

The Kidney Trade

Can economists make the system for organ transplants more humane and efficient?

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Hashim Thaci

The Council of Europe's [allegations](#) about Kosovo Prime Minister Hashim Thaci's involvement in kidney harvesting are as grisly as they are startling: "When the transplant surgeons were confirmed to be in position and ready to operate, the [Serbian] captives were brought out of the 'safe house' individually, summarily executed by a KLA gunman, and their corpses transported swiftly to the operating clinic," the report says, [according](#) to the *Guardian*. Though these allegations are unusually grotesque, a black market for kidneys thrives—and not only in poor or lawless nations. Last month, for instance, a private South African hospital group [admitted taking](#) about \$500,000 from an organ trafficking syndicate. Brazilians and Romanians, including five children, were reportedly paid \$6,000 each to give up a kidney. Selling your organs—eyes, bone marrow, parts of livers, skin, or, yes, kidneys—is illegal in every country except Iran. But the World Health Organization [describes](#) the black market as massive and estimates one in every five kidneys transplanted per year comes from it. The problem is not just a medical or ethical one. It is economic. Demand for kidneys is high, given that renal disease is common. Supply is constrained, but variable. Most everyone has two kidneys, and many can survive with just one. (This is not true for most other organs, obviously.) Therefore, kidneys—unique among organs—trade on a number of markets and exchanges, licit and illicit. And those markets have attracted extraordinary attention from

economists, who for the past 20 years or so have proposed a variety of ways to help get kidneys to those who need them economically—and, more important, safely.

In the United States, the above-board system for kidney transplants is, in a word, constrained. About 80,000 Americans currently await a kidney for transplant. But there are only about 19,000 kidneys donated per year, 13,000 from cadavers and 6,000 from live donors. Every day, about 13 Americans [die](#) waiting for a kidney. The rest wait on dialysis, at a cost of approximately \$75,000 per year per person. (That dialysis is mostly taxpayer funded, via Medicare's [special](#) End Stage Renal Disease Program.)

The incentive to perform more kidney transplants is medical: A transplant keeps the patient far healthier, for far longer, than dialysis. And it is economic to boot: Getting a transplant costs far less than keeping a patient on dialysis. In 2004, for instance, economist Mark Schnitzler and transplant surgeon Arthur Matas [estimated](#) that each kidney transplant saves society \$90,000. Extrapolating from those calculations, eliminating the kidney waiting list would save about billions per year.

The key to improving the market for kidneys lies in making more kidneys available for transplant, shortening the waiting list and helping renal disease patients. The question is how to do that. One option—the first option, in many cases—is to encourage more people to become organ donors. Public-health [campaigns](#) have convinced more and more Americans to sign up, but with mixed success. In New York, for instance, just 1 in 10 opts in.

Partly in response, in the past few years foundations and policy scholars have started to consider creating economic incentives for the families of the recently deceased. Macabre though it sounds, it is something economists have [been suggesting](#) for at least 30 years. In its "End the Wait" campaign, announced last year, the National Kidney Foundation suggested that organ-procurement organizations "have the discretion and funding to assist donor families with expenses directly related to the donation, which may include some funeral expenses." But such programs do not carry too much promise. Pennsylvania tried something similar—letting state residents donate \$1 to an awareness trust fund, and then using the funds to offer \$300 to families of organ donors. The state eventually [scrapped](#) it, with some donor families taking offense.

Another option is to just open the floodgates and pay for kidneys, an option espoused by some free-market economists. (We'll leave the very big question of ethics aside here, and focus on the economics.) How much should insurance companies, hospitals, or other organizations pay the donors? In 2007, Nobel-winning economist Gary Becker and his coauthor Julio Jorge Elías ran the calculations and suggested about \$15,200. In [a controversial paper](#), the economists considered the cost of the chance of death during surgery, lost earnings while recovering from surgery, and compensation for the possibility of reduced quality of life for kidney donors. They used average wages and a number of other variables to estimate a fair value at \$15,200, with kidneys flooding the market at \$162,000.

It's unlikely such payments will ever become reality. Doctors have major ethical and medical reservations about opening the market up as such—as do policymakers and, for the matter, a lot of other folks. Still, it does not preclude the option of ginning up more live donors for kidneys. And economists seek to do that by enhancing what one might call the "kidney gift" economy—getting more family members and friends, as well as altruistic strangers, to donate kidneys to those who need them.

Oftentimes, family members who offer to donate a kidney to a sick relative do not match: Even with anti-rejection drugs, the sick person's body will reject the organ. But kidney swap programs or exchanges greatly increase liquidity, by making the chance of a "coincidence of wants" much higher. To simplify, say I have a kidney of type A that I am willing to donate, but my mother needs kidney type B. You, meanwhile, have kidney of type B to donate, but your friend needs kidney type A. In isolation, nobody gets what they need. But if we swap, everyone does.

Kidney exchanges, designed by [economists](#) as well as doctors in many cases, help pair couples or even bigger groups of people, greatly enhancing the likelihood of matches between willing donors and needy recipients. A year ago, for instance, doctors performed a successful "chained transplant" [that helped](#) 13 recipients. And last week, the national exchange, started in October, [facilitated](#) its first successful swap. Due to the exchanges' success, in part, the number of non-family live kidney donations has increased to more than 20 percent of all transplant surgeries.

Some economists describe such exchanges as a panacea for the kidney program. At least hypothetically, if everyone who needs a kidney can find someone to donate one, with others taking cadaver kidneys, then the waiting list would clear. (In crass economic terms, the United States has an oversupply of kidneys, given that there are about 300 million spares.) But doctors caution that transplant surgery is major, and carries significant risk. Every year, some donors die during or after surgery. Many families won't want to donate, and won't want to feel pressured into donation either. Thus, the United Network for Organ Sharing estimates that the national exchange might facilitate an additional 2,000 to 3,000 transplants a year—a 10 percent or 15 percent improvement. And as transplants become safer and social mores change, that number might rise.

Of course, none of this does anything to stop the black market for kidneys, which relies as much on foreign demand as American. Still, preventing any American from seeking an organ on the black market—and every year [some unknown](#) but existent number of Americans do—would reduce incentives for unscrupulous and often dangerous cartels to supply them. And if the United States can solve its kidney problem, it might encourage other countries, all the way to Kosovo, to solve theirs.

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