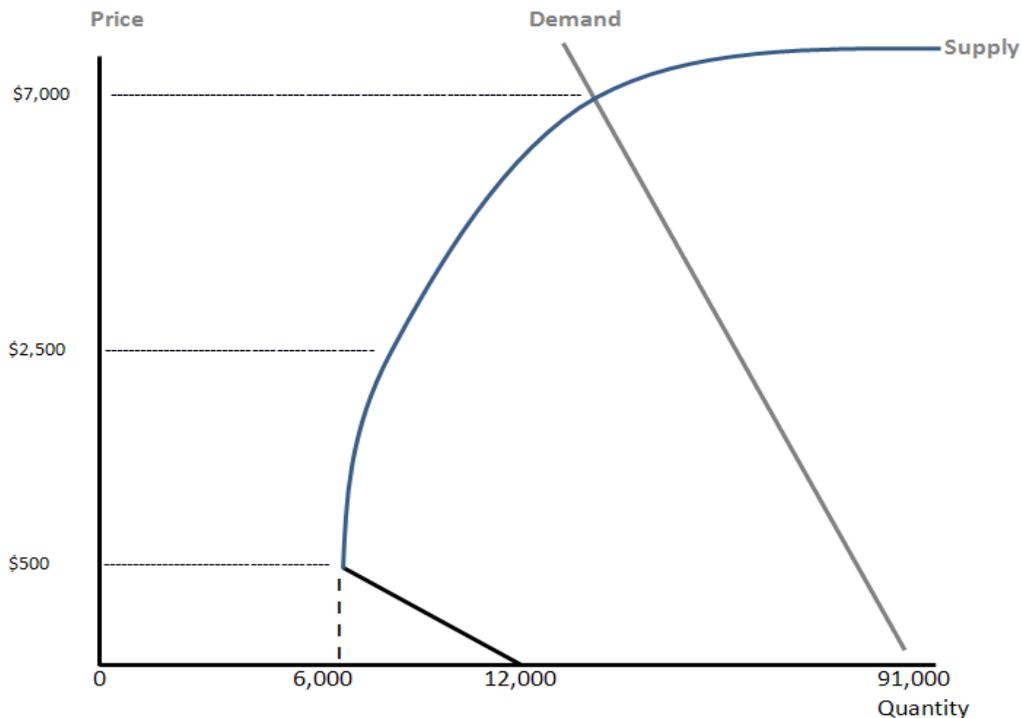
DOES THE LAWS OF SUPPLY AND DEMAND APPLY?

Economists take pride in the universality of the law of demand and supply whose interactions create a market, thus a true price, for ordinary goods and services. It is not clear, however, if human kidney is an ordinary good and thus a suitable candidate for market transaction? I believe we can start by making distinction between *effective* demand and *potential* demand. Doing so can help shed some light on this inimitable situation. For demand to become effective two things must exist: desire, otherwise known as consumer preference, and the ability to pay, income, as indicated by the level of consumers' income. Demand that cannot be backed by the ability to pay is known as potential demand in the sense that there are many customers in the market who wish to buy the underlying product, however, because of inability to pay, they are priced out hence their demand is dormant and has no effect on the outcome of the market. For potential demand to become effective either price has to decline or consumers' income should go up. In case of something as atypical as kidney, one can argue that there is no potential demand particularly under zero-price system. Existing demand is all there is and is limited to the number of patients who are in need of a kidney at any point of time. In other words, under voluntary system, there are no patients who are waiting for price cut. Even with a monetary price, one can argue, that demand is quite price inelastic for the same reason. In economic terms, demand is highly price inelastic and thus can be depicted as a very steep line, Chart 1. With zero price, supply is only 12,000 units, however, however, 91000 units are demanded, resulting in a shortage of 79,000 units.

In contrast, supply's sensitivity to price may be stronger reflecting the fact that some people, especially those in dire financial condition especially in poor countries, may consider selling a kidney to pay the bills if price is high enough. As a result, supply curve is price sensitive thus flatter than demand curve, especially at high prices. At zero price, there is a shortage, a gap between supply and demand as indicated above. However, because of almost vertical demand curve, the shortage stays almost the same in the short run. The question is, can it be assuaged by stimulating supply through monetary incentives. It can be surmised that low prices may thwart some of the people who are currently donating a kidney for moral gratification thus widening the shortage sharply at low prices like \$500. It can be argued that shortage will continue to rise up to certain price, say \$2,500, beyond that, supply might respond positively to further price hike. In other words, I believe there is a minimum price beyond which supply starts to show positive response thus become up-sloping, at or below that price there is no price-induced supply. This argument is based on the empirical results of our survey (presented below) that some people who used to donate kidneys just for moral gratification may now feel cheapen and refuse to sell a kidney especially at low prices. For example, at \$500 price, supply will drop to 6000 units, resulting in additional 6000 units shortfall. Conceivably, there might be a range of low prices at which supply remains flat or show a very low sensitivity to price change. Ideally, if price goes up to say \$7,000, it may be enticing to persuade some people to sell a kidney so that shortage will be eliminated, at least theoretically. Needless to say, that \$7,000 is just for the sake of making a point. It is realistically very low. According to a report in NYT, December 5, 2012 "Most experts say somewhere in the ballpark of \$50,000 would make sense." Given the fact that a substantial majority of people we surveyed, almost 85%, indicated that they believe they can live a healthy life with only one kidney, they will presumably be willing to sell a kidney if properly compensated. It can be asserted that there cannot be a complete elimination of shortage under

any price level since price is one of the several determinants of both supply and demand. Non-economic considerations may still in fact override the economic matters. There should be, for example, a perfect match between the donor/seller and the needy patient. Without it, there is no deal. Thus, there will remain always a number of patients unable to find suitable kidneys at any price. There is also a number of patients who will withdraw from the market after a long wait and inability to find proper donors, discouraged patients.

CHART 1



Under a legalized system, matching supply and demand may be facilitated by profit seeking procurement agents or the middlemen who may craft innovative methods to lure people into selling a kidney, some of such schemes, however, may be unethical or exploitative. In extreme case, if price is really high, these people may even contemplate importing kidneys to the US creating a network of international organ trafficking.

SURVEY RESULTS

To gauge the public opinion concerning various aspects of this multifaceted topic, I conducted a survey, using a simple questionnaire that contains 17 questions, see Exhibit 1. It was designed to elicit input from a sample of respondents mostly college students. Here are the summaries of responses to each question and the key findings:

1. *It is a good idea to have a legalized market for buying and selling human kidneys?*

A majority of respondents 54% agree that having a legalized market is a good idea, however, 43% disagree. The key reasons for supporting the legalized market is that first of all, people are under the impression that having a legalized market will help to solve the shortage problem and it, in fact, may. This was especially true of this survey because the respondents were properly informed of the benefits of a legalized system. Had they become fully aware of the costly non-monetary consequences of a legalized system, especially the possible health risks for live donors

and the ensuing exploitation of the poor by greedy middlemen, their response would have been favorable.

2. ***Instituting a legalized market is an effective and appropriate approach to alleviating the shortage of human kidneys.***

A good majority, 56%, disagrees simply because they believe that alternative non-market schemes, such as prevention and education not only help us to deal more effectively with the shortage problem, they also preserve the character and the human aspects of donating a kidney. In light of their responses to the first question, it seems that buying or selling a kidney in a legalized market is a good idea out of necessity not choice. It is not considered necessarily the most effective approach to tackle the shortage problem.

3. ***I would favor a legalized market if it is properly regulated by the government.***

Fifty two percent would favor government regulation. It seems people believe a well-regulated transparent market for kidneys may eliminate some of the problems associated with current system. Understandably, overall support for government regulation has been on the rise in the aftermath of recent financial turmoil that plunged this economy into its deepest recession in its history. It seems what the public is saying is that if we are going to have a legalized market, it is better to be stringently regulated and supervised by government. So, the possibility of abuse and exploitation is minimized.

4. ***Offering monetary compensation will increase the number of people who would be willing to give up a kidney.***

Almost 76% of the respondents thought that monetary incentive will entice people to offer a kidney for sale. This is especially the case if the amount is high enough to compensate the potential sellers for the possible health risk and psychological suffering. Plus, they are assured that doing so may not cause any long term health complications. Monetary incentives not only increase the supply from live persons, it may also motivate people to sign a legal document to become an organ donor/seller knowing that any financial reward benefits their surviving heirs. It can be also argued that monetary incentives may increase the number of kidneys that can be safely imported to the US from other countries.

5. ***Offering monetary compensation will turn off and decrease the number of people who would be willing to freely donate a kidney.***

Sixty two percent disagree with this statement. Although, one can argue that monetary incentives may discourage those people who are willing to donate a kidney for altruistic causes, the majority of the respondents seem to believe that this is not a big drawback. This finding is consistent with another conclusion of the survey, 65%, believed that monetary incentives may even inveigle voluntary donors to overcome the feeling of guilt if the incentives are worthwhile.

6. ***It is medically safe to donate a kidney and thereafter live a healthy, complete life with only a single kidney.***

Ironically, a substantial majority of people, a whopping 85%, think it is medically safe to sell a kidney. I think, however, there is no guarantee that complications may not arise in the long term. In case of such complications, the second kidney serves as a back-up system.

7. ***I would sell a kidney if I was financially desperate.***

Only 34% they said they would, 66% would not sell a kidney for money. Although they believe that monetary incentives work, as indicated by their response to question # 4, but only for other people not themselves! This should not be surprising because the respondents were mostly young people. If this question was asked from older respondents, the response would have probably been different.

8. ***It is morally and religiously wrong to buy and sell kidneys.***

Only 40% thought it was wrong, 60% thought it is ok to sell a kidney. This is expected because there is no outright prohibition for selling a kidney in any religion especially in Islam and in Christianity.

9. ***A legalized market for the sale of kidneys will open the door to exploitation of the poor by greedy middlemen seeking financial gain.***
This is the most troubling concern of those who believe a legalized market will open the door to exploitation and economic crimes. This is supported by empirical as well as the observation in many countries, especially in poor countries like Pakistan and India, regardless of whether they have a legalized market or not. Almost 73% of the respondents agree that a legalized market leads to exploitation of poor and a low 25% disagreed indicating that there is no flawless system to kidney shortage.
10. ***Public education is the best way to increase the number of potential organ donors.*** Almost 73% of respondents believed that public education and preventive programs is the best way to deal with kidney shortage because the most effective approach to solving a problem is to treat its causes. It seems, although people think that a legalized market combined with monetary incentives works, but they view it as the lender of last resort. The best solution to shortage is to cut demand by minimizing the number of incidences of kidney illnesses and the need for transplantations. Education not only enhances the public awareness about the importance of donation, it also encourages healthy life style and proper dieting.
11. ***Promoting a healthy life style and preventing obesity, diabetes, and hypertension are the most effective ways to minimize the number of kidney transplantation cases.***
The positive response to this question is expectedly overwhelming. Almost 84% agree or strongly agree with this statement. This should be of no surprise to us with a valuable lesson for our policy makers. Instead of throwing money on costly transplantations, we should invest adequately on public programs designed to promote healthy life style and to prevent obesity and hypertension, the two leading causes of kidney failure.
12. ***Maximizing donations from recently deceased persons is the most painless solution to the kidney shortage.***
More than 73% of respondents agree with this statement indicating that the public opinions favor donation from a deceased rather than a live person even under a legalized market system. This is especially true in economically developed rich countries in which the sanctity of human life is vigorously guarded and respected. The poverty is not so rampant to force the poor to sell kidney to get by.
13. ***Even discussing and exploring the pros and cons of a legalized organ market is disgusting and immoral.***
Even though, people do not feel comfortable about having a legalized market for human kidney, they believe strongly that this issue must be properly brought into public purview and there is nothing wrong with examining the pros and cons. Almost 75% believe that it is important to explore the consequential costs and benefits of a legalized market. And, doing so has educational value for the society.
14. ***A legalized organ market would save more lives and, therefore, should be seen as a value.***
Almost 54% support this statement indicating that a legalized system has a value and is worth exploring.
15. ***A legalized organ market would demean the human body by turning it into a commodity and, therefore, should be avoided at all cost.***
It seems that the opinions are equally split when it comes to this issue, 49% agree and 50% disagree. Especially, a legalized market seems to be supported if the cost of not having it is too high. This is again consistent with the responses to earlier questions and makes sense in particular because there is no overt religious prohibition for selling a kidney.
16. ***I have donated an organ.***
Almost all of them, 98%, said no. It may be argued that the responses to some of the survey questions might have been different if more respondents had donated a kidney thus aware of the painstaking process of harvesting and implantation.
17. ***I have signed a legal document stating I will be an organ donor in the future.***

Answers are split almost evenly, 49% said yes versus 51% who said no. Indicating a popular support for organ donation especially from cadaveric sources rather than a live person. If this is a true representation of what the general public thinks about kidney donation, it is really impressive and promising.

CONCLUDING REMARKS

After analysis of the information revealed by my survey and methodical assessment of the evidence for and against the legalized market, I am inclined to believe that although a legalized market helps to assuage the shortage, it may not, however, be a defensible and publicly supported solution to kidney shortage except among some economists and physicians. To be morally defensible, a legalized market should satisfy many requirements that are almost impossible to achieve. It creates many dilemmas and too many questions will still remain unanswered. The argument for legalized sale, although valid in terms of economic theory, it is weak on moral and philosophical ground. Shortage is a problem we have created by fomenting a demand for a kidney. Kidney is not an ordinary demandable product, we erroneously think of it that way. If we start thinking about human kidney in economic terms, soon, every body parts could be up for sale in an open market. This may sound like utopian imagination today but may become a reality in a not so distant future.

Shortage, in the U.S. is not caused by economic factors like lack of price; there is no concrete evidence to prove that. People do not wish to donate a kidney in expectation of pecuniary gains especially in affluent countries like the United States. Unlike the peasants living in the rural areas of a less developed country who are the major source of kidneys that are for sale, I believe the poor in the U.S. are not so depredate they would sell their body parts for money, even if it were legal. And, if a few of them do, it is not going to change the prospect of the persistent shortage. In addition, because people are well-informed about the possible health risks and the harm they may suffer because of the possible side effects, they cannot be lured into selling a kidney against their wishes. So I think an attempt to boost supply through monetary incentives may not be as effective as it sounds. Likewise, people do not seek a kidney because it is cheap or expensive; they need it because they suffer from an unfortunate medical condition and they hope that there is a matching donor somewhere out there who can help save their life. Again, shortage is not a pricing problem and should not be dealt with by finding a monetary solution.

A legalized market may also create an unthinkable situation in which the most vulnerable people may be taken advantage of by the greedy middlemen for the sake of personal gain. We should abandon this arrogant way of thinking that ameliorating the suffering of some individuals is more important than jeopardizing the welfare of other human beings who are financially so desperate that have no choice but to sell a kidney. Plus, there is a compelling evolutionary reason why we are naturally endowed with two kidneys. We need both of them to survive in the long run, the other one serves as a backup system in case the first one failed. Kidneys are not the only organs that come in pairs, and offering money for kidneys may open the door to trading these other organs! In addition, most of the available kidneys under our current system come from deceased people who altruistically wished to donate their organs to save lives and not for monetary gain. Actually, why would a deceased person be concerned with money anyway? If they wanted to help their surviving family or loved ones financially, they could buy a good life insurance policy.

Undoubtedly, implanted kidneys work equally well whether it is purchased in a legalized market, a black market, or is obtained free. However, buying them changes the nature of and the intention for which they are donated. Offering money for everything will weaken our natural tendencies to help others voluntarily and letting market to take over everything will undermine the sense of shame associated with doing things that are socially the otherwise condemned, like posing nude for money, selling admission to colleges to students with wealthy family, buying political favor with money, and etc. The fact that someone is willing to pay for something does not make it a legitimate candidate for market trade. The commoditization of everything in life will eventually annihilate the sense of altruism and will change the character of human relations. And, having a government sanctioning or promoting a legalized market

makes it is even more morally objectionable. There is no question that an open competitive market is the channel through which efficiency is promoted, but the more important question is whether efficiency is the only thing that matters to the society? Is efficiency compatible with other considerations or competitive with them? Should we also be concerned with whether efficiency improves the purposes for which goods and the services are purchased? Why we should focus only on efficiency if it means giving up other things that are worthy of protection and preservation? The balance between efficiency and social norms is a paradoxical issue but that should not be a reason for ignoring or overlooking it.

We should be able to hammer out a solution to organ shortage in general and kidney in particular that is humane, safe, and acceptable all around, a system that, while effectively dealing with the shortage and the resulting loss of human lives, is not prone to misuse and exploitation. Any such systems should be stringently regulated by government to protect each and every party involved and ensures transparency and fairness. Without rigorous government oversight, the possibility of misuse and mistreatment of vulnerable and uneducated people is certainly a possibility. According to most observers, public education concerning the importance of organ transplantation and healthy life style are very helpful. This can be accomplished through raising overall awareness via public service announcements and advertisements focused on the importance of donation and the laws and regulations that govern organ transactions. We already have a plethora of public service announcements related to smoking, wearing seat belts, domestic violence, and numerous other health concerns. Although society should strive to alleviate the suffering however, that worthy cause should not be achieved by undermining the respect for human dignity or the integrity of human body. It should be done in a fair and equitable manner and not by violating people's rights for financial gain. The main concern should be to preserve human life and its integrity and not turn the human body into a tradable commodity. Improving procurement through organizations such as Organ Donation Breakthrough Collaborative, this organization "have successfully improved the procurement rate of organs from eligible deceased donors to 70 percent or higher in a number of regions." (See, Benjamin Hippen) even though such arrangements may not solve the shortage, but they are steps in right direction.

My dislike of a legalized market is not because such a market is inefficient or does not contribute to ameliorating the shortage problem, it is rather due to strong belief that markets should not dictate every sphere of our life even though the intention is good or the end result is helpful. Commoditization of human body may abolish the moral codes and norms we have kept for thousand years, safeguarded and cherished as the social and family bounds. A legalized market may save some patients from experiencing the anxiety of the waiting list system and its agonizing limitations, but not all of them. Although the experience of Iran may offer some hope, we should be cautious; what may work in Iran, may not work in the U.S. or any other countries. We should come to term with inevitability of getting sick, just as we have with our death, and do not expect someone else suffers in order to alleviate ours.

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APPENDIX 1

SURVEY QUESTIONS

Please rate the statements below as follows:

A = you **Strongly Agree**; **B** = you **Agree**; **C** = you **Disagree**; **D** = you **Strongly Disagree**

1. It is a good idea to have a legalized market for buying and selling human kidneys.
2. Instituting a legalized market is an effective and appropriate approach to alleviating the shortage of human kidneys.
3. I would favor a legalized market if it is properly regulated by the government.
4. Offering monetary compensation will increase the number of people who would be willing to give up a kidney.
5. Offering monetary compensation will turn off and decrease the number of people who would be willing to freely donate a kidney.
6. It is medically safe to donate a kidney and thereafter live a healthy, complete life with only a single kidney.
7. I would sell a kidney if I was financially desperate.
8. It is morally and religiously wrong to buy and sell kidneys.
9. A legalized market for the sale of kidneys will open the door to exploitation of the poor by greedy middlemen seeking financial gain.
10. Public education is the best way to increase the number of potential organ donors.
11. Promoting a healthy life style and preventing obesity, diabetes, and hypertension are the most effective ways to minimize the number of kidney transplantation cases.
12. Maximizing donations from recently deceased persons is the most painless solution to the kidney shortage.
13. Even discussing and exploring the pros and cons of a legalized organ market is disgusting and immoral.
14. A legalized organ market would save more lives and, therefore, should be seen as a value.
15. A legalized organ market would demean the human body by turning it into a commodity and, therefore, should be avoided at all cost.

Mark A or B for the following:

16. I have donated an organ. A = Yes B = No
17. I have signed a legal document stating I will be an organ donor in the future. A = Yes B = No