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Outsourcing Wombs with Social Ignominy

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Abstract

In this note we characterize the 'outsourcing of womb' or 'rent a womb' contracts in terms of a hidden action framework with social ignominy and discrete effort. We show that the nature of optimum contracts change significantly with social ignominy compared to without social ignominy. Specifically we show that inefficiency (higher incentive payment compared to first-best to elicit high effort) is inherent if the surrogate suffers from a feeling of social ignominy stemming from her commercial motive which is not the case without social ignominy. Also with social ignominy the optimal contract becomes unique whereas multiple optimal 'first best' contracts are possible without social ignominy. Thus presence of 'social ignominy' and the consequent inefficiency from overall loss of surplus can provide one justification for India's recent banning of market driven gestational surrogacy contracts, which has been recently done in India through the tabling of the Surrogacy (Regulation) Bill, 2019 which attempts to stop the commoditization of wombs and babies on moral grounds. The bill has been passed in the lower house (Lok Sabha) but is yet to be passed by the upper house (Rajya Sabha) and then needs presidential consent before becoming a law.

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1. Introduction:

Outsourcing took a new dimension in India - infertile couples in large numbers from the U.S, Singapore, Britain, Taiwan, Nordic and other countries have been flocking to India in search of wombs for rent[1]. India's Assisted Reproductive Technology (ART) still has decent formal guidelines in which the custody right of the child is given to the intended parents (Indian Council of Medical Research (ICMR, 2005)). Decent medical facilities and cost effectiveness were the main driving force for this increase in demand. Because of this, couples from abroad felt comfortable from a legal perspective and were looking to have prospective Indian surrogates for their would-be child. Most importantly, in India, commercial surrogacy has been legal (since 2002 but subject to ICMR guidelines) although the Surrogacy (Regulation) Bill, 2019 attempts to ban market driven gestational surrogacy contracts. Although it keeps open the possibility of 'altruistic surrogacy agreements' where explicit financial incentives are non-existent. The rationale is that financial transaction leads to commoditization of woman's wombs and babies which fails a 'moral' cut-off whereas something done without monetary transaction passes that 'morality test'. Therefore the commercial 'rent a womb' industry might be deemed illegal if the Surrogacy (Regulation) Bill tabled in 2019 is passed into a law.

1.1. Surrogacy (Regulation) Bill, 2019: A Primer

The Indian Surrogacy (Regulation) Bill, 2019 was introduced by the Minister of Health and Family Welfare in the lower house of parliament on July 15, 2019. The bill proposes to prohibit commercial surrogacy whereas a window for altruistic surrogacy (defined in section 1.2) is kept open. It also proposes restrictions and criteria on who could become a surrogate mother and also includes sanctions if a baby born out of surrogacy is abandoned or any commercial activity is observed and proved. Also the bill intends to stop possible exploitation of financially needy women. Overall the main thrust is on banning commercial surrogacy which is deemed unethical whereas altruistic surrogacy is allowed since the perception is that it passes the 'ethical test'. The bill has been passed in the lower house (Lok Sabha) but is yet to be passed by the upper house (Rajya Sabha) and then needs presidential consent before becoming a law. From the upper house the bill was referred to a select committee on Nov 21, 2019 for review and the report of the select committee is supposed to be discussed in the budget session in February 2020[2].

1.2. Understanding surrogate motherhood:

According to the Merriam-Webster online dictionary, a surrogate mother is defined as "a woman who becomes pregnant usually by artificial insemination or surgical implantation of a fertilized egg for the purpose of carrying the fetus to term for another woman, who is medically incapable of doing so." The couple, who hires a surrogate, is known as the intended parents or the commissioning couple (ACOG, 2004). From a medical point of view surrogacy can take two

[1] In 2016 the commercial surrogacy industry in India is worth more than 1 billion US dollars (690 million UK pounds). Although the exact numbers of surrogacy births are not known, in 2012 the UN estimates there were about about 3000 commercial surrogacy clinics in India. (Bhalla, Nita; Thapliyal, Mansi (30 September 2013). "India seeks to regulate its booming surrogacy industry". Medscape. Reuters Health Information)

[2] For more see http://prsindia.org/sites/default/files/bill_files/Bill%20text%20as%20passed%20by%20LS-%20Surrogacy%20bill%2C%202019.pdf

forms: (i) straight (natural/ traditional) and (ii) gestational (or host). In a straight surrogacy, the sperm of the intended father is used to inseminate the surrogate[3]. Therefore, the surrogate becomes both the genetic and gestational mother whereas the intended mother becomes the rearing mother. In gestational surrogacy, the egg and sperm of intended parents are fertilized externally and the embryo transferred to the uterus of the surrogate. This process is known as In-vitro Fertilization and Embryo Transfer (henceforth IVF-ET). Here, the surrogate is only a gestational carrier and the intended parents are the biological (or genetic) parents[4] [5]. From a legal perspective surrogacy contracting can be of broad two types – 'altruistic' where no money is paid to the surrogate for her 'services' (mainly in excess of necessary medical expenses) and 'commercial' where money is paid to the surrogates for her services (in excess of medical expenses)[6]. In this paper we specifically work with 'gestational commercial surrogacy contracts' where money (or incentives) is paid to the surrogates for her 'services' (in excess of necessary medical expenses).

One can address large number of issues on this topic – legal, ethical and economic and one cannot possibly do justice to all dimensions of the problem at the same time (for more on the literature see (Gostin, 1988) (Hewitson, 1997) (Krawiec, 2009) (Posner, 1989) (Radin, 1987), Marwah (2018), Saxena (2012) et. al.). There are issues like, why in practice we see very restrictive policies on surrogacy agreements in many countries (see (Smerdon, 2008) (Sandel, 2012)), what the 'sacredness' of human life means in an ethical and/or economic context, whether this market can be classified as an 'obnoxious market" (see (Kanbur, 2004)) or whether such markets should be prohibited outright or regulated (Hale, 2013). In this paper we abstract from such issues.

We in this paper try to characterize the optimal gestational surrogacy contract in terms of a simple moral hazard framework with limited liability but with discrete efforts[7]. We assume that the surrogate primarily views this as an economic activity although she might have some altruism towards the intended parents (Vora, 2013). We attempt to show that inefficiency due to excessive incentive payment vis-a-vis contractible effort is likely when the surrogate has lower alternative income prospect whereas an efficient outcome is possible when the surrogate has higher outside option. In the latter situation we get multiple optimal contracts (outcome contingent wage contracts)[8]. Next comes our primary contribution. We extend our analysis by assuming that the surrogate suffers from a feeling of social ignominy since she views this as a money making opportunity[9] and society looks down upon her for renting her womb commercially. This perspective is further confirmed in the existing literature on negative attitudes towards commercialization of surrogacy (Kovacs, Gavor, Morgan, Wood, Forbes, & Howlett, 2003), (Krishnan, 1994), (Lasker & Murray, 2001). With this assumption the optimal contracts become unique. Also noteworthy is the fact that with social ignominy all optimal contracts are inefficient. Therefore this paper provides a non-trivial theoretical justification (i.e. the presence of social ignominy leading to inefficiency) for the introduction of the Surrogacy

[3] These kind of surrogacy are rare these days.
[4] For more details, see ICMR 2004, www. ivf-infertility.com
[5] We ignore the case where donor sperm is combined with donor or surrogate eggs because the child is not genetically related to intended parents.
[6] Data on altruistic surrogacy is not easily available since it happens mainly within family.
[7] For more details see (Itoh, 2004).
[8] Defined later.
[9] For more details see CSR Report on 'Surrogate Motherhood – Ethical or Commercial' (2012), and (Aravamudan, 2014).

(Regulation) Bill, 2019. In this paper, we are not making any value judgments about commercial surrogacy. We present an alternative economic argument that might support the introduction of this bill. There are umpteen arguments against the introduction of this bill.[10]

The paper is structured as follows. Section 2 presents a standard baseline bilateral contracting model between a set of intended parents and a surrogate having little or no wealth (i.e. limited liability binds). In section 3 we introduce social ignominy of the surrogates and examine how the nature of the optimal contract changes. Section 4 presents a discussion and possible extensions. Section 5 concludes the paper.

2. Surrogate's Moral Hazard with Discrete Effort : The Baseline Structure

We explore a relationship between a set of risk neutral 'intended parents' and a risk neutral 'surrogate mother' who will be willing to bear a child for them through IVF-ET. We assume that the couple is otherwise medically capable, but the wife is incapable of carrying a pregnancy till term because of some medical problems[11]. This implies that the couple may have a biological child if only a 'surrogate womb' is available. The intended parent (IP henceforth) is assumed to prefer a biological child to an adopted one. After the surrogate (S henceforth) is selected the IP and the S enter into a contract. The contract is defined as follows: the contract offers a basic compensation $\underline{t}$ if the process fails and $\overline{t}$ if it is successful[12] (i.e., a normal and healthy baby is delivered). Therefore de facto $\Delta t = \overline{t} - \underline{t}$ becomes the incentive bonus paid to the surrogate. After the contract is signed IVF-ET takes place and the surrogate starts taking care of the unborn child.

The S's effort represents the child-specific care taken during the period of pregnancy. Effort is discrete, and can either be 'high', denoted by $e = 1$ or 'low' denoted by $e = 0$. High effort generates a successful outcome with probability p_1 while low effort generates a successful outcome with probability p_0 such that $1 > p_1 > p_0 > 0$ [13]. Therefore the outcome (health of the baby) which is assumed to be verifiable[14] is only a noisy signal of the S's effort. Effort is neither observable nor verifiable. Cost of effort is given as $c(e)$. We assume that $c(e) = d > 0$ if effort is high, whereas low effort is costless, i.e. $c(e) = 0$. The sequence of events is as follows. The I.P offers a contract $\{\overline{t}, \underline{t}\}$ contingent on the outcome of the project. The surrogate decides whether to accept or reject the contract. If she rejects, the game ends and she receives her reservation utility $\overline{U} \geq 0$ (which she gets from an alternative job). If she accepts she chooses a level of effort. The outcome of the project is then realized. If the project succeeds the IP receives utility $V > 0$ and offers the surrogate a transfer $\overline{t}$. If the project fails the IP receives zero and

[10] For more on positives and negatives of different kinds of surrogacy see Banerjee (2013).

[11] Like (i) absence or malformation of uterus, since birth, (ii) hysterectomy (iii) diabetes, heart and kidney diseases, multiple sclerosis, (iv) repeated miscarriages (www. ivf-infertility. com, (Stuhmeke, 1996)). We also refer to section 1 of (Banerjee, S. Basu, S., 2009) for more details.

[12] That is, the child born thereof is health-wise normal and do not suffer from any detectable illness. For example, an Australian couple was reported to abandon the twin brother of the baby they had from a Thai surrogate due to the detection of Down's syndrome in the baby boy and had refused to accept parental rights of the baby. For full report see http://www.theguardian.com.

[13] This is in the sense of first order stochastic dominance.

[14] Here, it is assumed that given the modern range of technologies, the health of the baby may be clearly verified through a battery of tests.

must pay the surrogate $\underline{t}$. We assume that the surrogate derives an altruistic pleasure λV from helping out an infertile couple if only the process succeeds. We assume that $\lambda \epsilon (0,1)$. To focus exclusively on commercial contracts we assume that $\lambda < \frac{d}{\Delta p V}$[15]. Throughout the paper we assume that it is optimal for the IPs to elicit high effort from the surrogate[16].

2.1. Optimal Contracts

For a given level of e the expected pay-off of the intended parents is therefore ${\pi_{IP}}^e = p_e.[V - \Delta t] - \underline{t}$. The expected pay-off of the surrogate is ${\pi_S}^e = \underline{t} + p_e[\lambda.V + \Delta t] - c(e)$. The surrogate is assumed to have little or no wealth and we assume that she is protected by limited liability represented as:

$$\bar{t} \geq \underline{t} \geq 0 \qquad \text{(LLS)}$$

Limited liability constraint ensures that the surrogate is not paid a negative wage if the surrogacy fails. Therefore $C = \left[\{\bar{t}, \underline{t}\} \middle| \{\bar{t}, \underline{t}\}\, satisfies\ (LLS)\right]$ denotes the set of feasible contracts. Now suppose the IP wants to elicit high effort from the surrogate. The participation constraint (PCS) and the incentive compatibility constraint (ICS) of the surrogate are, respectively, given as follows:

$$\underline{t} + p_1[\lambda V + \Delta t] \geq d + \overline{U} \qquad \text{(PCS)}$$

$$\Delta p[\lambda V + \Delta t] \geq d \qquad \text{(ICS)}$$

where $\Delta t = \bar{t} - \underline{t}$ and $\Delta p = p_1 - p_0$.

The participation constraint ensures that the surrogate gets more than her outside option and therefore accepts the contract. The incentive compatibility constraint ensues that the surrogate in her interest chooses (puts in) high effort over low effort.

Thus, the IP's optimization problem becomes

$$\max_{\{\bar{t}, \underline{t}\}} {\pi_{IP}}^1 = p_1[V - \Delta t] - \underline{t}$$

subject to

$$\underline{t} + p_1[\lambda V + \Delta t] \geq d + \overline{U} \qquad \text{(PCS)}$$

$$\Delta p[\lambda V + \Delta t] \geq d \qquad \text{(ICS)}$$

$$\underline{t} \geq 0 \qquad \text{(LLS)}$$

Put differently the IP solves for the optimal contract $\{\bar{t}^*, \underline{t}^*\} \epsilon\, C$ that minimizes their expected payment $\underline{t} + p_1 \Delta t$ subject to (PCS), (ICS). Let us first assume that the surrogate's effort is verifiable. Any contract in C that satisfies the (PCS) with equality $\underline{t} + p_1[\lambda V + \Delta t] = d + \overline{U}$ will be a first best contract. Following Figure 1, the cost minimizing set of contracts is found along the (PCS). The first best range of contracts corresponding to each level of the surrogate's outside option $\overline{U}$ can be tracked along AB (if $\overline{U} = 0$), A'B' (if $\overline{U} = \frac{p_0}{\Delta p} d$), and A"B" (if $\overline{U} > \frac{p_0}{\Delta p} d$) which is above the 45^0 line implying the range where $\bar{t} \geq \underline{t}$. To analyze the optimal contracts under unobservable effort we take the following two sub cases:

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[15] Otherwise, zero incentive payments will be optimal, i.e. contracts like $\{\bar{t} = 0,\ \underline{t} = 0\}$ will be optimal. We rule this out. One can easily relax this assumption without qualitatively altering the results of our paper.

[16] Implicitly we assume that $V \geq V^* = \frac{d + \bar{U}}{[\Delta p + \lambda p_1]}$ holds. This will ensure that the intended parents will optimally elicit high effort from the surrogate.

Case 1: $\overline{U} < \frac{p_0}{\Delta p} d$

This is the case where S has sufficiently low outside income opportunities. One can easily show, in this case, that the first best set of contracts cannot be implemented under non-verifiable effort. This will be clear from Figure 1, where incentive compatible range of contract do not include the first best range of solutions. To show this, fix $\overline{U} = 0$. Assuming that the limited liability binds we get one first best contract as $\left\{\bar{t} = \frac{d}{p_1} - \lambda V, \underline{t} = 0\right\}$. Putting it in ICS we get that $\frac{\Delta p}{p_1} d < d$ implying that the first best contract doesn't satisfy ICS. So no first best contract can be implemented if the surrogate's outside option is sufficiently low. In this case, the optimal contract is found where the (ICS) intersects the $\underline{t} = 0$ line and therefore the unique optimal contract is obtained at point A, i.e. $\{(\frac{d}{\Delta p} - \lambda V),\ 0\}$. Note that at this optimum PCS will not bind. Therefore we can state the following result:

Proposition 1:

When surrogate's outside option is sufficiently low ($\overline{U} < \frac{p_0}{\Delta p} d$), the unique optimal contract will be as follows: $\left\{\bar{t} = \frac{d}{\Delta p} - \lambda V, \underline{t} = 0\right\}$. No first best is implementable in this case. More altruistic surrogates need lower monetary incentive to put in high effort.

Case 2: $\overline{U} \geq \frac{p_0}{\Delta p} d$

When S has sufficiently high outside income opportunities, the LLS may or may not bind at the optimum and the PCS will always bind. Thus, assuming LLS is binding, for $\overline{U} > \frac{p_0}{\Delta p} d$ we have one first best contract as $\left\{\bar{t} = \frac{d+\overline{U}}{p_1} - \lambda V, \underline{t} = 0\right\}$ which is also incentive compatible. This can be shown by putting in the contract in the ICS which yields $\frac{\Delta p}{p_1}(d + \overline{U}) \geq d$ for $\overline{U} \geq \frac{p_0}{\Delta p} d$. This corresponds to point A'' in Figure-1. This implies that we have a first best contract that can be implemented even if effort is non-verifiable. In fact for $\overline{U} > \frac{p_0}{\Delta p} d$ we have a continuum of first best contracts which are incentive compatible when effort is non-verifiable and this is given by the stretch $A''\tilde{B}$ on PC". The set of first best contracts which are also incentive compatible can be given as $\bar{t}^* \in \left[\left(\overline{U} + \frac{1-p_0}{\Delta p} d - \lambda V\right), \left(\frac{d+\overline{U}}{p_1} - \lambda V\right)\right]$ and the corresponding $\underline{t}$ can be found from the binding participation constraint of the surrogate i.e. $\underline{t} + p_1[\lambda . V + \Delta t] = d + \overline{U}$. When $\overline{U} = \frac{p_0}{\Delta p} d$, the optimum is at the intersection of the PCS and the ICS on the vertical axis $\underline{t} = 0$. Here the PCS binds and therefore we have a unique second best optimal contract at $\{\left(\frac{d}{\Delta p} - \lambda V\right), 0\}$. This is given by point A′.

Proposition 2:

For sufficiently high outside option of the surrogate such that $\overline{U} \geq \frac{p_0}{\Delta p} d$, under non-observability, the set of optimal contracts can be given as follows:

(a). If $\overline{U} = \frac{p_0}{\Delta p} d$ then $\{\left(\frac{d}{\Delta p} - \lambda V\right), 0\}$is the unique optimal contract.

(b). If $\overline{U} > \frac{p_0}{\Delta p} d$ *there exists multiple optimal contracts given by* $\bar{t}^* \in \left[\left(\overline{U} + \frac{1-p_0}{\Delta p} d - \lambda V \right), \left(\frac{d+\overline{U}}{p_1} - \lambda V \right) \right]$ *and* $\underline{t}^*$ *found from* $\underline{t} + p_1[\lambda . V + \Delta t] = d + \overline{U}$.

(c). All the above contracts are first-best. Again more altruistic surrogates need lower monetary incentive to put in high effort.

When the surrogate has low outside option optimal incentive payments are independent of $\overline{U}$ and this is due to the fact that the PCS is non-binding. When outside option is sufficiently high such that PCS binds higher incentive payments should be paid for the loss of outside option of the surrogate. Also the surrogate's optimal bonus falls with an increase in altruism. Finally, all optimal contracts for higher $\overline{U}$ are first best since in this case the limited liability doesn't bind and with risk-neutral agents moral hazard doesn't lead to a welfare loss with non-binding limited liability.

3. Introducing Surrogate's Social Ignominy:

We now introduce the concept of social ignominy and attempt to examine its effect on the optimal organization of surrogacy contracts. Therefore this model will be a discrete effort extension of (Banerjee, 2013). The concept is something like the following: we assume that the surrogate experiences a feeling of social ignominy from the fact that she is renting her womb in exchange for money. This might stem from the fact that the surrogate perceives that people will look down upon her commercial motive in helping out the infertile couple and this will be seen as violation of traditional social norms of procreation. One implicit assumption that we make is that everybody gets to know that she has rented her womb and is motivated by the monetary gain attached to it[17]. Specifically, we assume that the surrogate's social ignominy is attached to her receiving $\Delta t = \left(\bar{t} - \underline{t} \right)$ in case of success which can be interpreted as an incentive bonus if a normal baby is delivered whereas $\underline{t}$ can be interpreted as necessary medical expenses. This incentive bonus captures the commercial motive in (Banerjee, 2013) and we follow the same approach here.

The model is as follows: we assume that though the actual pecuniary incentive offered by the intended parents is Δt, yet the surrogate perceives her received incentive payment as $\beta \Delta t$. Therefore $(1 - \beta)$ fraction of actual incentive payment can be thought of as the surrogate's loss from the feeling of social ignominy. A lower β represents a higher level of social ignominy. The expected payoff from effort e as perceived by the surrogate in this case will be $\pi_S{}^e = \underline{t} + p_e[\lambda V + \beta \Delta t] - c(e)$. Therefore the perceived participation constraint, incentive compatibility constraint and the limited liability constraints in the presence of social ignominy are given as:

$$p_1[\lambda V + \beta \Delta t] + \underline{t} \geq d + \overline{U} \qquad \text{(PCS)}$$

$$\Delta p[\lambda V + \beta \Delta t] \geq d \qquad \text{(ICS)}$$

$$\underline{t} \geq 0^{18} \qquad \text{(LLS)}$$

[17] We could assume that with probability q (say) everybody gets to know that the surrogate takes money. In that case the surrogate being a risk-neutral agent will have an expected social ignominy. Even with this qualitatively our results will hold. Ours is a special case where q=1.

[18] The relevant perceived limited liability is more appropriately given as $\beta \underline{t} \geq 0$, that is even when the project fails the fixed pay must count in the compensation for her loss of prestige. Since $\beta \in (0, 1)$ we assume the limited liability is practically unaffected by the surrogates perception, and (LLS) is the relevant constraint.

In this modified framework when effort is verifiable the first best set of contracts can again be formalized as $\{(d + \overline{U} - p_1\lambda V),\ (d + \overline{U} - p_1\lambda V)\}$ for any given $\overline{U}$. In terms of Figure-2, if $\overline{U} = 0$, the unique first best contract is found at point B. If $\overline{U} = \frac{p_0}{\Delta p}d$ then the optimal first best contact is given by the point B' and for $\overline{U} > \frac{p_0}{\Delta p}d$ the optimal contract can be shown by the point B''. The optimal expressions can be easily calculated by substituting appropriate values of $\overline{U}$. Therefore in terms of Figure-2 the points B, B', B" represents the unique first-best contracts corresponding to the specified $\overline{U}$ values given in the figure. Under non-verifiability the second best optimal contracts must satisfy the ICS with equality and can be tracked along the IC-line in Figure 2 at A' corresponding to $\overline{U} \leq \frac{p_0}{\Delta p}d$ and $\tilde{B}$ corresponding to $\overline{U} > \frac{p_0}{\Delta p}d$. Therefore the points B, B' or B" are not achievable (can't be reached given ICS) and therefore no first best contract can be implemented. Also in the presence of social ignominy, the PCS is relatively steeper than the iso-profit lines, and therefore we get unique optimal solutions. Succinctly the optimal second-best contracts may be characterized as below:

Proposition 3: *In presence of social ignominy of the surrogate*

(a) If surrogate's outside option is sufficiently low $\overline{U} \leq \frac{p_0}{\Delta p}d$*, the optimal contract in this case will be* $\{\frac{1}{\beta}\left(\frac{d}{\Delta p} - \lambda V\right), 0\}$*. The limited liability will bind in this situation.*

(b) If $\overline{U} > \frac{p_0}{\Delta p}d$ *, the optimal implementable contract is* $\{\bar{t}^* = \overline{U} + \frac{1}{\beta}\left[(1 - \beta p_0)\frac{d}{\Delta p} - \lambda V\right],$ $\underline{t}^* = \left(\overline{U} - \frac{p_0}{\Delta p}d\right)\}$*. The limited liability will not bind.*

(c) If effort cannot be contracted, the first best cannot be implemented irrespective of whether limited liability binds or not. All the optimal second best contracts are unique.

(d) In all the above cases increased social ignominy (lower β*) leads to an increase in the incentive payments.*

The formal proof will be similar to that of proposition-2 and we omit it here for brevity. It is interesting to note how the nature of the optimal contract changes with social ignominy. When $\overline{U}$ is very low, PCS doesn't bind, but the ICS and LLS binds. Given LLS binding $\underline{t} = 0$ and therefore if β falls the IPs should optimally increase $\bar{t}$ such that LLS is satisfied and binds. When $\overline{U}$ is sufficiently high such that both PCS and ICS binds the same intuition holds. A fall in β has to be compensated by an increase in $\bar{t}$ such that both the PCS and ICS is satisfied. This makes the optimal contracts for the IPs more costly and therefore first best is not achievable. Finally because $\beta \in (0, 1)$ the slope of the PCS becomes steeper vis-à-vis the iso-payoff curves of the IPs, the optimal contracts (least cost points) for the IPs are now unique. This is in contrast to the standard case without social ignominy where the slopes of the PCS and the iso-payoff curves of the IPs are the same and there we get multiple optimal contracts. Thus with social ignominy no first best contract is implementable and therefore there is welfare loss. This provides one non-trivial economic explanation for the banning of commercial surrogacy that the Surrogacy (Regulation) Bill of India, 2019 intends.

4. Discussion and Extensions:

Alternatively, one can introduce the concept of social ignominy of the intended parents. Specifically we can assume that the intended parents experience a feeling of humiliation among peers and relatives once it is recognized that in order to have a biological child the couple has offered money to hire a surrogate[19] (for supporting literature see (Kovacs, Gavor, Morgan, Wood, Forbes, & Howlett, 2003) (Blyth, 2007) (Akker, 2007)). Put differently, the childless couple perceives that the society will criticize the "commercial exchange" of a baby through surrogacy on ethical grounds. For the sake of simplicity one can assume that everybody gets to know that the couple has managed to have a child through commercial surrogacy. Given this we can model social ignominy of the intended parents as follows: we capture it as an increase in the cost of a successful project from $\bar{t}$ to $(\theta\bar{t})$. The parameter $\theta > 1$ denotes the social ignominy of the intended parents. If the project fails, the intended parents may choose not to admit hiring a surrogate and hence evade the social humiliation. Henceforth, the model is an identical treatment presented in section-3 and we may state the main findings as follows: a first best contract is never implementable under non-observable effort. Also the second best solution is found to be unique corresponding to each level of the surrogate's outside option.

5. Conclusion:

In this paper we characterize the optimal gestational surrogacy contract in terms of a simple hidden action framework with limited liability but with discrete efforts. Here the implicit assumption is that the surrogate primarily views this as an economic activity. We show that inefficiency is likely when the surrogate has lower alternative income prospect whereas we get multiple efficient contracts when the surrogate has higher outside option. Next we address the interesting issue of social ignominy assuming that the surrogate suffers from a feeling of social ignominy since she views this renting a womb activity as a money making opportunity and feels that the society will look down upon her because of this. With this feature the optimal contracts become unique. Interestingly with social ignominy all optimal contracts are inefficient. The reason is that the intended parents now have to offer higher incentive bonus and compensate the surrogate for the loss due to the feeling of social ignominy. This makes the optimal contracts costly and results in welfare loss. This provides a theoretic economic justification for the introduction of the Surrogacy (Regulation) Bill in India, 2019 which attempts to ban arms length gestational surrogacy contracts, viz. the possible 'presence of social ignominy' and the resulting inefficiency in such markets.

[19] The underlying assumption is it is a common knowledge among social circle of the couple that the wife is unlike to conceive/carry a pregnancy under normal circumstances.

List of Figures:

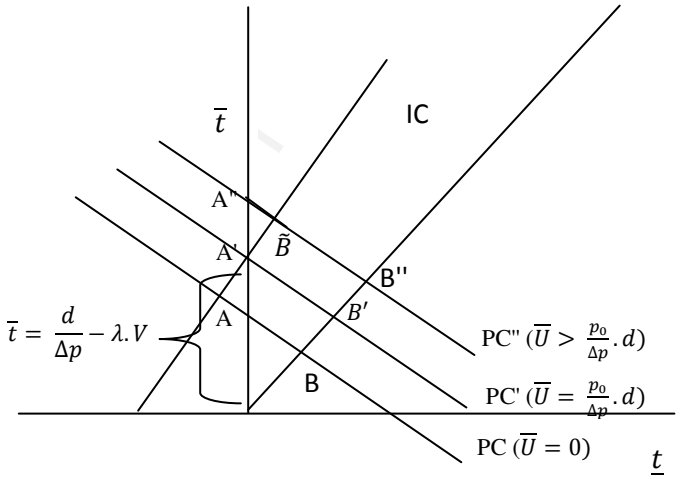

Figure 1: Tracking the implementable first-best and second best contracts (without social ignominy)

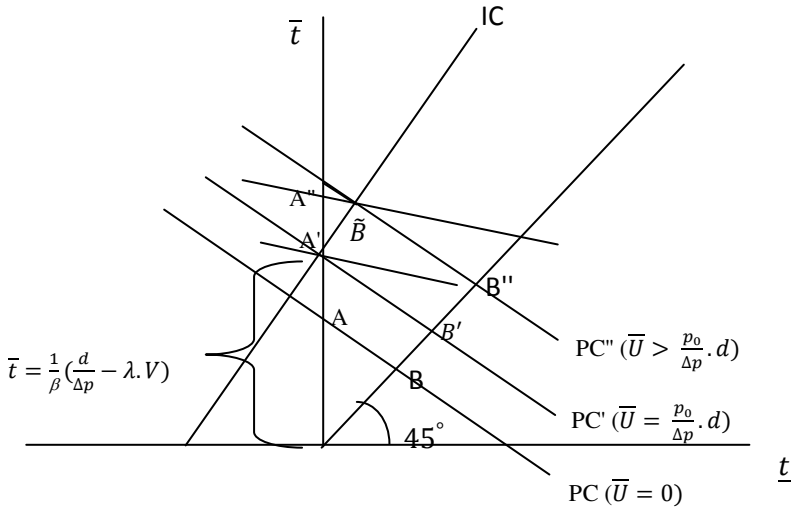

Figure 2: Tracking the optimal implementable contracts under social ignominy.

Reference:

ACOG (2004) “Surrogate Motherhood” in *Ethics in Obstetrics and Gynecology* Second Edition, The American College of Obstetricians and Gynecologists (ACOG) Committee Opinion 397.

Akker, O. B. (2007) “Psychosocial Aspects of Surrogate Motherhood” *European Society of Human Reproduction and Embryology* Oxford University Press 13(1), 53–62. Available at: http://humupd.oxfordjournals.org.

Aravamudan, G. (2014) *Baby Makers: The Story of Indian Surrogacy,* HarperCollins Publishers India Limited: India.

Banerjee, S. (2013) “Gestational Surrogacy Contracts: Altruistic or commercial? A Contract Theoretic Approach” *The Manchester School* 81(3), 438–460.

Banerjee, S. and S. Basu (2009) “Rent a Womb: Surrogate selection, Investment Incentives and Contracting” *Journal of Economic Behavior and Organization* 69, 260-273. (Also see SSRN Working Paper # 894022 (2006)).

Bhalla, N. and T. Mansi (30 September 2013). "India seeks to regulate its booming surrogacy industry". Medscape. Reuters Health Information).

Blyth, E. (2007) “‘Not a primrose path’: Commissioning parents' experiences of surrogacy arrangements in Britain” *Journal of Reproductive and Infant Psychology* 13(3-4), 185-196.

Centre for Social Research (2012) "Surrogate Motherhood: Ethical or Commercial". Available at: www.csrindia.org.

Gostin, L. (1988) “A Civil Liberties Analysis of Surrogacy Arrangements” *Journal of Contemporary Health Law and Policy 1*7, 432-454. Available at: http://scholarship.law.edu/jchlp/vol17/iss2/5.

Hale, B. E. (2013) “Regulation of International Surrogacy Arrangements: Do we regulate the market or fix the real problems?” *Suffolk Transnational Law Review* 36(3), 501-526.

Hewitson, G. (1997) “The Market for Surrogate Motherhood Contracts” *The Economic Record* 73(222), 212-224.

Indian Council of Medical Research (2005) *National Guidelines for Accreditation, Supervision and Regulation of ART Clinics in India* Ministry of Health and Family Welfare, GOI.

Itoh, H. (2004) Moral Hazard and Other-Regarding Preferences *The Japanese Economic Review* 55(1) 18-45.

Kanbur, R. (2004) "On Obnoxious Markets" in *Globalization, Culture and the Limits of the Market: Essays in economics and Philosophy* by S. Cullenberg and P. Pattanaik (eds.), Oxford University Press, India, 39-61.

Kovacs, G. T., G. Morgan, E. C. Wood, D. Howlett and C. Forbes (2003) "Community Attitudes to Assisted Reproductive Technology: A 20-Year Trend" *Medical Journal of Australlia* 179, 536-538.

Krawiec, K.D. (2009) "Altruism and Intermediation in the Market for Babies" Washington and Lee Law Review 66(1), 203-157.

Krishnan, V. (1994) "Attitudes Toward Surrogate Motherhood in Canada" *Health Care for Women International* 15 (4), 333-357.

Lasker, J. and D. E. Murray (2001) "Attitudes Toward Technologies for Conception: A 15-Year Follow Up" *Journal of Applied Social Psychology* 31 (10), 2165-2183.

Marwah, H (2018). "The ethics of Surrogacy", www.birmingham.ac.uk/news/thebirminghambrief/items/2018/09/the-ethics-of-surrogacy.aspx

Posner, R. (1989) "The Ethics and Economics of Enforcing Contracts of Surrogate Motherhood" *The Journal of Contemporary Health Law and Policy* 5(21), 21-31. Available at: http://chicagounbound.uchicago.edu/journal_articles.

Radin, M. J. (1987) "Market-Inalienability" *Harvard Law Review* 100 (8), 1849-1937.

Sandel, M. (2012) "What Money Can't Buy: The Moral Limits of Markets" Farrar, Straus and Giroux, New York.

Saxena, P, A. Mishra and S. Malik, (2012), Indian Journal of Community Medicine, Oct-Dec; 37(4): 211–213.

Smerdon, U. R. (2008) "Crossing Bodies Crossing Borders: International Surrogacy between the United States and India" *Cumberland Law Review* 39(1), 15-85.

Stuhmeke, A. (1996) "For love or Money: The Legal Regulation of Surrogate Motherhood" *Murdoch University Electronic Journal of Law* 3(1), 1-27. Available at: http://www.murdoch.edu.au/elaw/issues/v3n1/stuhmck1.html.

Vora, K. (2013) "Potential, Risk, and Return in Transnational Indian Gestational Surrogacy" in Potentiality and Humanness: Revisiting the Anthropological Object in Contemporary Biomedicine *Current Anthropology* The University of Chicago Press, 54(S7), S97-S106.

Websites:

www.ivf-infertility.com (Last accessed on 10/01/2020)

https://www.theguardian.com/global-development/2016/apr/01/outsourcing-pregnancy-india-surrogacy-clinics-julie-bindel (Last accessed on 03/01/2020)

http://www.theguardian.com (Last accessed on 05/01/2020)

http://prsindia.org/sites/default/files/bill_files/Bill%20text%20as%20passed%20by%20LS-%20Surrogacy%20bill%2C%202019.pdf (Last accessed on 15/01/2020)