

# Statutory Law and Customary Change: a Lab-in-Field Experiment in Ethiopia

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**Abstract:** *Through a lab-in-field experiment with villagers and real local customary judges in Ethiopia, we test the hypothesis that customary courts strategically adapt arbitration outcomes if they face increased competition by the formal law. We show that introducing a costly legal fallback reduces arbitration biases and draws the decisions of customary judges significantly closer to the formal law. Instead, agents disfavored by the custom do not take advantage of their increased bargaining power. Our results suggest that local customary dispute resolution institutions may have a role to play in shifting preexisting customs towards a desired outcome. In areas where formal legal institutions have limited outreach, most effects of increased competition between formal law and customary legal institutions may rise from changes in the latter, rather than from plaintiffs seeking justice under the rule of law.*

**Keywords:** Formal Law; Social Norms; Customary Courts; Lab-in-Field Experiment; Ethiopia

**JEL Classification:** C91, C93, K40, O17, Z13

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## **1. Introduction**

Formal laws play a marginal role in governing the lives of many African citizens, particularly those residing in rural areas (Chirayath et al., 2005). Instead, customary legal systems provide prompt, accessible and culturally coherent justice services (Wojkowska, 2006). Customary courts oversee and enforce customs and informal rules of behavior, typically taking into account local egalitarian and redistributive norms (Platteau, 2000). Their adherence to minimum standards of justice and human rights remains nevertheless disputed. Customary courts may persistently discriminate against the underprivileged, entrenching mechanisms that perpetuate local power structures (e.g. Ordioni, 2005; Asfaw and Satterfield, 2010; Pimentel, 2010). Local gender biases, for instance, may affect the distributional decisions of customary dispute resolution institutions (Asfaw and Satterfield, 2010). Understanding the effects of increased competitiveness of formal law in predominantly customary institutional environments is therefore central to achieving fair and functional legal systems—a primary driver of economic development (Acemoglu et al., 2001; Rodrik et al., 2004). Yet, data on extrajudicial and customary disputes are rarely available (Landeo et al., 2007), and the interaction between customary legal institutions and formal law has been subjected to little rigorous empirical analysis so far.

The work of Sandefur and Siddiqi (2013) in Liberia is a notable exception. They find that the demand for mediation by paralegals trained in the formal law are greater for plaintiffs disadvantaged by the customary system, and that direct access to the formal law results in strong socioeconomic gains for the underprivileged. Increased competition of formal law may nonetheless also foster indirect changes to the norms enforced by customary dispute resolution institutions. These indirect effects are particularly salient if agents face strong disincentives to appeal to formal legal institutions—i.e. if customary norms are backed by credible social sanctioning against defection and appeal to alternative forums. If those

disadvantaged by the customary system fear that overruling its decisions may be costly, thus complying with preexisting customs even when the law is individually preferred, much of the direct socioeconomic gains may be dissipated. Aldashev et al. (2012a, 2012b) provide clear theoretical predictions on the evolution of customary legal outcomes induced by the introduction or empowerment of formal laws. If customary authorities fear jurisdictional and reputational erosion,<sup>1</sup> they may strategically adapt arbitration outcomes in response to the introduction of a competing formal law.

In this paper we empirically investigate the hypothesis by Aldashev et al. (2012a, 2012b). Through a lab-in-field experiment in rural Ethiopia – where controversies are habitually settled through customary courts – we study the effects of introducing a costly legal fallback, on the arbitration decisions of local customary judges and the behavior of plaintiffs. In West Gojjam, we randomly select 60 customary judges, known among the local Amhara people as *Shimagelle*, to rule over controversies born from an ultimatum game with outside option, played by 532 villagers. For a random subsample, we allow participants to further appeal the arbitration through a costly fixed law. While some studies have looked at the influence of extraneous factors on formal judicial rulings (e.g. Danziger et al., 2011), the relative scarcity of naturally occurring data on customary rulings has limited their analysis. By bringing the lab into the field (see List, 2007), this work is the first to bridge this gap, studying the arbitration decisions of real Ethiopian customary judges.

In line with previous literature, we find evidence of significant arbitration bias against female participants, and in favor of plaintiffs known by the customary judge and advantaged by the custom. Our main finding is that introducing a legal fallback reduces such biases, and that

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<sup>1</sup> Jurisdiction erodes as plaintiffs begin to use formal courts instead of customary forums. In so far as customary judges face a positive utility in ruling over a controversy, jurisdictional erosion will reduce their utility. Moreover, customary judges may face an intrinsic disutility in seeing their decision overruled. Reputation thus erodes when plaintiffs reject the customary arbitration decision and appeal to formal legislation.

customary arbitration outcomes are drawn significantly closer to the formal law. Furthermore, we find that agents disfavored by the custom do not take direct advantage of the increased bargaining power offered by the legal fallback. In equilibrium, only a fraction of them make direct use of the formal law. These results complement the work of Sandefur and Siddiqi (2013), and highlight the importance of indirect customary responses to the increased competitiveness of the formal law. The “threat of law” may induce significant gains for those disfavored by the custom, even if they do not actively seek justice under the rule of law.

The rest of the paper is organized as follows. Section 2 discusses the literature on formal law and customary institutions. Section 3 provides a brief account of the Ethiopian institutional context and legal system. Section 4 outlines the experimental design. Section 5 discusses the empirical strategy. Section 6 illustrates the results, and Section 7 concludes.

## **2. Customs, customary legal institutions, and formal law**

Legal institutions encompass both formal and informal structures, and are central to enforcing the “rules of the game” that govern everyday life (North, 1990). Formal legal institutions typically preside over written constraints, such as statutory laws and constitutions—prescribed and enforced by exogenous legislative authorities. Customary legal institutions, instead, oversee the ‘codes of conduct, norms of behavior, and conventions’ that take form in a particular social setting (North, 1990: 36). Yet, formal and informal legal systems are not necessarily mutually exclusive, and often coexist and overlap to a considerable extent. Legal pluralism is thus prevalent in numerous countries and regions worldwide, including large portions of sub-Saharan Africa (Merry, 1988; Bennett, 2006; Tamanaha, 2008).<sup>2</sup>

The norms upheld by customary legal institution typically represent fairness standards intended at maintaining peace and social cohesion, but may also result in systematic

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<sup>2</sup> In what follows, we use the terms “customary” and “informal” as synonyms. “Statutory law” and “formal law” are also used interchangeably.

discrimination against certain disadvantaged categories. In either case, they may have substantial consequences on investment decisions and long-run growth (Platteau, 2009; Baland et al., 2011).<sup>3</sup> However, replacing undesired customary norms with the rule of law has proven to be a complex and daunting exercise (e.g. Andre and Platteau, 1998; Kuyu, 2005; Sacco, 2008). Formal legal institutions will not successfully replace incompatible or unwanted customary norms, unless they become a “focal point” of convergence in the expectations of agents (Basu, 2000; Aoki, 2001; Greif, 2006). In the presence of preexisting customary focal points, the fear of social punishment inhibits the consolidation of formal laws that contradict such customs. In fact, norms influence behavior not only through internal incentives (e.g. guilt aversion, or a taste for moral virtuousness), but also through external ones (Polinsky and Shavell, 2007). People may be willing to punish non-compliers even if the punishment is costly and doesn’t yield direct private benefits (Fehr and Gächter, 2000). As a result, agents find it harder to deviate from norm-compliant behavior even when the law is individually preferred. This is especially true for rural communities, where social pressure and sanctioning are more pervasive, and the cost of social exclusion is greater (e.g. Crook, 2004; Gedzi, 2012).

While certainly a source of institutional “stickiness”, customary legal institutions need not to necessarily discourage institutional change (Boettke et al., 2008; Williamson, 2009). Instead, they are often crucial to the functioning of formal institutions—such as the legal system (Platteau, 2000; Aoki, 2001). Their interaction with statutory law has thus surfaced as a pivotal issue to effectively reach the objectives sought by legislators (Richman, 2012). Several theoretical studies have examined this interaction (Greif and Laitin, 2004; Helmke

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<sup>3</sup> Customary norms may also add to the uncertainty over property rights, in turn affecting the investment decisions of individuals. Goldstein and Udry (2008), for instance, find that competing claims and higher insecurity of tenure over specific plots cultivated by a given individual correspond to lower intensity of investments on those plots.

and Levitsky, 2004; Dixit, 2007; Dhillon and Rigolini, 2011; Aldashev et al., 2012a, 2012b). Typically, these studies focus on the behavior of agents, not institutions. Formal laws alter the net benefit of adhesion to prevailing norms – affecting the bargaining power and fallback position of economic agents – such that established patterns of behavior may evolve. Studies empirically investigating the empowerment of formal laws are somewhat less prevalent. Banerjee et al. (2002), for instance, study the effects of a land tenancy reform in West Bengal. They find that the increased bargaining power that the tenants acquire, once a legal fallback is introduced, has positive effects on productivity, whilst arbitrary evictions by landlords all but disappear.<sup>4</sup>

Sandefur and Siddiqi (2013) propose a “forum shopping” model in which plaintiffs choose between the customary and formal systems based on rational tradeoffs. If plaintiffs face high entry costs to the formal legal system, they will bring their cases to customary forums even when these are systematically biased against them. After providing evidence of such barriers to access in Liberia, they investigate the outcomes of a randomized intervention that increases the competition between formal and customary law by offering complimentary mediation and advocacy services through community paralegals trained in the formal law. They find that female and ethnic minority plaintiffs – facing poor odds in the customary system – are more likely to adopt and to be satisfied with the paralegal service, and that the program increases average household wellbeing. Nonetheless, less than 10% of the recorded cases were brought to the attention of paralegals. The relatively low pick-up of complimentary paralegal services, even among self-selected paralegal clients,<sup>5</sup> may be an indication of social

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<sup>4</sup> The theoretical model underpinning these findings, however, assumes that the legal innovation replaces a sort of institutional vacuum, in which “landlords wielded a lot of power within the village and were therefore able to intimidate tenants” (Banerjee et al., 2002: p. 242).

<sup>5</sup> Their sample stems from a sub-category of villagers that had self-selected into contacting the paralegals before the baseline. It represents a “snapshot of potential paralegal clients, and therefore not representative of Liberians as a whole” (Sandefur and Siddiqi, 2013: p. 28).

sanctioning dynamics that create strong disincentives to appeal to any authority alternative to customary ones. Under such constraints much of the socioeconomic gains of increased outreach may be dissipated, unless increased competition of formal law produces indirect changes in customary arbitrations.

Aldashev et al. (2012a, 2012b) provide clear theoretical predictions on the evolution of customary legal outcomes induced by the introduction or empowerment of formal laws. Central to their argument is that not only agents, but also customary institutions respond to incentive structures. In fact, if customary judges insist on imposing custom-compliant outcomes once the legal fallback is introduced, they do not only increase the likelihood of appeal to the formal law by unsatisfied plaintiffs, but also the distance between the expected outcome and the custom. Provided the formal law is not too radical – i.e. it is not excessively costly for customary judges to deviate from the preferred arbitration outcome – increasing its competitiveness will thus shift the conflicting custom in the direction intended by the legislator. The law, therefore, does not only provide a direct alternative to customary dispute resolution institutions; it also changes the custom—indirectly improving the welfare of the disadvantaged sections of the population (Aldashev et al., 2012a, 2012b). In this paper we empirically investigate this hypothesis by observing the arbitration outcomes stemming from real customary judges in rural Ethiopia, half of which face the risk of seeing their decisions overruled by a fixed law. To this end, we formulate the following research questions:

- RQ1.** *Are post-arbitration payouts to agents disfavored by custom downwardly biased?*
- RQ2.** *Are biases against agents disfavored by the custom reduced by the legal fallback?*
- RQ3.** *Does increased competition by the formal law draw the arbitration decisions of customary judges closer to the law itself?*
- RQ4.** *Do disfavored agents take advantage of the increased bargaining power created by the legal fallback?*

### **3. Legal institutions in Ethiopia**

Ethiopia is home to more than sixty customary legal systems (Donovan and Assefa, 2003). Statutory law was first introduced in the 1950s, and customary institutions remain very vibrant. The formal legal system is far from penetrating and, since the mid-nineties, the government is committed to recognize and preserve local customary dispute resolution authorities. Most Ethiopian ethnic groups have their own customary systems for dispute settlement and conflict resolution. Famous examples include the *Shimagelle* system of the Amhara, the *Gadaa* system of the Oromo and *Sharia* courts of Muslim communities. In this paper, we investigate Amhara's *Shimagelle* system, which contains elements of customary law practices that are very much in use across the whole country. This traditional institution can best be viewed in line with principles of arbitration, where the arbitrators are mostly religious leaders and village elders who review existing evidence and arguments from both sides and issue a verdict to settle the case based on customary norms. The fact that customary judges are local elders and religious leaders ensures that arbitration outcomes are strongly embedded into community dynamics. This in turn favors the enforcement of deliberations, but also provides strong disincentives to use alternative forums, such as formal courts.

Typically, the adjudication proceeds focusing on narrowing of differences through negotiations, rather than through adversarial procedures. The verdict may vary depending on the nature and gravity of the dispute, ranging from a simple apology for petty disputes, to blood money for homicide crimes. At the end of the dispute resolution, the restoration of prior relationships is marked through customary rituals or ceremonies to which both parties take part. Once the arbitrators have held their verdict, they closely monitor its enforcement. Nominally, arbitrators lack the coercive powers of the formal law to ensure compliance; however, they rely effectively on the presence of social pressure and sanctions to enforce their decisions. A party failing to abide by the outcomes will be considered as insulting the

arbitrators and will be shunned by the community. Social sanctions – including ostracism by neighbors and friends – and loss of reputation soon follow.

*Shimagelle* are expected to provide their services without an explicit fee. Yet, there are several individualistic as well as altruistic reasons for the engagement of customary judges in dispute settlement. First, they are motivated by social recognition. Among the Amhara, there is a tradition of holding a special funeral ceremony for those who are believed to have played an important role for their community. Elders often serve their community hoping that they will be mourned accordingly. Second, in such strictly hierarchal communities, arbitration is an age-ascribed role, that provides a mix of status and responsibility. Third, arbitrators are expected to ensure the welfare of both parties and, through that, the wellbeing of the community. Fourth, the vast majority of *Shimagelle* serve some sort of religious function too, and being recognized as a *Shimagelle* is a signal of piousness and righteousness. While accounting for religious scriptures, local norms and customs, deliberations will therefore reflect the need of customary judges to maintain their reputation, reaffirm their social and moral standing, and minimize potential jurisdictional erosion.

The official status of Ethiopia's customary courts has not been unequivocal in the legal history of the country. Both the Imperial and *Derg* regimes opted for a centralized legal approach that did not embrace legal pluralism. Only since 1995 does the state recognize customary legal systems (Gopal and Salim, 1998).<sup>6</sup> The jurisdiction of customary courts is accepted as long as both parties to the dispute give their consent to be heard at customary forums, and the verdicts thereof are in conformity with human rights provisions. The Constitution preserves the mandate to adjudicate criminal matters solely through the formal law, but customary courts enjoy *de facto* wider jurisdictions—spanning from petty offences,

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<sup>6</sup> The provisions of the Constitution embracing legal pluralism are provided under Articles 34(5) and 78(5).

land tenure and inheritance issues, to violent crimes and homicide. In many respects, Ethiopian customary institutions stand out as more functional and powerful than statutory law. The political stalemate that followed the country's 2005 general election, for example, was ultimately settled through the arbitration of selected *Shimagelle*.

The relative dominance of Ethiopian customary institutions is in fact related to the problems encountered by the formal legal system. First instance courts are available in every Woreda (district), averaging approximately 100,000 people per tribunal (Guttman et al., 2004). However, as is true for much of Africa, the formal legal system in Ethiopia is regularly reproached as dysfunctional and inaccessible to ordinary people (Gowak, 2008; Asfaw and Satterfield, 2010). Moreover, the formal legal system is limited by the overload generated by the lack of physical resources, personnel, infrastructure and inadequate information systems (Baker, 2013): access to formal justice can be a daunting task for the average Ethiopian. Statutory law is often perceived as costly to access and punitive – rather than conciliatory – and regularly fails to deliver proper redress to aggrieved parties (Sandefur and Siddiqi, 2013). In contrast, customary courts provide prompt and accessible dispute resolution mechanisms. However, their capacity to produce unbiased sentencing is contested. Asfaw and Satterfield (2010) study land and property dispute settlements by *Shimagelle* in the Zeghie Peninsula, in the Amhara region. They find that the formal justice system is both inaccessible and dysfunctional, while customary arbitration outcomes are largely unfavorable to women. This in turn reinforces gender inequality and entrenches local power relations.

#### **4. Experimental design**

##### *4.1 Sample and setting*

We develop a multi-stage laboratory experiment involving 532 villagers and 60 real local *Shimagelle*. Participants belong to 18 *Kebele* (municipalities) of West Gojjam, in the Amhara region of Ethiopia. At each of the fifteen game-sessions, 4 customary judges were randomly

selected from a pool of well-established local *Shimagelle*. The villagers belong instead to a list of 612 randomly selected farmers responding to an agriculture-productivity related survey, administered in the same area in the previous year. Respondents are the main income earners (household heads), 92% are male, they average 43 years of age, and have slightly more than two completed years of formal education. Households are comprised of about 6 family members, and almost the entire sample is orthodox Christian. 82% of respondents take part in at least one informal safety net mechanism. Table 1 reports balance statistics for individual and experimental characteristics by treatment. No variable differs significantly at the 5% level, indicating a successful treatment randomization. The slight difference in sample size across treatments is due to the randomization at game-session level. This ensured that villagers and judges participating to the same game-session were all instructed on the same treatment, minimizing potential spill-overs and confusion.<sup>7</sup>

**Table 1.** Balance and summary statistics for the experimental samples

Variables	Customary only (N=252)	Customary + Law (N=280)	Diff.	Std. Err.
Male (%)	93.7	89.6	4.1	(2.40)*
Age	43.1	43.9	-0.8	(0.97)
Married (%)	92.5	91.1	1.4	(2.40)
Orthodox (%)	98.8	97.1	1.7	(1.24)
Education	2.6	2.3	0.3	(0.16)
Household size	6.4	6.2	0.2	(0.18)
Non-farm income	0.2	0.2	0.0	(0.03)
Informal safety nets <sup>8</sup> (%)	81.3	84.3	3.0	(3.33)
First risk game (selected ball)	26.4	24.0	2.4	(2.31)
Second risk game (invested %)	46.4	46.6	0.2	(0.22)
Private Endowment	118.9	125.8	-6.7	(4.88)
Joint venture endowment	276.5	289.8	-13.3	(10.22)

Group means; t-test: \*\*\* ↔ 99%, \*\* ↔ 95%, \* ↔ 90%.

<sup>7</sup> Sampling halted once at least 250 villagers had participated in each treatment. Random re-sampling ensured insignificant attrition bias: participants and non-participants show no significant differences (see Appendix A1).

<sup>8</sup> Taking value of one if the participant belongs to at least one informal institution between Debo, Eqqub, and Iddir. Debo is a local labor exchange arrangement; Eqqub is a rotating savings and credit association, and Iddir is a funeral association functioning as informal insurance arrangement.

The experiment comprised four stages: (1) private investment; (2) joint venture; (3) ultimatum game with arbitration by a customary judge as outside option; and (4) the application of the formal law treatment (see Appendix A2 for a timeline of the experimental procedure).

#### *4.2 Private investments and joint venture*

The first two stages only involved villagers (from here onwards called agents), not the judges. In our setting, ultimatum offer rejections are a necessary premise to arbitration by customary judges. We make use of previous findings in economic literature to increase the likelihood of litigation in each anonymous pair, without biasing the randomness of relative endowment assignments. Agents were randomly allotted an endowment of either 80 or 120 tokens,<sup>9</sup> and made two individual risky investment decisions that could increase or decrease the endowment. By having each agent make private investment choices, we made use of the so called “earned endowment effect”: people exhibit more self-interested behavior in bargaining and sharing games when relative wealth is earned in some way rather than obtained through a pure windfall gain (e.g. Hoffman et al., 1994; Gantner et al., 2001; Cherry et al., 2002; Frohlich et al., 2004; Oxoby and Spraggon, 2008). The first risk game combined design of Eckel and Grossman (2002) with that of Holt and Laury (2002).<sup>10</sup> The resulting endowment was then used in the second game, which followed Gneezy and Potters (1997). Agents decided how much of their endowment to invest in a lottery with 50% probability of doubling and 50% probability of halving the invested amount. To further strengthen a sense of ownership with respect to the endowment (see Kahneman et al., 1990), at the end of this stage agents were given a sleek and colorful endowment card, reporting private earnings.

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<sup>9</sup> Each token was worth 0.5 Birr, resulting in endowments of USD 2.2 and 3.3 respectively, or around twice the average daily income in the area.

<sup>10</sup> Agents selected one out of eight balls, with exponentially increasing value from 1 to 128, as their winning prize. They then drew one ball from a bag containing all eight balls: if the extracted ball was worth at least as much as the selected ball, they won the value on the selected ball; if the extracted ball was worth less than the selected ball, they would lose the amount specified on the extracted ball (see Appendix A3).

The second stage of the experiment involved paired anonymous decisions, and took place the following day. Agents were assigned to a randomly selected anonymous partner with higher or lower private endowment. They merged their individual endowments and jointly decided about the same risky investments mentioned above.<sup>11</sup> On average “higher investors” (i.e. participants contributing a higher share in the joint venture) contributed two thirds of the joint capital, while “lower investors” contributed the remaining third.<sup>12</sup> In other words, one agent typically invested twice as many stakes as their partner.<sup>13</sup> We expect such endowment heterogeneity to lower ultimatum offers in the next stage (Cherry et al., 2005). Particularly, we expect high endowment agents to prefer offers proportional to investment shares, and low endowment individuals to prefer egalitarian redistributions (Rutström and Williams, 2000). Pairs could bargain on their investment choices for up to eighteen rounds, through oral messages collected and delivered by experimenters. On average, 4.5 counteroffers were made across the two games, with a maximum of fourteen bargaining rounds before reaching an investment agreement. Once the joint investments were completed, the next task was to split the final outcome through an ultimatum game—the source of our experimentally induced litigations.

#### *4.3 Ultimatum and arbitration*

In the third stage, pairs play an ultimatum game with outside option (see Güth et al., 1982; Schmitt, 2004). One agent was randomly selected to become an ultimatum sender, the other one becoming the receiver. The sender was asked to make a split offer, which the receiver

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<sup>11</sup> The rationale of repeating choices in a paired setting follows that of intra-household bargaining literature (e.g. Bateman and Munro, 2005; Carlsson et al., 2012; He et al., 2012).

<sup>12</sup> “Higher investors” had an average private endowment of 165 tokens, “lower investors” 80.

<sup>13</sup> By design the risk propensity of each agent should not significantly influence the likelihood of being paired with a higher or a lower endowed partner (because of the random assignment of initial endowments). We test such assumption through a Pearson’s Chi-squared test and find no evidence of significant correlation, with  $p=0.611$  and  $p=0.303$  for the first and second game respectively. Individual risk preferences are thus not correlated with the relative size of the investment in the joint venture.

could either accept or reject. In case the offer was rejected, a randomly assigned local *Shimagelle* would mediate a resolution to the litigation. The customary judge independently studied the game history of each player and made an arbitration verdict on how to split the joint venture capital.<sup>14</sup> Before the ultimatum decision, experimenters exposed the name of the assigned customary judge, and stressed that in case of arbitration the judge would be informed about the players' names. While joint venture partners remained anonymous to each other throughout the game, the arbitration process was thus non-anonymous.

The non-anonymity of arbitration ensured that decisions of agents and customary judges were rooted into local reputational dynamics. We expect the experiment to reproduce disincentives to deviate from norm-compliant behavior, closely related to those faced by agents in their daily life.<sup>15</sup> Similarly, we expect systematic biases in arbitration decisions to reflect the customary favoritisms present in our setting (e.g. biases against women and in favor of well-known plaintiffs). On top of this, random relative endowment heterogeneity offers an experimentally generated source of discrimination. In the absence of a legal fallback, we expect arbitration decisions to mimic local egalitarian norms (Henrich et al., 2006), exogenously disfavoring those who invested a higher share of the capital.

#### *4.4 The legal fallback*

For about half of the game sessions, the game ended with the decision of the customary judge. The remaining sessions also included a fourth stage, consisting in the application of the formal law treatment. Agents could reject the arbitration outcome by appealing to a costly fixed law. At the cost of 10% of the final joint capital – a fictional measure of the costs related

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<sup>14</sup> Throughout the first and second stage of the experiment, customary judges were trained on understanding the game process and implications. The training only halted once each customary judge was able to individually explain the game procedure without external assistance.

<sup>15</sup> Henrich et al. (2006) show that ultimatum bargaining behavior mirrors local egalitarian and redistributive norms. They observe that laboratory behavior is consistent with economic patterns of everyday life in several small-scale societies, and that community characteristics explain experimental patterns better than individual level variation.

to formal legal litigation – the law divided the joint venture capital according to initial investment shares. This rule, known as liquidating dividend policy, dates back to sixteenth century maritime trade expeditions, if not Hellenistic and Roman merchants (Benrud, 2009). It reflects a standard practice for joint-venture dissolution in several national legal systems, including that of Ethiopia.<sup>16</sup> It represents an alternative idea of fairness that may appeal higher investors that feel entitled to a higher portion of the joint capital. But it is also in sharp contrast with the concepts of distributive justice and egalitarianism that typically characterize rural communities (see Platteau, 2000). In other words, it allows us to study the effect of introducing a proportional split rule – also known as “liberal egalitarianism” (Cappelen et al., 2003) – in a context of “strictly egalitarian” norms (with biases), enforced by the customary judge.<sup>17</sup>

## **5. Empirical strategy**

We investigate the research questions outlined at the end of section 2. First, we verify the presence of systematic bias against customarily disfavored agents and in favor of privileged ones, without a legal fallback (RQ1). Second, we look at these potential biases in the presence of a costly fixed law, expecting them to attenuate (RQ2). Third, we make use of the strictly egalitarian discrimination against (exogenously determined) higher investors, to verify that the competing formal law draws the arbitration decisions of customary judges closer to the law itself (RQ3). And fourth, we investigate the behavioral changes of agents, in terms of ultimatum offers and rejection probability, with and without legal fallback (RQ4).

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<sup>16</sup> The provisions of the Ethiopian Commercial Code referring to the dissolution of partnerships and joint ventures are provided under Articles 258(1) to 279(3).

<sup>17</sup> Strict egalitarianism requires that ‘all inequalities should be equalized’ (Cappelen et al., 2003: 818). In our context, it means that each partner in the joint venture would receive an equal share of the joint capital (in the absence of a legal fallback, this was the case in over 50% of the arbitrations). Instead, liberal egalitarianism accepts inequality as long as it stems from choices under individual control. In our context, it is closely represented by the fixed law, in which each partner receives a portion of joint capital proportional to their initial investment share.

In the absence of the legal fallback, we expect customary judges to discriminate against less “powerful” agents (e.g. women), and in favor of more “embedded” agents (e.g. known plaintiffs). Also, we expect these biases to decrease once a non-discriminatory legal alternative is introduced. We test RQ1 and RQ2 by observing the arbitration outcomes relative to individual characteristics of agents, through the following regressions estimated under the two separate treatments:

$$Payout_i = \beta_0 + \beta_1 Female_i + \beta_2 Age_i + \beta_3 Edu_i + \beta_4 LowerInv_i + \beta_5 Known_i + \varepsilon_i \quad (1)$$

$$Payout_i = \beta_0 + \beta_1 Female_i + \beta_2 Age_i + \beta_3 Edu_i + \beta_4 LowerInv_i + \beta_5 (Known_i \times LowerInv_i) + \varepsilon_i \quad (1')$$

Where  $Payout_i$  refers to the post-arbitration payout of individual  $i$ , as a fraction of the overall mean payout,  $Known_i$  is a dummy taking value of 1 if the agent is known to the customary judge assigned to the arbitration,  $Female_i$ ,  $Age_i$  and  $Edu_i$  indicate respectively the gender, age, and education level of the respondent, and  $LowerInv_i$  takes value of 1 if the agent is the lower investor in the joint venture. Standard errors are clustered at the customary judge level. In the absence of a legal fallback, we expect biases in favor of known plaintiffs ( $\beta_5 > 0$ ), especially if they are favored by the strictly egalitarian custom (i.e. known lower investors), and against women ( $\beta_1 < 0$ ). Once the formal law is introduced, we expect such biases to attenuate.

The experimental design exogenously imposes customary discrimination on half the agents—the higher investors in the joint venture. We proceed to assess the robustness of the previous finding by testing whether the exogenously imposed customary discrimination is reduced by the introduction of the legal fallback (RQ3). Assuming that the legal fallback is a credible threat in the eyes of arbitrators, the optimal strategy in our experiment would be to reallocate to lower investors the “legal cost” that higher investors would lose by applying the law, therefore redistributing in the direction of the strict egalitarian norm, but not beyond reserve

utility of higher investors. We estimate a specification with only the law dummy as a regressor (OLS), and gradually include other individual level variables to reach the following full specification:

$$Adev_i = \beta_0 + \beta_1 Law_s + \beta_2 HighSend_i + \beta_3 (HighSend_i \times Law_s) + \beta_4 JVineq_i + \beta_5 Udev_i + \beta_6 \mathbf{X}'_i + \varepsilon_i \quad (2)$$

where  $Adev_i$  represents the deviation of each arbitration  $i$  from a proportional split in percentage points (i.e. the rule of law) for each arbitration,<sup>18</sup>  $Law_s$  is a dummy taking value of 1 if the session included the formal law option,  $HighSend_i$  is a dummy taking value of 1 if the ultimatum game sender is the higher investor in the joint venture,  $JVineq_i$  is the deviation of joint venture investment shares from 50-50 in percentage points,  $Udev_i$  represents the ultimatum offer deviation from a proportional split in percentage points, and  $\mathbf{X}'_i$  is a vector of other individual and game characteristics. Other notations have the same meaning as in (1). We expect  $\beta_1 < 0$ .

Finally, we look at the effect of introducing the legal fallback on the behavior of agents. Higher investors should benefit from the introduction of a law that imposes splits according to initial investment shares (RQ4). Whether they are willing to use the increased bargaining power deriving from the legal fallback depends, however, on the expected social cost of such action. Higher investors may forego the benefits of formal legislation in the presence of reputational concerns or expected social sanctioning. We measure such shift through the following fully specified equation:

$$Udev_i = \beta_0 + \beta_1 Law_s + \beta_2 HigherInv_i + \beta_3 (HigherInv_i \times Law_s) + \beta_4 JV_i + \beta_5 \mathbf{X}'_i + \varepsilon_{ia} \quad (3)$$

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<sup>18</sup> We regress arbitrations (129), rather than participant (258), as otherwise the same ruling would appear twice, for each individual in the pair.

Where  $Udev_i$  represents the deviation of the ultimatum offer of sender  $i$  ( $N=266$ ) from a proportional split in percentage points, and all other notations have the same meaning as in (2). If social sanctioning or the threat of it is not stringent, we expect  $\beta_1 < 0$  and particularly  $\beta_3 < 0$ . Yet, a sufficiently high social cost of deviation from the norm may reverse these expectations. In our setting, the identity of everyone's joint venture partner is kept anonymous, but the identity of agents is revealed to customary judges if the ultimatum offer is rejected—actions are observed by customary judges. If agents have reputational concerns particularly at heart, they may wish to signal their distaste for the law, and indicate their intention not to make use of it by making more strictly egalitarian ultimatum offers once the law is introduced. These concerns would only be expected from agents that stand to gain from the law, i.e. higher investors, and not from those that would lose from it. In such case,  $\beta_1 = 0$  and  $\beta_3 > 0$ .

As additional control to RQ4, we investigate the probability of ultimatum offer rejection. If agents favored by the custom anticipate a shift in arbitration outcomes once the law is introduced, their willingness to accept an ultimatum offer may increase. On the other hand, it is plausible that the legal fallback increases the prevalence of disputes, particularly if agents previously disfavored by the custom take advantage of their increased bargaining power (H4). We estimate a linear probability model with only the law dummy as a regressor, and gradually include other variables to reach the following full specification:

$$\begin{aligned}
 Dispute_i = & \beta_0 + \beta_1 Law_s + \beta_2 HigherInv_i + \beta_3 (HigherInv_i \times Law_s) \\
 & + \beta_4 JVdev_i + \beta_5 Udev_i + \beta_6 \mathbf{X}'_i + \varepsilon_i
 \end{aligned} \tag{4}$$

where  $Dispute_i$  is a dummy taking value of 1 if the joint venture  $i$  resulted in an arbitration,<sup>19</sup> and other notations have the same meaning as in (1) and (2). We expect  $\beta_1 \neq 0$ , where the sign of the coefficients depends on the dominating effect, and  $\beta_1 < 0$  and  $\beta_3 > 0$  once the interaction term is introduced.

## 6. Results

In total our experimental setup induced 129 pairwise disputes arising from rejected ultimatum offers, involving 258 out of 532 villagers. 144 agents entered a controversy in the treatment with only the customary arbitration, the remaining 114 being from the one with the additional possibility of appealing to a fixed law. First, we test the assumption that customary courts may disfavor less powerful agents (RQ1) (Asfaw and Satterfield, 2010; Sandefur and Siddiqi, 2013), and that biases against them may be reduced by the introduction of a formal legal fallback (RQ2) (Aldashev et al., 2012a, 2012b). We regress the 258 payouts resulting from arbitration by a customary judge, on the individual characteristics of agents (Table 2). In the absence of law, we find that post-arbitration payouts are more than 31% lower for female players (Table 2, column 1). Also, arbitration outcomes are significantly higher for known lower investors—favored by the strictly egalitarian customary norm (Table 2, column 2).

**Result 1:** *Arbitration outcomes result in lower payout to women and higher payout to known plaintiffs with lower initial investment shares.*

Most importantly, these statistical differences disappear once the legal fallback is introduced. The post-arbitration payouts for agents participating to the treatment with the legal fallback are not lower for women and not higher for known plaintiffs (Table 2, columns 3 and 4).

**Result 2:** *Arbitration biases disappear once the legal fallback is introduced.*

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<sup>19</sup> Again, regressing at the joint venture level (266), instead of the individual level (532), avoids double counting outcomes.

Result 1 had been documented by previous literature both within and outside Ethiopia (Asfaw and Satterfield, 2010; Sandefur and Siddiqi, 2013). Result 2, instead, represents a novel finding. It indicates that customary dispute resolution institutions are susceptible to increases in competitiveness of formal laws. In response to the introduction of a legal fallback, customary judges change their verdicts, reducing discrimination against agents disfavored by the custom. On the other hand, their capacity to enforce strict egalitarian norms is weakened by the liberal egalitarian law—payouts of lower investors are on average almost 56% lower, instead of 23%.

**Table 2.** Skewed sentencing against the underprivileged

Dependent	Payout: relative to mean payout (=1)			
	Customary only		Customary + Law	
	(1)	(2)	(3)	(4)
Known	-0.062 (0.172)		-0.009 (0.073)	
Female	-0.313** (0.138)	-0.326** (0.151)	0.146 (0.119)	0.141 (0.123)
Age	0.008 (0.005)	0.008 (0.005)	0.003 (0.004)	0.003 (0.004)
Education years	-0.002 (0.022)	-0.004 (0.020)	-0.007 (0.016)	-0.007 (0.016)
Lower investor	-0.234*** (0.053)	-0.377*** (0.095)	-0.557*** (0.055)	-0.533*** (0.067)
Known × Lower investor		0.171** (0.080)		0.039 (0.056)
Observations	144	144	114	114
R <sup>2</sup>	0.098	0.104	0.348	0.349

OLS, standard errors clustered at the judge level (in parentheses). \*\*\* ↔ 99%, \*\* ↔ 95%, \* ↔ 90%.

Result 2 is all the more salient as in our experiment agents disfavored by customary outcomes make limited direct use of the formal law. In fact, only 12 plaintiffs ultimately appealed to the rule of law. In other words, over 91% of the agents settled for a share of capital below that enforceable through the rule of law. Aldashev et al. (2012a, 2012b) predict that, at least partially, this is the consequence of customary change in the direction of the law. As they put it, ‘the “magnet” effect of the law is triggered by the preoccupation of village elders to maintain their authority and to retain enough potential claimants within the purview of their

informal jurisdiction’ (Aldashev et al., 2012b: 193). Next, we explicitly test if the legal fallback draws the decisions of customary judges significantly closer to the formal law (RQ3). To verify this, we take the deviation of arbitration outcomes from a split proportional to investment shares (i.e. the law), as a dependent variable. We find that arbitration outcomes are on average 10 percentage points closer to initial investment shares when the formal law is introduced (Table 3, column 1). This “magnet effect” is robust to introducing experimental and individual controls (Table 3, columns 2 to 4). Importantly, arbitration outcomes are still significantly different from the proportional split rule imposed by the law ( $p=0.000$ ): on average, lower investors receive 36% of the joint capital (instead of 45%), against an initial investment of only 33%.

**Table 3.** Law shifts arbitration outcomes

Dependent:	Arbitration: deviation from law (proportional split)			
	(1)	(2)	(3)	(4)
Law treatment	-0.102*** (0.012)	-0.107*** (0.015)	-0.105*** (0.015)	-0.104*** (0.017)
Higher investor sender		0.047** (0.020)	0.047** (0.020)	0.043* (0.022)
Law $\times$ Higher investor sender		0.011 (2.103)	0.011 (2.103)	0.011 (2.329)
Ultimatum offer deviation from law		0.316*** (0.097)	0.316*** (0.097)	0.274*** (0.094)
Joint venture inequality			-0.025 (0.149)	-0.081 (0.126)
Additional controls	No	No	No	Yes
Observations	129	129	129	129
R <sup>2</sup>	0.475	0.560	0.560	0.591

OLS, standard errors clustered at the judge level (in parentheses). Additional controls in (4): Age, Education, Female, Joint venture capital, Joint venture profit, Number of counteroffers, Win risk game 1, Win risk game 2. \*\*\*  $\leftrightarrow$  99%, \*\*  $\leftrightarrow$  95%, \*  $\leftrightarrow$  90%.

**Result 3:** *Customary judges (partially) adapt arbitration outcomes in response to the introduction of the formal law.*

Next, we proceed to investigate the behavior of agents across the two treatments (RQ4). Higher investors acquire bargaining power once the legal fallback is introduced, as the law grants them a portion of joint venture capital equivalent to the initial investment share. As a

result, we could expect higher investors to make less egalitarian ultimatum offers. Yet, if they fear reputational loss and social sanctioning, they may not be willing to use their improved bargaining position, especially if their actions are observable. In our experiment, joint venture partners are unknown to each other, but the arbitration process is non-anonymous, and customary judges play the role of community “observers” of the actions of senders. In the presence of egalitarian customary norms that counter the law, those who stand to benefit from the law may wish to signal their intention not to make use of it, by making more egalitarian ultimatum offers once the law is introduced. Table 4 shows that the legal fallback does not significantly change the deviation of ultimatum offers from the law (Table 4, column 1). In fact, higher investors seem to make more egalitarian offers in the presence of it (Table 4, columns 2 to 4). Higher investors make ultimatum offers that are on average 10 percentage points closer to initial investment shares compared to lower investors, but once the law is introduced they increase the relative distance from the law by 3 percentage points. Likewise, the legal fallback increases the probability that higher investors make an equal split offer from 13.3% to 27.8% ( $p=0.039$ ).

**Table 4.** Law does not affect ultimatum offers (by senders)

Dependent	Ultimatum: deviation from law (proportional split)			
	(1)	(2)	(3)	(4)
Law treatment	-0.007 (0.011)	-0.022 (0.014)	-0.011 (0.008)	-0.008 (0.010)
Higher investor sender		-0.097*** (0.012)	-0.103*** (0.012)	-0.099*** (0.012)
Law × Higher investor sender		0.039** (0.019)	0.037** (0.018)	0.032* (0.018)
Joint venture inequality			0.783*** (0.099)	0.793*** (0.095)
Additional controls	No	No	No	Yes
Observations	266	266	266	266
R <sup>2</sup>	0.002	0.208	0.333	0.352

OLS, standard errors clustered at the judge level (in parentheses). Additional controls in (4): Age, Education, Female, Joint venture capital, Joint venture profit, Number of counteroffers, Win risk game 1, Win risk game 2. \*\*\* ↔ 99%, \*\* ↔ 95%, \* ↔ 90%.

Finally, we look at the behavior of ultimatum receivers. If ultimatum receivers anticipate the shift in arbitration outcomes, their willingness to accept such offers may change even if senders do not take direct advantage of the legal fallback. Particularly, lower investors may not want to frustrate higher investors by refusing partially redistributive offers, motivating them to apply the costly law. We find that receivers reject significantly less ultimatum offers in the presence of the formal law: 40.7% against 57.1%. This result is driven entirely by reduced rejection rates of lower investors (-28 percentage points), previously favored by the pro-egalitarian custom, with no significant variation in rejection rates attributable to higher investor receivers (Table 5, columns 1 and 2). This result is robust to controlling for the investment share inequality between the higher and lower investor, and to other potential confounds (Table 5, columns 3 and 4)

**Table 5.** Law decreases ultimatum offer rejections (by receivers)

Dependent:	Ultimatum: rejections (=1)			
	(1)	(2)	(3)	(4)
Law treatment	-0.164** (0.064)	-0.280*** (0.086)	-0.258*** (0.080)	-0.263*** (0.081)
Higher investor receiver		-0.023 (0.078)	-0.006 (0.076)	0.003 (0.080)
Law × Higher investor receiver		0.260** (0.119)	0.267** (0.118)	0.261** (0.120)
Joint venture inequality			0.022*** (0.008)	0.021*** (0.008)
Additional Controls	No	No	No	Yes
Observations	266	266	266	266
R <sup>2</sup>	0.027	0.056	0.085	0.106

OLS, standard errors clustered at the judge level (in parentheses). Additional controls in (4): Age, Education, Female, Joint venture capital, Joint venture profit, Number of counteroffers, Win risk game 1, Win risk game 2. \*\*\* ↔ 99%, \*\* ↔ 95%, \* ↔ 90%.

**Result 4:** *The formal law does not alter ultimatum offers. Disfavored senders (higher investors) actually make offers less advantageous to themselves. The likelihood of offer rejection is reduced, but only for customarily favored agents (lower investors).*

## **7. Conclusions**

This paper builds upon the work of Sandefur and Siddiqi (2013), and explicitly investigates the indirect effects that increased competitiveness of formal law may have on customary arbitration outcomes. Similar to them, we find that customary arbitration outcomes systematically discriminate against women, and favor well-embedded agents. We contribute to the literature on the interaction between customary institutions and formal law, by showing that not only agents, but also customary judges may respond to incentive structures. We do so by observing the ultimatum game decision of local villagers in rural Ethiopia, as well as the arbitration choices of real local customary judges, ruling over controversies born from the ultimatum game itself.

Introducing a costly legal fallback reduces arbitration biases and draws the decisions of customary judges significantly closer to the formal law. Agents disfavored by the custom, instead, do not take advantage of their increased bargaining power. If the formal legislation does not depart too radically from the custom (Aldashev et al., 2012a), customary dispute resolution institutions may have a role to play in shifting preexisting norms towards the desired outcome: in areas where formal legal institutions have limited outreach, most socioeconomic gains of increased competition between statutory law and customary institutions may rise from changes in the latter, and not from plaintiffs seeking justice under the rule of law. On the other hand, formal legislation may limit the redistributive functions of customary legal institutions that enforce local pro-egalitarian norms. This is especially true when, as in our setting, the formal law provides an alternative rule of fairness (liberal egalitarianism vs. strict egalitarianism). Legislators should not overlook the potential contribution of customary legal institutions in changing the custom.

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## Appendix

### A1. Attrition analysis

Variables	Non-participants (N=80)	Participants (N=532)	Diff.	Std. Err.
Male (%)	92.5	91.5	1.0	(3.32)
Age	41.8	43.5	-1.7	(1.36)
Married (%)	90.0	91.7	-1.7	(3.43)
Orthodox (%)	96.3	97.9	-1.6	(1.79)
Education	2.4	2.4	-0.0	(0.22)
Household size	6.2	6.3	-0.1	(0.25)
Non-farm income	0.2	0.2	0.0	(0.05)
Informal safety nets (%)	80.0	82.9	2.9	(4.56)

Group means; t-test: \*\*\* ↔ 99%, \*\* ↔ 95%, \* ↔ 90%.

### A2. Experimental procedure

Step	Description
Stage 1	
1.1	Each participant is brought to a private location within the premises of the experimental field by an enumerator. Enumerators explain the first risk game to their participant, and randomly assign an endowment of either 80 or 120 tokens to them.
1.2	The enumerator explains the rule of the risk game until the respondent is able to convey them back correctly. Then a trial round is performed.
1.3	After the trial round, the respondent is asked to explain the outcome of the 'investment'. If the explanation is correct, the actual game can take place, otherwise the enumerator explains the rules again until full understanding.
1.4	Once the first risk game is completed, the enumerator states the new endowment and proceeds with the second risk game. Steps 1.2 and 1.3 are thus repeated.
1.5	Once the second risk game is completed, the enumerator states the final private endowment of the participant. Each enumerator writes the amount on a 'private endowment card', signs it and hands it to the participant. The enumerator explains that that card represents the tokens obtained by the participant during the experiment, and states the value of the endowment in local currency. Once the participant has understood the value of the card, the enumerator seals it into a closed envelope.
1.6	At the end of the first stage, participants are reminded that their choices and earning are anonymous and that their participation to the next stages is tied to the redelivery of their sealed envelope the next day. Participants can go home.
Stage 2	
2.1	The next day, each participant is randomly paired with another participant with higher or lower endowment. Participants within each pair are not known to each other and are brought to separate private locations by different enumerators. Once there, enumerators explain the rules of the joint-venture stage, separately to both participants.
2.2	Participants are told that they will merge their private endowment with an anonymous partner, and perform the same risk games as the previous time. This time, however, they will need to compromise on the investment choice. Enumerators state the value of the joint endowment and remind each participant about their private share within the joint venture.
2.3	Pairs bargain over the same risk games of step 1.1 to 1.4. For each risk game, enumerators record and deliver messages between the joint-venture partners, to reach a consensus over the investment choice. If a consensus is not reached by bargaining

round 9 of each game, the enumerator may take the average of the two proposals, rounded down to the nearest available option, as investment choice.

- 2.4 After the two risk games are completed, the enumerator states the final joint-venture endowment of the pair. Each enumerator writes the amount on two ‘joint endowment cards’, signs them and hands them in to each participant in the pair. The enumerator explains that that card represents the total tokens obtained by the pair during the experiment.

### Stage 3

- 3.1 Each enumerator randomly assigns one participant to be the sender, and one to be the receiver in an ultimatum game. Enumerators explain the rules of the game, and state that the game will determine which portion of the joint endowment will be theirs to take home. They state that if the receiver does not accept the offer of the sender, the litigation will be sent to a local customary judge.
- 3.2 Prior to making the ultimatum offer, both participants are informed about the name of the customary judge that would rule over the controversy in case the ultimatum offer is rejected. They are asked to state whether they know that customary judge, and are told that in case an arbitration is required, the judge will be informed of their name and game history.
- 3.3 Throughout Stage 2, four customary judges have been instructed on the rules of the game. Each judge is asked to explain the rules of the two risk games, as well as the joint venture stage. If the explanation is not correct, the enumerator explains the rules again until full understanding. Before presiding an ultimatum game arbitration, customary judges are asked to sign an informed consent and confidentiality notice, requiring them to maintain the anonymity of game participants.
- 3.4 If the ultimatum offer is accepted by the receiver, the game terminates. Otherwise, the selected customary judge receives a game information sheet containing the names and game history of both participants, and independently reaches a final verdict.

### Stage 4

(only for the ‘Customary + Law’ treatment)

- 4.1 Participants to the ‘+ Law’ treatment are informed of the legal fallback during step 3.1. Similarly, judges are informed during step 3.3. Enumerators explain that the arbitration verdict can be overruled by a costly fixed law: at the expense of 10% of the joint endowment, the law imposes a split according to initial investment shares.
- 4.2 After the customary judge has emitted the verdict, each participant to the ‘+ Law’ treatment is asked whether they accept or reject the verdict. If at least one pair member rejects the verdict, the costly fixed law is applied.

### A3. First risk game lottery choices

Selected ball value	Winning probability	Highest possible loss	Standard deviation	Expected value	N
1	8/8	0	0.0	1.0	9
2	7/8	1	1.0	1.6	15
4	6/8	2	2.4	2.6	39
8	5/8	4	5.1	4.1	130
16	4/8	8	10.1	6.1	143
32	3/8	16	19.0	8.1	125
64	2/8	32	33.6	8.1	51
128	1/8	64	52.3	0.1	20

Winning values are in tokens. Each lottery comprises 8 balls with value  $B_n = 2^{n-1}$ . Agents select the desired winning ball value  $B_s$ . If the ball extracted  $B_e \geq B_s$ , players win  $B_s$ , if  $B_e < B_s$ , they lose  $B_e$ .