Determinants of online sperm donor success: how women choose

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ABSTRACT

Because the worldwide demand for sperm donors is much higher than the actual supply available through fertility clinics, an informal online market has emerged for sperm donation. Very little empirical evidence exists, however, on this newly formed market and even less on the characteristics that lead to donor success. This article therefore explores the determinants of online sperm donors’ selection success, which leads to the production of offspring via informal donation. We find that donor age and income play a significant role in donor success as measured by the number of times selected, even though there is no requirement for ongoing paternal investment. Donors with less extroverted and lively personality traits who are more intellectual, shy and systematic are more successful in realizing offspring via informal donation. These results contribute to both the economic literature on human behaviour and on large-scale decision-making.

KEYWORDS

Online sperm donor market; informal market; offspring; donor success; personality traits

JEL CLASSIFICATION

J13; D10

I. Introduction

Because an excessive demand for sperm donors has led to an acute shortage of gametes donors worldwide (Van Den Broeck et al. 2012; Yee 2009), an informal online market has emerged to accommodate additional demand. As yet, however, we have limited empirical understanding of how such a market works. Being a new phenomenon that is not subject to any uniform set of laws, the use of this market may be enhanced by factors such as resource constraints, information asymmetry, institutional or social discord, logistics issues, ongoing contact, perceived prejudice or simply just a lack of time. In some countries (e.g. Canada), the purchase, sale or advertisement of gametes is even illegal, with punishments including a fine up to $500 000 or/and imprisonment for up to 10 years (Yee 2009). Nevertheless, this market allows men and women to capitalize on the Internet’s capacity as a conduit for the sperm donation process.

The significant growth in the global demand for donated gametes over the last three decades has motivated researchers from a range of disciplines to explore the characteristics, attitudes and motivations of gametes donors (Riggs 1991; Thorn, Katzorke, and Daniels 2008; Van Den Broeck et al. 2012). The bulk of such research focuses predominantly on the motivation of men who donate their semen, primarily acknowledging the monetary and altruistic motivations in their decision-making process (Cook and Golombok 1995; Daniels 1987; Lui et al. 1995). Despite a large body of literature on such post-donation dynamics as contact and donor disclosure (Daniels et al. 2005; Jadva et al. 2011; Scheib and Cushing 2007), however, ex ante research that explores the demographic and physical characteristics or personality traits of gametes donors is limited (Hedrih and Hedrih 2012; Schover, Rothmann, and Collins 1992). Even less research is available on the men who donate in informal settings (Bossema et al. 2014; Riggs and Russell 2010), and to the best of our knowledge, this article is the first to include males that are donating gametes purely through unregulated websites and forums.

In the formal sector, donation agencies substantially coach donors to generate a profile that is saleable. For example, Almeling (2006) reports an agency assistant director saying ‘I don’t want you to be somebody that you’re not, but think of being..."
The survey URL was also downloaded by [Orta Dogu Teknik Universitesi] at 11:13 05 March 2016

II. Data and method

Data collection ran from 23 November 2012 to 1 March 2013 and began with the posting of the online survey’s URL on regulated (paid), semi-regulated and unregulated (free) online sperm donation forums and websites. The survey URL was also emailed to donors (inviting them to participate) who had posted an email address on any of the sites listed. All participant information, surveys and procedures (detailed in Whyte and Torgler 2015) were obtained and handled in accordance with the QUT Ethics guidelines (QUT Ethics Approval Number 1200000106).

The sample consists of 56 males who identified themselves as currently seeking to ‘donate my sperm to someone’ in an informal setting and were asked to complete a questionnaire. Although not large, the sample size is consistent with many sperm donor studies on the formal sector. In fact, as Van den Broeck et al. (2012) point out in their literature review, the median sample size for many studies is 52 (13). Our participants are between 23 and 66 years of age, with 94% being Caucasian, 84% self-identifying as heterosexual and 94% giving their current country of residence as Australia, Canada, the UK, Italy, Sweden or the US. Only 9% of the sample are students, with 77% reporting an undergraduate or higher level of educational attainment. 61% earned an annual wage greater than $50 000. Of those with children by donation, 73% currently had some form of ongoing contact (mail, email, phone, video link or even in person) with at least one of their donor children.

III. Results

Because the number of times a donor has realized offspring via informal donation is not normally distributed ($M = 3.089, SD = 4.933, min = 0, max = 23$), we use a negative binomial regression to handle overdispersion and include marginal effects (see Tables 1 and 2). Because of the number of available observations, we limit the number of independent factors to no more than nine. We rely on factors that recipients can most easily evaluate when interacting with donors, while also taking into account the individual characteristics in donor self-assessments. We find that income and health are positively correlated with being selected and hence with offspring success (see specification (1)). A one unit increase in income is linked on average with 0.728 more offspring success, statistically significant at the 1% level. Moreover, according to specification (2), the self-rated attribute of intellectual.
is very dominant compared with education, reducing the impact of annual income and reporting marginal effects of 1.196.

To understand this aspect better, we substitute intellectual with the self-rated attribute systematic. This latter reflects the fact that whereas formal donation requires only the provision of a sample in a medical setting at a time and place convenient to the donor, the unregulated online setting requires donors to be more organized, methodical and efficient. Online donation could thus incorporate logistical coordination, financial cost and precise timing to meet the needs of the recipient. In general, according to the evolutionary theory of parental investment (Trivers 1972), women bear a heavier cost in human reproduction, leading to a preference for more intelligent or systematic donors even though paternal investment may not be required post-insemination. Although the effect size for systematic is smaller than for intellectual, both income and health again become statistically significant when intellectual is not controlled for.

We also observe a U-shaped relation for age and offspring success.

Interestingly, when we retain intellectual because of its strong impact and add such factors as extraverted, lively and shy or fretful, being more extraverted or lively does not pay off while being shy does, suggesting that introverted and shy people enjoy a ‘success premium’. According to the research, not only is shyness associated with a preference for conversing online (Ebeling-Witte, Frank, and Lester 2007) but shy people choose smaller networks of friends and tend to choose friends who are also shy (Besic et al. 2009). The negative externality is particularly strong for the variable lively: a one-unit increase in liveliness reduces the number of offspring successes by more than one (1.344).

\*My highest level of education achieved at this point in time (1 = below Grade 10, 2 = Grade 10, 3 = Grade 11, 4 = Grade 12, 5 = Technical college (prevocational, trade college, apprenticeship), 6 = undergraduate university study (diploma, bachelor’s), 7 = university (graduate diploma, graduate certificate, master’s), 8 = doctorate/PhD.)
A minimally surprising finding is that recipients are less likely to choose the sperm of fretful men. Two studies by Murphy, Hall, and LeBeau (2001, 2003), for example, demonstrate that fidgeting is negatively associated with perceived intelligence, which may explain why fretful is negatively correlated with donor success. Being socially awkward, nervous or overtly outwardly oriented or active in initial encounters may also diminish recipient trust in the donor or recipient perceptions of donor confidence. The results reported in Table 2 also indicate that income remains statistically significant in three out of four cases even after intellectual is controlled for. Overall, personal characteristics matter more than physical traits like height, weight or health.

IV. Conclusions
Because the choice of a biological father is a major decision in any household, the new, emerging, informal market for sperm donation provides novel challenges and opportunities for investigation. Although in this article we limit empirical insights into the negative externalities of an informal online market that does not regulate donor quality, our results indicate that, in general, female choices in this informal environment seem carefully thought out. Personal attributes such as being intellectual, shy or systematic or having a certain level of income are rewarded, while the attributes extroverted, lively or fretful are punished. These results contribute to both the economic literature on human behaviour and on large-scale decision-making. Further research into this burgeoning market is warranted, both to assist those participating and to inform any potential future policy decisions.

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References


