Privatizing adoption and foster care: Applying auction and market solutions

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Abstract

Hard to adopt children remain in foster care for a long time and are often shifted from one temporary arrangement to another. In this paper, we present and evaluate the privatization of the administrative aspects of adoption and foster care in Kansas, Michigan, and Illinois. The Illinois model which permitted the most competition among private and public providers achieved the best results in increasing adoptions and eliminating inefficient providers. A national adoption market with ubiquitous information is recommended. Then, we apply a modern economic theory of auctions to the adoptive process. This will help solve the problem of children languishing in foster care and provide additional resources to assist adoption of hard to place children.
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1. Introduction

Hard to adopt children remain in foster care for a long time and are often shifted from one temporary arrangement to another. Some children reach adulthood without ever having achieved permanency. In addition, the management of these services has largely been by state government monopolies where spending is usually higher and quality of service is lower than in competitive markets.

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There are both high social costs and government expenditures for foster care. Higher incidence of criminal behavior is associated with growing up without family ties and the lack of permanency. For example, 90% of Rochester, New York youths who endured five or more family transitions became delinquent (Blackstone & Hakim, 2003). Furthermore, the Bureau of Justice Statistics reported that former foster care children comprised 17% of the inmates in local jails (NCPA, 1997). Former foster care children also tend to have a high incidence of public assistance. In any event, the direct annual cost of foster care nationwide has been estimated at $17,500 per child or $10 billion, which is itself a substantial commitment of resources that justifies efforts to improve efficiency in their use.

In this paper, we will present and discuss the privatization of the administrative aspects of adoption and foster care in Kansas, Michigan, and Illinois. Then, we shall suggest the application of the modern economic theory of auctions to the adoptive process. This will help solve the problem of children languishing in foster care and provide additional resources to assist adoption of hard to place children.

Section 2 discusses the federal legislation, the national picture of the process and its cost and the ensuing problems. Then, in Section 3, we describe, and in Section 4, evaluate the privatization efforts of the administrative aspect in the three states. Section 5 presents our market-oriented auction model that is a comprehensive treatment of the entire process.

2. Background of adoption and foster care in the U.S.

The number of children nationwide in foster care was 400,000 in 1991, increasing on the average by about 4% a year until 1999, then decreasing by 2% each year to 542,000 in 2001. The total number of adopted children is 1.5 million or 2% of all children (Evan B. Donaldson Adoption Institute, 2003). The average age of children in foster care was 10.1 years in 2001 and the average child remained in foster care for 33 months. About 32% of the children remain in foster care for more than 3 years and 17% remain for 5 or more years. The average age of children in foster care who are waiting to be adopted was 8.3 years in 2001, and on average, they have been in foster care for 44 months. Only 3% of those awaiting adoption were less than a year old.

A total of 88% of adopted children receive some subsidy (DHHS, 2001). Subsidies are available for the adoption of special needs children. The definition of special needs includes physical and emotional aspects of the child, whether a sibling group exists, and the age and ethnic background of the child (NACAC, 2003). Special needs children may allow adoptive parents to receive monthly stipends and medical assistance. They may also receive a subsidy for nonrecurring adoption expenses. The latter is the only subsidy available for international adoptions and that depends on the state of residence.

An increasingly common form of adoption is international. For example, in 2002, 20,000 children were adopted from other countries, an amount equal to 40% of the 50,000 children adopted from foster care in fiscal 2001 (Smiley, 2003; DHHS, 2003). Especially noteworthy, not quite 50% of international adoptions involve infants as opposed to only 2% of those adopted from foster care. Furthermore, while 50% of foster care adoptees are older than 5 years, about 90% of international adoptions involve children younger than 5

years of age (Evan B. Donaldson Adoption Institute, 2003). Most healthy infants are adopted through private placement including international adoptions (Heldman, 2003).

The cost of international adoptions ranges from $7000 to $25,000 for just the normal expenses similar to those incurred in private adoptions in the U.S. Even in the U.S. private adoptions, including the birth mother's expenses, agency, and court costs, can exceed $30,000. International adoptions involve additional expenses for travel to the country and sometimes expenses for the foster care agency. Domestic public agency adoptions involve the least expense, ranging up to $2500 (National Adoption Clearinghouse, 2003).

Specific state data illustrate that minorities comprise a much greater percentage than their share in the population of those in foster care and those waiting to be adopted. For example, black children comprised 18.5% of all Illinois children in 1999 but made up 78% of those waiting to be adopted and 76% of those in foster care (DHHS, 1999). Indicative of the difficulty of placing children above the age of 12 is the fact that only 2% of them exit by adoption when total exit by adoption from foster care is 46%.

Summary data for 30 states indicate that blacks comprise 17% of the population of children, 55% of those waiting to be adopted, and 49% of those adopted (DHHS, 1998). White children comprise 66% of the population, 27% of those waiting to be adopted, and 33% of those adopted. National and state data clearly indicate that the number of children in foster care has increased, the length of time in foster care is considered too long, and too few children are being adopted. The problem is especially acute for minorities, disabled, and older children.

The national policy is both to discourage children from being kept in foster care for an extended period and to encourage adoption when reunification is undesirable. The Child Welfare Act of 1980, for example, required states to make reasonable efforts to prevent placing the child in foster care. Its intent was to reduce the number of children in foster care and increase permanency. It mandated case plans for children. In spite of its goals, the Act has been criticized because it created incentives to maintain children in foster care. An Assistant Secretary of the Health Education and Welfare Department testified in 1979 that

> Our basic concern has been that there are fiscal incentives to place children and young people in out-of-home care because of the open-ended nature of the appropriation, and that may be in part the reason that there has been an increase in the number of children in foster care (quoted in Crossley, 2003, p. 276).

It also may have overemphasized the reasonable efforts to maintain children within their families. In any event, to reduce the number of children in foster care, the 1997 Federal Adoption and Safe Families Act (ASFA) was enacted. As opposed to the earlier 1980 Act, which stressed "reasonable efforts" to maintain children with their families, the ASFA mandated health and safety of children as the primary goal. States are required to place children whose permanency plan is adoption in a timely manner, to document their efforts to achieve adoption, to plan for adoption even while efforts are made to reunify the family, and to not allow cross-jurisdictional issues to act as barriers to permanency (Heldman, 2003).

Specifically, the ASFA requires a permanency hearing within 12 months of a child's entry into foster care and termination of parental rights if a child has been in foster care for 15 out of the last 22 months unless certain exceptions apply. The ASFA also provides incentive payments to a state that increases its adoption from foster care above the base rate. The payment is $4000 for each eligible foster care child adopted and $6000 for a special needs child. These incentive payments are not passed to the adoptive parents but become parts of the general state expenditures on child welfare.

The early results from ASFA seem promising; some states have markedly increased their adoptions from foster care. Illinois had 7113 adoptions in 1999, more than three times its average of 2200 in the 3 years prior to the passage of ASFA (Copley News Service, 2003). Missouri doubled its adoptions in a 5-year period and in September 2003, was awarded $366,000 of incentive payments. Adoptions from foster care in the nation as a whole grew from an average of 28,160 in the 1995–97 period to a peak of 50,683 in 2001, and then declined. The annual percentage increases were 27% in 1998, 29% in 1999, and 9% in 2000. Adoption then grew by less than 1% in 2001 and in 2002 declined by 5% (calculated from McDonald, 2003).

A more detailed examination of the early results is less supportive of the law's success. Illinois adoptions have declined since 1999, falling to 3585 in 2002, a situation similar to what has happened in a majority of states. Furthermore, the General Accounting Office (GAO), a Congressional Agency, studied the impact of ASFA and found that although adoptions grew since the federal law (31,000 in 1996 compared to 45,000 in fiscal 2000), they were increasing even before its enactment (Statistics from Welte, 2003). States had initiated reforms prior to ASFA to increase adoptions and otherwise achieve permanency. In the 1995 to 2000 period, the GAO found that adoptions increased 89% or an annual average increase of 8% to 12%. In 1999, when states began implementing the provisions, adoptions increased 29%.

Cities contend that the easiest adoptions were hastened by the ASFA and now the adoption rates have declined. They also point to the fact that the number of children in foster care has not decreased substantially since the law went into effect. They argue that the law promotes termination of parental rights instead of encouraging reunifications of families.[1] In any event, ASFA indicates the National policy toward encouraging adoption and permanency instead of having children languish in foster care.

3. Description and evaluation of privatization in three states

In order to accelerate adoption, a few states chose to contract out the administrative tasks, including operation of the foster care process and including searching for and placing children with adoptive parents. Clearly, privatization is often undertaken to save public resources. Unfortunately, when the states began the process, they did not have their own accounting system set to determine their real total per child costs for each function. This issue will be discussed in more detail.

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[1] Wulczyn (2002), in general, supports these conclusions.

3.1. Michigan

In Michigan, either the state agency, Family Independence Agency, or the foster care provider that manages the child is given 6 months exclusivity to place a child eligible for adoption. The 6-month exclusivity provides the original agency with an incentive to push the adoption. Within 3 months, adopting parents need to be identified. Then, if not placed within 6 months, the child must be listed on the publicly available Michigan Adoption Resource Exchange that the state established in 1989. Now, the information about eligible children is disseminated over the Internet. A 20% penalty in the form of a reduction in the foster care agency's administrative rate is imposed for not listing the child at the appropriate time. Any of the 53-licensed private adoption agencies can then compete to place the children (Blackstone & Hakim, 2003; Michigan Division of Adoption Services, 2002). These companies normally provide both adoption and foster care services.

Prior to 1992, the agencies were paid on a cost plus basis. Specifically, larger agencies that could provide detailed cost estimation were paid between $15,000 and $18,000 per adopted child. Smaller agencies that were unable to provide detailed cost estimation were paid only $3900. The result was that small agencies could not compete and larger agencies had little incentive to expedite the process.

Since 1992, fixed prices are paid for placing children based on the outcome, the time, and the difficulty of the case. The State imputes estimated cost for eight prototype cases and adds an incentive component. For example, a fee of $9325 is paid to a noncustodial agency that places the child from the exchange with a nonfoster or relative family. The adoptive family can act as a foster care family for the child for up to 150 days. Private agencies handle 60% of adoption services and the rest are managed by the state agency.

The total number of children adopted between 1991 and 1999 increased by 83%, black children increased by 82%, and disabled children by 52%. Because the number of children available for adoption increased by 116%, there is no obvious improvement since privatization started. Furthermore, Michigan increased its adoptions between 1998 and 2002 compared to the base period of 1995–97 by only 56%, ranking it fifth lowest among the 50 states (calculated from McDonald, 2003). On a positive note, only 3.5% of its adoptions were disrupted compared to 12% for the nation as a whole (Blackstone & Hakim, 2003).

Some other findings are notable. First, 90% of children are adopted by their foster parents or by relatives. Furthermore, of those adopted, 50% are adopted within 6 months through the agency that had initially placed the child in foster care. Although we cannot compare this performance to the period before privatization, it appears to be modestly successful.

In any event, we may comment on the effectiveness of the process based on economic theory. Michigan introduced an interesting form of competition to the process, including the widespread dissemination of information about children available for adoption. Private companies have the incentive to search for both a large number and high-quality foster care families. Thus, once a child is removed from his family, the agency with the available foster homes is likely to obtain the child. Then, once a company places a child in such a family, the probability of maintaining the service for this child, possibly even through adoption, is high. Prospective adoptive parents have greater choice under this system than

with the previous state run system. The number of competitors differs among counties or cities roughly in line with population. For example, Grand Rapids, Michigan's second largest city, has 5 foster care agencies, Muskegon has 4, Detroit, the largest, has 14, but Ann Arbor, a small city, has only 1.

This method has some shortcomings. The prices for adoption are set by the state and are not market-sensitive. In addition, the state provides identical services to the private companies that compete with it while the state's cost per child is of no concern. Thus, this method lacks the basic advantage of managed competition where government is forced to operate efficiently with respect to its cost. Finally, the 6-months exclusive awarded to the agency that is the child's foster care provider lacks justification. Allowing all agencies to seek the child's adoption immediately could reduce the time to adoption, at no cost to the child.

3.2. Kansas

The American Civil Liberties Union sued the State of Kansas, claiming that children remained in foster care too long and too few were adopted. In response to the settlement, Kansas moved in 1996 to privatize its foster care and adoption services (Blackstone & Hakim, 2003). After the initiation of privatization, the governor of Kansas stated that the objective was to improve the system to the benefit of the children and not to save resources (Geiszler-Jones, 2003).

Kansas was divided for foster care into five regions where bidding was conducted for each region. Contractors were selected for a 4-year period and prices were negotiated. In order to provide incentives for prompt reunification or adoption, the contractor received a fixed amount per child. The amount ranged in 1997 among regions from \$12,860 to \$15,504. Over time, prices were changed and adapted for children with special needs.

For adoption, bidders competed for the statewide contract. However, the contractor, Lutheran Social Services, had 12 subcontractors throughout the state. In the case of foster care, it was important that the child remain close to her family for possible visitation and reunification. In the case of adoption, proximity to the natural parents is less important and a wider market enhances the likelihood of adoption. This is the rationale for selecting a single provider for the entire state.

The Kansas Department of Social and Rehabilitation Services established performance standards which would be presumably used to evaluate renewal or bidding for subsequent contracts. Standards for foster care included limitation to no more than three placement moves and 65% of children will achieve permanency within 12 months of referral. Adoption standards included the requirement that 70% of children be placed within 180 days of referral and that 90% of adoptions shall be intact for 18 months from finalization.

During the first 4 years, some contractors lost substantial amounts. Kansas paid foster care contractors \$105.1 million above the \$178.7 contracted amount and the adoption provider \$31.4 million above the contract amount of \$37.4 million for unanticipated expenses. The adoption provider alone lost \$5.5 million in the first 2 years and was in danger of bankruptcy (Blackstone & Hakim, 2003; Kansas Action for Children, 2001). These losses prompted Kansas in 2000 after only 4 years of experience to revise its contract system. Contractors were now paid on a per month basis ranging between \$1958

and $2200 per month per child for the first year of the contract. This means that under the previous contract system, children remaining in foster care more than 6 months yielded losses to the contractor. About 32% of the children remain in foster care between 1 and 2 years, indicating the extent of the unrealistic nature of the initial incentive contract. In addition, performance standards were revised to reflect new experiences.

Evaluating the Kansas experience reveals that the act of privatization itself led to better data collection on cost and performance for both foster care and adoption. When the state performed the service, there was no clear notion about the quality and the cost per child adopted or in foster care. After privatization, such data became available; thus, it is difficult to provide a before–after evaluation and no definite statements can be made about whether privatization was indeed effective. Quality of both services has improved, but the budget has increased by 178% (calculated from Figgs & Ashlock, 2001, p. 11).

More specifically, the number of adopted children increased in the first year of privatization by 55% and over the first 4 years by 78% (Blackstone & Hakim, 2003; Kansas Special Committee on Ways and Means/Appropriations, 2001). Overall, however, Kansas increased adoptions by only 62% compared to the 1995–97 base period, ranking it seventh lowest among the 50 states (McDonald, 2003). Furthermore, Kansas received federal adoption bonus payments only in 1999, indicating its less than stellar performance. Privatization led to improved service in several ways: case workers became available 24/7, and 71% of foster care children were now in a home in their own or contiguous county. The percentage of children in foster homes instead of group homes or institutions grew during privatization from 67% to 85%. Unsuccessful adoptions were only 2.4% compared to 12% nationally. Privatization of service provision enabled the public social workers to focus on investigations and led to an increase in finding abused children (Snell, 2000; Ranney, 2003).

Successful privatization requires financial incentives for the contractors. The fixed fee contract failed because of unknowable medical costs and delays caused by judicial procedures outside the control of the contractors. To overcome these problems, the contract was changed to a per month basis, but the new payment system reduced the incentive for prompt placement. Contractors were still left with an incentive since an annual renewal of contract depends on performance. Another important requirement for successful privatization is to have as many contractors as possible compete for the service. Replacing the public monopoly with a private monopoly is suboptimal although competition for the contract is helpful. In Kansas, the adoption monopoly was not necessary because the statewide adoption provider utilized 12 subcontractors that could have competed. Moreover, the separation of foster care and adoption providers creates inefficiencies in the care of individual children who are moved between providers once the children are free for adoption. Allowing integration of both services will increase competition, lower cost ,and will improve service for the children (Kansas Action for Children, 2003).

Longer contracts increase the incentives to devote the effort to compete for a contract, and presumably, more providers will compete. This will result in lower bid prices and/or better service. Longer contracts also increase the incentives for providers to devote resources during the contract to improve efficiency. On the other hand, long-term contracts enable providers to exercise monopolistic power and reduce the quality of service. The 4-

year contract subject to annual renewal is reasonable as long as the renewal is not automatic.

3.3. Illinois

The total number of children in foster care in Illinois was among the highest in the nation. Indeed, the rate of children in foster care per one thousand children was the highest, 17.2 compared with 6.9 for the nation as a whole in 1996. The number had more than tripled in the 9-year period between 1988 and 1997. It peaked at almost 51,000 in 1997 (McDonald, 2000). Each social worker's caseload was as high as 60 compared to 25 in the nation. The result was an increase in the length of time children remained in foster care from a median of 8 months in 1986 to 40 in 1996. Privatization was prompted by a consent decree that limited the caseload per social worker.

Illinois in 1997 began contracting with private contractors to reduce the foster care population and achieve permanency. The process was confined to Cook County that comprised approximately 75% of the state's cases. The private agencies in 1997 were paid a monthly rate of $394 for each case. The private agency was expected to move 24% of the children in its care over the course of the year to permanency. If the agency moved more than 24% of its cases, it was still paid the same amount as before for the next year and received additional children. If the placement was lower than 24% during the year, then the funding remains the same for a larger number of children under the agency's care, and the state in the future may not provide the agency additional children (McDonald, 2000). The 24% standard was aimed at reducing the average stay in foster care from 56 to 48 months, reflecting approximately a 25% exit from foster care each year. In other parts of the state, providers receive a $2000 bonus payment for all children adopted above the standard.

As a result of the privatization effort with performance contracting, the foster care caseload diminished from 51,000 in 1997 to 22,000 in 2003, a decline of 57%. Adoptions and guardianships increased in Cook County from 1600 to 3100 over the same period, an increase of 94%. In the 9 years prior to performance contracting, only 2% to 4% achieved permanency each year, while in the post 5 years of performance contracting the rate ranged between 12% and 23% (Illinois DCFS, 2003). In the first year after performance contracting, the rate of permanency for most agencies increased by 200%, then increased by 300% by year three, and then declined slightly. Agencies eventually confronted the difficult cases. Specifically, the average age in foster care increased from 8 in 1997 to 12 in 2003. The median duration in foster care diminished from 40 months in 1996 to 25 in 2002. Interestingly, in spite of inflation and improved services, the total funding declined between 1996 and 2003 by 3.5%.

At the initiation of performance contracting there were 42 private agencies and three state offices providing relative foster care where the children are placed just in homes of relatives. In 2003, only 26 private and only one state office existed. The number of traditional private foster care providers declined from 40 to 33 over the 1998 to 2003 period, while the state providers declined from 3 to 2. The number of agencies declined because of both the reduction in the number of children and the exit of inefficient providers.

The experience in Illinois reveals an effective system of performance contracting that relies on private providers. Indeed, prior to 1997, private providers competed in both the foster care and adoption markets. However, only when performance contracting was initiated did the Illinois system achieve its good results. More children achieved permanency that led to lower caseloads and improved quality of service to children remaining in the system. Indeed, between 1997 and 2002, Illinois ranked near the top of the states in achieving permanency. These results were achieved with some budgetary savings.

Performance contracting also led to a growth of the better performing agencies, the elimination of inefficient performers, and the probable realization of economies of scale. This system where agencies provide both foster care and adoption services is efficient because duplication of effort and the child disruptions are avoided. Importantly, the new standards applied also to public agencies and led to the elimination of two public agencies and the transfer of cases to private firms.

4. The auction model

The three states merely outsourced the actual process of foster care and adoption by shifting from government to private employees. It is, however, possible to expose the entire allocation of children to market forces while still maintaining government oversight and supervision. Economists recommend reliance on markets to allocate goods, services, and resources efficiently. The shortage of white infants and the simultaneous surplus of older, minority, or disabled children is an indication that that the adoption system needs reform. Because the goal is to maximize the quality of placement for all children and not use adoption as a vehicle to improve family equity, adoption is a situation where markets can help. Auctions, a special market mechanism, can be used for adoptions in a national market. Auctions will raise revenue for endowing children that are otherwise difficult to place, giving greater numbers of children access to permanent family environments.

Auctions are ubiquitous and have been used for thousands of years. In one of the earliest references to an auction, Herodotus[2] writes (Cassady, 1967):

> In every village once a year all the girls of marriageable age were collected together in one place, while the men stood around them in a circle; an auctioneer then called each one in turn to stand up and offered her for sale, beginning with the best-looking and going on to the second best as soon as the first had been sold for a good price. Marriage was the object of the transaction. The rich men who wanted wives bid against each other for the prettiest girls, while the humbler folk, who had no use for good looks in a wife, were actually paid to take the ugly ones. The money came from the sale of the beauties, who in this way provided dowries for their ugly or misshapen sisters. It was illegal for a man to marry his daughter to anyone he happened to fancy, and no one could take home a girl he had bought without first

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[2] The father of history has been questioned for his veracity. Herodotus' writings are not universally accepted as being historically sound, so that there may be some doubt whether auctions for women really occurred.

finding a backer to guarantee his intention of marrying her. In cases of disagreement between husband and wife the law allowed the return of the purchase money. Anyone who wished could come, even from a different village, to buy a wife.

Regardless of the veracity of Herodotus' account of the auctioning of brides, auctions are commonplace in everyday affairs.[3] Economists use the theory of auctions[4] to model all kinds of activities: sequential reductions in the price of last season's fashions,[5] election campaigns,[6] and research and development spending.[7] Whenever goods or services are thinly traded or are being traded for the first time, it is generally agreed by economists that the most efficient mechanism for maximizing the welfare of the seller and the buyer is an auction. The only difficulty is in designing the auction to achieve specific goals (McAfee, 1998).[8] Commonly, auctions are designed to maximize the revenue accruing to the seller, but other objectives may receive primacy. In the bride auction described by Herodotus, the objective was not to maximize the revenue from any particular marriage, but to find spouses for all of the women of the village. To accomplish this goal, the revenues from the attractive brides were used to create an endowment or dowry for the less-desirable women. Herodotus would have us believe that in the Greek marriage market, not all prospective brides were created equal, and that without some form of intervention, not all eligible women would find mates. Given the pervasiveness of auctions and the flexibility of auction design, it is perhaps time to use auctions to assign the right to adopt a child.

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[3] eBay is used to auction everything from household goods to rare artworks. Although not everyone has used eBay, it would be difficult to find someone who has not heard of one of the most successful dot-com companies to emerge from the 1990s. Governments use auctions to let supply contracts, to sell surplus goods, to sell securities, to sell the communications spectrum, and to sell the state-owned liquor distribution system in West Virginia.

[4] Klemperer (2004) provides an excellent comprehensive survey of auction theory.

[5] When one goes to the store to buy a loaf of bread, the good is being sold in a particular form of auction. The bread on the shelf states the seller's asking price. The buyer has the opportunity to make a bid for the bread. The buyer's dominant strategy is to bid the lower of her own reservation price or the shelf price. This is a take-it-or-leave-it auction. When a store, say Filene's Basement, puts a suit on sale then a twist has been added to the take-it-or-leave-it auction format. As the sale progresses, the price is lowered until finally it falls below a consumer's reservation price and the suit is taken off the rack.

[6] Suppose that George, Joe, and Howard are running for elective office. They begin the process by spending money on advertising and making numerous campaign appearances during the primaries. If a candidate is doing poorly in the polls and is having trouble raising money, then he drops out of the campaign. Thus, there is a war of attrition aspect to the political campaign in which one is making a 'bid' for office and loses the entire value of the bid when one drops out of the race. With each passing day, the remaining candidates expend more and more irretrievable resources on their bid for election. On Election Day, one of the candidates is declared the winner and collects the prize: the elective office. For his expenditure of time and money, the winner has submitted the highest bid and has won. The loser retires from the field after having lost the resources spent on his bid; he has paid to play and lost. Thus, the election is an all-pay auction.

[7] Suppose two companies are in a race to map the human genome. They incur recurring R&D expenditures until one of them has completed the map. The first firm to complete the map gets the patent, the prize, and the runner up gets nothing. This is also a war of attrition-type auction.

[8] If the auction is designed correctly, then there are two powerful results. The first is the revelation principle which states that bidders will truthfully reveal their valuation of the object. The second states that the specific form of auction, of which there are four, does not matter because the same expected revenue will accrue from any of them. The force of these two guarantees that the welfare of the seller and the buyers is maximized (Myerson, 1981; Vickrey, 1961).

Although the nomenclature of auctions is not used, children available for adoption are already allocated by an auction. The specific form used is a fixed price, take-it-or-leave-it auction that also has an all-pay feature to it. One can obtain the cost of adoption data cited elsewhere in this paper and determine the financial resources necessary for adoption.[9] There is no opportunity to offer more than the established fees and thereby increase the likelihood of adoption. There is no opportunity to offer a smaller fee in exchange for adopting a less desirable child.[10] In this sense, adoption is a fixed price, take-it-or-leave it opportunity. If a prospective parent withdraws from, say, a public adoption agency process, then all fees already paid, and time spent waiting in the queue, are forfeited.[11] In this sense, the present system of adoption is an all-pay auction.

Admitting the description of the present adoption system as an auction, one must conclude that it is a poorly designed auction. The sad fact is that not all children are equally desirable in the adoption system, as in the case of the brides in ancient Greece. The most desirable children remain in the system only a short time while the least desirable children may remain without placement for many years. In fact, because healthy white babies are so desirable a variety of non-market mechanisms, some illicit, have arisen to allocate them among adoptive parents. To explain why some babies are never adopted and some are placed in undesirable households, we consider a stylized model. The same model can be used to show that an all-pay auction overcomes the undesirable outcomes observable in the current adoption framework.

To make things as simple as possible, potential adoptive parents are characterized by two attributes, wealth (rich and poor) and fitness as parents. The wealth attribute is observable. Fitness of parents is modeled as a dichotomous variable: There are parents that are fit and those that are less fit (abbreviated as unfit). The fitness attribute is known to the parent, but is not known by the adoption agency. Wealth and fitness are independent of one another.

We suppose that there are two kinds of babies available for adoption: those that are healthy and those that are not. The lifetime cost of raising a healthy baby is less than the lifetime cost of raising an unhealthy baby. The proportion of healthy babies in the general population is q; everyone knows this proportion. There is a test that allows us to evaluate a baby's health. A positive result indicates a healthy baby and a negative result indicates an unhealthy baby. Healthy babies are preferred to unhealthy babies by both wealthy and poor adoptive parents. Once a family has adopted a child, there are

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[9] There are state and federal subsidies that can offset the nonrecurring cost of an adoption. However, the cost of raising a child is not just the up-front, nonrecurring cost, but also the variable costs associated with food, clothing, shelter, health care, and education. The nonrecurring costs are probably quite small in comparison to the present value of all the future expenditures necessary to raise a child.

[10] Although there are subsidies for adopting less healthy children, the fact that some languish in the system for so long suggests that the subsidies are not high enough.

[11] In addition to the financial commitment, there is the nonpecuniary cost of waiting for a child with the desired attributes. Even in the 21st century, there is a cultural stigma when it becomes known that a family is waiting, waiting, waiting for an available child. In addition, as an adoptive family waits in the queue, they may forego other opportunities for family building. These investments in time and emotions are sunk costs; they are irretrievable even if one never qualifies to adopt. In this sense, the present configuration is an all-pay war of attrition.

nonpecuniary benefits that result from adding value to the life of an otherwise parentless child.

Suppose that initially the test for the health of a baby is not available and all babies are offered for adoption by a single agency. All adoptions are final. An adoptive parent presents himself to the agency and requests a child. A randomly chosen child is assigned to the prospective parent. There is a positive probability (q) that the child will not be healthy and that if the adoption is consummated the parent will incur the higher costs of childrearing. If the cost of rearing an unhealthy child is high enough and the proportion of unhealthy child is high enough, then the net gain to the parent from the adoption will be such that the prospective parent will not seek to adopt. The high proportion of unhealthy babies drives the healthy babies from the agency in that no prospective parent is willing to incur the risk of getting an unhealthy baby. This phenomenon is known as the market for lemons and was first used by economists to model the market for used cars.

Now, make the health test available.[12] The agency tests all children for their state of health and reports the result to prospective parents. Now the prospective parent is able to distinguish healthy from unhealthy babies and so adopt a child from one group or the other as their preferences dictate. If the adoption market were working perfectly, one would expect that the adoption costs of unhealthy children would fall relative to those for healthy children once the health status of the two types is discernible. This does not seem to be the case. Situations in which heterogeneous goods trade at different prices are known as separating equilibria in economics. Indeed, this phenomenon is observed today in adoption services. According to data presented earlier, there are three distinct avenues for domestic child adoption: in ascending cost of adoption, the choices are a public agency, a private agency, and a private placement. The public agencies, which are the monetarily cheapest alternative, also have the highest proportion of less desirable children available for adoption who spend the greatest amount of time waiting to be adopted. Apparently, even with three separate markets, the system is not achieving the goal of maximizing the welfare of the children, or the adoptive parents.

In place of the present system in which children are allocated using an all-pay auction, the currency of which is time in the waiting line, we propose using an all-pay simultaneous ascending auction with a bid cap. A simple auction of the sort used by Sotheby's, say, to auction paintings would not be optimal. A sequential, winner-only-pays, ascending auction generates less revenue than the proposed format.[13] Additionally, low income parents would be discouraged from participation if there is no bid cap, the lack of an all-pay feature would result in parents with a weak motive for adoption participating in the auction, and the sequential process causes an uncertainty about adoption outcomes as the auction proceeds that results in less-aggressive bidding by all participants.

At each round of the all-pay simultaneous ascending auction with bid cap, each prospective parent would submit a sealed bid for the child(ren) they wish to adopt. The

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[12] The same result could be obtained by offering a warranty to the adoptive parents instead of providing a test result.

[13] Whenever the assumptions risk neutrality, independent private values, and affiliation are violated, the revenue equivalence theorem fails, opening the door to other auction designs.

bidder may bid for the right to adopt just one child or may split their bid among several in order to reflect her preference ordering over the children available for adoption. Bidding a larger amount for just a single child raises the probability of winning the right to adopt that particular child. Splitting the amount bid among several children raises the probability of winning the right to adopt some child.

In order to remain active in the bidding process, the prospective parent must either increase her bid from round to round or switch her bid to a different child. In switching to a different child, the switched bid must exceed any outstanding bid already placed. If a bidder becomes inactive, then she loses an amount equal to her last bid and is not eligible to adopt. Bidding continues until all of the children are adopted. It is well established that when the basic auction assumptions are relaxed, then the greatest amount of revenue is generated by an ascending bid auction. This aspect of our proposal therefore makes as much money as possible available to endow the least desirable children, as in the Greek marriage auction.

Since at any given time, there are many children available for adoption and in the aggregate there are more adoptive parents then there are children, there is no reason to auction the right to adopt in a sequential fashion. If the rights to adopt are auctioned sequentially, then adoptive parents find it more difficult to bid because they can never be sure about the values that will be assigned to children whose adoption right is offered later in the queue. The effect is that prospective parents would bid more conservatively in the early stages of a sequential auction. Furthermore, the consensus based on worldwide experience in telecommunications auctions is that a simultaneous ascending auction is revenue maximizing (McAfee & MacMillan, 1996). Finally, although the children are heterogeneous with respect to their physical and mental health status, there is no overarching reason to pursue a discriminatory policy that auctions their availability in a particular order. Again, experience in the telecommunications auctions around the world suggests that when bidding for heterogeneous units is simultaneous, then participants bid more aggressively for the less-desirable units than they would otherwise.

The function of the all-pay stipulation eliminates those prospective parents who would be inclined to attach a low valuation to an adopted child.[14] Basically, the participants are being required to put their money where their mouth is. When bidders forfeit their money upon dropping out of the auction, then they will be more cautious about their decision to participate. Goeree and Turner (2001) prove that in an auction in which the good is a public good,[15] an all-pay feature induces everyone to bid more aggressively. This is relevant in the adoption context because all bidders benefit from reduced costs of unemployment and crime when a child is placed in an adoptive home. Nevertheless, practical considerations justify that only the winner pays.

The cap on allowable bids serves two purposes. First, the cap induces wider participation since lower income households will see that they are potentially able to compete with higher-income households. Klemperer (2004) shows that wider

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[14] Additionally, one wants to preserve the current system of prequalifying prospective adoptive parents.

[15] In economics, there are public and private goods. Buyers of a private good can exclude others from consuming the same units of the good. A public good, like national defense, does not have that excludability characteristic.

participation in an auction adds more to the seller's revenue than does improving the design of the auction mechanism. Second, the cap causes low-income households to bid more aggressively than they otherwise would (Sahuguet, 2002).

As in the auction of brides in ancient Greece, the proceeds from the auction would be used to endow the less-desirable children. At the end of a round, the bids are pooled and then allocated as an endowment to the less-desirable children. The funds are apportioned based on the added cost of raising the less-healthy child. Thus, a perfectly healthy child would receive no endowment, but a physically or mentally handicapped or older child would receive a significant endowment. As the rounds progress, the less-healthy children become more attractive to all prospective parents as a result of the endowment that accompanies their placement. Bidders see that they can add more value to a handicapped child than to a healthy child and they can do so at no greater expense to themselves than they would incur were they to adopt a healthy child. When the auction closes, all children would be claimed and the total net cost of childrearing would be the same for all children regardless of their health status.

The total net cost to the adoptive parent is equal to the endowment that accompanies the child, minus the sum of the amount bid and the discounted lifetime costs of food, clothing, shelter, education, physical, and mental healthcare, etc. For example, Sheila is considering bidding on the right to adopt Gabriel or Raphaela, the only two children available. Gabriel is a healthy boy of the same race as Sheila. Raphaela has a physical disability that will require attention from physicians, teachers, and parent(s) throughout her childhood, and she is not the same race as Sheila. After several rounds of the auction, the bidding for the right to adopt Gabriel has resulted in a bid of 100 and it is known that because of his good health, it will cost only 25 for all other expenses. The total expense of acquiring the right to adopt Gabriel and raising him is 125. The 100 bid for the right to adopt Gabriel is available to endow Raphaela. At the same point in the auction, the last bid for Raphaela stood at 50. Because Raphaela has a disability that will require professional intervention throughout her childhood, the cost of rearing her is known to be 150, more than would have to be spent to raise Gabriel. The total net cost of acquiring the right to adopt Raphaela and raise her is 100, somewhat less than what is necessary for Gabriel. At this point in the auction, Sheila can raise the bid on Gabriel's adoption and incur a total lifetime expenditure of more than 125 or raise the bid on Raphaela and incur a total net lifetime expenditure of more than 100. Where Sheila places her next bid will depend on her resources and where she feels that her own interests coincide to the greatest degree with the value that she can add to the life of the child. With many rounds of bidding, enough bidders, and small enough allowable bid increments, the bids for desirable children will finally rise to the point where Sheila would be just indifferent between raising her bid on one child or the other.

5. Lessons learned

The rationale for privatization is to improve efficiency by having market forces replace government bureaucracy. Ideally, government involvement would be limited to only those activities that involve public good attributes. However, even when public good attributes

exist for a service, contracting out can expose the service to market forces. Successful contracting out normally requires a fair number of bidders. Michigan, Kansas, and Illinois should be commended for recognizing that the production of the service, namely the provision of foster care and adoption services, can be contracted out although the state government maintains its close control over the private providers. Ultimately, the question is whether the degree of government control can be reduced without sacrificing necessary public good attributes of the service. Evaluation of the attributes of adoption and foster care services lead us to believe that it is indeed possible to reduce government involvement and even develop an auction for adopting children. Basically, we suggest opening the market for adopting children not just to a few private and public agencies, but instead to prospective parents nationwide that will bid for a child. However, even if the auctioning model is adopted, state governments will still be responsible for screening potential parents.

Although we recommend the auction model, we recognize that some reluctance may exist to such a major change. Therefore, we analyzed the three partial privatization efforts to determine which is most efficient both in economic terms and in achieving results. Privatization in all three states was done to increase the rate of permanency and reduce the time children remain in foster care. Reducing state government expenditures was less important. The advantages of the Michigan system are the ubiquitous nature of information of available children, even on the Internet, and that all 53 private agencies and the public agency can compete to place children.

Kansas's system led to improvement in the actual number of adoptions. Its incentive method of fixed price per child failed because contractors lack control over court procedures and medical costs. The revised system of per month payments lacks the incentive for prompt placement. Kansas also created unnecessary monopolies.

Illinois' performance contracting was highly successful in achieving permanency. It reduced the foster care population, the time children remain in foster care, eliminated inefficient providers, and allowed more concentrated effort to be devoted to the 'hard to place' children. It provided a framework for managed competition where the public and private providers compete. Other than possibly being too complicated, Illinois provides the best of the three "traditional" methods of private sector involvement in the foster care and adoption field.

Privatization is aimed essentially at improving the efficiency of the process. It assumes that the private sector responds better to monetary incentives, is less bureaucratic, and is more flexible. However, all three privatization methods still allow large number of hard to place children to remain in foster care for a prolonged period, even until majority, while white healthy babies are immediately adopted. For these reasons, we recommend the auction model.

The auction model further reduces government involvement and simplifies the process by reducing the role of the intermediaries. It generates resources from the adoption of high-demand babies that can be used to place hard to adopt children. Because all prospective parents are screened in the same fashion as is currently done, the quality of the adoption will not differ. Under existing practice, the next couple in the queue, not necessarily better qualified than any other waiting couples, adopts the child. Under the auction system, the winning couple is at least as qualified and has the added virtue of

willingness to pay and the requisite financial resources. The auction process would achieve the ultimate objective of maximizing the utility of children.

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