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IS YOUR KIDNEY FOR SALE? AN ECONOMIC AND POLICY PERSPECTIVE ON THE LEGALIZATION OF A LIVING KIDNEY VENDOR PROGRAM IN THE UNITED STATES

Kristine D. Kuenzli



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IS YOUR KIDNEY FOR SALE? AN ECONOMIC AND POLICY PERSPECTIVE ON THE LEGALIZATION OF A LIVING KIDNEY VENDOR PROGRAM IN THE UNITED STATES

Kristine D. Kuenzli*

ABSTRACT

The National Organ Transplant Act of 1984 (hereinafter NOTA) was an attempt to regulate, streamline, and encourage legal organ donation. NOTA has undergone some amendments since its enactment, including attempts to modernize the registry process and create a unified donation and transplant network. However, the regulation on the sale of organs has remained steadfast. We continue to have an organ shortage, and the statistics on the number of individuals dying each day awaiting transplants is only getting worse. An additional amendment to NOTA is necessary to solve our organ donation crisis. This Article identifies the relevant NOTA provisions, identifies some significant court decisions, and explores the policy and economic arguments in support of and against creating a living organ trade in the United States. In addition, this Article explains the Iranian Living-Unrelated donor program, and the government regulations necessary to create a living kidney vendor program in the United States.

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I. INTRODUCTION

Is your kidney for sale? Should you be able to sell it? Should our country consider a living kidney organ vendor program to relive our growing organ shortage? The National Organ Transplant Act of 1984 (hereinafter NOTA)¹ was an attempt to regulate, streamline and encourage legal organ donation. It has undergone some amendments in the intervening years, including attempts to streamline the registry process, and to create a unified donation and transplant network.² However, the regulation on the sale of organs has remained steadfast. Fast forward 32+ years and we continue to have an organ shortage, and the statistics on the number of individuals dying each day awaiting transplants are only getting worse. An amendment to NOTA is necessary to solve our organ donation crisis. There is a strong economic argument that creating a fully regulated, Living-Unrelated Donor Program would not only solve the organ shortage, but also provide a sustainable market that would benefit organ donors in addition to their recipients. A regulated free market has the potential, in theory, to increase the number of living kidney donors while resulting in overall greater economic efficiency. We have a ready supply of viable kidneys, and a desperate demand for them. The law is standing in the way of the market controlling this relationship, and providing an efficient outcome.

II. DONATION STATISTICS

Every day in the United States, 20 to 30 people die waiting for an organ donation.³ There are more than 119,000 men, women, and children on the national transplant waiting list, and more than 80% of transplant candidates are waiting for the donation of a kidney.⁴ In 2015, a total of 37,910 organs were donated, however, more than 80% of the donations were from deceased

¹ The National Organ Transplant Act of 1984, 42 U.S.C. §§ 273–276 (2013).

² Health Omnibus Programs Extension of 1988, Pub. L. No. 100-607, 102 Stat. 3048, 3049 (1988); Charlie W. Norwood Living Organ Donation Act, Pub. L. No. 110-144, § 2, 121 Stat. 1813 (2007) (codified as amended at 42 U.S.C. §§ 201, 273b, 274e and 301 (2007)).

³ U.S. DEP'T OF HEALTH & HUM. SERVS., Organ Donation Statistics: Why be an Organ Donor, https://organdonor.gov/statistics-stories/statistics.html.

⁴ *Id*.

donors.⁵ Further, only 3 in every 1,000 people die in such a way as to make them eligible for organ donation, and only 48% of adults in the United States are currently signed up as donors.⁶ Finally, this problem is not resolving itself. Each year, the number of people on the waiting list continues to grow, while the number of donors grows slowly. In fact, the number of people on the organ donation waitlist has more than quadrupled in the last 22 years, while the number of organ donors has remained relatively constant.⁷ In economic terms, the current system does not adequately incentivize the market to adjust supply to demand. This situation is only going to get worse as medical technology, combined with our country's aging population, results in citizens living longer, which creates an increase in the demand for transplant organs. Although living donors are an important source of kidneys, living donation rates are not increasing at a level to satisfy demand.

III. HISTORY OF NOTA

The debate over the buying and selling of organs became a national issue in 1983 when H. Barry Jacobs, a Virginia physician, formed an organization, the International Kidney Exchange, to purchase and market kidneys. Under Dr. Jacob's proposal, a living donor would set a price for their kidney, up to \$10,000, and the recipient would pay that fee, along with a broker commission, for the kidney. It was recognized by Dr. Jacobs that some of the kidneys purchased would be from people living in underdeveloped countries. The medical community and legislators were disturbed by Dr. Jacob's proposal. The National Kidney Foundation stated that it was "immoral and unethical... to place a living person at risk of surgical complication and even death for a cash payment to that person." As there appeared to be no legal method to prevent Dr. Jacob's from buying,

⁵ *Id*.

⁶ *Id*.

⁸ Gwen Mayes, *Buying and Selling of Organs for Transplantation in the United States*, MEDSCAPE (Dec. 9, 2003), https://www.medscape.org/viewarticle/465200.

^{9&}lt;sup>°</sup> Id.

Walter Sullivan, Buying of Kidneys of Poor Attacked, N.Y. TIMES (Sept. 24, 1983), http://www.nytimes.com/1983/09/24/us/buying-of-kidneys-of-poor-attacked.html.

¹¹ *Id*.

¹² *Id*.

importing, and selling human organs in 1983, legislators responded quickly. Senator Edward M. Kennedy and Representative Albert Gore, Jr. each proposed legislation that would both establish a national system for organ procurement, and outlaw the unregulated sale of organs. He provisions of these bills became what we now know as NOTA, which regulates organ donation.

IV. PROHIBITION ON ORGAN PURCHASES IN NOTA

Section 301 of NOTA, entitled "Prohibition of organ purchases," imposes criminal penalties of up to \$50,000 and 5 years in prison on any person who "knowingly acquire[s], receive[s], or otherwise transfer[s] any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce." ¹⁶ Section 301 does not define "valuable consideration," but instead lists certain acts that do not involve "valuable consideration." According to Section 301, "valuable consideration" does not include the "reasonable payments associated with the removal, transportation, implantation, processing, preservation, quality control, and storage of a human organ or the expenses of travel, housing, and lost wages incurred by the donor of a human organ in connection with the donation of the organ." The legislative history of NOTA does not define "valuable consideration" either, but rather only references the "buying and selling" of human organs. 19 The Senate Report indicates that the bill "prohibits the interstate buying and selling of human organs for transplantation" and "is directed at preventing the for-profit marketing of kidneys and other organs."20 It further indicates that "individuals or organizations should not profit by the sale of human organs," and that

¹³ Id

National Organ Transplant Act, S. 2018, 98th Cong. (1983), https://www.govtrack.us/congress/bills/98/s2018; National Organ Transplant Act, H.R. 4080, 98th Cong. (1983), https://www.govtrack.us/congress/bills/98/hr4080.

¹⁵ National Organ Transplant Act, 98 Stat. 2339 (1984).

¹⁶ 42 U.S.C. § 264e (2016).

¹⁷ 42 U.S.C. § 274e(c)(2) (2016).

¹⁸ *Id*.

 $^{^{19}}$ Memorandum Op. from the Gen. Counsel Dep't of Health and Human Services (Mar. 28, 2007) (on file with author).

²⁰ S. REP. No. 98-382, at 2, 4 (1986), reprinted in U.S.C.C.A.N. 3975, 3976, 3978.

"human body parts should not be viewed as commodities." The House Conference Report on NOTA also notes that the bill "intends to make the buying and selling of human organs unlawful." Although there is a lack of specific guidance on what constitutes "valuable consideration," commentators have largely concluded that payment for an organ violates NOTA. Despite NOTA outlawing the buying and selling of organs, it was not until 2011 that the first organ traffic case was prosecuted in the United States. In *United States v. Rosenbaum*, a New York man was charged with brokering black market sales of human kidneys to three Americans in violation of NOTA. In a case of first impression, Rosenbaum, an Israeli citizen, pled guilty to three counts of organ trafficking and one count of conspiracy.

V. PROPERTY RIGHTS TO YOUR KIDNEY

If you ask the average American if they own their organs, the answer would be yes. A notion that we do not own the organs within our body does not seem to make sense. However, under NOTA you do not enjoy all of the typical property characteristics of your organs. The characteristics of property include the right to possess, use, exclude others from use, and transfer. Private property includes this "bundle of rights." Here is the challenge with respect to your organs: Although they may remain your exclusive property and cannot be taken without your consent, you also do not have the right to transfer your organs at will. Rather, under NOTA the legal transfer of our organs, either through living donation or upon our death, is to a centralized organization that decides who will receive those organs.

Organ donations go to the Organ Procurement and Transplant Network (hereinafter OPTN). OPTN, which developed out of NOTA, establishes a national organ sharing system to guarantee, among other things, fairness in

²¹ Id. at 16017, 1984 U.S.C.C.A.N. at 3982.

²² H.R. CONF. REP. No. 98-1127, at 16, reprinted in 1984 U.S.C.C.A.N. 3989, 3992.

²³ David Glovin, Kidney Broker Pleads Guilty in First U.S. Organ-Traffic Case, BLOOMBERG (Oct. 27, 2011), https://www.bloomberg.com/news/articles/2011-10-27/kidney-broker-pleads-guilty-infirst-u-s-organ-trafficking-prosecution.

²⁴ United States v. Rosenbaum, Mag. No. 09-3620 (D.N.J. 2013), https://www.justice.gov/sites/default/files/usao-nj/legacy/2013/11/29/Rosenbaum%20Complaint.pdf.

²⁵ Id

the allocation of organs for transplant.²⁶ OPTN maintains a database of all patients waiting for various organ transplants. 27 Further, OPTN allocates the distribution of organs based on a balancing of factors.²⁸ OPTN balances "justice (fair consideration of candidates' circumstances and medical needs), and medical utility (trying to increase the number of transplants performed and the length of time patients and organs survive)."29 As a result, you transfer property rights in your organs, or the organs of your deceased family member, to OPTN for distribution.³⁰ Therefore, OPTN owns the "bundle of rights" in the donated organs.³¹

Under common law, there is no clear property right in a human corpse, and therefore no one has the right to transfer a cadaver or any of its parts for any purpose, including as a gift.³² In the case of deceased family members, courts have acknowledged that relatives have a "possessory interest" that only exists long enough to allow them to bury or otherwise dispose of their family member's body.³³ Judicial interpretations of this interest in the cadaver evolved in the 19th century, paralleling the rise in demand for human cadavers in medical science, and the use of cremation as an alternative to burial.³⁴ It was in these earlier cases that courts began to recognize that the next of kin had the right to possess and control the disposition of the bodies of their dead relatives.³⁵ However, these cases only created "a quasi property right, belonging to the spouse or next of kin to possess the body for the purposes of ensuring proper burial,"36 and did not create any other property rights to the human corpse.

²⁶ Organ Procurement and Transplantation Network—History, U.S. DEP'T OF HEALTH & HUMAN SERVS., https://optn.transplant.hrsa.gov/governance/about-the-optn/history-nota/.

²⁸ Organ Procurement and Transplantation Network—How Organ Allocation Works, U.S. DEP'T OF HEALTH & HUMAN SERVS., https://optn.transplant.hrsa.gov/learn/about-transplantation/how-organallocation-works/

²⁹ Id. ³⁰ Id.

³¹ *Id*.

³² See In re Estate of Johnson, 7 N.Y.S.2d 81 (N.Y. Surr. 11, 1938).

³⁴ Id. at 85-86 (describing "an outpouring" of such cases).

³⁶ Colavito v. New York Organ Donor Network, 356 F. Supp. 2d 237, 244 (2005). See, e.g., Bauer v. North Fulton Med. Ctr., 527 S.E.2d 240, 243-44 (1999) (The quasi-property right in a corpse

VI. SIGNIFICANT COURT DECISIONS

In recent decisions, courts have maintained the same theory that body parts are not property, either living or cadaver, which have a "bundle of rights" that can be transferred.³⁷ In Moore v. Regents of the University of California, the California Supreme Court addressed whether a patient has a possessory interest in a patented cell line that was developed from his blood and cells.³⁸ In the *Moore* case, the patient's blood and cells were extracted for therapeutic purposes to treat his leukemia.³⁹ However, at the same time, his physicians were researching and developing a new cell line.⁴⁰ Moore alleged that his physicians failed to disclose the preexisting research and economic interests in the cells before obtaining consent to the medical procedures by which they were extracted. 41 The physicians subsequently used these cells to create a commercially-patented cell line and various methods for using the cell line to produce lymphokines. 42 Moore theorized that he "continued to own his cells following their removal from his body, at least for the purpose of directing their use, and that he never consented to their use in potentially-lucrative medical research."⁴³ Moore argued that the physicians engaged in conversion by using his cells. 44 The court rejected this notion and refused to extend full property interest to Moore of the resulting ownership in his cells.⁴⁵

Courts have continued to avoid answering the question as to what extent we have property interests in our body, and have come to markedly different

encompasses only the power to ensure that the corpse is orderly handled and laid to rest, nothing more.);

Dick v. City of New York, 2002 WL 31844745, at *2 (N.Y. Sup. Ct. Oct. 30, 2002).

37 See, e.g., Shults v. United States, 995 F. Supp. 1270, 1275–76 (D. Kan. 1998) (Parents of deceased airman had no claim for conversion where portions of son's tissues and organs were discarded after autopsy.); Hasselbach v. Mt. Sinai Hosp., 159 N.Y.S. 376, 377-79 (N.Y. Ct. App. 1916) (Widow could not sustain conversion claim for unauthorized autopsy performed on husband.).

³⁸ Moore v. Regents of Univ. of Cal., 793 P.2d 479 (Cal. Sup. Ct. 1990).

³⁹ *Id.* at 480.

⁴⁰ *Id*.

⁴² Cf. Lymphokines, THEFREEDICTIONARY.com (2003), http://medical-dictionary.thefreedictionary .com/lymphokine (Lymphokines regulate immune responses and can be used for the treatment of cancer.). ³ *Moore*, 793 P.2d at 482.

⁴⁴ *Id.* (Conversion is a tort that protects against interference with possessory and ownership interests in personal property.).

⁴⁵ Id. at 493-97.

results depending on what body part they are evaluating. In *Davis v. Davis*, the court was asked to determine the relative interests between two divorcing spouses in the disposition of seven frozen embryos produced through in-vitro fertilization. The court evaluated the nature of the embryos, which were formed by using the wife's ova and the husband's sperm, and whether they were "personal property" of either of the spouses. The court determined that the embryos were neither "persons" nor "property," but rather "occupy an interim category that entitles them to special respect because of their potential for human life." In *Hecht v. Superior Court of California*, the court was asked to determine whether there is a "testamentary interest" in sperm deposited in a sperm bank. In *Hecht*, William Kane, the decedent, gave his deposited sperm to his mistress for her use "should she so desire." Kane's family contested his will, and the court found that at the time the sperm donation was made, Kane did have a "testamentary interest" in his sperm, and therefore it was property subject to disposition in the estate. So

The court cases on the ownership of our body, more specifically our organs, do not provide specific guidance to facilitate a discussion on the extent of property interests in human organs. In one important case, the court addressed the question of whether we even own our organs when we die. In 2006, the New York Court of Appeals, in *Colavito v. New York Organ Donor Network, Inc.*, considered the ability of our relatives to decide on the disposition of our organs upon our death, and whether those organs are property that can be transferred to another person. In August 2002, Peter Lucia died of intra-cranial bleeding in a Long Island, New York hospital. His widow, Debra Lucia, decided to donate his kidneys. One of them she specifically donated to Peter's long-time friend, Robert Colavito, who was suffering from end-stage renal disease. Peter Lucia's left kidney was sent to a hospital in Miami, Florida, where Colavito was waiting for its

⁴⁶ Davis v. Davis, 842 S.W.2d 588 (Tenn. 1992).

⁴⁷ *Id.* at 597.

⁴⁸ Hecht v. Superior Court, 20 Cal. Rptr. 2d 275 (Cal. Ct. App. 1993).

⁴⁹ Id. at 276.

⁵⁰ Id. at 289.

⁵¹ Colavito v. New York Organ Donor Network, Inc., 8 N.E.2d 43, 44-5 (N.Y. 2006).

⁵² *Id.* at 44.

⁵³ *Id.* at 45.

implantation.⁵⁴ Lucia's right kidney stayed in New York.⁵⁵ During the process of preparing Colavito for surgery, doctors discovered that Lucia's left kidney was damaged and unfit for implantation.⁵⁶ When the Florida hospital called the New York Organ Donor Network ("NYODN") to ask for delivery of the second kidney for implantation into Colavito, they were told that it had already been delivered to and implanted in another patient.⁵⁷ Colavito filed suit, asserting causes of action sounding in fraud, conversion, and violation of the New York Public Health Law. 58 Essentially, he argued that he had a property interest in the kidney that was transferred to him upon Peter Lucia's death by Debra Lucia, and that the NYODN had violated that property interest. He asserted that as the specified donee of the organs, he acquired a property right in both kidneys, giving rise to claims against the defendants for delivering the right kidney to someone else. 59 Debra Lucia testified in an earlier proceeding that had she known that the kidneys could not be used by Colavito, she would not have consented to their removal.⁶⁰ According to Lucia, "there was no question about them being transplantable. [Colavito's blood] was a universal blood type, and therefore, he was compatible. Had [the physician] told me any other thing, I would not have donated them." Although the lower court found that it is "arguable that . . . a person or entity may have an enforceable property right in a functioning organ," the New York Court of Appeals ultimately concluded that the plaintiff, "as a specified donee of an incompatible kidney, had no commonlaw right to the organ," and his "cause of action for conversion must fail, as it is necessarily based on his claimed right to possess the kidney in question."62

In another important case, the court addressed whether individuals can be compensated for bone marrow donations. In 2011, the Ninth Circuit Court of Appeals, in *Flynn v. Holder*, specifically ruled on whether NOTA could

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    <sup>54</sup> Id.
    <sup>55</sup> Id. at 46.
    <sup>56</sup> Id.
    <sup>57</sup> Id.
    <sup>58</sup> Id. at 47.
    <sup>59</sup> Id.
    <sup>60</sup> Id.
    <sup>61</sup> Colavito v. New York Organ Donor Network, Inc., 438 F.3d 214, 218 (2d Cir. 2006).
    <sup>62</sup> Colavito v. N.Y. Organ Donor Network, Inc., 860 N.E.2d 713 (N.Y. 2006).
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prohibit compensation for "bone marrow" donations. 63 The program in question in Flynn offered \$3000 awards in the form of scholarships, housing allowances, or gifts to charities selected by donors, in exchange for the donation of bone marrow.⁶⁴ In Flynn, the plaintiffs argued that NOTA, as applied to a bone marrow pilot program, violated the Equal Protection clause. 65 NOTA specifically defines a "human organ" as including the human kidney, liver, heart, lung, pancreas, bone marrow, cornea, eye, bone, and skin, and any other human organ specified by the Secretary of Health and Human Services by regulation. 66 The plaintiffs claimed that "blood stem cell harvesting is not materially different from blood, sperm, or egg harvesting, which are not included under the statutory or regulatory definitions of 'human organ.'"⁶⁷ The government argued that since it is "much harder to find a match for patients who need bone marrow transplants than for patients that need blood transfusions, exploitative market forces could be triggered if bone marrow could be bought."68 The Flynn court focused on the advanced technology being used to extract the bone marrow, and found that with this new and less invasive procedure, only some of the marrow's "hematopoietic stem cells" were being extracted, and not the "soft, fatty substance in the bone cavities." ⁶⁹ In making this distinction, the court was comparing the bone marrow extracted through this new process with the extraction of blood and blood products, which is not covered by NOTA. Therefore, the court concluded that this new procedure did not fall under the prohibitions on organ donation in NOTA and that the criminalization for provisions of NOTA did not apply to the pilot program at issue.⁷⁰

The court's conclusion in *Flynn* sparked further controversy as to why individuals can be paid for blood, blood products, sperm, egg donation, and now bone marrow, but not for other organs.⁷¹ Some advocates of legalizing

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63 Flynn v. Holder, 684 F.3d 852 (9th Cir. 2012).
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^{64 684} F.3d at 858.

⁶⁵ Id

^{66 42} U.S.C. § 274e(c)(1) (2012).

^{67 684} F.3d at 858.

⁶⁸ Id. at 859.

⁶⁹ Id. at 863.

⁷⁰ *Id.* at 865.

⁷¹ Adam Cohen, Should You Be Allowed to Sell Your Bone Marrow: A new ruling reinterprets the National Organ Transplant Act banning the sale of bone marrow. Will other human body parts follow?,

organ donation hailed the Flynn decision as having "broad implications for transplant policy in general because it underscores the profound weakness in our altruism-only transplant policy."⁷² Further, commentators argue that this simple compensation will expand the donor pool for bone marrow.⁷³ Specifically, Carol Williams argues that "this is a fundamental change to how deadly blood disease will be treated in the country," and "compensation will expand the donor pool by at least hundreds and potentially thousands each year."⁷⁴ However, this raises the question of why the same rationale cannot be expanded to include the donation of a kidney. Although NOTA specifically lists kidneys as an organ that cannot be traded for valuable consideration, with the advances in kidney transplantation and the advancements in understanding the human body, is not the donation of a kidney, one of two duplicative organs, more akin to the donation of bone marrow than the donation of a lung? Further, was not the Flynn court also responding to the lack of supply of bone marrow, coupled with the new lessinvasive technology to harvest that bone marrow, in making their decision? Does that same rationale apply to kidney donation?

VII. MUTUAL EXCHANGE OF ORGANS

Interestingly, two different practices have developed in the United States that sidestep the restrictions of NOTA. These practices effectively allow a recipient to bypass or "move-up" on the national waiting list to receive a kidney from a deceased donor. Living donor transplants have always been legal under NOTA. Typically, this occurs when a related or otherwise connected individual volunteers to donate a kidney to the recipient. Issues arise when the would-be donor is incompatible with the recipient, and

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 $[\]label{to-sell-your-bone-marrow} TIME \quad (Dec. 19, \quad 2011), \quad http://ideas.time.com/2011/12/19/should-you-be-allowed-to-sell-your-bone-marrow/.$

 $^{^{72}}$ Id. (quoting Dr. Sally Satel, a leading advocate of allowing organ donors to be compensated and herself a recipient of a donated kidney).

⁷³ Carol J. Williams, *Pay Ban on Donor Organs Doesn't Include Bone Marrow, Court Says*, L.A. TIMES (Dec. 2, 2011), http://articles.latimes.com/2011/dec/02/local/la-me-bone-marrow-20111202; Adam Martin, *You Can Now Sell your Bone Marrow for \$3,000*, THE ATLANTIC (Dec. 2, 2011), https://www.theatlantic.com/national/archive/2011/12/you-can-now-sell-your-bone-marrow-3000/334788/.

⁷⁴ Williams, *supra* note 73 (quoting Jeff Rowes, the Institute for Justice attorney who argued the *Flynn* case before the Ninth Circuit).

 $^{^{75}}$ See The National Organ Transplant Act of 1984, 42 U.S.C. §§ 273–276 (2013).

therefore a direct donation cannot occur. A Paired Exchange, however, occurs when a living donor is incompatible with the recipient, so the donor exchanges an organ with another donor/recipient pair. There have been a number of reported successful transplants involving Paired Exchanges. ⁷⁶ One such exchange involved five transplant candidates, all former strangers from across the country.⁷⁷ This swap, which included simultaneous marathon operations, was made possible when four transplant candidates each had a living relative willing to donate a kidney, and a fifth candidate was on the national waiting list. Although none of the related pairs were compatible, the donors were compatible with someone else in the larger five pair group, and as a result, the five-way swap was organized.⁷⁸ A Paired Exchange can be a creative way to allow for living donor exchanges of organs. An additional alternative practice is usually referred to as a Living Donor/Deceased Donor ("LDDD") Exchange. In this scenario, the donor wants to donate a kidney, but a paired exchange is not possible because he or she is not a suitable match for the intended recipient. Instead, the donor can offer to donate a kidney to a stranger on the waiting list, in exchange for the intended recipient advancing on the waiting list for another kidney from another source. This allows the intended recipient to receive a kidney much sooner than had they waited under the typical waiting procedure.

Taking into consideration the organ exchange techniques listed above, it is important to consider whether these practices violate the "valuable consideration" prong of NOTA. All of the donors involved in these exchanges received a benefit for their donation: they provide a life-saving organ to a system, that in turn provides a life-saving organ to the donor's intended recipient, often a relative or loved one. Unfortunately, there is little legislative history to define "valuable consideration." However, there is no indication that any of the legislative drafters intended to define "valuable consideration" as anything other than direct monetary compensation for an

⁷⁸ Id.

⁷⁶ See, e.g., Alan Duke, 5-Way Kidney Swap Offers Hope for Unmatched Donors, CNN (Apr. 3, 2011, 6:20 PM), http://www.cnn.com/2011/HEALTH/04/03/california.kidney.swap/index.html; Susan Levine, Hopkins Celebrates Quintuple Transplant, WASH. POST (Nov. 21, 2006), http://www.washingtonpost.com/wp-dyn/content/article/2006/11/20/AR2006112001254.html.

 $^{^{77}}$ Susan Levine, Hopkins Celebrates Quintuple Transplant, WASH. POST (Nov. 21, 2006), http://www.washingtonpost.com/wp-dyn/content/article/2006/11/20/AR2006112001254.html.

organ.⁷⁹ Further, the Department of Health and Human Services concluded that both of these "donative practices" do not imply "valuable consideration" under NOTA, and therefore do not implicate the criminal penalties of the statute. 80 As a result, the current system does not consider these exchange programs violative of the "valuable consideration" prohibitions of NOTA. However, one could argue that these exchange programs are, in essence, doing the same thing as a Living-Unrelated Donation program, with the use of a bartering system by exchanging the property rights to kidneys in lieu of monetary compensation. Does it make sense to make this distinction?

VIII. WHY SHOULD KIDNEYS BE THE EXCEPTION TO NOTA?

Kidneys should be the exception to NOTA because of the biological realities of the kidney. Most humans are born with two kidneys that are part of their renal system. 81 The renal system also includes the uterus, bladder, and urethra.82 Kidneys have many functions, including regulating blood pressure, producing red blood cells, activating vitamin D, and producing glucose. 83 In addition, the kidneys filter bodily fluids through the bloodstream, produce waste (excreted as urine), and maintain the composition, pH, and osmotic pressure of our bodily fluids.⁸⁴ Distinct from our other organs, most humans are born with more kidneys than they need. In fact, a single kidney, functioning at only 75% capacity, can provide all that a human renal system requires. 85 Further, if an individual only has one kidney, it can adjust to filter just as much as two kidneys. 86 In addition, if you are only born with one kidney, the other kidney can grow to reach a size similar to the combined weight of two kidneys (about one pound). In this

⁷⁹ 42 U.S.C. § 274e(c)(2) (2012).

⁸⁰ C. Kevin Marshall, Legality of Alternative Organ Donation Practices Under 42 U.S.C. § 274e (U.S. Dep't of Health & Human Servs., Office of Legal Counsel Mar. 27, 2007), https://www.justice.gov/ sites/default/files/olc/opinions (In an interesting Memorandum Opinion for the General Counsel, Department of Health and Human Services, C. Kevin Marshall, the Deputy Assistant Attorney General provided an opinion and specifically concluded that these practices did not violate NOTA.).

⁸¹ Mark A.W. Andrews, How Can You Live Without One of Your Kidneys?, SCI. AM., https://www .scientificamerican.com/article/how-can-you-live-without/.

⁸² *Id*.

⁸³ *Id*.

⁸⁴ *Id*.

⁸⁵ *Id*.

⁸⁶ *Id*.

way, the existence of a second kidney is really a "biological insurance policy." Individuals should be allowed to transfer this insurance policy just as they are able to transfer other pieces of personal property.

IX. POLICY ARGUMENTS AGAINST A LIVING ORGAN TRADE

There are a number of policy arguments for why a living organ trade, or the ability to compensate living (or the family of deceased) donors for their organ donations, is a dangerous practice. Three main policy arguments are: (1) an organized organ trade will exploit the poor; (2) there are intangible consequences to an organ trade; and (3) an organ trade will encourage corruption.

A. An Organ Market Exploits the Poor

One of the most compelling arguments against an organ trade is that the vulnerability of poor populations makes them particularly susceptible to exploitation, because the poor will be attracted to the idea of selling their kidneys for a profit. The same incentive does not exist for the wealthy. The resulting situation could therefore become a mismatch between predominantly poor donors and largely wealthy recipients, a situation rife for exploitation. This policy argument has been borne out by the data from Iran, ⁸⁷ Pakistan, and India, where the majority of organ donors are extremely poor. ⁸⁸ The concern is that the current economic divide will be further expanded with the addition of organ transplantation in the economy.

Although a rational concern, this is something that can be overcome with regulation; free-market approaches tend to trade equity for efficiency. Further, this simplistic argument does not address economic realities. Does the fact that organ suppliers will be economically disadvantaged prohibit a market for organs? In a true market for organs, where the individuals selling their organs are doing so voluntarily and are not forced into the sale, do we have a right as a society to limit their ability to engage in that exchange? If a person is not going to benefit by the transaction, then the rules of a free

⁸⁷ Javaad Zargooshi, *Iranian Kidney Donors: Motivations and Relations with Recipients*, 165 J. UROLOGY 386, 386–92 (2001).

⁸⁸ Madhav Goyal et al., *Economic and Health Consequences of Selling a Kidney in India*, 288 J. Am. Med. Ass'n 1589, 1589–93 (2002).

market economy will not allow the transaction to occur. The notion that the economically disadvantaged will be taken advantage of robs them of the choice to make the decision on their own.

There are currently other markets where the economically disadvantaged are exploited. Consider some risky employment options, such as coal mining or enlisting in the military. In these instances, society has determined that we are willing to accept the potentially large personal costs to provide a larger social benefit. We do not restrict the performance of those jobs because there is a potential to prey on the economically disadvantaged. In this respect, as a society, we weigh the social benefit against the social cost for many issues. If we consider the social benefit of an open market for kidneys to be worth at least 20 to 30 lives that could be saved every day, is it worth the risk?

Finally, by restricting the ability of the poor to sell their organs, society is likewise restricting them to their current economic situation. Studies of paid donors in overseas markets indicate that the majority of those donors use the money to relieve themselves of debt, or buy food or clothing.⁸⁹ If the market for a kidney could change the economic situation for an individual or a family, is there a societal benefit in restricting that right?

B. The Organ Market Ignores Intangible Costs to the Donor

Another concern regarding a living organ trade is that the long-term health consequences of organ donation will not be considered by the donor that is looking to "cash-in" on organ donation. The obvious cost to the living donor is the risk that comes with any major surgical procedure, such as the risk of surgical complications and/or death. However, there is evidence to suggest that living kidney donors do not usually develop significant longterm detrimental health effects. Rather, the more common situation involves rare instances of surgical complications, not the lack of the kidney.⁹⁰ Moreover, there is a lack of clinical research on the long-term consequences

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⁸⁹ Goyal et al., *supra* note 88, at 1591.

⁹⁰ Andrews, *supra* note 81.

of living organ donation. ⁹¹ Some reports of mortality associated with living liver donation have affected the perception of the risk of living organ donation. ⁹² In addition, some surveys of living donors in India have reported adverse health effects. ⁹³ In India, where there is no regulation of the organ market, about 86% of donors reported deterioration in their health status. ⁹⁴ However, due to the lack of regulation in India, there is a substantial concern that these procedures are performed in back-street clinics with incomplete donor and recipient evaluation, and inadequate pre-operative and post-operative care. ⁹⁵ As a result, it is necessary to remember that the standard of healthcare in these countries, especially with reference to the unregulated black market sale of organs, is difficult to compare with the state of modern medicine in the United States. Rather, in developed countries living kidney donors have generally reported excellent long-term health. ⁹⁶ A study conducted in Norway concluded that the risk to the donor is considered small, and in general, the donation outcome is excellent. ⁹⁷

In addition, there are other financial considerations, such as medical bills, and time away from work, that the donor should consider when making the decision to donate. A potential donor can incur medical bills up to \$5,000 per kidney donation, as well as up to 6 weeks away from work. Further, there are other less tangible considerations, including maintaining life, disability, or medical insurance coverage after the donation. The argument that potential donors will not consider these unabsorbed costs is unfounded.

⁹¹ Manik Razdan, *The Efficiency and Effectiveness of Donor Registration Promotion and the Organ Donation Process: Impact on the Availability and the Cost of Procuring Organs for Transplant*, PITT. GRADUATE SCH. OF PUB. HEALTH 110 (2014).

 $^{^{92}}$ Mark Roth, Is a Living Liver Donation Worth the Risk?, PITTSBURGH POST-GAZETTE (Aug. 9, 2009, 4:00 AM), http://www.post-gazette.com/health/2009/08/09/Is-a-living-liver-donation-worth-the-risk/stories/200908090191.

⁹³ Razdan, supra note 91, at 110.

⁹⁴ Goyal et al., *supra* note 88, at 1589.

⁹⁵ See id

⁹⁶ See Razdan, supra note 91, at 110.

 $^{^{97}}$ Anders Hartmann et al., The Risk of Living Kidney Donation, 18 Nephrol Dial Transplant 873 (2003).

⁹⁸ Samantha Olson, *Organ Transplant's Problem in America: 30 Years Since the National Organ Transplant Act Was Passed*, MED. DAILY (Sept. 29, 2014, 5:46 PM), http://www.medicaldaily.com/organ-transplants-problem-america-30-years-national-organ-transplant-act-was-passed-305578.

⁹⁹ Bootie Cosgrove-Mather, *The Dark Side of Organ Donation*, CBS NEWS (Aug. 12, 2003, 12:47 PM), https://www.cbsnews.com/news/the-dark-side-of-organ-donation/.

Rather, it is these additional costs that can actually discourage "altruistic" organ donation. If there was a way to cover these additional costs through a payment to the organ donor, there could potentially be an exponential increase in organ donation. As the system currently stands, only those who can afford the medical bills and the time away from work can "afford" to donate an organ. "We have created a model where only the rich can donate." Rather than considering them a bar to an open market, these financial considerations should instead be considered as reasons to advocate for an open market.

In comparison, when considering all of the variables, one study has suggested that the market price of a living donated kidney is around \$15,200.\(^{101}\) This study considered three components: "a monetary compensation for the risk of death, a monetary compensation for the time lost during recovery, and a monetary compensation for the risk of reduced quality of life.\(^{102}\) The \$15,200 market price is nominal when compared to the cost of a typical transplant surgery, which costs \$160,000 on average.\(^{103}\) Furthermore, the average cost of dialysis for a period of one year in the United States is \$89,000.\(^{104}\) Since living donors are already an important source of kidneys (approximately 33% of donated kidneys), allowing for the payment for kidneys should increase the supply, assuming donors respond to the financial incentive.\(^{105}\) Every individual is going to make his or her own cost-benefit analysis, but the relatively small payment of \$15,200 for the organ donation would allow the organ donor to factor that payment into the benefit side of the equation.

¹⁰⁰ Olson, supra note 98 (quoting Dr. Sigrid Fry-Revere, the founder and president of Stop Organ Trafficking Now and the Center for Ethical Solutions).

¹⁰¹ Gary S. Becker & Julio Jorge Elias, *Introducing Incentives in the Market for Living and Cadaveric Organ Donations*, 21(3) J. ECON. PERSP. 11 (Summer 2007).

¹⁰² *Id*. at 9.

¹⁰³ *Id*.

 $^{^{104}\} The\ Kidney\ Project:\ Statistics,\ UCSF\ SCH.\ PHARMACY\ \&\ MED.,\ https://pharm.ucsf.edu/kidney/need/statistics.$

¹⁰⁵ Organ Donation and Transplantation Statistics, NAT'L KIDNEY FOUND, https://www.kidney.org/news/newsroom/factsheets/Organ-Donation-and-Transplantation-Stats (last visited Jan. 15, 2018).

C. An Organ Market Is Likely to Involve Corruption

Another argument is that an open organ market will likely facilitate corruption and encourage donors to be less than truthful about their medical health and/or compatibility. Further, some experts theorize that once a price is put on the value of an organ, those with the economic means to pay will benefit, while those who cannot will be unable to afford the lifesaving transplant. This argument is reinforced by the reports of corruption in the Indian black market, where on average, the donor is promised one third more than they are actually paid after the donation. However, the legal system in the United States is more robust and effective than the legal system in India. The United States is better positioned to respond to any corruption and resolve these issues. In addition, the United States' medical system is better equipped to screen potential donors and ensure that only healthy donors are considered for the market.

Further, because black-market selling of organs is already occurring in the United States, this concern will exist regardless of the availability of legally-purchased organs. In the case of Levy Rosenbaum, who pled guilty to illegal organ trafficking, it was estimated that over the course of 10 years he bought organs from Israeli donors for as little as \$10,000, and would sell them to Americans for more than \$100,000 per kidney. ¹⁰⁷ The *Rosenbaum* case shows that when a black market is created, illegal suppliers will attempt to meet the demand. This allows for unscrupulous characters to prey upon innocent donors and exploit desperate recipients. By not allowing for a free market for the sale of organs, with the accompanying regulation, this type of corruption will flourish.

¹⁰⁶ Goyal et al., *supra* note 88, at 1591.

¹⁰⁷ Samantha Henry, *Brooklyn Man Sentenced 2½ years in Fed Organ Trafficking Case*, NBC NEW YORK (July 11, 2012, 4:54 PM), https://www.nbcnewyork.com/news/local/Kidney-Organ-Trafficking-Levy-Izhak-Rosenbaum-Brooklyn-Federal-Conviction-Sentencing-162046565.html; *see also* David Glovin et al., *Kidney Broker Pleads Guilty in First U.S. Organ-Traffic Case*, BLOOMBERG (Oct. 27, 2011, 1:53 PM), https://www.bloomberg.com/news/articles/2011-10-27/kidney-broker-pleads-guilty-in-first-u-s-organ-trafficking-prosecution.

X. ADDITIONAL TANGIBLE BENEFITS TO THE ECONOMY

There are two additional benefits to the economy that would result from a regulated organ market. First, organ recipients will experience a resulting increase in economic efficiency. An average patient in need of a kidney transplant spends about three to five years on the waitlist. During this time, patients typically go to dialysis 3 times per week at the average cost of \$230 per session. This results in an average cost of over \$100,000 for the 3 years they spend on the waitlist. The majority of these costs are already borne by the taxpayer in the form of Medicare. In addition, decreased productivity occurs as a result of actual time spent getting dialysis. The average dialysis session lasts from three to five hours. Also, undergoing dialysis decreases a patient's mobility and negatively affects the workplace, family and friends. All of these components reflect economic inefficiency resulting from the inability of supply to meet demand.

Second, an open market could exist in addition to the current waitlist and national registry.¹¹³ If one accepts the hypothesis that the current donations are prompted by a sense of altruism, nothing suggests that this will change with the addition of an open organ market. There will still be cadaver kidney donations and an accompanying waitlist. An open market would only be in addition to those transplants that are already occurring. This benefits both those that can avail themselves of the open market and the other individuals that are also on the registry that are unable to afford to "purchase" a kidney. The number of individuals on the waitlist would decline, and there would be an increasing percentage of those getting transplants from that list.

 $^{^{108}}$ KIDNEY LINK: THE WAITING LIST, http://www.kidneylink.org/TheWaitingList.aspx (last visited Jan. 15, 2018).

¹⁰⁹ David Orenstein-Brown, *Dialysis Costs Challenge Medicare Budget*, FUTURITY (Sept. 11, 2012), http://www.futurity.org/dialysis-costs-challenge-medicare-budget.

¹¹⁰ The Kidney Project: Statistics, UCSF Sch. Pharmacy & Med. (last visited Jan. 15, 2018), https://pharm.ucsf.edu/kidney/need/statistics.

¹¹¹ *Id*.

¹¹² *Id*.

¹¹³ Shmuly Yanklowitz, Give a Kidney, Get a Check, THE ATLANTIC (Oct. 27, 2015), https://www.theatlantic.com/business/archive/2015/10/give-a-kidney-get-a-check/412609/.

XI. IRANIAN LIVING-UNRELATED DONOR PROGRAM

In 1988, Iran adopted a compensated and regulated living-unrelated donor renal transplant program. The program has proven to be quite successful. By 1999, the renal transplant waiting list in the country was eliminated because the program successfully addressed the shortage of organs. 114 The new economic system is highly regulated by the government. In the Iranian model, during transplant evaluation, the physician recommends and emphasizes the advantages of a living-related donor and discusses the shortage of cadaver kidneys. 115 If no living-related donor exists, the patient is referred to the Dialysis and Transplant Patients Association (hereinafter "DAPTA") to locate a suitable living-unrelated donor. 116 There is no role for a broker or agency for the organs in the system, and all of the renal transplant teams belong to university hospitals. Further, the government pays for all hospital expenses associated with the transplant and provides the donor with a monetary reward and health insurance. Most donors also receive a "gift" from the recipient, or from a charity if the recipient cannot afford a "gift." Finally, the renal transplant teams do not receive any additional compensation or incentives from the recipient or the government. The current compensation to the donor is the equivalent of \$4,500. 117 The Iranian Society for Organ Transplantation enforces these strict policies and regulations and rules on any ethical issues.

The Iranian model has provided interesting statistical results. First, there has been a reduction in living-related organ donation. Before 1988, almost all transplants were from living-related donors. In 2005, only 12% of all transplants were from living-related donors. This decrease in living-related donors might suggest that when there is a price to be collected for a kidney, the altruistic impulse to help a related recipient is reduced. Alternatively, an

¹¹⁴ A.J. Ghods & S. Savaj, Iranian Model of Paid and Regulated Living-Unrelated Kidney Donation, 1 CLIN. J. AM. SOC NEPHROL 1136–45 (2006).

¹¹⁵ *Id*.

¹¹⁶ Id

¹¹⁷ Karimi & Gambrell, *In Iran, Anyone Can Sell Their Kidney for Thousands of Dollars*, BUS. INSIDER (Aug. 25, 2016, 10:01 AM), http://www.businessinsider.com/ap-in-iran-unique-system-allows-payments-for-kidney-donors-2016-8.

¹¹⁸ Ghods & Savaj, *supra* note 114.

¹¹⁹ *Id*.

open market for kidneys might have decreased coercive living-related transplants. In other words, family members are no longer required to pressure their relatives in order to procure a donation. Further, although Iran has allowed deceased-donor organ donation since 2000, only 12% of kidneys being transplanted are from deceased donors, compared to the 80% in the United States. Again, this statistic might show that due to the robust market for kidneys in Iran, there is a decreased need for deceased-donor organs. Conversely, this could also suggest that there is a lessened impulse to donate deceased-donor organs since there are alternative methods to procure a kidney through the government program.

Some of the Iranian program's guidelines have attempted to counter the public policy arguments that are leveraged against a living organ trade. For instance, in Iran there are provisions to provide free health insurance for the donor for a year following the procedure, thereby reducing the potential for residual health effects on the donors. In addition, if an Iranian recipient is unable to pay the cost of the transplant, they are not turned away. Instead, charitable organizations bridge the gap for those individuals who are unable to afford to pay for their transplant. This attempts to counter the notion that if the donors are being paid for their organs, that the recipient who is in poverty will be unable to secure a transplanted organ.

Finally, in Iran, the data does not support the notion that if there is a market for organs, then kidney donors will be disproportionally poor and illiterate, while the recipients are educated and wealthy. The data show a more distributed donor and recipient base, with 84% of paid kidney donors labeled as "poor," while recipients were classified as 50.4% "poor," 36.2% "middle class," and 13.4% "rich." As a result, the data supports that more

We previously conducted a study on 500 renal transplant recipients and their living-unrelated donors to determine which socioeconomic classes are receiving transplants more from paid kidney donors. All of these donors and recipients were grouped according to their level of education, which showed no significant differences. In this study, 6% of living-unrelated donors were illiterate, 24.4% had elementary school education, 63.3% had a high school education, and 6.3% had university training. Corresponding levels in their 500 recipients were 18%, 20%, 50.8%, and 11.2%, respectively. Then they were grouped according to whether they were poor, rich, or middle class. The results showed that 84% of paid kidney donors were poor and 16% were middle class, and of their recipients, 50.4% were poor, 36.2% were middle class, and 13.4% were rich.

¹²⁰ *Id*.

¹²¹ *Id*.

¹²² *Id.* The results were as follows:

than 50% of kidneys from paid donors are being transplanted into recipients labeled as "poor."

XII. PROPOSED LIVING KIDNEY VENDOR PROGRAM IN THE UNITED STATES

Although this article advocates for a living kidney vendor program in the United States, there is not a resulting need for the complete dismantling of NOTA. Rather, a living donor market for kidneys should be created with specific limitations in order to minimize corruptions and exploitation. Some of the principles of the Iranian model could be adopted in the United States, and result in a sustainable market for organs. There are three primary regulatory provisions that would limit the potential for abuse and exploitation of the system: government regulation for the price of a kidney, minimum age and health screening for donors, and a government agency managing the purchasing and distribution of the purchased kidneys.

A. Government Regulated Price of a Kidney

Similar to the Iranian model, there should be a set price for the value of a kidney. This would be a non-negotiable price set and paid by the government. By placing bounds on the price of a kidney, this will protect all parties from being exploited. In addition, the government can adjust the price relative to the costs imposed on the donors, rather than allowing the market to determine a fair price. This proposal is more akin to a governmentsubsidized price than rather allowing the free market to determine the price based on supply and demand. However, the government can adjust the price based upon the supply as well. In the initial stages of the program, where there is a need to clear the remaining patients from the waitlist, the price could be set significantly higher to encourage additional supply. After equilibrium between supply and demand is reached, the price could be set closer to the free market price. Further, there would ultimately be a societal savings from the lower costs of long-term medical treatment recipients, including dialysis. Since the costs of this long-term treatment would be primarily paid for through government-subsidized programs, this would result in additional economic efficiency.

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B. Minimum Age for Donors

In addition, there would need to be a minimum age of 30 years in order to qualify to become a kidney donor. There are two reasons for this minimum age. First, the age requirement would reduce the temptation to donate without fully understanding the ramifications. A young adult between the ages of 18– 25 may not fully appreciate the risks associated with organ donation, and instead look only to the monetary benefit. In addition, there may be a tendency to pressure women and children into donating their organs. By requiring a minimum age of 30, the government can minimize the encouragement of individuals that are still under the coercive pressure of parents and other family members. This will reduce the exploitation of those that are unable to appreciate the long-term ramifications of their market decision, and/or those that are pressured into ignoring those ramifications. In addition, it would be necessary to enact comprehensive health screening, including a significant family disease profile. This would allow the ability to screen out those individuals with less than ideal medical conditions and ensure that long-term health effects are reduced. In the current system, there is a temptation, when considering recipient suffering, coupled with the determination of less than ideal living-related donor, to approve the surgery even in challenging circumstances. By removing this temptation through the increased supply of living-unrelated donors, the overall health of organ donors could actually increase. Further, the government has a financial interest in identifying potential donors that will result in the minimum amount of short-term and long-term health effects, and is therefore perfectly situated to make those screening decisions.

C. Government Control over Purchase and Distribution of Kidneys

The government should be the sole purchaser and distributor of the kidneys. Eliminating any "broker" or "agency" that has an economic incentive in recruiting or otherwise finding suitable donors reduces the potential for exploitation. This would also provide a convenient intermediary between organ donors and recipients, thereby reducing any potential conflicts of interest and/or additional payments or "gifts" that could be exploited from recipients. Lastly, the purchased kidneys should be allocated based on need, much like the current deceased donor program. The current system in the United States for the identification and distribution of deceased donor organs

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would allow for a parallel system to identify and distribute purchased donor organs.

XIII. CONCLUSION

It has been more than 30 years since the passage of NOTA, and the time has come to repeal some of its provisions. A strong argument exists that enabling the "payment" for organ donation, specifically kidneys, would not only eliminate organ shortage, but also result in a more economically-efficient outcome. It is time to encourage a modified free market for living kidney donation, provided there are specific government regulations to reduce exploitation and the potential for abuse.