Monitoring and notification: Evidence from a field experiment in a Mexican labor court

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Abstract

We explain the set up of a randomized field experiment in a labor court in Mexico. The experiment is designed to increase the levels of effort, productivity, and effectiveness of notifiers responsible for carrying out personal notification that is necessary for initiating and continuing any lawsuit. Specifically the experiment consisted of two intervention, monitoring of the notifiers' effort in real time and taking control over the notifiers' workload. Preliminary results indicate that the second intervention, centralizing the case files and managing the notifiers' case loads by designing and assigning their routes, produced a very large and highly significant effect on success in notification procedures. On the other hand direct monitoring of effort is overall counterproductive, although it has positive and significant results on notification in some time periods within the experiment. We explain these results based on two effects of direct monitoring: higher input of effort from the notifiers conditional on attempting to notify a specific case file while being monitored, and a strong tendency to postpone attempting case files just assigned when monitored. We find that direct monitoring of effort only has positive effects on performance when the notifier has relatively little discretion over which case files to attempt to notify on a given day. [1] [2]

[1] JEL codes: K41, K42, D82

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Part I
Background and motivation

Mexico is known as having rigid, pro-worker labor laws, and high firing costs. Very recently, however, the Federal Legislature passed a major labor law reform. On paper, the reform creates greater flexibility in hiring by allowing training and trial periods for initial employment, reduces firing costs by limiting the amount of back pay that can be paid more than one year after firing, and reduced costs and duration of labor litigation by penalizing actions taken by parties or court officials with the intention of delaying the resolution of a labor dispute.

Specifically, article 48 of the federal labor law was reformed to include penalties of up to 64,760 pesos (slightly over 5,000 USD at current exchange rates) to be imposed by the labor courts on private parties for each instance which the party or lawyer deliberately delays labor lawsuit proceedings using "notoriously improper" actions or petitions. When a government official, including any court officer, is the source of the notoriously improper action causing delay, the official can be penalized up to 90 days of wages and may be removed from her post and investigated by the public prosecutor's office.

At present there is much uncertainty about how courts and other authorities will interpret changes to the law. With regard to deliberate delay, it is difficult to specify exactly what type of action or petition would constitute a notoriously improper delay tactic, especially in a highly formalistic legal system such as Mexico's. Currently, labor disputes last several times as long as the maximum amount of time allowed by law. The example most relevant to our experiment is the initial notification which must take place before any conciliation or further hearing can be held. The law states that once the case has been filed and a conciliation hearing has been scheduled by the labor court, notification of the defendant must take place within 5 business days. In fact, the average time to successful notification is over two months for cases in which the defendant is successfully notified, while in over 30% of cases, there is never a successful notification of the main defendant in the case.

This bottleneck in notification is due to a combination of factors. In the first place, the formalistic legal rules and the rigidity of their application make notification difficult in principle. The notifier need not only find the party to be notified, but must certify that the party is being notified at the correct address. Simple clerical errors in the address or incorrect specification of the "neighborhood" or municipality result in unsuccessful notification, even if the address is essentially correct, the notifier finds it, and also finds the party to be notified. Another reason for slow and often unsuccessful notification is that the labor courts in Mexico have historically been given much lower budgets then similar courts in the judicial branch. This has resulted in generally lower levels of human and physical capital in these courts, as well as personnel shortages, contributing to delays and low quality of service. Thirdly, court notifiers responsible for notifying carry out their two main duties (notifying and writing

the formal notification reports) away from the court, and are thus difficult to supervise. They are commonly believed to be corrupt, insubordinate to the court hierarchy, and to exert very low levels of effort. Corruption appears to mostly take the form of plaintiffs or plaintiffs' lawyers paying the notifier a bribe in order to try harder (and sooner) to notify their defendant; however, many anecdotes circulate about bribes from firms and their lawyers to avoid timely notification in order to delay the conciliation and other hearings in hopes that the worker will give up on the lawsuit. Both forms of corruption generally operate through the notifier delaying notification in the case, until he is paid either to notify successfully, or is paid to state falsely that notification was impossible whether or not he actually attempted it.

Hence, designing effective mechanisms of monitoring the notification process is essential to reducing the duration of labor disputes, as well as for determining how the sanctions in the reformed labor law can credibly be applied.

This research can also shed light on the more general issue of legal reform and institutional change in any country or area of law. Often legal and institutional reforms focus on substantive matters, but their effectiveness is closely related to procedural matters that determine the application of new laws or rules. Such processes are often controlled by middle and low level government bureaucrats who apply the laws or rules to provide a public service, and who in practice determine the quality of the service as much or more than the formal rules or institutional design. In other words, without increasing the quality of service provided by such bureaucrats, legal and institutional reforms, however well designed in theory, are doomed to fail at producing positive economic development outcomes. Our experiment can shed provide valuable micro level information about the effectiveness of inexpensive and non-hierarchical monitoring, as well as an additional mechanism that combines control over timing of notification attempts, along with the publication of crude but objective measures of notifier production and rate of success.

Our preliminary results have two main implications. First, overall the second method of monitoring, involving control of timing and simple productivity measures, is much more effective than the direct monitoring of notifiers' effort levels. Second, the direct monitoring of effort is only clearly effective when notifiers face deadlines that reduce their discretion on the timing of notification attempts. To the extent that this discretion has been reduced but not eliminated, the direct monitoring of effort is less likely to have strong effects. With respect to the direct monitoring of effort, it also appears that comparing between days that notifiers are monitored and days they are not monitored does not capture the entire effect of the monitoring of effort. It seems that the general notion of their effort being monitored also has positive effects on notifiers' productivity. However such effects cannot be identified in comparisons across monitored/unmonitored days.

Part II

Labor law and courts and the legal notification process

Labor courts in Mexico are administrative bodies that belong to the executive branch. They are divided into state and federal courts, and at the federal and state levels are divided into Juntas, which deal with private labor disputes, and Tribunales, which deal with labor disputes between a private individual or a union and the state or federal government. State and Federal courts dealing with private labor disputes all apply the exact same law, the Ley Federal del Trabajo (LFT). Federal vs. state jurisdiction is not determined by the LFT itself, but by a list of industries mentioned as "strategic" in the Mexican Constitution and thus assigned to federal labor courts. These industries include auto production and auto parts, rubber, sugar, textiles, chemical and pharmaceutical industries, and others. Any industry not mentioned specifically in the Mexican Constitution is then assigned to local, state-level labor courts.

All labor courts whether federal or local, or whether Juntas or Tribunales, are in fact labor "boards", in which all decisions must be voted on and signed by a tri-partite commission. The commission is comprised of a representative of the government, who is essentially the judge (although she is called a "president of the special labor court #X", depending on the location of her court), and representatives of labor and firms. The representatives of labor and firms are political appointees from unions and trade associations. While they supposedly defend workers' and firms' rights in the specific case, they have no relationship to the parties in the case, and in practice they do not review the judge's decision in any detail. One side, the side that is perceived to have won the case, votes with the judge, and the other votes against, guaranteeing the judge's decision will always be approved by majority vote. It is very rare to find cases in which the representatives of labor and firms both vote in favor of the judge's decision, or where they request any specific change to the judge's draft decision.

Appeals from decisions made by these courts must be based on some claim of unconstitutionality or violation of due process in the interpretation or application of articles of the labor law. Such appeals go to the judicial branch at the federal level, which has the same structure as US federal courts, with a district level, a circuit court appeals level, and a Supreme Court.

While only slightly over 10% of cases end in a court decision (with close to 70% settling and around 20% being dropped), for each court decision there are 0.33 appeals, and over half of all appeals are granted. An appeal that results in a reversal of the initial judgment will often require the court to hold additional hearings and consider new evidence or evidence the court previously did not admit, redo certain notifications, and create a new decision, all within a relatively short period of time specified in the district or appeals court decision to overturn the court's first ruling. Hence, each overturned decision represents

a disproportionate amount of work for court personnel and clerks who draft the judges' decisions, especially considering that for the average appeals decision, the case file takes almost two years to return to the labor court. It is both important and interesting to note that more than one third of all appeals are "interlocutory", that is, they occur before the labor court's decision. These appeals are almost always claims of violation of due process due to the initial notification being done incorrectly, through deliberate misbehavior or negligent behavior of the assigned notifier.

In terms of the substantive issues the labor law, even after the reform passed in December 2012, is mostly based on the initial paternalistic version of the law created along with the Mexican Constitution of 1917. It is highly protective of workers and generally makes hiring rigid and firing costly. For example, even after the recent reform, for any worker that has been at a firm for more than 6 months, low productivity is not a valid cause for firing. Also, severance pay still includes 90 days full wages, 20 additional days per year for all at-will employees, and full back pay for one year, with 30% back pay per month, plus interest, as of one year from the firing date, until the resolution of the firing dispute.

All cases require at least one initial notification, generally to be delivered to the defendant. This notification must be delivered in person, and must be delivered at the correct address at which the individual or firm resides, works, or maintains a business address. At least the main defendant in a particular case must be properly notified in order for the case to proceed. It is not uncommon to have either multiple individuals or firms that should be notified, at the same or different addresses. It is also common for cases to go through multiple notification stages, associated to successive hearings, inspections, or depositions. The law specifies the actions the notifier must take to verify that he or she is notifying the correct person or firm, at the correct address. These articles also specify what elements must be found in the notifier's report to the court, which is a formal legal document to be included in the case file.

Part III

Structure and jurisdiction of the Junta Local de Conciliacion y Arbitraje del Valle Cuautitlan Texcoco

The labor court at which we carried out the monitoring experiment is the Junta Local de Conciliacion y Arbitraje del Valle Cuautitlan Texcoco (JLCAVCT). This court is one of two major local labor courts of the State of Mexico, one of the country's most populous and economically active states. The JLCAVCT has

jurisdiction over 58 municipalities of the State of Mexico, covering roughly two thirds of the state. The court is divided into 12 "special labor courts" with each of these operating as a court, under the administrative purview of the president of the JLCAVCT. Of these 12 special courts, 5 are located at the main branch of the court, in the municipality of Tlalnepantla. Between them, these special courts have simultaneous jurisdiction over 7 municipalities, including the two most intensively industrialized municipalities in the country, Tlalnepantla and neighboring Naucalpan. Geographically, the court's area covers the industrial corridor north of Mexico City, and hence is one of the most important labor courts in the country. According to the 2010 Mexican Census, almost 2.5 million individuals reside within the jurisdiction of this court, as well as almost 100,000 firms. Note that all 5 special courts located at the main branch have the same geographical jurisdiction, with cases assigned to the specific courts in a "round robin" fashion that should not be related to either case file observables or non-observables.

Within each special court, in formal terms the notifiers operate almost at the bottom of the hierarchy, only above technical legal aides and typists. As mentioned previously, notifiers have two main tasks, notifying and writing formal reports to show notification has taken place or justify why it could not legally take place, reports that by law must be included in the case file.

The direct superiors of notifiers are "Secretarios de Acuerdos" who handle the notifiers' work flow, assign cases to them, and manage all the case file material during the course of the lawsuit. There may be one or more notifier, and one or more Secretario de Acuerdos, in a particular special court. Above Secretarios de Acuerdos are "Auxiliares" who are responsible for holding all hearings, including the initial conciliation hearing that must be held before evidence is considered. They are also responsible for admission and reception of evidence, and its inclusion in the case file. Above the Auxiliares is the "president" of the special court, who is the judge in standard legal terminology. The judge receives a draft decision written by a court clerk who does not belong to the specific special court, but to a separate division of the court. These court clerks receive the closed case file, produce a draft decision, and send it to the judge, who reviews the decision and either requests changes or corrections, or proceeds to ask for the votes of the representatives of labor and firms in order to turn the draft decision into a final court decision.

Above the judge of each special court, the court has a general secretary who usually oversees a number of special courts, and above the general secretaries is the president of the court, in this case of the JLCAVCT. Formally, the general secretaries and the president of the JLCAVCT intervene directly only in collective labor disputes, which we do not study. With respect to individual disputes, they only constitute administrative authorities, so that they may fire the judge in a special labor courts, or move her to another special labor court, but may not officially review her decisions. In practice, we know that general secretaries and the president of the JLCAVCT sometimes intervene in specific cases before the judge's decision is official, in an attempt to change the outcome of a case or guarantee that the outcome will be favorable to a particular party. While

such interventions may on occasion be motivated by a concern for the quality of decisions taken by the special courts, or supervision of how a specific article of the law is being applied, we believe the interventions are mostly a result of lobbying (and perhaps high level corruption) carried out by one of the parties, either at the level of general secretaries or with the president of the JLCAVCT.

Part IV
The experiment

We set up the following experiment:

The court's 8 (or 9, depending on the time period) notifiers responsible for notifying on all case files handled by the court were accompanied based on a randomization program, by 4 full time assistants. All results presented in the paper in relation to accompaniment are based on whether or not an notifier was scheduled to be accompanied, not on whether or not the accompaniment actually took place. Reasons the accompaniment may not actually happen include the notifier not coming to work on that day or being given permission by his judge to stay at the court and carry out activities other than notification, or the assistant that was scheduled by the randomization program to accompany that notifier being absent that day. The first event is fairly common, and the second quite rare.

We have yet to process the data sufficiently to find out whether notifiers are more prone to obtain permissions to stay at the court on days they are told they will be accompanied. Since notifiers are not informed whether or not they will be accompanied on a particular day until they arrive to work on that day, they could not be absent strategically to avoid being accompanied, without simply avoiding work altogether. They are also asked whether they will engage in the normal notification activities outside the premises of the court, before they are informed about whether they will accompanied on that particular day. On isolated occasions, however, they may have changed their minds about going out to notify after finding out they were to be accompanied, and could have justified this change of plan by claiming (and convincing their judge to claim) that some urgent matter requiring their attention or a report they could only create at the court has resulted in them not going out to notify on that day. After further data processing we should be able to pinpoint instances in which this has taken place. However we believe that the timing of our procedures makes this scenario difficult, so that we do not expect to find many observations affected by this phenomenon.

The assistants responsible for accompanying the notifiers are either upper level law students (law school is an undergraduate program in Mexico as in many civil law countries) or recent law graduates. They have been instructed not to make direct suggestions to the notifiers, and never to criticize or express opinions about the quality or intensity of the notifier's work. Both the assistants who

carry out the accompaniment and the notifiers understand that the assistants are in no way their hierarchical superiors, but are rather observers who gather data about personal notifications in order to help design policies that will promote a more efficient notification process.

The assistants fill out a form for each visit made by the notifier they are accompanying. Data to be filled out on the form includes all information that should be contained in the formal notification report turned in by the notifier (such as exact location of address, a description and name of the person or persons encountered at the party's premises in the notification attempt, and so on). This is meant to facilitate comparison between what the assistant observed on days he accompanied a particular notifier, and what that notifier claims happened in his formal notification report to the court. Assistants also fill out information intended to measure the real difficulty of notifying the party, strategies used by some parties to avoid formal notification, costs of transport and other costs associated with personal notification, and the level of effort exerted by the notifier to successfully complete the notification process.

The data is coded by undergraduate and graduate student assistants and any missing data or irregularity in the information on the forms is discussed immediately with the assistants to recover any relevant information that is unclear on the form, and guarantee the quality of data from accompaniments.

The preliminary results discussed in this paper do not include analysis of the data from the accompaniment forms. However, systematic comparison of data from forms with formal notification reports made to the court by the notifiers reveals that even on days they are accompanied, notifiers often misreport information about their attempted (and successful) notification, as well as leaving out important information which by law should appear on a formal notification report. This leads us to ignore many of the details provided in the notifiers' formal notification reports, and use only whether or not the notification is successful. We believe this indicator is more reliable since it is grave misbehavior to report a successful notification which was not successful. A party that supposedly received this "fake" notification can easily initiate an interlocutory appeal claiming a violation of due process. Such appeals are almost always granted by the district or circuit court, and result not only in the court having to repeat all procedural steps starting with the notification, but also in possible sanctions for the notifier. For these reasons, we believe that an notifier would not usually pretend to have successfully notified when he has not.

The accompaniment experiment started on August 1, 2012. The daily procedure initiated on that date included running the randomization program on a daily basis to determine which assistants would accompany which notifiers. This information was not given to notifiers until they arrived at the court, and registered the case files they intended to attempt to notify on that day. Once they registered the case file identifiers of the "stack" of cases they were assigned or they decided to attempt on that day, they were informed whether or not they were to be accompanied on that particular day, and by which assistant.

Over the first month of the experiment, we discovered that notifiers generally had a very large number of back-logged case files in their possession, and that

they routinely provided inaccurate or false information about which case files they were to attempt on days they were not accompanied. This resulted in false information about the control group, which is the group of case files not chosen for accompaniment.

To remedy the lack of reliable data on the control group, on September 25, 2012, we formally instituted the "Office for Actuarial Assistance" (OAA). Each special court required its notifiers to submit their entire back log of case files to the office, and this amounted to more than 250 case files per notifier on average. The OAA proceeded to organize the case files and create a data base with all information relevant for carrying out the notification, such as the exact names of parties to be notified, the address, and the location of the address on official maps of the court's jurisdiction, and the latest date by which notification could legally take place in order for the scheduled hearing to be held properly. From then on until the end of the experiment on April 26, 2013, the OAA was responsible for turning the case files over to the notifiers on a daily basis, and designing "routes" or regions in which each notifier is supposed to notify on a given day. Routes are designed based on a combination of the file's urgency and by grouping files with similar geographical locations in order to reduce costs. Other than better organizing the notifier's work load, the OAA did not give the notifier any other "help" in carrying out his duties.

In the design of the OAA, the judges (presidents) of the 5 special courts located at the court's main branch were consulted about the number of notification attempts they considered reasonable on a daily basis. Estimates varied somewhat but we ended up agreeing to 15 case files turned over to each notifier on each day. We also agreed upon a set of procedures to control the number of case files notifiers would have in their possession at any one time. Each case file given to an notifier would have to be returned to the OAA along with a formal notification report, one week later. An notifier who did not turn in a case file one week after receiving it would receive a first warning and would be required to return the case file in 3 business days. If he did not turn in the case file within three days, a second and last warning would be issued, after which failure to turn in the case file with the requisite report would result in an "administrative violation" by the notifier being documented and signed by the judge of his special court. An administrative violation can result in negative consequences such as a day or more of pay being docked. For repeated violations, notifiers could suffer suspension without pay or could even be fired without severance pay, since accumulated administrative violations are considered just cause for dismissal.

It is important to note that while sanctions for administrative violations can be quite significant, in fact the court never applied any sanction. Two notifiers were rotated out of their posts due to improper behavior, which the greater control and order imposed by the OAA made more susceptible of detection. However, neither notifier was fired. They were rather moved to other bureaucratic positions within the court, positions that generally do not provide many opportunities for gifts or bribes from litigants.

As a result of the OAA's existence and structure, we were now able to

provide simple measures of productivity and effectiveness of notifications to the president of the courts and the general secretaries. These measures were quite rough but easy to compute based on workflow data for each notifier, and were provided by the research team to the notifiers' hierarchical superiors upon request. Notifiers knew that these statistics are produced and shared with their superiors, andon occasion asked how "they were doing" in the statistics. In other words, though the reward/punishment incentive was quite vague, these low-level bureaucrats realized they were being supervised, and cared about the statistics on their productivity and quality of work that they knew were being compiled by the research team.

Part V
Results and analysis

Essentially the experiment consisted of two interventions, the random accompaniment of notifiers, and the establishment of a centralized office that managed case files, created routes, and limited the amount of time notifiers could keep the files, while coding data that allowed rough but easily calculated measures of production and quality.

We will first discuss results of the second intervention, the establishment of the centralized office. The figure below shows average notification attempts carried out per day per notifier, over the period of time beginning on August 1 and ending on November 18, the last day for which we have completely coded data from formal notification reports made by notifiers (date 50 in each of the graphs). We fit a flexible curve to this scatter plot, allowing the curve to differ at September 25. The graph indicates both an increase in attempts as a result of the pure accompaniment process between August 1 and September 25, as well as a substantial increase due to the creation of the OAA.

As shown, the average number of attempts increased by over 80%, while successful notifications per notifier per working day more than doubled, and both differences are highly significant in simple difference in means tests. If we consider only days on which an notifier makes at least one attempt (i.e. shows up to work and actually goes out to notify), we can regress the average number of claimed attempts and of real successful notifications, on the dummy which takes the value of 0 before the establishment of the centralized office, and 1 afterwards. In this way, Table 1 shows the effects of the establishment of the centralized notification office, measured over the entire period of the experiment and over the period August - December 2012. In both cases the effects of this partial centralization is very large and highly significant, more than doubling rates of attempts and of successes in notifications. This suggests that controlling the work flow of the notifiers is a key policy for increasing levels of effort and quality of performance.

In order to analyze the effects of the first intervention, the randomized ac-

Figure 1: Attempts

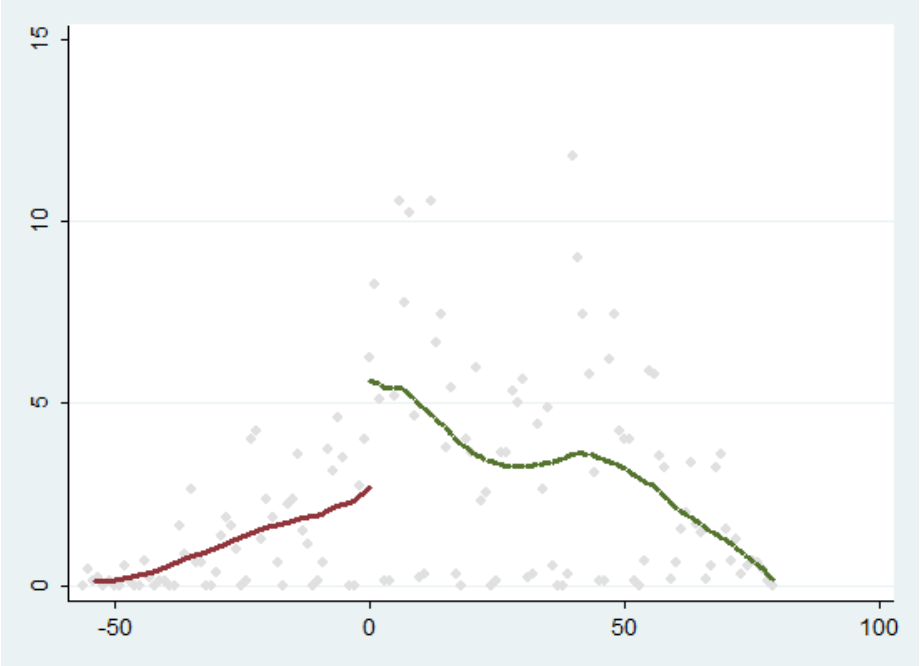

Figure 2: Successes

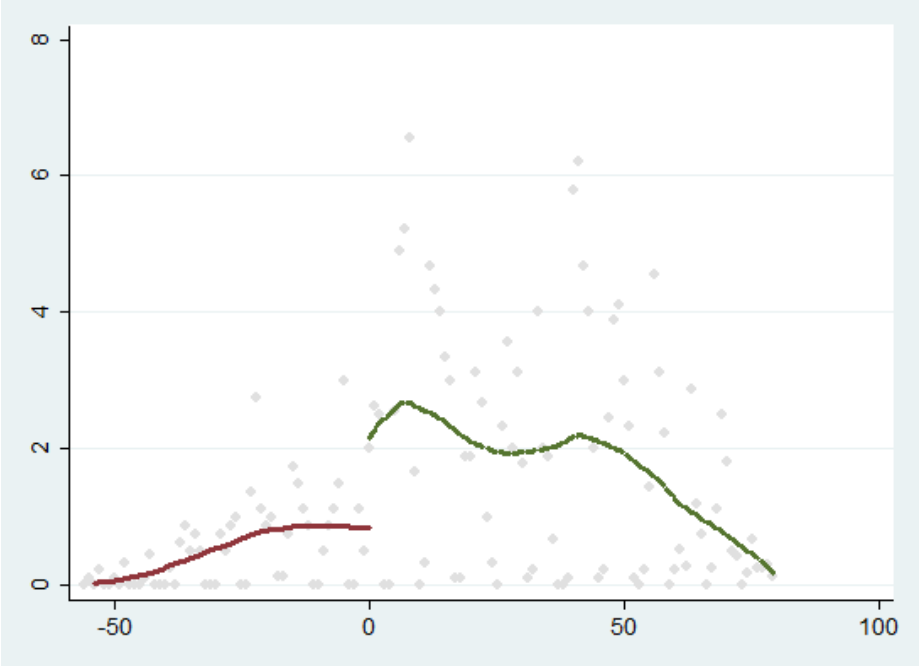

Table 1: Notification Office Effect

	Regression Effect		
	Aug/Dec	Whole Period	Baseline Values
Attempts	2.308	1.246	1.097
	(0.000)	(0.000)	
Successes	1.439	0.809	.5205
	(0.000)	(0.000)	
N	1161	1791	

Observation units are days. p-values in parentheses. Whole period up to March 7, 2013

companiment of the notifiers, we need to define a measure of success in notification. We propose two measures. One is overall success in the case file being notified, with no time limit on when successful notification takes place. A more strict measure is successful notification within a short time period: we choose 2 weeks from the date the cae file is assigned to the notifier, because this was the supposed maximum allowable time period that notifiers could keep the case file before returning it with a notification report to the special labor court. Table2 shows the baseline levels of success by these two measures, over the relevant time periods in the experiment. We look at 5 possible subdivisions of the entire period, divided by important events: September 2012 (pre-notification office), September/October 2012 (trial period of the notification office), October-December 2012 (supposed full implementation of the notification office procedures including sanctions), January 2013 (new JLCAVCT president starting Jan 7), February 2013 (another change in the court leadership). We also look at August-December 2012, January-February 2013, and the entire period. Note that all the baseline values of success in notification are low, and towards the end of the experiment they are relatively lower.

Table 2: Baseline Values of Success

	Mean of Success Measures					
Period	Sept 2012	Sept/Oct 2012	Oct/Dec 2012	Jan 2013	Feb 2013	Total
Success within 2 weeks	.0775	.0747	.0592	.0157	.0197	.0525
Overall Success	.4059	.3409	.2972	.1160	.1364	.2644

Table V shows the mixed and contradictory effects of accompaniment on success in notification. We regress success in notification over the two weeks immediately after case file assignment to the notifier, on being accompanied on the same day a case file was assigned, or on being accompanied on the day of assignment and/or on the following day. We find significant but opposite results in 2012 and 2013, and the overall effect of monitoring on the success of notification of case files assigned at the time the monitoring takes place is

negative and signifcant at the 90% confidence level.

Table 3: Monitoring Effects: Period Overview

	Success within 2 weeks of assignment			
	2012-2013		2012	2013
File assignment day	-0.00944			
	(0.100)			
2 days after		-0.00915	-0.0159	0.0107
		(0.028)	(0.007)	(0.016)
constant	0.00546	0.00987	0.0809	-0.00712
	(0.763)	(0.604)	(0.001)	(0.723)
N	5772	5707	3659	2048

Observation unit is case file. p-values in parentheses. Notifier dummies included.

To attempt to understand these results, we look at sub-periods. Table 4 shows results for 2012 in three sub-periods, now including as explanatory variables being accompanied on the day of case assignment and one day after, being accompanied two days before and after case assignment, and being accompanied on the 5 days leading up to case assignment. Clearly the effect of monitoring here is negatively related to the existence of the notification office. While controlling the notifiers' work flow may have crowded out the effect of monitoring, the reversal in the results is difficult to explain.

Table 4: Monitoring Effects: 2012 Subperiods

	Success within 2 weeks of assignment			
	Sept 2012	Sept/Oct 2012		Oct/Dec2012
2 days after	0.0739		-0.0342	
	(0.055)		(0.000)	
2 before/2 after		-0.0144		
		(0.046)		
5 days before				-0.0186
				(0.005)
_cons	0.108	0.514	0.534	0.0403
	(0.044)	(0.005)	(0.004)	(0.113)
N	271	1756	1766	1642

Observation unit is case file. p-values in parentheses. Notifier dummies included.

Table 5 shows results for sub-periods in 2013. In these sub-periods, each

measure of intensity of accompaniment has a positive and significant impact on at least one of the measures of notification success.

Table 5: Monitoring Effects: 2013 Subperiods

	Success within 2 weeks		Overall success	
	Jan 2013		Jan 2013	Feb 2013
2 before/2 after	0.0114			
	(0.017)			
2 days after		0.0116	.0298	
		(0.072)	(0.072)	
5 days before				0.0408
				(0.006)
_cons	-0.0333	-0.0159	0.170	0.108
	(0.177)	(0.467)	(0.003)	(0.086)
N	956	957	957	660

Observation unit is case file. *p*-values in parentheses. Notifier dummies included.

It appears that the interaction of the two experimental interventions is in some way responsible for the negative impact that monitoring of effort has in a significant part of the experiment. A possible theory to explain this interaction can be described as follows. Once notifiers have already decided to attempt a case file on a particular day, if they are randomly chosen to be monitored, they may exert more effort to be observed having greater sucess in notification. However, if on the day they are assigned a particular case file they are randomly chosen to be accompanied, they are less likely to choose to attempt the case files they were just assigned. This may be because holding onto the case file (exercising control over the litigation process) is profitable to the notifiers since parties to the lawsuit will attempt to convince the notifier to give their particular case file priority through illegal payments or covering transportation and other expenses directly. Since these two phenomena have opposite effects on success in notification, the overall effect depends on which one dominates. If notifiers have a large amount of discretion in which case files to attempt, the "postponement" effect is likely to dominate the effect of additional effort. The effect of the initial monitoring of effort and the establishment of the centralized notification office caused notifiers to worker much harder early in the experiment, so that they dealt with most temporally urgent case files (due to a close hearing date), and by October this allowed them to have a much larger amount of discretion regarding which case files to notify on a particular day. Once the backlog of cases grew to substantial levels by early 2013, notifiers had to attend specific urgent cases as a large proportion of each day's workload, so that their discretion in regard to postponing attempts was greatly reduced, and thus monitoring of

effort produced positive and significant results.

Part VI
Preliminary conclusions

One reasonable preliminary conclusion from this experiment is that direct monitoring of effort is simply less effective, especially given a somewhat sophisticated job description of the monitored individuals, than simple administrative reorganization that permits easy (though rough) calculation and publication of measures of productivity and quality of output.

Another possible conclusion is that direct monitoring of effort simply has little hope of affecting the performance of low level bureaucrats as long as they maintain wide discretion in the organization and priorities in their work loads. In either case, it appears that the strongest policy conclusion of this experiment is that controlling the work flow of the low level bureaucrat is a necessary condition for the success of any program designed to increase the productivity of these public employees, and this control of work flow creates a framework within which the effects of different types of monitoring policies can be properly tested.