The Impact of Active Case Management on Adjournments, Court Delays and Income: Evidence from Kenya

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Contribution to Original Knowledge

My first contribution is to provide the first quasi-experimental evidence showing that active case management can be used to reduce adjournments and delays in complex trials. This knowledge expands the set of effective tools available to policy makers and can therefore inform future efforts at implementing reform in judicial systems.

My second contribution is to document the economic impact of reducing adjournments and delays in the courts. The first effect is a direct increase of per capita income for citizens involved in legal disputes. The second is an expected benefit in the long run: since the judiciary is responsible for protecting property rights and holding corrupt politicians to account, public confidence that these functions are being carried out effectively is crucial to promoting investment in the economy at large.

Contributions of Author

I was responsible for obtaining the dataset, performing statistical analysis, writing the text and interviewing officials from government and non-government agencies.

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Abstract

An efficient judicial system is a key driver of economic growth, by enforcing contracts and securing property rights. Many judiciaries face problems with delays caused by excessive adjournments which can be costly for citizens involved in litigation. In 2016, the Kenyan judiciary launched an innovative pilot in 11 courts called Active Case Management (ACM), whereby judges must take active control of their cases by organizing pre-trial conferences and setting up deadlines with the overall objective of reducing adjournments. While 18 percent of all hearings ended with an adjournment before the pilot, this figure essentially dropped to zero after the pilot. We find an increase in speed and no decrease in the quality of legal processes. Income of citizens involved in contract enforcement and property rights disputes increased by 34% in the pilot courts.

Le système judiciaire joue un rôle important dans la croissance économique car il fait respecter les contrats et aide à garantir les droits de propriété. De nombreux systèmes judiciaires sont confrontés à des problèmes de retards dus à des ajournements excessifs qui peuvent être coûteux pour les citoyens impliqués dans des litiges. En 2016, la justice kenyane a lancé un projet pilote innovant dans 11 tribunaux appelé "Active Case Management" (ACM). Le projet avait comme but d'encourager les juges à prendre un contrôle plus actif de leurs procès en organisant des conférences préparatoires et en fixant des délais avec l'objectif global de réduire les ajournements. Alors que 18% de toutes les audiences se terminaient par un ajournement avant le pilote, ce chiffre est essentiellement tombé à zéro après le pilote. On constate une augmentation de la vitesse et aucune diminution de la qualité des procédures judiciaires. Les revenus des citoyens impliqués dans des litiges relatifs aux contrats et aux droits de propriété ont augmenté de 34% dans les tribunaux ciblés.

I. Introduction

There is a growing consensus that institutions play a vital role in determining a nation's development path [Acemoglu, 2006]. The judiciary is a particularly important institution because it directly applies the laws which govern social and economic interactions. One of the problems that judiciaries often face, however, is excessive delay in resolving cases [Palumbo et al., 2013]. For example, the Canadian Supreme court recently put strict ceilings on the length of criminal trials in reaction to a "culture of delay and complacency towards it"[1]. While there is a widespread recognition that reforming judiciaries is important, the best way to achieve this in practice is not clear.

In this paper, I evaluate the effect of a promising intervention that has never been rigorously tested before: active case management (ACM). ACM is designed to increase performance by 1) holding pre-trial conferences in which all parties agree to a schedule that will be closely followed as the case proceeds and 2) changing the work culture within the courts to promote a 'doctrine of efficiency' [UNODC, 2017, 12]. ACM was developed by legal experts who have studied its implementation and found positive results however, all the evaluations up to date have been based on qualitative case studies and simple correlations [Laws, 2016, Goerdt, 1991, Flanders, 1980]. The idea holds promise and has been tried in both developed [Flanders, 1980, Goerdt, 1991, Raine and Willson, 1993, Somerlot et al., 1989] and developing [Hazra, 2006, WorldBank, 2011a, Hammergren and Mitiku, 2010] countries but a rigorous evaluation has yet to be conducted.

To evaluate the impact of ACM, I leverage a pilot intervention in Kenya which began in 2016 and targeted criminal cases in 11 specific courts. I employ a difference-in-differences approach which contrasts the performance over time of courts that were involved in the pilot to other similar courts that were not. Intuitively, if I find that the pilot group has improved more than the other courts since 2016 - for example if the probability of adjournment decreased by a greater amount - I can conclude that the intervention was responsible for this divergence. The difference-in-differences method crucially relies on an assumption of parallel time trends: that absent the intervention, both groups would have been improving (or declining) at the same rate. This assumption could be violated in my study if, for instance, the judiciary deliberately targeted the 'best' courts with the most entrepreneurial judges that would have been improving faster regardless of ACM. To address this issue, I conducted extensive interviews with officials who were directly involved in the early stages of the pilot and I perform a statistical test to check if the treatment and control groups were on different time trends prior to the intervention. The interviews revealed that courts were chosen

[1] R. v. Jordan, 2016 SCC 27, [2016] 1 S.C.R. 631

for the pilot essentially by accident: judges attended a routine training in the United Kingdom where there happened to be other foreign officials who who researching ACM. When the judiciary decided to implement the pilot, they started in those courts that already had some exposure to the idea. The statistical analysis also shows no evidence of diverging trends.

This paper makes three key findings. First, ACM reduced the probability that a hearing ends with an adjournment from 18 percent to practically zero for criminal trials in the high courts. Using the average length and frequency of adjournments, I estimate that the average time saved per case is 65 days which corresponds to 4.3% of mean time to disposition. I conduct a range of tests that bring credence to the analysis: the effect is larger for criminal than civil cases which were not the focus of this pilot, the effect is larger in high courts (that deal with more complex cases likely to be affected by better planning) than in lower-level courts (that deal with more basic cases).

Second, I demonstrate that increased speed did not come at the expense of quality. If anything, the evidence shows that the intervention improved the public's perception of fairness and efficiency in the judicial system. Thus, ACM reduced the financial burden of litigation and public faith in the judiciary increased as well.

Third, I find that these improvements in speed and quality resulted in significant economic effects: the income of citizens involved in contract enforcement and property rights disputes increased by 34% in the treated courts.

This paper makes two significant contributions. First, I provide the first quasi-experimental evidence showing that ACM can be used to reduce adjournments and delays in complex trials. This knowledge expands the set of effective tools available to policy makers and can therefore inform future efforts at implementing reform in judicial systems. The World Bank alone spends on average 24 million dollars a year [WorldBank, 2012, 5] on stand-alone judicial reform projects, i.e., not counting the many other projects that have a judicial reform component. ACM can help governments and aid organizations achieve their goals without incurring significant extra costs because it is mainly an organizational and cultural shift which does not require much additional spending on infrastructure or personnel.

My second contribution is to document the economic impact of reducing adjournments and delays in the courts. The first effect is a direct increase of per capita income for citizens involved in legal disputes and there is an additional expected benefit in the long run: since the judiciary is responsible for protecting property rights and holding corrupt politicians to account, public confidence that these functions are being carried out effectively is crucial to promoting investment in the economy at large [Acemoglu et al., 2012, Besley and Mueller, 2018]. My findings show that an increase in

speed did not come at the expense of quality and that if anything, citizens perceive that quality of proceeding increased as a result of the intervention.

The rest of the paper is organized as follows. Section II provides a conceptual framework for understanding ACM. Section III describes the intervention in Kenya. Section IV presents the identification strategy and the data used to implement it. Section V presents the empirical methodology. Section VI presents the results and Section VI.E the robustness checks. Section VII concludes.

II. Literature Review and Conceptual Framework

A growing body of theoretical and empirical work has emphasized the important role of institutions for economic development [Acemoglu, 2006, Kesternich and Schnitzer, 2010, Acemoglu and Johnson, 2005, Pande and Udry, 2005].

The judiciary is a vital institution in modern societies and it affects many different facets of the economy. For instance, it protects citizens from expropriation by prosecuting public officials who engage in acts of bribery, extortion, confiscatory taxation and other means of corruption. These issues are quite common in many emerging markets [Kaufmann, 2005] and undermine private investment [Luo, 2011, Kaymak and Bektas, 2015]. An independent and effective judiciary also promotes economic growth by helping enforce legal contracts between private actors [Kaymak and Bektas, 2015].

However, the judiciary can only help foster economic development if it functions properly, which is not always the case. One of the persistent problems that plagues judiciaries across the world is excessive delay and there is one recurring theme in most discussions about long trial length; adjournments [Hammergren and Mitiku, 2010, Kondylis and Stein, 2018, WorldBank, 2011b, Flanders, 1980, Goerdt, 1991, Laws, 2016, Raine and Willson, 1993, Somerlot et al., 1989, WorldBank, 2018b]. A hearing is said to be adjourned when it is postponed to a later date, so when this occurs, resolution of the case is necessarily postponed as well. While there are legitimate motives for granting adjournments, their overuse is very often cited by legal experts as one of the major reasons why courts experience unreasonable delay. To give only a few examples, a report from the Canadian Senate in 2016 made as it's first recommendation the reduction of "the number of unnecessary appearances and adjournments [...] to ensure criminal proceedings are dealt with more expeditiously" [Runciman and Baker, 2016, 7]. A similar recommendation was made by the World Bank in a report for the Serbian government [WorldBank, 2018b]. In Kenya, the Chief Justice has been on record saying that "endless adjournments of cases on frivolous grounds" are a major cause of case backlog in the country [Muriuki, 2019]. His assessment is also supported by the data which

show that the average probability of adjournment was 20.9% for civil cases in the last quarter of 2015, compared to 6.3% in Canada that same year. Thus, while the Canadian government was denouncing what it saw as a problem with excessive adjournments, the situation in Kenya was more than three times worse.

Various strategies have been implemented in the past to reduce delays and control adjournments. The government of Ethiopia implemented (in two courts) several concrete measures such as: banning judge-initiated adjournments, not allowing civil trials to have more than two adjournments, and imposing strict rules to dismiss cases if the plaintiff does not show up to court or proceeding without the defendant if he fails to attend trial [Hammergren and Mitiku, 2010, 78]. A World Bank report notes a slight decrease in adjournments after the policy in these two courts. Yet, there is no control group, and no confidence intervals such that it is impossible to ascertain the causal effect of these policies [Hammergren and Mitiku, 2010, 80].

In 2008, the Malaysian judiciary also underwent reforms to reduce backlogs and improve efficiency in the courts [WorldBank, 2011a]. The strategy was centered around improving data collection to monitor outcomes and increasing pressure on judges to improve their speed. In addition, government officials sometimes made unannounced visits to courts to ensure that judges were respecting the rules [Laws, 2016, 4]. A progress report which was commissioned in 2011 found that the reforms had been "particularly successful in discouraging frequent adjournments of hearings [...] creating incentives to encourage judicial staff to operate more efficiently" [Laws, 2016, 5]. However, as was the case in Ethiopia, the conclusion was arrived at by comparing data before and after the reforms and no rigorous impact evaluation was conducted. Furthermore, since the reform was made up of many components (pre-trial management, inventory management, creation of new courts) [WorldBank, 2011a, 8] it would be very hard to isolate the effect of one specific intervention.

[Hazra, 2006] also reports that Indian officials have suggested using data to identify lawyers who often use adjournments as a delay tactic or sending text message alerts to remind litigants about hearing dates [Ibid, 100]. While these are creative and interesting initiatives, they were documented anecdotally in the form of "Narrative Accounts" [Ibid, 2], so no attempt was made at quantifying their impact.

In addition to the policy reports cited above, there also exist a number of academic studies which analyze reforms aimed at reducing delays. [Raine and Willson, 1993] Compare the evolution of trial duration over time in eight magistrate courts in England to track how different scheduling and management practices affect speed of resolution. They identify judges' different practices using qualitative interviews and ultimately conclude that those who exercise more control over

their cases resolved them faster [Ibid, 250]. [Goerdt, 1991] uses data from 500 civil cases in 37 (not randomly selected) magistrate courts in the United States to identify the factors which best explain the length of trials. He employs bivariate and multivariate correlation analysis [Ibid, 305] and determines that lack of judges and effectiveness of case management systems are the two factors which best explain the pace of litigation [Ibid, 322]. In a similar vein, [Somerlot et al., 1989] look at an initiative to reduce delays in the Wayne County Circuit Court through better case management, i.e., encouraging judges to schedule their trials in advance and manage timelines more actively. The authors look at trends in data over time and find that the program was effective, but there was only one court in the "sample" so the paper is more of a case study than a statistical analysis.

Thus, this older literature from the United States and England emphasizes that pre-trial planning - establishing strict schedules and empowering judges to take more control over the progress of trials - are key policies that could be employed to reduce delays. Unfortunately, there is no rigorous empirical evidence supporting this claim, only statistical correlations and qualitative case studies that do not have causal interpretations.

A recent paper by [Kondylis and Stein, 2018] uses a more rigorous empirical approach to quantify the impact of a judicial reform in Senegal. The reform placed a four month limit on the duration of civil trials and empowered judges to dismiss cases they considered frivolous [Ibid, 10]. Their identification strategy is to compare newly filed cases to those that were already active before the reform was passed because judges were explicitly told not to apply the new rules to active cases [Ibid, 16]. The authors find that length of trial was reduced by the reform and do not find any negative impact on the quality of proceedings [Ibid, 29]. These robust findings represent a significant contribution to the ongoing international effort at implementing judicial reforms. Their study is a valuable resource for policy makers who are trying to improve the speed of judiciaries in different contexts. In the present paper, I aim to expand this line of research by adding to the set of available policies that have been tested using a thorough identification strategy. Instead of focusing the effect of time limits for civil trials, I will be evaluating the impact of a reform specifically aimed at reducing adjournments in criminal proceedings.

III. Reducing Adjournments and Delays in Kenya with Active Case Management

A. The Concept of ACM

It is the opinion of legal experts in Kenya that "The majority of adjournments are due to poor pre-trial planning" [UNODC, 2017, 1] and that "unnecessary adjournments [...] themselves exacerbate the delays presently faced by the Kenyan courts" [NCAJ, 2019b, 14]. ACM is a case

management strategy that aims to address these problems, reduce adjournments and ensure just and expeditious resolution of trials [2]. Its fundamental principles are written into law in Australia, England, Wales and Scotland [NCAJ, 2019b, 97] and the idea was initially introduced to Kenya through the judiciary's close partnership with the British high Commission (see Section IV). There are two main components to ACM: holding pre-trial conferences (PTCs) to improve planning, and training all the parties (i.e., police, prosecutors and defense counsel) involved in litigation, not just judges[3], to create a culture of efficiency in the courts.

PTCs are scheduled at the outset of a trial and are attended by the judge, the litigants, the accused and other relevant actors[4]. The first goal of a PTC is to agree upon the precise areas of dispute, i.e. what the contested or not contested issued are. Sometimes, one party may be unclear as to what is being contested by the opposing side and spend significant time and resources proving points that are in fact not contested[5]. Clarifying these issues in advance thus allows greater speed [NCAJ, 2019b, 11].

The second goal of PTCs is to encourage plea bargaining or other means of alternative dispute resolution [UNODC, 2017, 3].

The third and most important goal of PTCs is to determine a precise schedule for the trial (once all the points of contention are established and if no plea bargain is achieved). The schedule includes dates and length of trial but also lays out a detailed agenda for each hearing to make sure that all the necessary preparation is done in advance. Prior to the pilot, there was no systematic pre-trial planning which resulted in inadequate preparation by parties, non-attendance in court, late disclosure of evidence and other such problems that impeded hearings being held in a continuous manner [NCAJ, 2019b, 13]. In this sense, ACM puts judges in control since they set and enforce the timeline, not interested parties.

Other topics that can be discussed at a PTC include bail, preparation of technological requirements (such as videoconferences for witnesses abroad), and the confirmation of disclosures of witness statements. The discussion of these topics at an early stage may prevent delays down the line [NCAJ, 2019a, 76]

[2] U.K. Criminal Practice Directions, Part 3, PD. 3A.1 (2019)

[3] Technically, judges are called judicial officers in Kenya since a judge is for high courts and magistrates are for magistrate courts such that judicial officer is an umbrella term for both judges and magistrates.

[4] Outside actors such as medical examiners and government chemists may also be consulted before trial. A concern was raised during the intervention in Kenya that medical examiners were sometimes unwilling to cooperate with the scheduling aspect of ACM. This can cause delays during trial because a hearing will have to be adjourned if reports are not ready on time. It was therefore recommended that the judge in charge should call in reticent practitioners at the pre-trial stage to ensure compliance on their part [UNODC, 2017, 4]

[5] A UNODC employee I interviewed was present at a hearing where multiple witnesses were brought in to attest to the legitimacy of a signature on a document. However, it turned out the opposing side had never contested the signature's legitimacy in the first place.

Once the PTC is complete, the trial begins with the judge in charge of enforcing the agreed-upon schedule [NCAJ, 2019b, 11] and the ability to impose sanctions or refuse adjournments if parties fail to comply [JTI, 2016, 6]. However, while judges have the legal right to impose sanctions, they can be reticent to do so for fear of being accused of interfering with citizens' right to a fair trial[6]. For this reason, success of ACM in practice crucially depends on creating a doctrine of efficiency that encourages all parties to willingly participate in the process [Leveson, 2015, 9]. A first condition for achieving this, is that judges must "exercise firm control over the conduct of the trial at all stages." [Ibid, 9]. They need to be trained on facilitating communication and demonstrating fairness to all parties [NCAJ, 2019b, 11] while at the same time being strict about granting any adjournments and enforcing the timeline determined at the PTC stage [UNODC, 2017, 2]. The second condition is that the other parties must buy into the culture of efficiency so that they make an effort to comply with the guidelines and also help find innovative solutions to the challenges of ACM [NCAJ, 2019b, 32]. Without the cooperation of these other parties, it is deemed unlikely that ACM will have any effect at all [UNODC, 2017, 2].

B. The Intervention in Kenya

In January 2016, the Kenyan judiciary, the United Nations Office on Drugs and Crime (UNODC), and the British High Commission (BHC) initiated a pilot project for ACM. The pilot was launched in eleven courts [UNODC, 2017, 1].[7]

The key activities of this pilot were to implement a system of PTCs, establish a pre-trial questionnaire where pertinent information for trial is recorded in writing and establish a set of guidelines that were later transformed into more formal "rules" in March of 2016 [UNODC, 2017, 2]. This pilot was only for criminal cases (since pre-trial conferences were already written into the Civil Procedures Act in 2012[8].

The UNODC produced a report (called the Concept Note for Rollout of ACM) in which significant concerns about this pilot were raised by two sets of actors: the police and prosecutors. Police officers raised the concern of having to wait long periods for reports from other parties, such as chemists or medical practitioners [UNODC, 2017, 2]. According to the police, medical practitioners perceive their time is "wasted" in court as they often have to wait for hours to testify whereas they would rather tend to patients. Police officers also felt they had not been sufficiently involved in the

[6]This information was obtained during an interview with a UNODC official

[7]Mombasa high court, Mombasa employment and labor relations court, Mombasa environment and land court, Mombasa magistrate court, Shanzu magistrate court, Tononoka magistrate court, Naivasha high court, Naivasha magistrate court, Machakos high court, Machakos environment and land court , Machakos magistrate court. These 11 courts are grouped in three "court stations": Mombasa Law Courts, Naivasha Law Courts, and Machakos Law Courts.

[8]Kenya. Civil Procedure Act, Ch. 21, Order 11 (2012)

PTCs or in the implementation of ACM; yet they play a crucial role in ensuring criminal cases are disposed of expeditiously [UNODC, 2017, 7]. A recommendation was made to involve all these actors (chemists, examiners, police) more closely for a successful ACM intervention [Ibid, 8]. These concerns emphasize the fact that ACM relies upon a global change of culture in the courts that must include all actors, not only judges.

Prosecutors raised two other important concerns. First, they complained that disclosing evidence during the PTCs would preclude them from introducing new evidence at a later date.[9] Second, prosecutors stated that the impartiality of judges will be compromised at trial because they will base their judgements only on the evidence seen during the PTC.

These concerns raised by the police and prosecution echo the main findings of a baseline survey conducted on court users prior to the pilot: "83% of defense counsel, 75% of judges, 37.50% of police officers and 35% of prosecutors were dissatisfied with the length of time it took to dispose of criminal cases"[UNODC, 2017, 2]. What these statistics indicate, is that lawyers and judges were dissatisfied with the state of affairs prior to the pilot, while the police and prosecution were much less concerned. Therefore, some groups may be much less pre-disposed to the idea of ACM.

Overall, this section points to significant obstacles for implementing ACM in practice: some important court actors (i.e., police and prosecution) were opposed to such an intervention. This point has important implications for policy: failing to identify groups that are resistant to the idea and addressing their concerns could undermine the intervention. In my empirical section, I will formally test this hypothesis by looking at the overall satisfaction with court processes after the pilot by the police and prosecution.

Despite these concerns, the overall conclusion of the Concept Note is that ACM achieved many of its goals. First, the instruction to only grant adjournments in exceptional circumstances was taken "very seriously" by judges [UNODC, 2017, 1]. Second, prosecutors were more diligent in presenting evidence and witnesses on schedule, which had the ripple effect of pressuring police officers to conclude investigations in a timely manner. What the latter point demonstrates is that a "doctrine of predictability" which did not previously exist, had in fact been anchored in the system [UNODC, 2017, 2]. While the qualitative findings in the UNODC's Concept Note are encouraging, there exists no empirical analysis which measures the effect of the pilot against a credible counterfactual. The main purpose of this paper is therefore to rigorously quantify the impact of the intervention and determine whether ACM produced concrete results which appear in the data.

[9]This point is dismissed in the Concept Note as "a fundamental misunderstanding of both their disclosure obligations and the power to serve additional evidence right up until the conclusion of the prosecution case" [UNODC, 2017, 2]. "Charging decisions should rarely be made where crucial evidence is outstanding". In other words, evidence should be gathered before, not after, the PTC.

Complexity of cases is germane to a study of ACM because I expect the intervention to be more effective in complex trials which require the cooperation of numerous actors. This idea is also reflected in the judiciary's training manual for ACM which states that "Not all cases may require a PTC and some jurisdictions have adopted a mixed approach so that only complex cases or those that are likely to take substantial time of the court are subject to case management" [NCAJ, 2019b, 29]. It also makes intuitive sense that a trivial traffic violation hearing would not benefit much from intensive planning, but a murder trial with multiple witnesses and extensive evidence to be presented would.

In this paper, I thus focus on high courts rather than lower-level courts, called magistrate courts[10]. Magistrate courts only hear basic cases, and appeals are directed to high courts. Thus, the more complex cases reach the high courts, where ACM could make a difference. This is confirmed by my descriptive statistics: the average time to disposition for criminal trials in high courts is 1479 days compared to 1006 days in magistrate courts. Legal representation is also much less common in the lower courts (57% in high court criminal cases and 10% in the magistrate courts). While I mostly focus on high courts in this paper, I nonetheless present all results pertaining to magistrate courts in Appendix F.

IV. Empirical Strategy

A. The Data

The main source of data I use to evaluate the impact of ACM is the Daily Court Return Template (DCRT) which is stored on the judiciary's server and contains specific information about each proceeding that takes place in the courts of Kenya. Every case is identified by a unique code which allows me to track its activity and calculate the time elapsed between date of filing and date of resolution. I also know the exact charge leveled against the defendant, the precise outcome of each appearance, the name of the presiding judge(s), the number of plaintiffs/appellants, the number of defendants/accused, whether any of the parties has legal representation [11], how many accused were remanded in custody and whether a witness has testified. If an adjournment was given, I am able to see the specific reasons for adjournment. The reasons for adjournment can be essentially grouped into two categories: those under the control of the judge or the court (which I call

[10]The courts of Kenya are categorized into the following groups: The Supreme Court, The Court of Appeal, High Courts, Magistrate Courts, Employment and Labour Relations Courts (ELRC), Environment and Land Courts (ELC), and finally, the Kadhi's Court which deals only with civil cases related to sharia law.

[11]This is a yes or no question and if the answer is yes, it is not specified which party has representation.

"internal") and those caused by other actors (which I call "external"). "Internal" adjournments can be granted when the judge is not present (despite a hearing date having been given to all parties) or when the judgement is not ready[12]. "External" adjournments can be granted when the lawyer or other parties are not ready [13]. I make this distinction between internal and external since the ACM training manual explicitly instructed judges to be strict about granting adjournments to other parties [NCAJ, 2019b, 13]. Therefore, I expect ACM to have a larger effect on external adjournments.

The information in the DCRT is entered into a spreadsheet on a daily basis by court clerks, and it is submitted to the statistics department at the end of each month. Upon submission, Program Officers check for missing data or other obvious irregularities and when an issue is identified, they contact the courts to rectify it. The result of this process is a data set which provides a detailed picture of what goes on in the courts. While the data collection process is structured and rigorous today, this was not always the case. Prior to 2012, data collection was very limited in scope and it was not managed in an accurate and systematic way. These practices only began to change when the judiciary implemented the Judicial Performance Improvement Project (JPIP), a wide-ranging reform which had three main goals: 1) increasing access to courts and legal information 2) improving the timeliness of judiciary services and 3) enhancing performance and quality of decision - making [WorldBank, 2018a, 10-11]. Creating the DCRT was an integral part of JPIP since the Judiciary needed accurate information both to assess the state of affairs at the time, and to monitor the progress they were making as they carried out their reform agenda. More recently, outcomes which can be measured using the DCRT - such as the case clearance rate (cases cleared over cases filed) - are being considered in internal decisions about promotions and transfers of judges. Efforts to improve the data management process continue to this day but a complete and reliable version of the DCRT has been available only since October 2015.

To examine if the ACM reform had an impact on the quality of the legal system, I use data from the Court User Satisfaction Survey (CUSS) which is conducted every two years by the statistics department of the Kenyan judiciary. Two rounds of the CUSS were compiled in 2015 and 2017, thus covering the periods before and after the ACM pilot. Respondents include "people with cases,

[12]The full list of "internal" adjournments is: court not sitting, court on its own motion, judgment not ready, ruling not ready, matters not cause listed, no reason recorded, typed proceedings not ready, submission not ready, recusal, court on leave, court on official duty, court indisposed.

[13]The list of "external" adjournments is: advocate not ready, advocate not present, partie(s) not ready , partie(s) not present, prosecutor not ready, prosecutor not present, witness not present, witness not ready, death of a party, expert report not ready, file missing, judge on transfer , no exhibits, no proof of service, parties to negotiate, no interpreter, matters cannot be reached, expert witness absent, accused not ready, accused not present, Subject not represented, faulty charge sheet, accused not supplied with witness statements/relevant documents, police file not availed, other (specify in details of case).

lawyers, prosecutors, police and inmates"[14] so the survey represents a variety of viewpoints. An interesting feature of the CUSS is that I can identify respondents based on their role in the courts (defense lawyer, prosecutor, accused, etc.) and this allows me to test whether certain groups like prosecution and police will have different reactions to ACM, as predicted by the Concept Note. The questions asked also cover many topics ranging from the quality and fairness of judicial proceedings to the work environment within the judiciary and the quality of court infrastructure.

The third dataset I use was collected by the Hague Institute for Innovation of Law (HiiL) in 2017. They surveyed approximately 6,000 individuals to ask them about their past experiences with the courts and also asked questions about personal characteristics of the respondents (income, education, employment), information about disputes settled in court (business or personal, costs of procedure, quality of procedure) and attitudes about justice institutions. A significant portion of the disputes were filed before 2016 so the sample covers the periods before and after the ACM pilot. Here the geographic data is given at the county level[15], so I can identify if the courts were part of the ACM pilot but no more specific information is available.

B. Identification Strategy

To identify the causal impact of ACM on adjournments, I use the eleven courts which were targeted by the pilot as a treatment group (those located in Mombasa, Machakos and Naivasha), and all the other high courts and magistrate courts as the control group. I employ a difference-in-differences approach which crucially relies on the parallel trends assumption, i.e., that absent the intervention, the frequency of adjournments would have evolved in the same way in both the treated (pilot) and control courts. The assumption could be violated however, if selection of courts into the treatment group was done in an endogenous way. If those in charge of implementing the pilot chose to involve only the most efficient courts - because they felt pressure to show results for example - this would cause positive bias of the regression coefficients and it would be impossible to know if improvements in performance should be attributed to the intervention itself, or whether these 'best' courts would have outpaced the others regardless of being trained on ACM. Conversely, if the judiciary had selected the least productive courts - perhaps because they wanted to provide help where it was most needed - this would cause me to underestimate the true impact of the pilot.

Information about selection is not available in the official documentation but I was able to conduct interviews with employees of the Chief Registrar's Office (CRJ), the UNODC, the BHC, the World Bank, the National Council on the Administration of Justice (NCAJ) and the Judiciary Training

[14] https://www.judiciary.go.ke/two-thirds-of-court-users-are-satisfied-with-court-services
[15] There are 47 counties in Kenya

Institute (JTI), all of whom were involved in some capacity with the ACM pilot.

Through the interview process, I was able to confirm the reason why these three court stations were chosen for the ACM treatment. Before the inception of the pilot in 2016[16], the BHC and UNODC collaborated with the judiciary to offer a training in the United Kingdom on two topics: land reform and traffic cases. The Chief Justice of Kenya chose to send a few judges from these three court stations to the training, not based on anything related to skill or performance, but because they handled cases connected to those two topics. The UK training was not designed to address ACM specifically and the subject was merely discussed in an informal way with the judges who were present because the BHC happened to be doing research on the topic at the time.

After this training was completed, the BHC presented ACM as a possible solution to excessive delays in Kenya. The judiciary simply chose to start the pilot in the three court stations where certain judges already had exposure to the idea of ACM.

Therefore, selection into the treatment group was rather coincidental, not caused by the frequency of adjournments or court performance being abnormally high or low (this fact is also reflected in balance tests I conducted between the treatment and control groups in Appendix A). The eleven courts were chosen because some of the judges there were working on land reform and traffic cases, two topics which were discussed in this training in the UK. In my empirical analysis, I exclude all cases related to land or traffic so my estimates are free from any influence of the training on those types of cases.

The only remaining threat to identification comes from the possibility that the 11 courts in the treatment group received other major reforms or investments after 2016 that would put them on a different time trend. Conversely, courts in the control group might have experienced detrimental events like severe budget cuts. Both these propositions were refuted by the UNODC and NCAJ staff who are the best source of information for this type of inquiry: they are directly involved in the implementation of reforms, trainings and monitoring performance of the courts. One exception however, is Shanzu Law courts, a magistrate court which is housed in the Mombasa court station. The UNODC cautioned me that Shanzu had received a disproportionate amount of funding for reforms such as infrastructure and investments in IT equipment. The court also has an in-house consultant from the BHC who is charged with overseeing operations, so Shanzu may be an outlier at the magistrate court level. I present results with or without Shanzu in Appendix F, they essentially stay the same.

[16]The BHC and UNODC officials I interviewed remembered the purpose of the training and its connection to the ACM pilot but not the specific date. The training took place more than five years prior to the date of the interviews and as explained above, the judiciary did not keep very good records at the time.

The argument outlined above makes a strong case that the identification strategy is credible. In addition to these qualitative interviews, I verify in the empirical analysis below that the treatment and control courts were on common time trends before the intervention.

V. Methodology

The main empirical question is: does ACM successfully reduce the number of adjournments that are granted during trials. To test this proposition, I estimate the following specification:

$$\begin{aligned} Adjournment_{ictjk} &= \beta_0 + \beta_1 ACM_c \times Dec2015_t + \beta_2 ACM_c \times 2016_t + \beta_3 ACM_c \times After2017_t \\ &\quad \alpha_c + \gamma_t + \beta_4 X_{ictjk} + \delta_j + \theta_k + \epsilon_{ictjk} \end{aligned}$$

$Adjournment_{ictjk}$ is a dichotomous variable equal to 1 if the outcome of a hearing is adjournment, 0 otherwise; such that the regression is predicting the average probability that a hearing will be adjourned. The subscript i corresponds to each individual court appearance. c refers to court c, t refers to the time period (a month-year). The variable $Dec2015_t$ takes on a value of 1 if the observation is in December of 2015, 0 otherwise, 2016_t takes on a value of 1 if the observation is in the year 2016, 0 otherwise, and $After2017_t$ takes on a value of 1 if the observation is in the period from January 2017 to July 2019, 0 otherwise. ACM_c is a dichotomous variable equal to 1 for courts involved in the pilot and 0 otherwise.

To check for common time trends, I interact the variables $ACM_c \times Dec2015_t$. The coefficient β_1 functions as a placebo test, verifying whether my statistical analysis detects an effect of ACM in a period before the intervention had started. If I find that the pilot has an impact in 2015 this will suggest that the treatment and control groups were on divergent time trends before the pilot so the results I obtain from the difference-in-differences regression could be driven by something other than the intervention itself. If, on the other hand, β_1 is not significantly different from zero, I can be more confident that the treatment and control groups were on the same pre-trends.

Two variables are used to determine the impact of ACM: $ACM_c \times 2016_t$ which estimates the short-run effect (less than one year after implementation) and $ACM_c \times After2017_t$ which estimates the long run effect. There are two reasons why I expect the impact to be weaker in the short-run. First, although the pilot officially started in January 2016, the training took an extensive amount of time to involve all parties. In fact, as explained above, there was considerable opposition at first

to ACM and furthermore, the official guidelines were only published in March of 2016. Second, even after the guidelines were published and all the parties were trained, it would take some time before the first cases that were affected by ACM (and went though pre-trial conferences) would appear before the courts. Thus, it is reasonable to expect a greater effect after 2017.

(α_c) are court fixed effects and (γ_t) are month-year fixed effects. X_{ictjk} is a vector of controls which includes: legal representation of the defendant, accused or plaintiff; whether the defense produced a witness; whether the prosecution produced a witness. Moreover, I include judge fixed effects (δ_j), and detailed case code fixed effects (θ_k)[17]. ϵ_{ictjk} is a stochastic error term. Standard errors are robust, clustered at the level of courts.

VI. Results

A. Effects on Adjournments

The impact of ACM on adjournments for criminal cases in high courts can be observed in Figure 1 which shows the probability that a hearing will end in adjournment, averaged on a monthly basis. The data is somewhat noisy but there is no obvious divergence in trends between the treatment and control groups in 2015. There is no obvious difference in 2016 either.

The real difference occurs in 2017: the probability of adjournment in the treatment group collapses to almost zero, while the control group still experiences a probability of adjournment around 15 percent. Figure 2 displays the same data as Figure 1 but this time the average is taken on a daily basis. It is informative to observe the evolution of adjournments with a more disaggregated time variable. Again, we can see the treatment courts being on a similar trend as the control courts before 2017 and a collapse of adjournments after 2017.

We now turn to regression analysis. Table 1 shows the regression results which estimate the impact of the ACM pilot on adjournments in the high courts. Column (1) shows the main result of this paper: implementing the ACM pilot reduced the probability of adjournment by 18 percentage points for criminal trials in the high courts, in line with what is observed in Figure 2. This is a large effect considering that the probability of adjournment for the treatment and control groups combined was roughly 18 percent prior to 2016. Clearly, a reduction (almost elimination) in adjournments of this magnitude will have a direct impact on the speed at which trials are completed. The relationship between adjournments and speed of resolution is very straightforward

[17]Case codes are used for administrative purposes to categorize the different types of cases. There are 42 case codes in the high courts and 18 in the magistrate courts. For example one of these codes is HC.ACEC.REV which is used to identify all cases related to revisions of anti-corruption cases in high courts.

Figure 1. Adjournments in High Courts - Criminal Cases (monthly average)

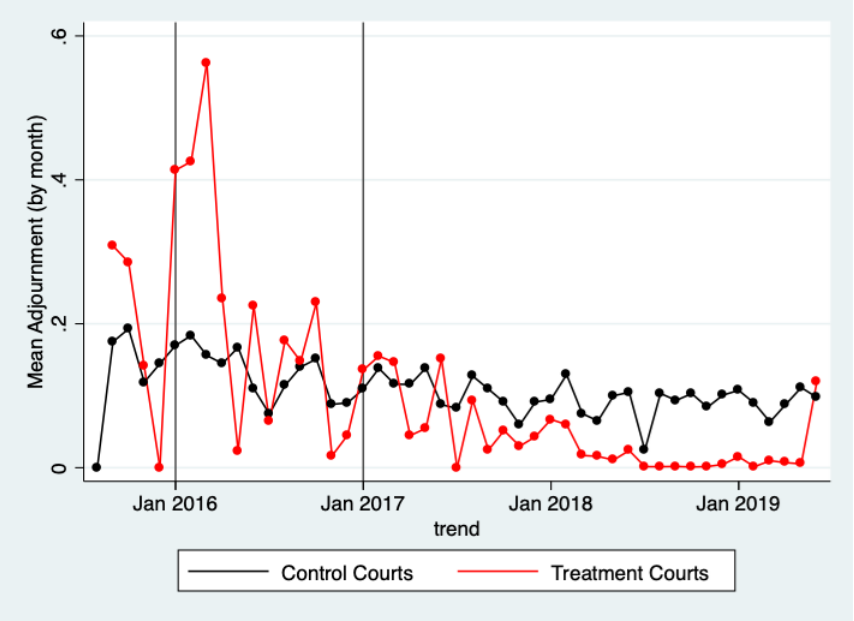

Figure 2. Adjournments in high courts - Criminal Cases (daily average)

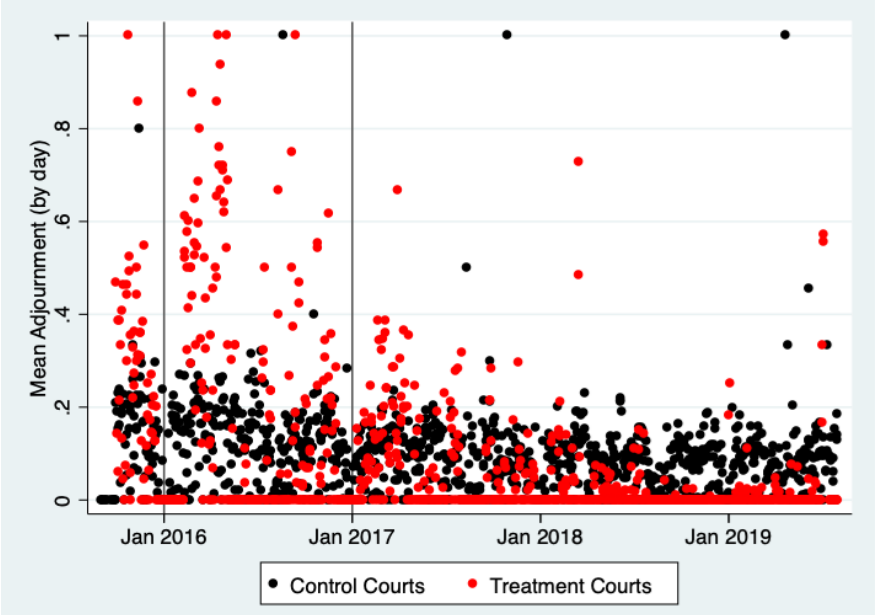

Table 1—Effect on Adjournments in High Courts

	(1) Adjournment Criminal	(2) Adjournment Civil	(3) External Adjournment Criminal	(4) Internal Adjournment Criminal
ACM * Dec 2015	-0.048	0.013	-0.017	-0.0063
	(0.056)	(0.036)	(0.045)	(0.030)
ACM * 2016	0.024	-0.13**	0.021	0.0064
	(0.063)	(0.056)	(0.031)	(0.014)
ACM* After 2017	-0.18***	-0.12*	-0.11**	-0.036
	(0.051)	(0.060)	(0.055)	(0.027)
Observations	193450	360481	200191	200191

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

because adjournments are by definition delays that extend the length of trials. we can quantify the effect of ACM on time to disposition by calculating the mean duration of an adjournment, multiplying this by the probability that a hearing will be adjourned and inferring the average time saved at every hearing. If ACM had been in place during the period before the intervention, i.e., October to December 2015, the average time to disposition per case would have been 65 days (4.3%) shorter in high court criminal trials[18]. Furthermore, interpreting this result in the context of its total impact on the national legal system helps underline how significant it is: had ACM been implemented prior to 2016, the cumulative time saved for all criminal trials in the high courts would have been 497 years in that quarter alone[19]. This is a striking amount and it helps explain why legal experts insist so strongly that adjournments must be addressed to reduce excessive delays. If each adjournment only sets a case back for a few months, the cumulative burden on a country's justice system is enormous[20].

[18]Mean adjournment length is 77 days, probability of a hearing being adjourned is 0.184 and mean number of hearings per case is 4.63. Therefore, the expected delay per hearing multiplied by the average number of hearings per case: [77 x 0.184] x 4.63 = 65 days. ACM brings the probability of adjournment from 18 percent to roughly zero, so 65 days is the total time lost because of adjournments which would have been avoided with ACM. All the values are calculated using 2015 data.

[19]Mean adjournment length is 77 days. There were 12,752 hearings between October and December 2015 with 18.4% of them (2,351) being adjourned. So a total delay of 77 x 2,351 = 181,489 days or 497 years. ACM brings the probability of adjournment from 18 percent to roughly zero so 497 years is the total time lost because of adjournments which would have been avoided with ACM. All the values are calculated using 2015 data.

[20]Note that while it is possible to calculate time to disposition (the time elapsed between filing and resolution of a case) directly in the data, this outcome is incompatible with our difference-in-differences model. The main reason is that we have to use date of filing to define the pre and post-intervention periods, and since our dataset does not extend beyond July 2019, time to disposition decreases mechanically in the sample. For example, a case that was filed prior to 2015 would not be affected by ACM and could have any time to disposition greater than zero. In contrast, a case filed in the treated courts in May 2019 would be affected by ACM but has a maximum time to disposition of 3 months - if the case remains unresolved, time to disposition is undefined. This is problematic because it means that the sample in the later period of our dataset consists only of extremely short cases which are surely not comparable to the very long cases that constitute the period prior to 2015 (recall that the average time to disposition for criminal cases in this period is 1504 days or 4.1 years). See Section **??** for a graphical representation of how time to disposition evolves over time.

Figure 3. Adjournments in high courts - Civil Cases (monthly average)

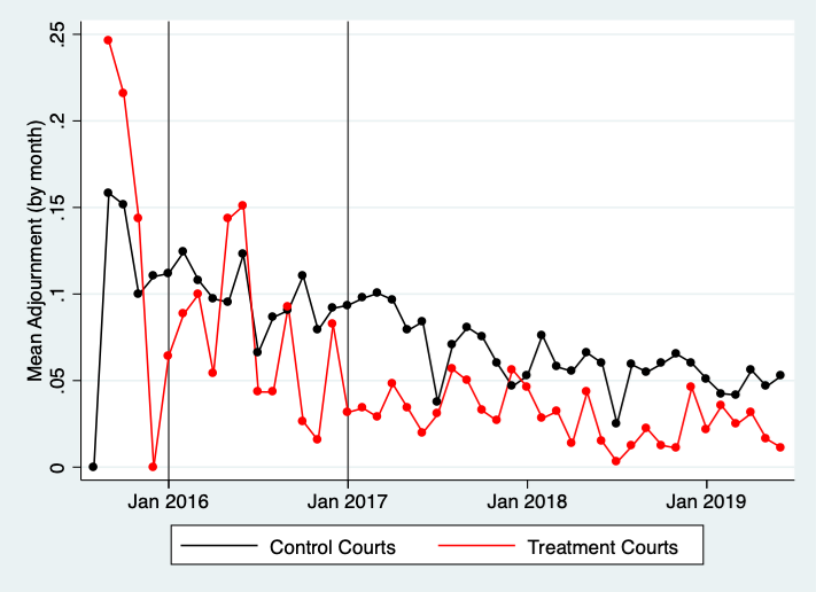

Figure 4. Adjournments in high courts - Civil Cases (daily average)

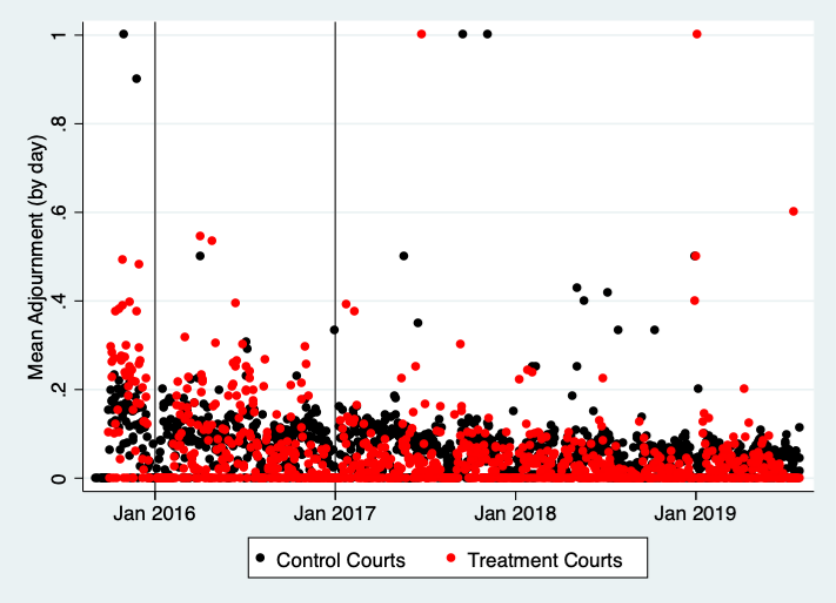

Figure 3 shows the results for civil cases. While the difference is not as drastic as for criminal cases, there is still a detectable effect. It is also visible in Figure 4 plotting the probability of adjournment by day. Column (2) of Table 1 confirms that adjournments in civil cases decreased by 13 percentage point in 2016 and 12 percentage points after 2017 in the high courts.

The smaller effect on adjournments in civil cases is expected since the pilot was primarily aimed at criminal cases. The presence of an effect on civil cases can be explained by spillovers within courts and even within judges. Judges who handle criminal cases - and therefore were trained on ACM - also tend to be involved in civil cases quite often (on average, judges preside over 65% criminal cases and 35% civil). Since the pilot aimed to build a global culture of efficiency in the courts and included not only judges but police, prosecution, lawyers and presumably other administrative staff such as court clerk by extension, it makes sense that gains in productivity would also spillover into civil cases.

The smaller effect for civil cases can also be explained by the fact that pre-trial conferences were already written into the Civil Procedures Act in 2012. The 2016 ACM pilot may therefore have served as a reminder for a procedure already in place; hence the earlier effect than in criminal cases (the variable "ACM*2016" is negative and significant in column (2) but not in column (1)).

Despite the smaller effect for civil cases, the magnitude is still large. If I apply the same logic as above, I deduce that the average time saved per civil case is 48 days (1.4%)[21] and 1443 years per quarter[22]. While the point estimate is smaller than for criminal cases, the global effect is much larger because adjournments are more than twice as long and there are twice as many civil hearings in the same time period.

[Kondylis and Stein, 2018], who studied the effect of time caps on civil trials in Senegal, found that that reform led to a reduction in time to disposition of 45 days [Ibid, 31]. Their result is similar in absolute terms to my findings of 48 and 65 days in civil and criminal trials respectively. In relative terms however, the impact of ACM is much smaller because the denominator in my equation is large: the average trial in their study lasted 150 days pre-reform, while the average length of civil trials in Kenyan high courts was 3339 days before the pilot and 1504 days in criminal trials. It is therefore not obvious to draw a direct comparison between these studies because the estimation samples consist of very different cases. Even if time limits reduced delays by a larger

[21] Mean adjournment length is 163 days and probability of a hearing being adjourned is 14.8%. ACM reduces the probability of a hearing being adjourned by 12 percentage points and mean number of hearings per case is 2.42. Therefore, the expected time saved per hearing multiplied by the average number of hearings per case: [163 x 0.12] x 2.42 = 48 days. So 48 days is the total time lost because of adjournments which would have been avoided with ACM. All the values are calculated using 2015 data.

[22] Mean adjournment length is 163 days. There were 26,943 hearings between October and December 2015 with 14.8% of them being adjourned. ACM reduces the probability of a hearing being adjourned by 12 percentage points so total time saved in the quarter is [0.12 x 26, 943] x 163 = 527,005 days (1443 years) . All the values are calculated using 2015 data.

percentage than ACM, the finding by [Kondylis and Stein, 2018] that quality was not affected might not be applicable to complex high court cases. It is more useful to interpret these two sets of findings as complementary because both interventions were effective in different contexts and could in fact be implemented in parallel.

Columns (3) and (4) disaggregate adjournments by their main cause, "internal", i.e., caused by the judge or the court, versus "external", i.e., caused by other actors. Comparing columns (3) and (4) shows that the effect for criminal cases was mainly driven by a reduction in external adjournments, in line with the idea that ACM is focused on empowering judges to exercise more control over other parties such as defense and prosecution. This is made clear in the judiciary's training manual which states that "No longer is it acceptable or considered prudent for a judge/magistrate to allow parties to dictate the pace of the case once the judicial process commences." [NCAJ, 2019b, 15]. It also insists that judges must "take control of the proceedings from the start, manage the timelines and ensure that any directions issued in the management of the case are followed by both the prosecution and defence." [Ibid, 16]. Therefore, in terms of practical application, the training guidelines place a heavy emphasis on encouraging behavior that would likely affect external adjournments, not so much on streamlining operations within the courts that would reduce internal adjournments.

As predicted, ACM did not have an effect in the magistrate courts which deal with much simpler cases. None of the results are statistically significant as shown in Table F1. Overall, this section shows that ACM had a substantial impact on high court cases, reducing the number of adjournments - and therefore increasing speed - of both criminal and civil trials.

B. Effects on Quality

Faster trials may not be desirable if they come at the expense of quality. However, most of the literature suggests that ACM should increase quality rather than decrease it. For example, the official documentation produced by the government of Kenya notes that reducing adjournments should improve quality because it hinders the ability of dishonest actors to employ delay tactics [UNODC, 2017, 1]. A report by the Canadian Senate points to the fact that multiple appearances place a strain on the court's resources and on the parties involved, stating that "Every adjournment means that victims must endure further worry and anxiety as they await closure in matters that were likely among the most traumatic experiences of their lives. Every additional court appearance requires that they prepare to revisit the upsetting events surrounding the crime and to see the accused person in court once again. They may have had to take time off work or travel long distances to get to the courthouse, usually incurring additional personal expenses in order to do

so." [Runciman and Baker, 2016, 2]. [Messick, 2015] also argues that long delays undermine the integrity of trials because witnesses can die or disappear, memories fade and people end up abandoning efforts to vindicate their rights altogether [Ibid, 1]. In short, ACM is meant to reduce delays by implementing a better management strategy, so it should be able to achieve improvements in speed and quality simultaneously.

It is possible however, that judges would take the culture of efficiency too far and fail to grant adjournments when they are justified or try to accelerate the process in other ways that infringe on citizens' constitutional right to a fair trial. I verify this proposition by using two rounds of the Court User Satisfaction Surveys (CUSS). I focus on plaintiffs, lawyers, and police/prosecutors because, as explained in Section III.B their response to ACM is expected to vary: plaintiffs and lawyers should be more favorable since delay is a great concern for them while police/prosecution might be more resistant to the intervention.

To determine the effect of ACM on quality I estimate the following specification:

$$Y_{ict} = \beta_0 + \beta_1 2017_t + \beta_2 ACM_c \times 2017_t + \alpha_c + \epsilon_{ict}$$

Where Y_{ict} is the answer to a question on the CUSS. The subscript i corresponds to individual i, interviewed in court station[23] c, in year t. The variable 2017_t takes on a value of 1 if the observation is in the second round of surveys, 0 otherwise. ACM_c is equal to 1 if the respondent was interviewed in court station c that is part of the pilot, 0 otherwise.[24]. (α_c) are court station fixed effects, and ϵ_{ict} is the error term. Standard errors are clustered at the level of the court station.

In Table 2, I look at all questions that are present in both survey rounds[25]. I start with "The judge/magistrate was neutral in his/her decision" (on a 1 to 4 scale: Strongly Disagree, Disagree, Agree, Strongly Agree). Column (1) shows the results for plaintiffs[26]. There is no significant decrease in this variable for plaintiffs (Column (1)) and even lawyers (Column (2)), which indicates

[23]The CUSS dataset only has information on the "court station", the geographical compound that may host multiple courts in populous areas, such as both a high court and a magistrate court.

[24]The treated court stations are Mombasa, Machakos and Naivasha that include the 11 treated courts in this pilot.

[25]Court users such as lawyers may be physically present in a court station and work in both the high court and the magistrate court of the same court station, and on criminal as well as civil cases, such that it is not possible to differentiate between high courts versus magistrate courts, criminal versus civil cases for this analysis. I present results for the entire sample in these court stations.

[26]To be precise, the category "plaintiff" includes both accused and plaintiff, not defendants. The fact that accused and plaintiff are grouped together is due to a slight discrepancy in the data. While the 2015 round collects data on whether the individual is a plaintiff, or accused, or defendant; the 2017 round only has 2 categories: "Accused or Plaintiff" and "Defendant". To make both rounds comparable, I focus on "Accused" + "Plaintiff". I focus on "Accused" + "Plaintiff" since these two categories likely value speed. Take the example of a civil case: A steals from B. B is the plaintiff, A is the defendant. B prefers quick compensation. A prefers to delay as much as possible to avoid paying a fine. Take the example of a criminal case. In Kenya, many people stay in prison without bail waiting for their judgement. Sometimes the sentence is shorter than the time spent in prison waiting for the judgment (called remand) [ODPP, 2018]. In this case, the accused may value greater speed.

that increased speed did not come at the detriment of a worsened perceived neutrality of the judge, according to plaintiffs. The police/prosecutors on the other hand, believe the judge is less neutral (Column (3)), in line with the Concept Note [UNODC, 2017, 2].

This finding is important for policy implications: not all court users are equally satisfied with ACM, despite the positive effects detected on adjournments. In this case, the plaintiffs and lawyers experience greater speed with no decrease in quality, i.e., and overall positive effect while the police and prosecution experience negative effects. Thus, despite the positive findings in this paper on adjournments, ACM may be difficult to implement in practice considering the opposition of police and prosecutors found in qualitative studies [UNODC, 2017] as well as in my empirical analysis.

This finding is more general than with just this one dependent variable and whatever the outcome considered, I seem to always detect a pattern where perceptions differ in line with the groups' attitudes toward the reform. In Columns (4) to (6), the variable is: "The judge/magistrate listened and led the hearing well". Here I can see that the lawyers saw improvements while plaintiffs were less satisfied and there is no statistically significant change for police/prosecution. In columns (7) to (9) the variable is "Suggestion Quality" where I develop an indicator of quality based on answers to the question: "What suggestions do you have for improving court facilities and services?" I search for the following keywords in the responses: In the 2017 data, I look for: expertise, quality, file lost, file missing, communication, administration, neutral, skill, assist, competent, service, delivery, charter, friendly, inform, collaboration, cooperation, witness refund, training, fair, fact, properly investigated, justice, transparent, train, motivate, ethic, accuracy, rude, polite, knowledgeable, accurate, understanding, courtesy, arrogant, filing, filling, audible, bias, courteous, transparency, honesty, witness, bribe, corrupt, integrity. In the 2015 survey I look for: professionally, evidence, impartial, investigation, communicate, customer, enforce, serious, equal, respect. The hypothesis is that if the courts are getting worse, suggestions on how to improve quality should increase but none of the coefficients are are significantly different from zero. Columns (10) to (12) show the results for the variable "Court Cell" which is an average of three questions: "There is no congestion in the court cells"; "The court cells are clean"; and "The court cells have adequate sanitation facilities". Again, none of the coefficients are significantly different from zero. Columns (13) to (15) present the results for the variable "Customer Care" which is also an average of three variables: "The Customer Care Desk was easy to find and accessible"; "The Customer Care Desk staff are courteous"; "Customer Care Desk staff provide useful guidance". Here I see a large improvement in the perception of lawyers but no change for plaintiffs or police/prosecution. Columns (16) to (18) display results for the variable "Court Registry" which is an average of four variables:

"Court registry staff are courteous"; "Court registry staff are well informed and provide guidance"; "Court registry staff handles information with confidentiality"; "The court fees are clearly displayed and easy to understand". Here the situation has improved according to the lawyers but it has deteriorated in the eyes of plaintiffs and police/prosecution. Finally, columns (19) to (21) show results for the variable "Satisfaction" which is an average of the 6 variables previously described: "The judge/magistrate was neutral in his/her decision", "The judge/magistrate listened and led the hearing well", "Suggestion Quality", "Court Cell", "Customer Care" and "Court Registry". Overall, there is no marked deterioration in the quality of courts according to plaintiffs (Column (19)). Lawyers believe courts improved (Column (20)), whereas the police/prosecutors believe courts deteriorated (Column (21)). Again, this result is in line with what is suggested by the Concept Note - that police/prosecution would react negatively to the ACM reform while the defense lawyers would perceive the changes in a positive way.

C. Economic Outcomes

To gauge the economic effect of ACM, I use the HiiL dataset which was collected in April 2017, such that there is no obvious before and after comparison. Instead, I use the date of the filing of a case for my identification strategy: I compare people in the treatment and control courts with disputes that started before or after the reform. I thus estimate the following specification:

$$Y_{ict} = \beta_0 + \beta_1 ACM_c \times Post_t + \beta_2 Dispute_i \times Post_t + \\ \beta_3 ACM_c \times Dec2015_t + \beta_4 Dispute_i \times Dec2015_t + X_{ict} + \alpha_c + \epsilon_{ict}$$

Where Y_{ict} is the answer to a question in the HiiL survey. The subscript i corresponds to individual i, who was involved in a court case in county c, in period t. The variable $Post_t$ takes on a value of 1 if the case was filed after April 2016 (since the Guidelines were gazetted in March), 0 otherwise. $Dec2015_t$ is equal to 1 if the case was filed in December of 2015, 0 otherwise. ACM_c is equal to 1 if the case was heard in county c that is part of the pilot, 0 otherwise[27]. $Dispute_i$ is a dichotomous variable equal to 1 if individual i was involved in a dispute, 0 otherwise (63% of the sample). X_{ict} is a vector of controls which includes: gender of the respondent, age, marital status,

[27]The treated counties are Machakos and Naivasha that include 5 treated courts. There are no observations for Mombasa in the HiiL survey

Table 2—Effect on Quality

			Panel A			
	(1)	(2)	(3)	(4)	(5)	(6)
		Judge Neutral			**Judge Led Hearing Well**	
	Plaintiff	Lawyer	Pol/Pros	Plaintiff	Lawyer	Pol/Pros
ACM * Post	-0.11	0.27	-0.45***	-0.21*	0.13**	-0.22
	(0.09)	(0.26)	(0.11)	(0.11)	(0.06)	(0.15)
Observations	2,426	933	1,059	2,540	965	1,142
Mean control group	1.69	1.99	2.05	1.97	2.13	2.14
(SD)	0.76	0.55	0.65	0.76	0.61	0.65
			Panel B			
	(7)	(8)	(9)	(10)	(11)	(12)
		Suggestion To Improve Quality			**Court Cells**	
	Plaintiff	Lawyer	Pol/Pros	Plaintiff	Defense	Pol/Pros
ACM * Post	0.04	-0.01	-0.02	0.06	-0.09	0.08
	(0.10)	(0.07)	(0.16)	(0.16)	(0.27)	(0.17)
Observations	2,740	1,002	1,217	1,475	410	740
Mean control group	0.19	0.18	0.13	0.94	0.91	1.24
(SD)	0.39	0.38	0.33	0.85	0.81	0.89
			Panel C			
	(13)	(14)	(15)	(16)	(17)	(18)
		Customer Care			**Court Registry**	
	Plaintiff	Lawyer	Pol/Pros	Plaintiff	Lawyer	Pol/Pros
ACM * Post	0.28	0.79**	0.29	-0.28***	0.44**	-0.17*
	(0.28)	(0.34)	(0.20)	(0.08)	(0.21)	(0.10)
Observations	1,785	846	1,027	2,004	976	1,140
Mean control group	1.92	2.02	2.13	1.66	1.76	1.95
(SD)	0.67	0.63	0.63	0.71	0.61	0.64
			Panel D			
	(19)	(20)	(21)	-	-	-
		Satisfaction		-	-	-
	Plaintiff	Lawyer	Pol/Pros	-	-	-
ACM * Post	0.00	0.28***	-0.16**	-	-	-
	(0.06)	(0.05)	(0.08)	-	-	-
Observations	2,740	1,002	1,217	-	-	-
Mean control group	1.41	1.58	1.61	-	-	-
(SD)	0.43	0.36	0.43	-	-	-

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent. Pol/Pros refers to police and prosecution.

household size and whether he or she has more than a primary education. α_c arecounty fixed effects, and ϵ_{ict} is the error term. Standard errors are clustered at the level of the county.

Column (1) of Table 3 shows the result for income per capita for people involved in cases likely to have a direct effect on income, such as contractual or property rights disputes[28]. It shows a very important result of this paper: that reducing delays in the courts has a direct impact on individual incomes. More specifically, the per capita monthly income of people involved in disputes in the ACM courts increased by 2,595 Kenyan Shillings (25.95 USD) which corresponds to 34.7% of the mean income at baseline for the control group in this sample.

Other than income, the HiiL dataset also contains questions on satisfaction with courts. Column (2) asks: "To what extent did you receive the result at the time you needed it?". This outcome increases after the reform. Column (3) asks the simple question "Did you find the result fair?" which also increased. Column (4) shows that the quality of procedures did not decrease, in fact it increased. The quality of the procedure is measured as an index based on 16 questions (e.g., did you find the process fair?, are you satisfied with the process?). The complete list can be found in Appendix C.C1. While the index in column (4) only pertain to process, a separate set of questions is asked about the outcome. The quality of the outcome is measured as an index based on 16 questions (e.g., How fairly was the matter at stake divided between you and other party?, To what extent was the division in line with what the other party deserved?, Will this result guarantee that the other party does not do the same things in the future?, To what extent did you receive the result at the time you needed it? (complete list in Appendix C.C1)). Column (5) shows that the quality of the outcome also increased, possibly because it is delivered faster as a result of ACM.

[28]The full list is: problems with rented property and tenants (leasing issues, tenant not paying rent); disputes between neighbors over (water for irrigation, damage to property, trespassing of property borders); employment issues (non payment wages non-payment social welfare, dismissal from work); family issues (difficulties obtaining maintenance from a former husband, difficulties agreeing to pay maintenance to a former wife, difficulties obtaining child support from a former partner, difficulties agreeing to pay child support payments); social welfare disputes (problems with welfare benefits, asked for a bribe to receive welfare benefits, problems with other benefits or grants, other welfare problems); criminal cases related to (cattle raiding, other theft, damage to property); disputes about money (borrowing money, refusal to get loan from bank when eligible, insurance companies unfairly rejecting claims, difficulties with contract enforcement); business-related problems (obtaining licenses to operate a business, being asked to pay bribes fo obtaining licenses, contractual disputes between business partners, other business-related problems). I exclude cases that would have less of an impact on income, such as disputes with neighbors over noise. The full list of excluded cases is: problems with housing (alteration to property or planning permission, communal repairs or maintenance, disputes with neighbors such as noise or common expenses, getting or keeping utilities like internet and heating, legalization, repossession of the home, buying or selling a house/apartment, other housing problems); problems with rented property and tenants (unsafe living conditions, problems with getting deposit, getting the landlord to do repairs, agreeing on value of rent, transfer of tenancy, harassment by landlord, eviction, roommate does not pay his/her part, tenant damages the property); disputes between neighbors (noise, harassment or violence, refusal to pay communal maintenance, children causing disorder); employment issues (refused vacation, dangerous working conditions, harassment at work, injury at work, unfair disciplinary procedures); disputes about family and children (divorce, custody rights, domestic violence, inheritance, children not receiving appropriate education, children being unfairly suspended from school, violence against children); public services (construction permits, tax, unjustified police arrest, asked for bribe); crime (violent crime, illegal trading in drugs, intimidation with weapon, police failing to investigate a crime, unfair treatment by police); consumer problems (buying defective or dangerous goods, services of substandard quality, refusal to respect warranty, selling agricultural product with pesticides, selling old food); accidents (traffic accident, work-related accident, medical malpractice, disputes about money (threatened with legal action to recover owed money, incorrect or disputed bills, incorrect or unfair tax demands); obtaining ID (registering a child, marriage or death, getting marriage certificate, being asked to pay a bribe for ID)

Column (6) shows that people's trust in the courts also went up in the treatment group.

Taken together, columns (2) to (6) show no evidence that increased speed came at the expense of quality. Some of the pre-trends in Table 3 are significantly different from zero, but the general picture suggests that if anything changed, it was an increase in quality. As a result of improvements in speed and quality, people also began to use the courts more often to resolve their disputes, instead of relying on informal channels. In column (7) the dependent variable asks the question "Did you try to solve the problem through court of law, Kadhi court, or An Administrative Tribunal Central government organisation?", Column (8) asks:" Did you look for legal advice from professional sources such as court of law, Kadhi court, or An Administrative Tribunal Central government organisation?" and column (9) measures the change perception that courts are the best means through which to resolve disputes. All these variable significantly increased as a result of the ACM pilot and there is no evidence of diverging time trends in columns (7) or (9). Overall, the data from the Hiil survey tell a story that is consistent with the literature about adjournments and ACM: reducing adjournments and having pre-trial conferences does not only increase speed but it increases the perceived quality of the courts, according to citizens who are involved in disputes. The most reliable results (where there is evidence of common time trends) show that specifically: receiving results on time, receiving a fair ruling and a good quality outcome were unequivocally improved by ACM. Furthermore, these improvements encouraged people to settle their disputes within the formal setting of the courts and they directly contributed to increasing incomes in the community by almost 35 percent.

Finally, a concern which is sometimes raised about reforms aimed at increasing speed of court proceedings is that " judges may be closing cases too quickly" [Hammergren and Mitiku, 2010, xxiv] in order to achieve the increase in speed that is expected of them. I verify this by looking at the impact on appeals, convictions and dismissals on the grounds that a case is frivolous in Appendix E and find no evidence of this behavior.

D. Testing the Culture of Efficiency Hypothesis

It has been asserted several times throughout this paper that achieving a shift in culture which entrenches a 'doctrine of efficiency' in the courts is crucial for the success of ACM. The obvious

Table 3—Effects on Economic Outcomes

Panel A					
	(1) Income Per Capita	(2) Result in Time	(3) Result Fair	(4) Procedure	(5) Outcome
ACM* Post	2,595***	0.43***	0.36***	0.31***	0.29***
	(521.64)	(0.08)	(0.10)	(0.06)	(0.08)
ACM * Dec2015	-844.99	0.00	0.00	0.32***	0.00
	(734.02)	(0.00)	(0.00)	(0.11)	(0.00)
	(1,076.92)	(0.13)	(0.14)	(0.08)	(0.09)
Observations	1,134	1,344	1,348	2,937	1,364
Mean Baseline in Control group	7481	3.550	3.789	3.548	3.518
(SD)	9044	1.022	1.045	0.817	0.697
Panel B					
	(6) Trust Courts	(7) Use of Court	(8) Look for Advice from Court	(9) Courts Most Helpful to Resolve Cases	-
ACM * Post	0.26***	0.06**	0.12***	0.07**	-
	(0.08)	(0.02)	(0.03)	(0.03)	-
ACM * Dec2015	-0.54**	-0.03	-0.07*	-0.06	-
	(0.20)	(0.02)	(0.04)	(0.04)	-
Constant	2.40***	-0.08*	-0.07*	-0.08**	-
	(0.10)	(0.04)	(0.04)	(0.04)	-
Observations	3,717	3,759	3,759	3,759	-
Mean Baseline in Control group	3.421	0.157	0.207	0.169	-
(SD)	1.119	0.364	0.406	0.375	-

Note: Robust standard errors, clustered at the level of the county. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

implication is that training judges alone is not enough to produce meaningful change because they will encounter resistance from other parties who have not embraced the principles of ACM. It is possible to test this doctrine of efficiency hypothesis because of the fact that judges and magistrates get transferred to a new location every three years. The transfer policy is meant to help them get exposure to different types of cases and to prevent them from becoming too familiar with the local community [Judiciary, 2015, 3]. By following judges who were trained during the pilot in 2016 and later transferred to courts outside the treatment group, I can see if their skills continue to yield results in a new environment or whether the culture in the control courts is not compatible with ACM.

Column (1) of Table 4 simply reiterates the main result of the paper - that in the long run, the probability of adjournment was decreased by 18 percentage points for criminal cases in the high courts (when the unit of treatment is defined at the court level). In Column (2), the dependent variable is also adjournments for criminal trials in high courts, but here judges are used as the unit of treatment instead of courts. More concretely, the variable "treated_judge" is a dichotomous variable which has a value of 1 for judges who were working in pilot courts at the time of implementation, 0 otherwise. We see that the effect disappears when defining the treated group this way which is consistent with the claim that training judges alone will not work: judges who were transferred out to untreated courts lose their ability to properly apply ACM so the effect is weakened when looking at the whole group of treated judges over time. Column (3) repeats the difference-in-differences regression with judges as the treatment unit, but this time I include a dichotomous variable "Treated Judge Outside of Treatment Court" equal to 1 if a judge was present in the pilot courts at the time ACM was implemented but later transferred out to a court in the control group. Two things are worth mentioning here. First, the variable "Treated Judge Outside of Treatment Court* Dec 2015" is not significantly different from zero, implying that the courts where the judges are transferred are not on different time trends. Second, when "Treated Judge Outside of Treatment Court" is interacted with the treatment and post variables, there is once again no effect, further supporting the claim that ACM must be a comprehensive intervention if it is to be successful.

The main conclusion which can be drawn from Table 4 is that ACM will not work if it is implemented as a targeted training for judges and fails to involve other parties like police, prosecution and even government chemists and medical examiners. In other words, changing the work culture and achieving a doctrine of efficiency should be the main focus of an intervention which aims to promote ACM.

Table 4—Culture of Efficiency Hypothesis: Adjournments for Criminal Cases in High Courts

	(1) All Types	(2) ACM-trained Judges as Treatment Unit	(3) Treated Judges Leave ACM Courts
ACM * 2016	0.024		0.022
	(0.063)		(0.063)
ACM * After 2017	-0.18***		-0.19***
	(0.051)		(0.055)
ACM * Dec 2015	-0.048		-0.057
	(0.056)		(0.057)
Treated Judge * 2016		0.027	
		(0.040)	
Treated Judge * After 2017		-0.083	
		(0.067)	
Treated Judge * Dec 2015		-0.11	
		(0.066)	
Treated Judge Outside of Treatment Court* 2016			0.0081
			(0.035)
Treated Judge Outside of Treatment Court* After 2017			-0.027
			(0.034)
Treated Judge Outside of Treatment Court* Dec 2015			-0.10
			(0.075)
Observations	193450	193450	193450

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

E. Rollout of ACM in Kenya and it's Applicability in Other Countries

To implement the national rollout of ACM which began in 2019 UNODC [2019b], the NCAJ and the UNODC will continue training all the relevant actors to ensure that rigorous PTCs become standard practice across the country and instill a general culture of efficiency in the workplace. In other words, no major restructuring will be required other than the adoption of new work methods and organizational practices on the part of judges, lawyers, prosecutors, police and other external parties (namely government chemists and medical examiners) which is par for the course in ACM. However, one issue that was raised by the UNODC when discussing the future of the program is the potential lack of basic equipment, such as photocopiers, in certain courts UNODC [2017]. Photocopiers are important because legal documents must sometimes be submitted in hard copy so having the facilities on-site can help avoid situations where a hearing is postponed due to lack of required documentation UNODC [2017, 5]. This issue is more relevant for small courts outside urban areas so the scale of the problem is not all that large but nonetheless, it should not be ignored.

As mentioned in II, ACM is not new to Kenya and it has been tried in various countries such as Australia, England and the United States. The studies that evaluated these interventions found encouraging results, but they did not use rigorous identification strategies and moreover, they were all based in high-income countries. There is therefore some evidence that ACM can work in different socio-economic contexts, but this evidence is correlational and qualitative, not conclusive. The insights from our study will therefore be useful to evaluate the potential for successfully implementing ACM in other countries. First, our paper shows that the main impact of ACM was to reduce external adjournments which affected the speed at which trials were resolved and ultimately increased the incomes of citizens involved in certain types of cases. The important point to underline is that ACM is unlikely to work if the court system in question does not suffer from excessive external adjournments.

Assuming external adjournments are a serious cause of delay, the second question is whether training on ACM and the introduction of PTCs will generate a significant cultural shift toward efficiency in the way trials are handled. This question cannot be answered quantitatively but there are certain factors which were arguably important for the pilot in Kenya that could be informative in other contexts as well. For instance, out of the four major parties involved in litigation, two (judges and lawyers) were in favor of the changes ACM was trying to achieve. If on the other hand, the judges, lawyers, prosecutors and police had all been completely satisfied with the status quo prior to the intervention, it may not have been so effective. Another factor to consider, is the new

constitution which was established in Kenya in 2010. This constitution had a large impact on the judiciary and empowered the reform-minded Chief Justice Mutunga who is widely regarded as a major driving force behind much of the positive change that took place in the judicial system at the time Gathii [2016, 45]. While it is not possible to measure the effect that constitutional reform and an influential Chief Justice had on the ACM pilot, these factors interesting for other countries to consider because strong leadership and a constitutional framework that is taken seriously could be a pre-requisite for almost any internal reform to work, ACM included.

Thus, while there is no guarantee that ACM will be as effective in other countries as it was in Kenya, the quantity of external adjournments, the attitudes of important parties, a well-respected constitution and strong leadership are key factors that policy makers should consider in their analysis of this question.

Table 5—Robustness Checks

Panel A: Adjournments High Court Criminal					
	(1) Full Specification	(2) No case code FE	(3) No Judge FE	(4) No Controls	(5) No Judge FE, No Case Code FE, No controls
ACM * 2016	0.024	0.027	0.0071	0.023	0.0013
	(0.063)	(0.062)	(0.068)	(0.063)	(0.065)
ACM * After 2017	-0.18***	-0.18***	-0.16***	-0.18***	-0.16***
	(0.051)	(0.051)	(0.056)	(0.052)	(0.057)
ACM * Dec 2015	-0.048	-0.050	-0.026	-0.050	-0.034
	(0.056)	(0.052)	(0.064)	(0.057)	(0.062)
Observations	193450	193450	259381	193450	259381
Panel B: Adjournments High Court Civil					
	(1) Full Specification	(2) No case code FE	(3) No Judge FE	(4) No Controls	(5) No Judge FE, No Case Code FE, No controls
ACM * 2016	-0.13**	-0.13**	-0.11**	-0.12**	-0.11**
	(0.056)	(0.055)	(0.046)	(0.056)	(0.044)
ACM * After 2017	-0.12*	-0.12**	-0.12**	-0.12*	-0.12***
	(0.060)	(0.059)	(0.047)	(0.059)	(0.044)
ACM * Dec 2015	0.013	0.012	-0.039**	0.015	-0.033**
	(0.036)	(0.034)	(0.017)	(0.036)	(0.016)
Observations	360481	360481	579259	360481	579259

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

F. Robustness Checks

Panel A of Table 5 displays the results for criminal cases in high courts when the specification is changed to exclude certain variables. Column (1) shows the result for the full specification, Column (2) removes case code fixed effects, Column (3) removes judge fixed effects, Column (4) removesthe vector of control variables and Column (5) removes all the variables. What this table shows is that the main result of the paper is very robust to changes in the specification. Panel B repeats the exercise for civil cases in the high courts and we can see that the test for common pre-trends is somewhat sensitive to changes in the specification. Without judge fixed effects, the coefficient

on "Treatment * Dec 2015" indicates that adjournments may have already been decreasing in the treated courts prior to the intervention. However, the magnitude of the coefficient is quite small so it is highly probable that positive spillovers from ACM are responsible for the majority of the effect we am finding in the later periods.

VII. Conclusion

The importance of having strong inclusive institutions for economic growth is widely acknowledged [Acemoglu et al., 2012, Pande and Udry, 2005, Besley and Mueller, 2018] and the judiciary plays a central role in regulating these "humanly devised constraints that shape society" [North, 1991, Kondylis and Stein, 2018, 97]. For this reason many governments and international aid agencies spend millions of dollars every year on judicial reform [Chemin, 2020] but most of these interventions are not tested in a rigorous way [Laws, 2016, WorldBank, 2018b]. One of the main goals of judicial reforms is to reduce adjournments and increase the speed at which trials are resolved [Kondylis and Stein, 2018, UNODC, 2017] and active case management is a promising strategy to address these issues. Despite being studied by several legal scholars, no thorough impact evaluation of ACM has been conducted to date, and all empirical assessments have been solely based on correlations and qualitative case studies [Goerdt, 1991, Flanders, 1980, Somerlot et al., 1989]. This paper measures the effect of a pilot project which was implemented by the Kenyan judiciary in 2016 to implement ACM in criminal trials.

Our first contribution is to demonstrate that ACM is an effective strategy to reduce adjournments and delays, and that it achieves this without negatively affecting quality of proceedings. The reduction is mostly observed in the high courts where more complex trials are heard and the impact is stronger on adjournments that are external to the court.

Our second contribution is to document how citizens involved in legal disputes benefit directly from shorter trial times in the form of higher incomes. The fact that their perception of the judiciary is improved by the intervention also suggests that ACM will increase public confidence in the judiciary as an institution and promote more investment in the long run [Jappelli et al., 2005, Acemoglu et al., 2012, Acemoglu, 2006].

These findings are of particular relevance for organizations interested in implementing effective judicial reforms. By having a detailed understanding of ACM, they will be able to target implementation properly and achieve optimal results. At the moment, most judicial reforms are carried out with no serious attempt made at measuring their impact in a rigorous way. Given the importance of judiciaries for economic growth and the large sums that are spent on improving them, it will be

useful to continue building on this work and guide policy decisions so that resources are invested in the most productive way.

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APPENDIX

Appendix A: Balance Test DCRT

Table A1 shows the balance of characteristics for high courts for cases entering courts in the months prior to December 2015. Column (1) shows that the probability that any criminal case entering the high courts ends with an adjournment is 18 percent. Treatment courts have more adjournments as can be seen in Column (3).

Table A2 shows the balance of time to disposition in high courts for cases filed before December 2015.

Column (3) shows that the time to disposition is actually less in the treatment group than the control group. Overall, treatment courts have more adjournments but less time to disposition for criminal cases. Thus, there is no clear pattern as to whether the program was targeted to better or worse courts, in line with debreifing with officials about the selection of treatment courts.

Table A1—Balance test on Adjournments

Panel A: Criminal				
	(1) All Courts	(2) Control group	(3) Treatment group	(4) Control-Treatment/p-value
Adjournment All Courts	0.24	0.18	0.30	-0.11***
				(0.00)
Adjournment High Courts	0.18	0.16	0.25	-0.08***
				(0.00)
Panel B: Civil				
	(1) All Courts	(2) Control group	(3) Treatment group	(4) Control-Treatment/p-value
Adjournment All Courts	0.21	0.15	0.23	-0.08***
				(0.00)
Adjournment High Courts	0.15	0.13	0.16	-0.03***
				(0.00)

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

Table A2—Balance test on Time to Disposition

	Criminal High Courts			
	(1) All Courts	(2) Control group	(3) Treatment group	(4) Control-Treatment/p-value
Time to Disposition	1504.94	1583.84	1388.02	195.82***
				(0.00)
	Civil High Courts			
	(5) All courts	(6) Control group	(7) Treatment group	(8) Control-Treatment/p-value
Time to Disposition	3339.71	3247.59	4545.45	-1297.87***
				(0.00)

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

Appendix B: Balance Test Court User Satisfaction Survey

Table B1 shows the balance of characteristics for court user satisfaction surveys in 2015, therefore not affected by the reform.

Columns (1), (2), and (3) pertain to plaintiffs. According to them, judges are equally neutral in the control and treatment groups. The judges led hearings slightly better in the treatment group, yet there are slightly more suggestions to improve quality in the control group. The condition of court cells is roughly equal, customer care slightly worse and court registries slightly better in the treated courts. Overall satisfaction is similar.

Concerning lawyers in columns (4), (5), and (6), overall satisfaction is slightly worse in the treatment group. Concerning police/prosecutors in columns (7), (8), and (9), satisfaction is very similar.

Table B1—Balance test on Court User Satisfaction

	Plaintiff			Lawyer		
	(1) Control group	(2) Treatment group	(3) Control-Treatment/p-value	(4) Control group	(5) Treatment group	(6) Control-Treatment/p-value
Judge Neutral	1.69	1.82	-0.14	1.99	1.75	0.24
			(0.10)			(0.13)
Judge Led Hearing Well	1.97	2.13	-0.16**	2.13	2.00	0.13
			(0.05)			(0.43)
Suggestion To Improve Quality	0.19	0.34	-0.15***	0.18	0.21	-0.04
			(0.00)			(0.73)
Court Cells	0.94	1.05	-0.10	0.91	1.00	-0.09
			(0.44)			(0.88)
Customer Care	1.92	1.54	0.37***	2.02	1.42	0.60***
			(0.00)			(0.00)
Court Registry	1.66	1.81	-0.15**	1.76	1.38	0.39**
			(0.04)			(0.02)
Satisfaction	1.41	1.46	-0.05	1.58	1.34	0.25**
			(0.27)			(0.01)
	Police Prosecutors			-	-	-
	(7) Control group	(8) Treatment group	(9) Control-Treatment/p-value	-	-	-
				-	-	-
Judge Neutral	2.05	2.41	-0.36**	-	-	-
			(0.02)	-	-	-
Judge Led Hearing Well	2.14	2.33	-0.19	-	-	-
			(0.21)	-	-	-
Suggestion To Improve Quality	0.13	0.16	-0.03	-	-	-
			(0.71)	-	-	-
Court Cells	1.24	1.33	-0.09	-	-	-
			(0.86)	-	-	-
Customer Care	2.13	1.93	0.21	-	-	-
			(0.17)	-	-	-
Court Registry	1.95	2.01	-0.06	-	-	-
			(0.71)	-	-	-
Satisfaction	1.61	1.73	-0.12	-	-	-
			(0.22)	-	-	-

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

B1. CUSS Description

The survey is composed of the following sections: General perceptions of the judiciary's performance as an institution; Experience with the customer care desk; Assessment of court infrastructure; Ease of communication with the judiciary offices and staff; Satisfaction with fees and file management services; Satisfaction with judge/magistrate and his/her staff; Assessment of the judiciary's public image; Satisfaction with process for filing complaints; Satisfaction with miscellaneous services (pro bono, arbitration, notarizing, reconciliation); Most/Least appreciated aspects of court experience; Personal questions about respondent and interaction with courts; Access to courts; Geographical location information.

For our analysis, we used all the questions that were repeated in the 2015 and 2017 waves. These questions related to the public's image of the judiciary, satisfaction with the judge/magistrate and quality of courts proceedings, infrastructure and customer care.

Appendix C: Balance Test HiiL

Table C1 shows the balance of characteristics for individuals with a dispute that started before May 1st 2016, therefore not affected by the reform.

The treatment group has slightly worse procedures, same satisfaction with the outcome, same result in time, slightly fairer result, but slightly less trust in courts, same use of court, propensity to look for advice from court and to find that the courts are the most helpful to resolve cases. Overall, treatment and control areas look very similar. Income per capita is also similar, indicating that the reform was not placed in better or worse areas.

Table C1—Balance test on Economic Outcomes

	Control group	Treatment group	Control-Treatment/p-value
Procedure	3.55	3.38	0.17**
			(0.04)
Outcome	3.52	3.64	-0.12
			(0.24)
Result in Time	3.55	3.63	-0.08
			(0.59)
Result Fair	3.79	4.08	-0.29*
			(0.06)
Trust Courts	3.42	2.86	0.56***
			(0.00)
Use of Court	0.16	0.16	-0.00
			(0.92)
Look for Advice from Court	0.21	0.19	0.02
			(0.63)
Courts Most Helpful to Resolve Cases	0.17	0.15	0.02
			(0.48)
Income Per Cap	7480.78	6413.02	1067.76
			(0.18)

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

C1. Questions in Indices for HiiL

The variable "Procedure" is constructed using the following 16 questions: Were you able to express your views and feelings during the dispute resolution process?; Were these views and feelings appropriately considered during the process?; Were you able to influence the final result?; Were the same rules equally applied to you and to the other party/ies?; Was the process objective and unbiased?; Was the dispute resolution process based on accurate information?; Were you able to correct wrong information during the process?; Did you find the process fair?; Are you satisfied with the process?; Did the officer of the court treat you with respect?; Did the officer of the court treat you in polite manner?; Did the officer of the court refrain from making improper remarks or comments? Was officer of the court honest in his/her communications with you?; Did officer of the court explain the procedure thoroughly and made sure you understood it?; Did officer of the court explain your rights and options during the process thoroughly and made sure you understood

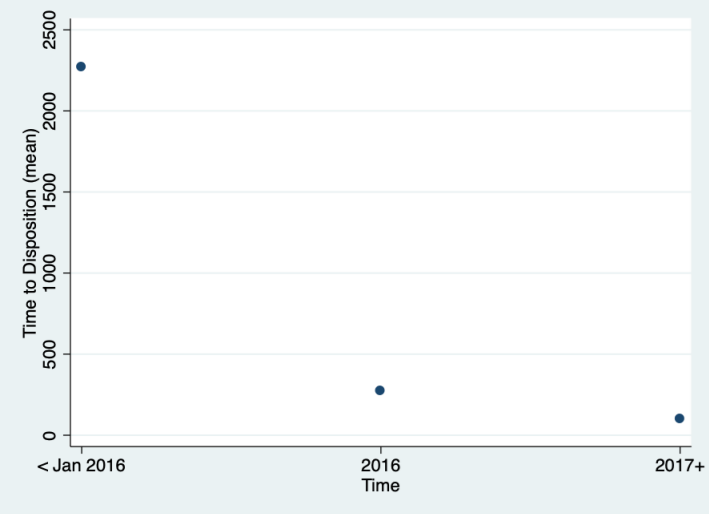
them?; Didofficer of the court explain the process in a timely manner?

The variable "Outcome" is constructed using the following 16 questions: How fair was the matter at stake [money/rights/property etc.; Was the matter at stake divided equally between you and other party?; To what extent was the division of the matter according to what you deserved to receive?; To what extent was the division in line with what you needed?; To what extent was the division in line with what the other party deserved?; Did the result of the process bring you back all the money you lost or compensate the damages you suffered? Did the result make you feel better? If there was a relationship and it was harmed: Did the result improve the relationship with the other party?; To what extent did the result solve the problem?; Has the decided result actually been implemented?; Will this result guarantee that the other party does not do the same things in the future?; To what extent did you receive the result at the time you needed it?; Did you receive an explanation (reasons) about the result from the court official; Are you satisfied with the explanation (reasons) you received about the result?; Was it possible for you to compare your result with the results in other similar cases? ; Was your result similar to the outcome of other similar cases?

Appendix D: Problem With Time to Disposition

Figure D1 shows how time to disposition (in calendar days) decreases mechanically over time in the data because it is measured using date of filing.

Figure D1. Trend with Time to Disposition



Appendix E: Other Measures of Quality

Table E1 shows the regression results for variables that complement individual perceptions to provide an additional check on quality. Column (1) shows the impact on the probability that a case will be appealed at the magistrate level. This variable is a proxy for quality of the high courts, the intuition being that if people think they can "game the system" in the high courts they are more likely to appeal the decision in the magistrate courts. There is no significant impact. Column (2) shows the impact on the probability of conviction. If cases are closed too early because of a desire to reduce delays, we might expect judges to rush their judgements and convict felons more often. There is no evidence of this in the data. Column (3) shows cases that were deemed frivolous by the judge and thrown out. Here the impact is a reduction in dismissals which suggests that judges were being more careful and not simply throwing out cases to increase speed. However, the coefficient on the pre-trends suggests that the treatment courts were already decreasing this practice more than the control courts prior to the intervention so the result is not entirely robust.

Table E1—Other Measures of Quality

	(1) Appeal MC Criminal	(2) Convicted HC Criminal	(3) Frivolous HC Criminal
ACM * Filed in 2016	0.011	-0.00011	-0.011
	(0.012)	(0.00038)	(0.051)
ACM * Filed After 2017	0.019	-0.00013	-0.11**
	(0.021)	(0.00035)	(0.056)
ACM * Filed in Dec 2015	-0.0051	0.00045	-0.079**
	(0.011)	(0.00028)	(0.037)
Observations	183501	183501	183501

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.

Appendix F: Effect on Magistrate Courts

Table F1 shows the impact of ACM on adjournments in magistrate courts. None of the results are significant except for civil cases but we also observe a violation of the parallel trends assumption. These results include Shanzu magistarte court and remain similar when excluding this court.

Table F1—Effect on Adjournments in Magistrate Courts

	(1) All Types	(2) Criminal	(3) Civil	(4) Internal	(5) External
ACM * 2016	0.020	0.048	0.0076	-0.0083	-0.0037
	(0.045)	(0.063)	(0.034)	(0.0068)	(0.027)
ACM * After 2017	-0.044	-0.0097	-0.077*	-0.011	-0.046
	(0.045)	(0.047)	(0.043)	(0.0099)	(0.043)
ACM * Dec 2015	0.031	-0.022	0.12*	-0.012	0.027
	(0.043)	(0.043)	(0.067)	(0.0079)	(0.019)
Observations	4921102	3356105	1448253	5093294	5093294

Note: Robust standard errors, clustered at the level of the court. *** Significant at 99 percent confidence-interval, ** Significant at 95 percent confidence-interval, * Significant at 90 percent.