

Problems in Kidney Transplantation: A Natural Law Perspective on Organ Donation and Incentives

Jonny¹, Megawati Barthos²

{Jonny_army@yahoo.com¹, megawati_barthos@borobudur.ac.id²}

Universitas Borobudur^{1,2}

Abstract. Kidney transplantation is a crucial procedure for individuals with end-stage renal disease, but ethical dilemmas arise due to organ scarcity. This study examines kidney transplantation ethics through natural law, which suggests inherent moral principles. It explores whether selfless organ donors benefit society and deserve appreciation or reward, and considers individuals' natural right to control their bodies and make health decisions, affecting the need for external donor rewards. This study aims to provide ethical insights into organ donation and transplantation, focusing on how these practices can align with natural law principles while respecting the dignity of all involved parties. To achieve this goal, the research uses a literature review to analyze existing ethical theories and principles related to organ donation. While incentivizing organ donation could increase donation rates, concerns exist regarding the potential commodification of the human body. This study also aims to provide ethical insights into organ donation to ensure that organ transplantation adheres to natural law principles and respects the dignity of all involved parties.

Keywords: Kidney Transplant, Organ Donor, Natural Law, Donor Incentive

1 Introduction

End-stage renal disease (ESRD) in Indonesia presents unique challenges, primarily driven by hypertension and diabetes as leading causes of chronic kidney disease (CKD)[1], [2]. Hemodialysis remains the predominant renal replacement therapy, with a marked increase in patients undergoing routine hemodialysis from 2017 to 2018[3], [4]. The prevalence of CKD in Indonesia rose from 0.2% in 2013 to 0.3% in 2018, accompanied by a significant uptick in patients receiving kidney replacement treatments, particularly hemodialysis[5]. In response, the Indonesian Ministry of Health launched a health transformation program in 2022, focusing on nephrology care to address health system disparities and improve kidney health services. Additionally, cost-effectiveness studies indicate that kidney transplantation offers the best value for money and outcomes compared to hemodialysis among ESRD patients in Indonesia.

The current Indonesian legislation governing organ transplantation includes provisions for rewarding donors. Nonetheless, the stipulated "reward" lacks clarity in terms of its nominal value and the mechanism for its distribution. This ambiguity hinders the effectiveness of the law, potentially discouraging donors who might otherwise consider donating their organs if the rewards were more clearly defined and assured[6].

From a legal philosophical perspective, natural law offers valuable insights into the ethical and moral foundations of organ donation incentives. Natural law, rooted in the belief that certain rights and moral values are inherent in human nature and can be understood through human reason, provides a framework for evaluating the legitimacy and necessity of compensating organ donors.

One notable example of natural law supporting organ donor incentives is the principle of beneficence, which emphasizes actions that promote the well-being of others. In the context of kidney donation, this principle can be interpreted to justify the provision of incentives to donors, as it aligns with the moral duty to save lives and alleviate suffering. By ensuring that donors receive appropriate recognition and compensation, society upholds the natural law tenet of promoting the common good and fostering altruistic behaviors[7].

In this normative literature review, we will explore the challenges and issues surrounding kidney transplantation in Indonesia through the lens of natural law. We will examine the current legal framework, its shortcomings, and propose ways to enhance the law to provide clearer and fairer incentives for organ donors, thereby encouraging more donations and addressing the critical shortage of kidneys available for transplantation.

2 Result and Discussion

The low rates of kidney transplantation in Indonesia are attributed to a multitude of factors including high costs, cultural issues, legal perceptions, lack of information, and inadequate infrastructure. Dialysis and transplantation are prohibitively expensive, with hemodialysis costing between US\$4900 to US\$6500 per year and kidney transplants approximately US\$15,000 for the first year. Cultural and religious beliefs also play a significant role, as they hinder organ donation despite an official consensus that all religions in Indonesia accept it. This results in a reliance on living relatives for donor kidneys. Legal misunderstandings and confusion about organ donation laws and the diagnosis of brain death further impede transplant rates. Additionally, there is a substantial information deficit, with a lack of education contributing to misconceptions and fears within the community. Infrastructure issues, such as insufficient transplant data registries, a shortage of nephrologists and specialist nurses, and a limited number of transplant centers, exacerbate the problem. Geographical limitations also restrict access to transplant facilities, which are primarily located on Java Island, making it difficult for patients from remote areas or other islands to receive necessary treatments. [8]

In Indonesia, the landscape of end-stage renal disease (ESRD) treatment is predominantly characterized by hemodialysis, with 80% of patients relying on this method. This heavy reliance comes at a significant financial cost to the National Health Insurance scheme (Jaminan Kesehatan Nasional, JKN), which spent a staggering 2.2 trillion IDR on hemodialysis in 2015 alone[9]. A cost comparison reveals that a peritoneal dialysis-first policy would be far more economical, costing 75 trillion IDR for complete coverage over five years, compared to the 166 trillion IDR required for a hemodialysis-first approach[10]. While direct economic analyses for renal transplants in Indonesia are not yet available, predictions suggest that transplants could be more cost-effective than lifelong hemodialysis[11]. Recognizing the need for change, the government implemented significant regulatory reforms in 2016. These included revising the JKN reimbursement scheme to cover kidney transplantation costs—around USD 18,000 per case—and legalizing organ transplants from unrelated donors. Despite these advancements, only seven out of 33 medical centers in the country are fully covered by JKN for kidney

transplants[6]. Nonetheless, these regulatory changes are crucial steps towards reducing financial burdens and promoting the growth of organ transplantation, thereby addressing two fundamental barriers to kidney transplantation in Indonesia.

2.1 Legal Framework Governing Organ Transplantation in Indonesia

Organ and human body tissue transplantation in Indonesia is regulated by national laws, particularly Law No. 36 of 2009 concerning Health, and its accompanying regulations like Government Regulation (PP) No. 53 of 2021 regarding Organ and Body Tissue Transplantation. These legal frameworks set the guidelines for the transplantation process, specifying that it must be conducted in accredited hospitals by authorized healthcare professionals. For individuals to undergo transplantation, they must follow a prescribed series of steps outlined in PP No. 53 of 2021. These steps include registration, compatibility testing between the recipient and donor, the transplantation surgery itself, and post-operative care. Additionally, potential donors must fulfill certain administrative criteria, such as being in good health, at least 18 years old, and providing written consent for voluntary donation without expecting any form of compensation[6].

The regulations also address violations related to organ and human body tissue transplantation. Those who perform these procedures without proper authorization or consent, or who engage in organ or tissue sales, may face legal penalties such as imprisonment and fines. These regulations aim to ensure that organ and tissue transplantation procedures are conducted in a legal, ethical, and transparent manner, with a focus on saving lives and promoting health.

Religious beliefs, particularly in Islam and Catholicism, significantly influence attitudes toward organ transplantation in Indonesia. Both religions permit transplantation based on principles of compassion and humanity, emphasizing voluntary donation and prohibiting commercialization. The Indonesian Ulema Council (MUI) has issued Fatwa No. 13 of 2019, supporting these principles and providing guidance on the ethical and legal aspects of transplantation.

The issuance of Fatwa No. 13 of 2019 by the MUI was prompted by inquiries from the public and the Ministry of Health regarding the legal status of organ and body tissue transplantation. The fatwa clarifies that transplantation is permissible when it is done to save a life and is not for commercial purposes. It emphasizes the importance of informed consent, the safety of the donor, and the ethical considerations involved in transplantation. Overall, the fatwa serves as a guideline for both the public and the government, ensuring that organ transplantation practices in Indonesia adhere to religious, ethical, and legal standards.

The term "special criminal law" is employed to differentiate between criminal laws that are encompassed within the Criminal Code (KUHP) and those that exist outside of it. According to Andi Hamzah, the domain of general criminal law includes the KUHP itself along with any laws that amend or expand its provisions, while the special criminal law encompasses legislation that is separate from the KUHP but still has relevance to it[12].

Despite the absence of regulations concerning the sale of human organs in the Criminal Code, the issue is addressed in the newly enacted Criminal Code Law No. 1 of 2023, which will come into effect in 2026. This new law explicitly prohibits the sale of organs, body tissues, and human blood, and stipulates penalties including imprisonment and fines for violations. In addition to the provisions in the Criminal Code, the Health Law also takes a firm stance against the commercialization or sale of organs and body tissues under any circumstances. This law imposes similar penalties of imprisonment and fines for those found guilty of such activities[13].

Under the Health Law, the sale of human organs and tissues is classified as human trafficking, as it involves the exploitation of individuals for profit. This underscores the ethical and legal considerations surrounding the trade in human body parts. Moreover, the Health Law is clear that organ and tissue transplantation should be conducted solely for humanitarian purposes, such as the treatment of diseases and the restoration of health. Any commercial motives behind such practices are deemed unacceptable under this law. Those who contravene the prohibition on organ sales as outlined in the Health Law are subject to imprisonment and fines, reflecting the seriousness with which these offenses are regarded in Indonesian law[14].

2.2 Natural Law and Its Application to Organ Donation

Natural law, a foundational concept in legal philosophy, has a rich history and has been shaped by influential figures throughout time. Contrary to being a mere evolutionary process of the universe, natural law finds its roots in ancient Greek philosophy, particularly during the era of figures like Zeno and the Stoics. These philosophers, inspired by the inherent regularity of nature, believed that there was a purposeful direction guiding the universe, which extended to the realm of law. Ancient Greek philosophers, including Socrates, Plato, and Aristotle, further developed the concept of natural law by proposing the existence of a universal law that aligns with the natural order. Aristotle emphasized the distinction between human-made laws and a higher, natural law that corresponds to the fundamental principles of nature itself[7].

Thomas Aquinas, a prominent figure in medieval philosophy, integrated the classical theory of natural law into Christian theology. He distinguished between eternal law, which is the divine rational governance of the universe, natural law, which is the participation of human beings in eternal law through reason, and human law, which is derived from natural law but requires human reason to apply it to specific situations. Aquinas also recognized sacred law as divine law revealed in religious scriptures. Contrasting Aquinas's view, Hugo Grotius introduced a rationalistic concept of natural law, suggesting that the principles of law are rooted in human intellectual reasoning rather than divine command. According to Grotius, natural law principles are tested by human reason and their acceptance by societies worldwide, indicating a universal foundation for legal principles[15].

Natural law, one of the oldest streams in legal philosophy, has evolved through significant historical figures and their contributions. In ancient Greece, philosophers were inspired by the regularity of nature, leading them to believe in a purpose, target, and direction for the existence of law. This philosophical perspective, known as teleology, posits that nature and humanity have specific purposes and directions. Aristotle, influenced by his background in medicine and biology, viewed nature as having an inherent order and purpose. He believed that things in nature have a principle of motion and immobility within themselves. His doctrine of the four fundamental qualities—warmth, cold, wet, and dry—was foundational in ancient medicine, contributing to the understanding of health as a balance of these elements. Aristotle emphasized that the essence of things, including organs, determines their function, suggesting a teleological relationship where the function shapes the form of organs.

For Aristotle, nature acts spontaneously and is self-sustaining, with health reflecting the natural balance of elements. Medical knowledge, according to Aristotle, should respect this natural order, intervening only to restore balance when disrupted. Aristotle's concept of natural law aligns with the idea that human beings, as rational creatures, can understand and participate in this natural order, but should not impose artificial changes. Hypothetically, ancient Greek philosophers like Aristotle would likely not have accepted organ transplantation, as it involves external, accidental, and potentially violent intervention that disrupts the natural order.

Aristotle's view that nature is self-regulating and that health is a reflection of natural balance suggests a preference for minimal medical intervention, maintaining harmony with nature.

Christianity introduced the idea of nature as God's creation, distinct from divine intervention, which marked a shift from the self-referential view of nature. Descartes later claimed that nature could be explained without resorting to God, indicating a move towards a more mechanistic understanding of natural processes. In summary, while the text does not directly discuss natural law in the context of organ donation, it provides a philosophical backdrop that helps understand why ancient Greek philosophers, particularly Aristotle, would likely oppose such practices. They valued natural harmony and believed medical interventions should align with restoring this balance rather than introducing external changes [16].

Nature and disease might lack inherent meaning, as Spinoza argued that nature operates through mechanical laws without intentions. However, humans imbue these laws with meaning, striving for achievements beyond mere existence. Aristotle's concept of deliberation incorporates not only theoretical and technical knowledge but also judgment influenced by inter-subjectivity and culture. Phenomenologists emphasize the body's inherent wisdom and spontaneous movements, highlighting a vital force or "endogeneity" that involves a dialogue between voluntary and involuntary processes. Paul Ricœur describes this as a circular relationship, where human beings guide their bodies according to natural requirements. Disrupting the body's native spontaneity violates natural law, suggesting that decisions about organ transplantation should respect the body's intelligence and consider the broader implications. Recognizing the difficulty of clarifying natural intelligence, cautious deliberation is advocated, in line with Heidegger's concept of "letting be" (Gelassenheit), and Hegel's idea that thought gives meaning to nature. Kant's view that moments of crisis allow humans to transcend natural determinism and enter the realm of freedom implies that decisions about organ transplantation should consider the life stories of both donors and recipients, reflecting their experiences and the meanings they derive from them.

From the perspective of natural law, organ transplantation presents a complex and nuanced issue. Natural law emphasizes the inherent order and purpose found in nature, suggesting that human actions should align with this intrinsic balance. Aristotle's philosophy, for instance, underscores that everything in nature, including human organs, has a specific function and purpose shaped by its form. This implies that medical interventions should respect the natural order and only act to restore balance when it is disrupted. Organ transplantation, while a significant medical advancement, involves removing an organ from one body and placing it into another, a process that might be seen as disrupting the natural harmony and spontaneity of the body's functions. From a strict natural law viewpoint, such an intervention could be viewed as unnatural, as it imposes an external force onto the natural order of the body[17].

However, the practical benefits of organ transplantation cannot be ignored. It saves lives and restores health to individuals suffering from organ failure, aligning with the natural law principle of preserving life. This creates a moral and philosophical tension: while the procedure itself may appear to contradict natural law by disrupting the body's native spontaneity, it also fulfills a fundamental aspect of natural law by preserving and enhancing human life.

Natural law philosophers have provided both criticisms and support regarding the concept of organ transplantation, though they did not directly address the topic due to the historical context of their works. Thomas Aquinas, for instance, emphasized the principle of totality, which requires preserving the wholeness of the body. According to Aquinas, it is *prima facie* morally impermissible to remove a healthy part of the body that maintains its natural disposition, as the human being, as a whole biologically functioning unit, is considered a natural

good. This traditional view would prohibit any removal of organs from a live donor, whether through free donation or a compensated transaction, thus challenging the entire medical transplantation community[18].

At the 26th Congress of Urology, Pope Pius XII endorsed organ transplants, drawing on the teachings of St. Thomas Aquinas as articulated in the *Summa Theologica* (II, Question 65, Article I). He cited the Totality Principle, which posits that every part of the human body exists for the sake of the whole. This principle supports the idea that sacrificing one part of the body to save or enhance the life of the whole person is morally permissible. By endorsing organ transplants under this principle, Pope Pius XII emphasized the ethical legitimacy of such procedures within the framework of Catholic moral theology. He argued that, in certain circumstances, the removal of an organ from a donor to save or significantly improve the recipient's life aligns with the moral duty to preserve human life and the integrity of the person as a whole. This perspective not only supports the medical practice of organ transplantation but also integrates it within a broader ethical and theological context, reinforcing the idea that the collective well-being of the human body justifies the donation of organs to save lives. This endorsement by a prominent religious figure provided significant moral and ethical support for the advancement of organ transplantation, influencing both public perception and medical practice in the subsequent years[19].

However, the principle of totality has evolved with contemporary Thomists reinterpreting it to focus on preserving human biological functioning rather than mere anatomical wholeness. This shift recognizes the transplantation of duplicated organs, such as a kidney, as permissible if it does not substantially impair the body. John Locke's natural law philosophy also indirectly touches on organ transplantation. Locke argued that individuals have property in their own person and that society's purpose is to protect this property, life, and liberty. He believed that government should not infringe on personal liberties unless absolutely necessary. In a modern context, this could be interpreted to support the moral duty to donate organs to save lives, aligning with the promotion of societal good through charity and aid[20].

Immanuel Kant's arguments present a different perspective, opposing both the commodification and donation of human organs. Kant viewed the removal of an organ as partial self-murder and impermissibly using oneself as a means rather than an end. His categorical imperative stresses that one should act only according to maxims that can be universal laws and treat humanity as an end in itself. While Kant's philosophy would traditionally reject organ transplantation, contemporary interpretations of these philosophical arguments can vary. For instance, allowing organ transplantation to save lives can be seen as fulfilling a moral duty and respecting human dignity by promoting health and well-being[21].

In summary, natural law philosophers such as Aquinas, Locke, and Kant offer frameworks that have been reinterpreted to address the moral complexities of organ transplantation. These interpretations recognize the potential for organ donation to enhance human life and well-being, reflecting an evolving understanding of natural law in response to modern medical advancements.

2.3 The Principle of Beneficence and Organ Donor Incentives

Plato's natural order of human goods and Aquinas' "ordinance of reason" for the common good provide a philosophical foundation for understanding the moral implications of organ donation. Aquinas, like Plato, believes that laws should direct individuals towards the common good, which he defines as what benefits everyone in the community, not just the majority or specific classes. According to Aquinas, humans are rational and social beings who need each

other to achieve their ends, and the inclination to live in society is inherently good. Positive laws should promote the common good by ensuring the well-being of the community as a whole.

In the context of organ donation, this philosophical framework suggests that such acts could be considered morally good if they promote the common good by saving lives and improving the health of individuals within the community. The analogy of the 1974 Dodge Monaco illustrates that just as each part of the car must function well for the car to achieve its purpose of providing transportation, each individual's well-being contributes to the overall harmony and functioning of the community. Thus, organ donation can be seen as an act that supports the common good by contributing to the health and well-being of others.

Aquinas' view that the common good is different from individual good but that individual actions for the common good promote harmony within the community further supports the idea that organ donation aligns with natural law principles. By donating organs, individuals help order the community towards collective well-being and perfection, embodying the moral duty to act for the common good [22].

John Locke's principles of natural rights and individual freedoms, including the right to life and health, have significant implications for the field of organ transplantation. Locke's emphasis on the protection of individual liberties and the right to health aligns with the ethical considerations surrounding organ donation and transplantation. In the context of organ transplantation, Locke's ideas underscore the importance of respecting individuals' autonomy over their bodies and their right to make decisions about organ donation. This perspective supports the notion that individuals should have the freedom to donate their organs voluntarily, without coercion or undue influence.

Furthermore, Locke's advocacy for education and intellectual development can be applied to the promotion of public awareness and understanding of organ donation. By educating the public about the benefits and importance of organ donation, societies can empower individuals to make informed decisions about donation and potentially increase the availability of organs for transplantation. Additionally, Locke's views on property rights and the duty of governments to safeguard these rights can be extended to the realm of organ transplantation. The concept of property rights can be interpreted to include the idea that individuals have a certain degree of ownership over their organs. This perspective supports the idea that individuals should have control over the use of their organs and that governments should enact laws and policies to protect these rights[23].

In conclusion, John Locke's philosophy of natural rights and individual freedoms provides a compelling framework for understanding and addressing ethical issues related to organ transplantation. By emphasizing autonomy, education, and the protection of rights, Locke's ideas contribute to the ethical foundation of organ donation and transplantation practices.

2.4 Balancing Altruism and Compensation

In the context of organ transplantation, the balance between altruism and compensation is a key ethical consideration that intersects with the philosophical frameworks discussed. John Locke's philosophy, emphasizing individual freedoms and property rights, can be applied to the debate on whether individuals should be compensated for donating organs. Locke's emphasis on autonomy suggests that individuals should have the freedom to decide whether to donate their organs and whether to receive compensation for doing so. From this perspective, compensating organ donors could be seen as respecting their property rights and autonomy over their bodies[23].

On the other hand, Aquinas' principle of the common good could be interpreted to support altruistic organ donation. According to Aquinas, actions that promote the common good, such as saving lives through organ donation, are morally good. From this perspective, organ donation motivated by a desire to benefit others aligns with the principle of the common good.

The principle of beneficence, which emphasizes the obligation to act for the benefit of others, also comes into play. Plato and Aquinas both argue for laws and actions that promote the well-being of the community. In the context of organ donation, this principle could support both altruistic donation and the provision of compensation, as long as it ultimately benefits the community by increasing the availability of organs for transplantation[7].

In summary, the philosophical frameworks of Locke, Aquinas, and others provide valuable insights into the ethical considerations surrounding organ transplantation, including the balance between altruism and compensation. While these frameworks offer different perspectives, they all emphasize the importance of considering the well-being of individuals and communities in decisions about organ donation and transplantation.

To address the balance between altruism and compensation in organ donation, it is essential to establish clearer reward mechanisms that recognize and appreciate the selfless act of donation while maintaining ethical standards. One proposal is to implement a system of non-monetary rewards and incentives that acknowledge the donor's contribution without introducing financial incentives that could potentially exploit vulnerable populations or undermine the altruistic nature of donation[24]–[27].

1. **Recognition and Appreciation:** Donors could be publicly recognized for their contribution to saving lives through organ donation. This recognition could take the form of certificates, plaques, or other symbolic gestures that acknowledge the donor's altruism and highlight the importance of their contribution.
2. **Priority Access to Healthcare:** Donors could be given priority access to certain healthcare services as a form of appreciation for their donation. This could include expedited access to medical care or access to specialized services that may not be readily available to the general public.
3. **Education and Awareness Programs:** Donors could be invited to participate in education and awareness programs about organ donation. By sharing their experiences and knowledge, donors can help raise awareness about the importance of donation and encourage others to consider becoming donors.
4. **Counseling and Support Services:** Donors could be offered counseling and support services to help them cope with the emotional and psychological aspects of donation. This could include access to mental health professionals who can provide support and guidance throughout the donation process.
5. **Financial Reimbursement for Expenses:** While direct financial compensation for organ donation is not ethical, donors could be reimbursed for expenses related to the donation process, such as travel expenses, medical tests, and lost wages. This reimbursement would help alleviate the financial burden associated with donation without introducing monetary incentives.
6. **Health and Wellness Benefits:** Donors could be offered health and wellness benefits, such as access to fitness programs, nutritional counseling, or preventive health screenings. These benefits would not only show appreciation for the donor's contribution but also support their overall health and well-being.
7. **Community Engagement Opportunities:** Donors could be invited to participate in community service projects or other volunteer opportunities that allow them to

continue making a positive impact in their communities. This engagement would reinforce the idea of donation as a selfless act that benefits society as a whole.

By implementing these non-monetary reward mechanisms, we can recognize and appreciate the altruistic act of organ donation while ensuring that ethical standards are maintained. These rewards not only show appreciation for donors' contributions but also help support their well-being and encourage others to consider becoming donors.

3 Conclusion

In conclusion, the balance between altruism and compensation in organ donation can be delicately maintained through the implementation of clear reward mechanisms that recognize and appreciate donors' selfless contributions. By avoiding direct monetary incentives, which could compromise the ethical integrity of donation, non-monetary rewards and incentives can effectively acknowledge donors' altruism while upholding the principles of fairness and dignity. Public recognition, priority access to healthcare, education and awareness programs, reimbursement for expenses, health and wellness benefits, and community engagement opportunities are all viable ways to express gratitude to donors and encourage organ donation without resorting to financial inducements.

These reward mechanisms not only honor donors' altruistic acts but also serve to educate and inspire others to consider donation. By fostering a culture of appreciation and support for donors, we can uphold the ethical principles of organ donation while ensuring that those who make such generous contributions are duly recognized and respected. Through these measures, we can encourage more individuals to become donors, ultimately saving lives and improving the well-being of those in need of organ transplantation.

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