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LETTER GRADING GOVERNMENT EFFICIENCY

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ABSTRACT

We mailed letters to non-existent business addresses in 159 countries (10 per country), and measured whether they come back to the return address in the US and how long it takes. About 60% of the letters were returned, taking over 6 months, on average. The results provide new objective indicators of government efficiency across countries, based on a simple and universal service, and allow us to shed light on its determinants. The evidence suggests that both technology and management quality influence the quality of government.

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I. Introduction

Most developing countries have poorly performing governments, as evidenced by surveys of citizens, businessmen, foreign investors, or local experts (La Porta et al. 1999, Treisman 2000, Svensson 2005, Kaufmann et al. 2008). Yet the quality of government improves as countries grow richer (e.g., Barro 2012). The question is why? Unfortunately, survey responses make it difficult to disentangle the determinants of the quality of government, since they capture the respondents' combined assessment of government policies, corruption, and productivity. In addition, survey responses often reflect a mixture of personal experiences and policy views (Glaeser et al. 2004).

In the standard explanation, governments in poor countries are run less well because they are less accountable: citizens have few opportunities to exercise their voice through voting (Hirschman 1970). As countries become richer and more educated, politics becomes more democratic and transparent, with the result that government responsiveness to citizen needs and hence its quality improves (Verba and Nie 1972, Barro 1999, Glaeser, Ponzetto, and Shleifer 2007, Papaioannou and Siourounis 2008, Djankov et al. 2010). One difficulty with such a voice-based explanation is that the quality of government improves with development in dictatorships as well as in democracies (Botero et al. 2012). Voice and accountability cannot be the whole story.

An alternative view of bad government in developing countries holds that productivity of public services is low for similar reasons as that of firms. After all, public institutions are in effect organizations, such as courts, police, or the post office, and as such their productivity might be shaped by the same factors as that of firms. One reason for low productivity is inferior inputs, including human and physical capital, and technology. Another reason is poor management. Management in the public sector might be poor for reasons unique to government, such as use of patronage in hiring and promotion or low public sector wages that fail to attract talent. Evans and Rauch (1999) and Rauch and Evans (2000) pioneered economic research on "Weberian bureaucracies" that professionalize public sector management through meritocratic recruitment,

career ladders, and compensation. Public sector management might also be poor for the same reasons as that in the private sector, such as lack of incentives, supervision, and monitoring (Bloom et al. 2007, 2010a,b, 2012a,b; Lewis 2004). Low government productivity shows up in many outcomes, such as public worker absenteeism (Chaudhury et al. 2006), corruption and bureaucratic delays (Treisman 2000, Svensson 2005), or low quality of public goods (La Porta et al. 1999).

We propose a new objective indicator of government efficiency, and use it to understand the determinants of the quality of government. Our indicator describes the performance of the mail system in accomplishing one simple task: returning an incorrectly addressed international letter. Focusing on mail follows the suggestion by Edward Prescott in the early 1980s that postal economics is more central to understanding the economy than monetary economics[2].

Between December 2010 and February 2011 we sent letters to non-existent business addresses in 159 countries: 2 letters in each country's largest 5 cities. Each envelope had a typed up address using the Latin alphabet, as required by international postal conventions, and included a return address at the Tuck School of Business in Hanover, New Hampshire, as well as a clear request to "please return to sender if undeliverable." The addresses included an existent city and zip code (where available), but a non-existent business name and street address. The letter inside was a standard one page business letter, written in English and requesting a response from the recipient. We included nothing else in the letter to avoid a temptation to open and steal the content (see Castillo et al. 2011).

All countries subscribe to an international postal convention requiring them to return the letters posted to an incorrect address. We measured the fraction of letters that were actually returned, and how long it took the letters to come back from the date they were posted from Cambridge, MA. We stopped keeping track of returns one year after the final postings that took place on Feb 4, 2011. We do not believe this procedure aroused any concerns or delays at the US

[2] Personal communications from Edward Prescott, Patrick Kehoe, Timothy Kehoe, and Ellen McGrattan.

post offices. We use the data to construct the share of letters we got back and how long it took to get them back in each of 159 countries. We then analyze a variety of correlates of these measures of postal efficiency.

Our approach to measuring government efficiency has two key advantages. First, we are looking at a fairly simple and universal government service. All countries have post office equipment reading zip codes and sometimes addresses, so the letter has to end up in the hands of a postal employee whose job is to initiate the process of returning the letter but who can instead throw it out. We measure productivity directly by whether this task is actually performed, and how fast.

Second, by design we are looking at a government service where corruption plays no role. It is actually impossible to ask the American sender of the letter for a bribe, since he is not available to pay it. Furthermore, no larger political purpose is served by either returning the letter or throwing it out. In essence, we are examining a measure of the quality of government relatively free from political influences. Political factors would influence outcomes through employment practices if patronage and favoritism in the postal service shape employment practices. We address this possibility in our empirical work.

Once we construct our measures, we consider some determinants of government efficiency. We use measures of capital, labor, and technology in the postal system. Having accounted for those, we turn to management. The principal hypothesis we consider is that postal efficiency is greater in countries with "Weberian bureaucracies" (hereafter WB) as defined by Evans and Rauch (1999). According to Weber (1968), professional bureaucracies are needed to accomplish social goals. Evans and Rauch developed WB indices based on expert surveys for 35 countries, covering such aspects as skill and merit based as opposed to patronage-based hiring, career employment, civil service protection, and relative pay. Dahlstrom, Lapuente, and Teorell (2011) have recently updated and refined these measures for over 100 countries in our sample, so we can examine the influence of WB on postal efficiency, holding resources and technology constant.

We supplement WB indices with three other approaches to measuring public sector management. First, one reason for poor public sector performance may be low relative wages, which keep away talent and discourage initiative. Compensation is in fact part of WB indices. We assemble additional data on relative public sector wages, including for 25 countries those of postal employees, and consider their influence on postal efficiency. Second, Dahlstrom et al. (2011) also collect data on objectives and attitudes of public sector employees. We examine the relationship between these attitudes and postal efficiency. Finally, recent research shows that management practices are a key determinant of productivity in the private sector (Bloom et al 2007, 2010a,b, 2012a,b). We use survey measures of management quality in the private sector to examine its impact on mail efficiency for a large sample of countries, but also more precise Bloom/Van Reenen measures of management practices for a small sample. Our data enable us to check whether related dimensions of public and private sector management influence postal productivity.

In brief, we find enormous variation across countries both in how many letters come back, and how long it takes them to come back. Much of this variation is explained by the variation in postal system resources and technology. Indices of Weberian bureaucracy, particularly meritocratic recruitment, are also statistically significant determinants of postal productivity, while relative public sector wages are not. Differences in private sector management quality help explain differences in productivity across countries; interestingly, some of the same aspects of management in the public and private sectors seem to matter. The evidence points toward better management as part of an explanation of both private and public institutional improvement in the process of development.

II. Procedure and Variables.

We sent 2 letters to each of the 5 largest cities in 159 countries. These were airmail, first class letters, with correct international postage of 98 cents. The letters were dropped in street mail

boxes in Cambridge, MA between December 8, 2010 and February 4, 2011. Both the letter inside and the information on the envelope used the Latin alphabet and the Arabic numerals, as required by the postal convention. The letter inside, reproduced in Figure 1, was always the same, and written in English. It came from Rafael La Porta at Tuck School of Business at Dartmouth College in Hanover, New Hampshire. The letter stated that it was confidential, confirmed the receipt of previous correspondence, and requested urgent response regarding the recipient's willingness to continue the collaboration project. The idea of such a letter was to add a bit of urgency to the task of returning in the event that a postal employee opened the envelope and read it. At the same time, we made sure there was only one piece of paper inside the envelope to minimize the temptation for postal employees to look for valuables inside (Castillo et al. 2011).

The name of the addressee was chosen as a common name in the country. In addition to the name of the addressee, each address on the front of the envelope had a generic name of a business, such as Computer Management Professionals, Smart Computer Services, Inventory Technology Partners, Professional Management Forum, Inventory Area Management Computer, etc. Following the name of the business, the envelope had a printed address, which had a correct existing zip code for the city in question but a non-existent address. Names of Nobel Laureates in Economics and famous Western composers were used as street names. It is possible but extremely unlikely that, by coincidence, the street address existed in that city at that zip code. For all practical purposes, the street address was non-existent. The addresses were typed following the postal convention. Figure 2 presents the front of the envelope for several of the returned letters.

In addition, each letter contained the return address of Rafael La Porta at the Tuck School of Business at Dartmouth. Under the address, it said in larger bold letters **PLEASE RETURN TO SENDER IF UNDELIVERABLE**. This too was done to encourage the return of the letter.

All of the countries in the sample subscribe to the Universal Postal Union. Article 147 from the Universal Postal Union Letter Post Regulations Final Protocol of 2009 regulates the return of

incorrectly addressed mail, and in particular mandates the return of such mail under normal circumstances (our letters certainly met those circumstances: they did not contain biodegradable or radioactive material, etc.). Moreover, the Regulations require that the letters must be returned within a month of entering the country, and that the sending country (i.e., the US) pays for the return. The letters met all the requirements, such as how the addresses were typed, postage, return addresses, letter weight, to trigger the return under the Universal Postal Union.

Following the mailing, we kept track of the dates of return of the letters, checking every weekday when mail was delivered. Based on this information, we constructed three variables for each country. The first is the fraction of the 10 letters that were returned. The second is the fraction of 10 letters that were returned within 3 months, as would be (generously) required by postal conventions. The third is the average time to get the letter back using the (equalizing) assumption that the letters than never came back actually did come back on February 4, 2012, the last day we kept track of the data. Appendix A provides a detailed description of all the variables we use in the paper; Appendix B illustrates the construction of the mail variables for two extreme countries: Czech Republic and Russia.

Table 1 presents some statistics on these three variables, and lists the countries with the highest and the lowest share of returned letters. On average, we got 59% of the letters back (i.e., 6 out of 10 per country), although only 35% of the sent letters came back within 3 months. We got 100% of the letters back from 21 out of 159 countries, including from the usual suspects of efficient government such as Canada, Norway, Germany, and Japan, but also from Uruguay, Barbados, and Algeria. At the same time, we got 0% of the letters back from 16 countries, most of which are in Africa but also including Tajikistan, Cambodia, and Russia. For high income countries, we got almost 85% of the letters back, and 60% within 3 months, while for low income countries these numbers fall to 32% and 9%, respectively. Table 1 also shows that more of the letters came back, and they came back quicker, from higher education than from lower education countries. Despite our focus on a

very simple task, government efficiency measures vary enormously across countries, and in ways roughly related to per capita income and human capital, consistent with the evidence on subjective indicators of the quality of government (La Porta et al 1999, Treisman 2000).

Table 2 correlate our measures of government efficiency with a large number of standard measures, taken from standard data sources (for a sampling of these measures, see La Porta et al. 1999, although here we use the most recent numbers). These correlations are quite high. Insofar as return of letters is not a corruption driven measure of government quality, this evidence suggests that understanding mail efficiency may help gain broader insight into how government works[3].

As a final point, we note that the coefficient of variation in our measures of postal productivity is 1.80 for getting the letter back, and 1.11 for getting it back in 30 days (see Appendix A). For comparison, the coefficient of variation for GDP per capita is .90. Despite the simplicity of our measure, it is as variable across countries as the more traditional indicators of development.

III. Determinants of Mail Efficiency

Table 3 presents the determinants of mail efficiency, including resources of the postal system, whether a country uses the Latin alphabet, as well as the extent of postcode databases. We measure resources as the (ln) permanent offices per capita and (ln) postal staff per capita. The correlation between these two variables is .82, so we use them separately. We find that postal resources are strong predictors of efficiency, as one would expect from a production function specification. This result was confirmed using several other measures of postal resources, including geographic area per office, number of sorting offices per capita, and number of full time staff per capita (results not reported).

[3] Nick Bloom has suggested that, since we send 2 letters to each city, we can use data about return of one as an instrument for return of the other, to correct for the measurement error problem. We have done that, and found that R-squared of regressions of our mail efficiency variables on the quality of government variables in Table 2 in general increases (see Appendix C).

Table 3 also shows that countries that use the Latin alphabet return 12 percentage points more letters (an extra .7 of a letter), and also return 11 percentage points more letters within three months. Although using the Latin alphabet conforms to the postal convention that all countries sign, language is an obstacle to the return of the letter from countries that do not use it.

We also find strong evidence that postcode databases predict our outcomes. The variable equals 1 if postcode database includes street names, in which case the non-existence of the street name, and therefore the incorrectness of the address, would pop out immediately as soon as the envelope is machine read. The variable equals 0 if the postcode database only includes the names of localities, in which case the envelope-reading machine would not detect the wrong address at all, and a person is needed to do it. There are two intermediate values as well (see Appendix D for precise description). We find that going from 0 to 1 on this variable raises by between 18 and 24 percentage points the number of letters that come back or that come back within 3 months. This variable seems to capture technology differences among countries in the processing of letters.

Altogether, these resource and technology variables explain 41-47% of the variation across countries in the share of letters that come back, and in the share of letters that come back within three months. We do not have data on human capital of postal employees, although the standard years of schooling variable is not significant when added to the specifications in Table 3. Although over half the variance remains unexplained, this evidence shows that, even for this extremely simple service, productivity differences are substantially accounted for by inputs, including technology[4].

Before turning to management, we report some checks of robustness of the above findings. We have considered a variety of alternative measures of postal resources, with similar results. We have also verified that state monopoly on some postal activity does not affect our results. We have examined several geographic and population controls related to mail specifically, such as distance to the U.S., distribution area, population density of a country, a dummy for the country being

[4] We have rerun the regressions in Table 3 using logistic and Tobin specifications. The results are very similar.

landlocked, and some measures of cost and fee adjustment based on geography that are produced by the Universal Postal Union. Some of these measures are significant and add modest explanatory power, but their inclusion does not alter our main results. We have considered many standard measures of the quality of government, such as legal origins, latitude, trust, religion, ethnic heterogeneity, and GDP per capita (La Porta et al. 1999). These variables do not alter our results. We have also tried to take advantage of geographic diversity of our addresses within countries. Generally speaking, letters come back faster and more consistently from capital cities, but otherwise we did not find much. There is no evidence, in particular, that letters come back faster from richer places within countries. All of these results are presented in Appendices E, F, and G.

The results so far suggest that measures of postal resources and technology explain 40-50% of variation in mail efficiency, consistent with the hypothesis that public and private productivity are driven by similar economic factors. Yet much variance remains unexplained. To pursue this issue further, we next turn to management as a potential source of differences in mail efficiency.

IV. Management.

In this section, we focus on management as a determinant of postal efficiency. The idea that a professional bureaucracy with non-political rules of recruitment, promotion, and compensation of employees delivers public goods better than a politicized bureaucracy goes back to Weber (1904-1911, 1968). Evans and Rauch (1999) measured such Weberian bureaucracy (WB) in 35 countries using expert surveys. Conceptually, they distinguished in their questions three aspects of WB: meritocratic recruitment, predictable career ladders, and compensation practices. Dahlstrom, Lapuente, and Teorell (DLT, 2011) significantly extended Evans and Rauch's work by both revising their variables and expanding the number of countries, while still collecting information from country experts. Below we use DLT data.

DLT's WB index consists of 9 components, divided into three categories: professional and non-political administration, closed public administration, and salaries. The first category covers merit-based as opposed to political hiring. Experts answer four questions in this area: whether skills and merit decide who gets the job when recruiting, whether political connections decide who gets the job, whether political leadership hires and fires senior public sector officials, and whether senior public sector officials are hired from the ranks of the public sector. The second category describes whether public administration is closed, i.e., employs lifetime workers governed by special rules and practices. Finer (1997) distinguishes two approaches to organizing a bureaucracy: the open bureaucracies with employees moving between public service and the private sector, adopted for example in the UK, Netherlands, and Denmark, and closed/protected career bureaucracies of France, Germany, and Spain. Experts answer three questions: whether public sector employees are hired via a formal examination system, whether if recruited they stay in the public sector for the rest of their careers, and whether terms and contracts in the public sector are regulated by special laws not applying to the private sector. The third category deals with salaries, and includes two questions: whether senior officials have salaries comparable to those of similar private sector managers, and whether salaries of public sector workers are linked to performance appraisals. In DLT data, each expert answers each question on 1 (hardly ever) to 7 (almost always) scale, and DLT average the answers across experts in each country. DLT also construct a WB index that averages answers to the 9 questions (with higher values representing more "Weberianism"). The correlation between their WB index and Evans and Rauch's (1999) for the common 35 country sample is .67.

DLT supplement these questions on Weberian characteristics of the bureaucracy by a number of questions about the attitudes and objectives of public employees, a topic also stressed by Weber (1968). In particular, they ask whether public employees strive to: 1) be efficient, 2) implement policies designed by top politicians, 3) help citizens, 4) follow rules, 5) fulfill the ideology of parties in government. In addition, DLT construct an index of impartiality of public employees focusing on whether kickbacks, bribes, discrimination, or personal connections influence their

decisions. They also separately ask whether public employees act impartially when implementing a policy in a case. We use these assessments both to check whether a higher WB leads to more pro-social objectives and attitudes of public employees, and as alternative indicators of management quality in the public sector.

As a first step in looking at these data, Table 4 presents cross-country correlations of answers to the nine questions included in the WB index and assessments of public employee attitudes. The Table also correlates WB variables with two additional measures of public sector wages: the ratio of average government wage to GDP per capita from the World Bank, and for 25 countries, the ratio of postman salary to GDP per capita, from the International Labor Organization.

In Table 4, Weberian indicators of professional and non-political public administration are uniformly and consistently positively correlated with public-spirited objectives of government employees (and negatively with the desire to fulfill the ideologies of parties in power). These indicators are also uniformly and consistently positively correlated with indicators of public sector impartiality. At the same time, there is no relationship between public sector professionalism and measures of relative wages. Second, Weberian indicators of closedness of the bureaucracy are not nearly as consistently correlated with public-spirited objectives. For attitudes and impartiality, 8 out of 21 correlations are significant and of the "predicted" sign. For wages, only the correlation between lifetime public service employment and relative public sector wages is statistically significant. Finally, there is also a fairly consistent positive correlation between salaries indicators from DLT and public-spirited objectives of government employees, especially for salaries being linked to performance. The correlations between DLT and public sector wages are weak. At least from this initial look, Weberianism of the bureaucracy, especially professionalism, is indeed quite strongly positively correlated with pro-social attitudes of the bureaucrats.

In the next three Tables, we consider WB indicators, bureaucratic salaries, and bureaucratic attitudes as determinants of postal efficiency. Table 5 adds to the specifications in Table 3 the WB

indicators. We present the results solely for getting the letter back as the dependent variable; the results for other variables are similar and are presented in Appendix H. We use three Weberian indicators: the WB index defined as the average answer to the 9 questions summarized in Table 4, the average answer to the four questions on professional and non-political public administration (professionalism sub-index), and the average answer to three questions about closed public administrations (closedness sub-index). We deal with salaries separately in Table 6. In addition, Table 5 uses as an independent variable "public management performance" from a different data source. The results show that the WB is a statistically significant predictor of getting the letter back, holding everything else constant. The effect comes from the professionalism sub-index, and not from closedness (and as we show in Table 6 not from salaries). Of the 4 questions going into the professionalism sub-index, skill-and-merit-based recruiting does all the work. Raising professionalism of bureaucracy by one standard deviation raises the probability of getting a letter back by 5 percentage points, a big effect. Public management performance score has a significant effect on the likelihood of getting the letter back as well. These results are consistent with the hypothesis that improvements in public sector management, expressed as professionalization of the bureaucracy, improve postal efficiency.

Table 6 shows, in contrast, that neither the wage variables from DLT, nor the two wage variables we added to the data set, help explain postal efficiency. The result that relative wages of public officials are not important in predicting performance is consistent with earlier findings of La Porta et al. (1999) and Evans and Rauch (1999). Table 7 turns to the attitudes of public sector employees. The results are more mixed. Striving to help citizens, not following government party ideology, and measures of impartiality are statistically significantly correlated with mail efficiency. Other measures of attitudes, including public employees striving to be efficient, are not.

An alternative approach to measuring management quality is to consider private sector management. Perhaps countries that manage the private sector better also manage the public

sector better. This approach also provides an independent check on our evidence for the Weberian hypothesis. After all, the issue in returning the mail is how to get a low level postal employee to actually do his job or putting the incorrectly addressed letter into a correct (return) container, rather than throw it out or get rid of it in some other way. This seems to be fundamentally a management task of monitoring employees (it is hard to see how incentives would work).

We consider two groups of management variables. First, we found three survey-based cross-country measures of management quality: will to delegate authority, innovation capacity, and quality of management schools. Second, for 16 countries, we have the Bloom/Van Reenen management practices index, as well as the three sub-indexes of monitoring management, targets management, and incentives management. Table 8 presents the correlations between nine Weberian questions from DLT and the seven quality of private management indicators we found. A bit remarkably, at least to us, measures of professionalism of public administration are consistently positively correlated with the cross-country indicators of the quality of private sector management. In addition, private sector management quality seems to be highly correlated with salaries of public employees being linked to performance. On the other hand, there is no relationship between closedness of public administration and private sector management quality. These correlations suggest that similar management practices shape efficiency in both public and private sectors.

Table 9 presents the results for private sector management and mail efficiency. The three indicators of private sector management quality are all significant predictors of whether the letters get back. Table 9 also shows a strong influence of Bloom/Van Reenen management practices index, as well as of monitoring management and targets management sub-indices, on mail efficiency. Consistent with the evidence in Table 8, the variables most intimately related to professional management in both public and private sectors are important determinants of mail efficiency.

We stress that our results on management are cross-sectional, and as such cannot be interpreted as causal. Omitted country characteristics could influence both management quality and

postal efficiency. In a cross-section, we found it difficult to come up with a plausible instrument satisfying the exclusion restriction. At the same time, our management variables are correlated with mail efficiency in both democracies and autocracies, which suggests that the omitted variables are unlikely to be political factors that are central to the standard view of government quality.

In summary, it appears that measures of management quality in the public and private sectors, obtained from very different sources, explain some of the variation in postal productivity across countries, just as it explains variation in private sector productivity. If not spurious, this finding leaves open the deeper question of how countries solve these basic management problems, such as getting a postal employee to get his job done, as they develop. One possibility suggested by the results in Table 9 is that the more developed countries could hire better educated and trained managers, who bring better practices into the public as well as the private sector, and in particular can provide the necessary supervision of the employees (see Gennaioli et al. 2012). More broadly, an important reason for low quality government in developing countries is low overall productivity.

IV. Conclusion.

This paper has made two contributions. First, we constructed new objective measures for the quality of government in 159 countries, based on return of incorrectly addressed international mail. These measures correlate with other indicators of the quality of government, yet have the advantage that we know more precisely what goes into them.

Second, we used these measures to argue that one reason for poor government in developing countries is the same low productivity that plagues the private sector in these countries as well. Such low productivity is explained to a large extent by inputs and technology, but also by management. In fact, our findings could shed light on some fundamental puzzles related to the quality of government. The first puzzle, illustrated by this paper, but seen in other research as well

(e.g., La Porta et al 1999, Treisman 2000, Botero et al. 2012) is that the quality of government improves as countries grow richer. This fact is surprising if one focuses on the uniqueness of government, but makes more sense once it is recognizes that government is subject to the same productivity dynamics as the private sector.

Second, the analysis suggests that even the more political aspects of poor government, such as corruption, may be a reflection of problems similar to those of the private sector, such as mismanagement. Corruption, for example, might be in part a manifestation of the weakness of monitoring and incentive systems in less developed countries. Perhaps our small findings on the post office could be developed into a broader theory of the quality of government and its evolution in the course of economic development.

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Table 1: Measures of mail efficiency

	Got the letter back	Got the letter back in 90 days	Avg. Number of days to get the letter back
	Panel A: Top and bottom countries sorted by "Got the letter back"		
United States	100%	100%	16.20
El Salvador	100%	100%	39.00
Czech Republic	100%	100%	52.30
Luxembourg	100%	100%	68.00
Finland	100%	90%	51.60
Norway	100%	90%	53.30
New Zealand	100%	90%	53.60
Uruguay	100%	90%	54.00
Canada	100%	90%	54.30
Barbados	100%	90%	57.90
	---	---	---
Angola	20%	0%	404.00
Malawi	20%	0%	414.70
Mauritania	20%	0%	416.20
Mongolia	10%	10%	383.60
Swaziland	10%	0%	387.40
Fiji	10%	0%	388.20
Congo, Dem. Rep.	10%	0%	397.60
Tonga	10%	0%	398.70
Honduras	10%	0%	408.70
Burundi	10%	0%	410.70
Cambodia	0%	0%	413.50
Russian Federation	0%	0%	418.80
Gabon	0%	0%	418.80
Panama	0%	0%	418.80
Egypt, Arab Rep.	0%	0%	418.80
Nigeria	0%	0%	418.80
Sudan	0%	0%	418.80
Cameroon	0%	0%	418.80
Tajikistan	0%	0%	418.80
Cote d'Ivoire	0%	0%	418.80
Ghana	0%	0%	418.80
Tanzania	0%	0%	418.80
Rwanda	0%	0%	418.80
Liberia	0%	0%	418.80
Myanmar	0%	0%	418.80
Somalia	0%	0%	418.80
	Panel B: Full sample means		
Full sample (159)	0.5931	0.3535	228.22
	Panel C: Means by GDP per capita		
High income (39)	0.8487 [a]	0.6000 [a]	125.91 [a]
Upper middle income (38)	0.6684	0.4316 [c]	196.27 [c]
Lower middle income (39)	0.5590	0.3026	245.99
Low income (38)	0.3211 [a]	0.0921 [a]	336.02 [a]
	Panel D: Means by avgerage number of years of schooling		
Above median years of schooling (72)	0.7528 [a]	0.5208 [a]	164.48 [a]
Below median years of schooling (84)	0.4607	0.2120	281.65

Notes:
Number of countries in parentheses.
Significance levels: (a) if $p<0.01$; (b) if $p<0.05$; (c.) if $p<0.10$.

Table 2: Mail efficiency and other dimensions of government efficiency and institutional quality

The table shows raw pair-wise correlations between mail efficiency variables and other measures of government efficiency and institutional quality for the full sample of countries with letters data. The various measures of government efficiency and institutional quality are shown in the first column and the source of each variable in the second column. For each of the three mail efficiency variables, the first column of numbers shows the pairwise correlations between the mail variable and each of the other variables. The second column of numbers shows the number of observations for each correlation. Significance levles: (a) if p<0.01; (b) if p<0.05; (c) if p<0.10

		Got the letter back		Got the letter back in 90 days		Ln Avg. number of days to get the letter back	
Variables	**Sources**	**Correlation**	**Obs.**	**Correlation**	**Obs.**	**Correlation**	**Obs.**
Government Effectiveness (1996-2007)	Kaufmann et al. 2008	0.631 [a]	157	0.595 [a]	157	-0.657 [a]	157
Bureaucratic quality (1995-2008)	BERI	0.559 [a]	132	0.515 [a]	132	-0.574 [a]	132
Extent of bureaucratic red tape	Global Competitiveness Report 2011	-0.627 [a]	125	-0.556 [a]	125	0.622 [a]	125
Teacher absenteeism hinders education a lot	PISA 2010	-0.261 [b]	70	-0.137	70	0.209 [c]	70
Overall Ease of doing business rank	Doing Business Report 2011	-0.493 [a]	153	-0.495 [a]	153	0.543 [a]	153
Starting a business rank	Doing Business Report 2011	-50.838 [a]	153	-50.838 [a]	153	25.361 [a]	153
Starting a business procedures	Doing Business Report 2011	-0.273	153	-0.285	153	0.305 [b]	153
Starting a business days	Doing Business Report 2011	-0.324 [b]	153	-0.317 [b]	153	0.342 [a]	153
Time to import	Doing Business Report 2011	-0.532 [a]	153	-0.551 [a]	153	0.591 [a]	153
Documents to export	Doing Business Report 2011	-0.456 [a]	153	-0.404 [a]	153	0.458 [a]	153
Construction permit days	Doing Business Report 2011	-0.249	153	-0.242	153	0.279	153
Enforcing contracts procedures	Doing Business Report 2011	-0.316 [b]	153	-0.275	153	0.309 [a]	153
Paying taxes rank	Doing Business Report 2011	-0.191	153	-0.236	153	0.235	153
Business Freedom	Heritage Foundation 2008	0.545 [a]	150	0.545 [a]	150	-0.582 [a]	150
Time firms spend meeting with tax officialas	WB Enterprise Surveys	-0.333	99	-0.208	99	0.281	99
Regulatory quality (1996-2007)	Kaufmann et al. 2008	0.639 [a]	157	0.607 [a]	157	-0.663 [a]	157
Infrastructure quality	Global Competitiveness Report 2011	0.436 [a]	134	0.447 [a]	134	-0.477 [a]	134
% household with running water at home	Gallup 2007	0.529 [a]	128	0.567 [a]	128	-0.585 [a]	128
ICRG corruption index (2000-2008)	ICRG	0.581 [a]	132	0.571 [a]	132	0.603 [a]	132
% firms expect to give gifts for water connection	WB Enterprise Surveys	-0.384 [b]	97	-0.386 [b]	97	0.421 [a]	97
Voice and accountability index (1996-2004)	Kaufmann et al. 2008	0.641 [a]	156	0.610 [a]	156	-0.664 [a]	156
Expropriation risk (1982-1997)	BERI	0.568 [a]	121	0.524 [a]	121	-0.569 [a]	121
Protection of property rights and law enforcement	Heritage Foundation 2008	0.555 [a]	150	0.557 [a]	150	-0.604 [a]	150
Judicial independence	Global Competitiveness Report 2011	0.439 [a]	134	0.372 [a]	134	-0.433 [a]	134
Democracy index (1990-2006)	Polity IV	0.581 [a]	148	0.562 [a]	148	-0.608 [a]	148
Executive constraints (1990-2006)	Polity IV	0.577 [a]	147	0.559 [a]	147	-0.604 [a]	147
Freedom of the press	Freedom House 2006	-0.578 [a]	157	-0.571 [a]	157	0.609 [a]	157

Table 3: Postal office characteristics and alphabet as determinants of mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

Dependent variables:	Got it back		Got it back in 90 days		Ln. Avg Number of days to get it back	
Ln permanent offices per capita	0.097 [a]		0.096 [a]		-0.185 [a]	
	[0.015]		[0.015]		[0.027]	
Ln postal staff per capita		0.096 [a]		0.092 [a]		-0.195 [a]
		[0.017]		[0.017]		[0.032]
Postcodes databases	0.242 [a]	0.180 [b]	0.243 [a]	0.188 [b]	-0.557 [a]	-0.408 [a]
	[0.059]	[0.070]	[0.065]	[0.075]	[0.129]	[0.146]
Alphabet used is Latin-based	0.124 [a]	0.112 [b]	0.115 [a]	0.102 [b]	-0.273 [a]	-0.256 [a]
	[0.047]	[0.047]	[0.044]	[0.043]	[0.083]	[0.083]
Constant	0.006	-0.132	-0.227 [a]	-0.349 [a]	6.444 [a]	6.772 [a]
	[0.063]	[0.089]	[0.061]	[0.092]	[0.105]	[0.169]
Observations	157	157	157	157	157	157
R-squared	0.41	0.41	0.42	0.42	0.45	0.47

Robust standard errors in brackets
Significance levels: a p<0.01, b p<0.05, c p<0.1

Table 4: Correlations of Weberian scale components, public sector employees attitudes and public sector wages

The table shows raw pair-wise correlations between the components of the Weberian scale index, measures of public sector employees attitudes and measures of public sector wages for the full sample of countries with letters data. Significance levles: (a) if p<0.01; (b) if p<0.05; (c) if p<0.10

	Public sector employees strive to:					Impartiality of public sector employees		Public sector employee wages	
	Be efficient	Implement policies designed by top politicians	Help citizens	Follow rules	Fulfill the ideology of the parties in governemnt	Impartiality index	Act impartially when decident to implement a policy in a case	Avg. government wage / GDP percapita 2000	Postman salary / GDP percapita 2005
Professional & non-political public administration (4 questions)									
Skills and merits decide who gets the job when recruiting	0.774 [a]	0.600 [a]	0.808 [a]	0.781 [a]	-0.400 [a]	0.788 [a]	0.837 [a]	-0.108	0.232
Political connections do not decide who gets the job when recruiting	0.719 [a]	0.492 [a]	0.748 [a]	0.712 [a]	-0.386 [a]	0.775 [a]	0.757 [a]	-0.090	-0.064
Political leadership does not hire and fire senior public sector officials	0.522 [a]	0.287 [a]	0.530 [a]	0.433 [a]	-0.383 [a]	0.654 [a]	0.523 [a]	0.061	0.154
Senior public officials are hired from the ranks of the public sector	0.340 [a]	0.334 [a]	0.416 [a]	0.437 [a]	-0.300 [a]	0.369 [a]	0.568 [a]	0.051	-0.054
Closed public administration (3 questions)									
Public sector employees hired via formal examination system	0.177 [c]	0.216 [b]	0.228 [b]	0.320 [a]	-0.162	0.121	0.289 [a]	0.153	0.338 [c]
If recruited, one stays as a public sector employee for the rest of one's career	0.012	0.025	0.124	0.214 [b]	-0.235 [b]	0.075	0.259 [a]	0.234 [c]	0.275
Terms of contracts regulated by special laws not applying to private sector	-0.133	0.009	-0.036	0.102	0.005	-0.101	0.026	0.105	-0.080
Salaries (2 questions)									
Senior officials have salaries comparable to those of similar private sector managers	0.219 [b]	0.202 [b]	0.167 [c]	0.131	0.091	0.123	0.186 [c]	-0.199	-0.096
Salaries of public administration workers are linked to performance appraisals	0.567 [a]	0.526 [a]	0.574 [a]	0.508 [a]	-0.139	0.470 [a]	0.526 [a]	-0.255 [b]	0.122

Table 5: Public sector management quality and mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back			
Ln permanent offices per capita	0.086 [a] [0.022]	0.089 [a] [0.022]	0.093 [a] [0.022]	0.061 [a] [0.018]
Postcodes databases	0.178 [b] [0.080]	0.163 [b] [0.078]	0.176 [b] [0.077]	0.174 [b] [0.079]
Alphabet used is latin-based	0.175 [a] [0.061]	0.167 [a] [0.060]	0.205 [a] [0.064]	0.062 [0.052]
Weberian public administration (index of 9 questions)	0.075 [c] [0.045]			
Professional & non-political public administraiton (subindex of 4 questions)		0.049 [b] [0.025]		
Closed public administration (subindex of 3 questions)			0.053 [0.035]	
Public management performance				0.052 [a] [0.015]
Constant	-0.234 [0.195]	-0.119 [0.135]	-0.247 [0.213]	-0.105 [0.078]
Observations	101	102	102	116
Adj. R-squared	0.39	0.38	0.37	0.36

Robust standard errors in brackets

a $p<0.01$, b $p<0.05$, c $p<0.1$

Table 6 : Public sector wages and mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back			
Ln permanent offices percapita	0.093 [a]	0.094 [a]	0.086 [a]	-0.044
	[0.023]	[0.022]	[0.029]	[0.060]
Postcodes databases	0.204 [b]	0.233 [a]	0.336 [a]	0.438 [b]
	[0.078]	[0.077]	[0.100]	[0.177]
Alphabet used is latin-based	0.165 [a]	0.151 [b]	0.074	0.362 [a]
	[0.062]	[0.061]	[0.071]	[0.103]
Senior officials with salaries comparable to to salaries of managers of private sector	0.010			
	[0.023]			
Salaries of public administration workers are linked to performance appraisals		-0.006		
		[0.028]		
Avg. government wage / GDP percapita 2000 (World Bank, constant 2000 US dollars)			0.020	
			[0.017]	
Postman salary / GDP percapita 2005 (constant 2005 US dollars PPP adjusted)				-0.077
				[0.075]
Constant	-0.001	0.032	-0.026	0.400
	[0.109]	[0.124]	[0.154]	[0.253]
Observations	102	101	84	25
Adj. R-squared	0.35	0.37	0.363	0.703

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1

Table 7 : Attitudes and decision making by public officials and mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back						
Ln permanent offices percapita	0.093 [a] [0.022]	0.090 [a] [0.022]	0.087 [a] [0.022]	0.092 [a] [0.023]	0.088 [a] [0.021]	0.089 [a] [0.023]	0.082 [a] [0.022]
Postcodes databases	0.195 [b] [0.079]	0.201 [b] [0.078]	0.157 [b] [0.078]	0.192 [b] [0.082]	0.167 [b] [0.073]	0.181 [b] [0.078]	0.163 [b] [0.078]
Alphabet used is latin-based	0.160 [b] [0.061]	0.162 [a] [0.061]	0.143 [b] [0.060]	0.161 [a] [0.061]	0.152 [b] [0.058]	0.109 [c] [0.059]	0.144 [b] [0.060]
Public sector employees strive to be efficient	0.017 [0.027]						
Public sector employees strive to implement policies decided by top politicians		0.023 [0.039]					
Public sector employees strive to help citizens			0.062 [b] [0.028]				
Public sector employees strive to follow rules				0.015 [0.032]			
Public sector employees strive to fulfill the ideology of the parties in government					-0.074 [a] [0.025]		
Impartiality of public sector employees (index of 3 questions)						0.045 [b] [0.020]	
Public sector officials act impartially when deciding to implement a policy in a case							0.065 [b] [0.026]
Constant	-0.030 [0.139]	-0.063 [0.192]	-0.159 [0.140]	-0.028 [0.153]	0.412 [b] [0.159]	0.281 [c] [0.158]	-0.158 [0.139]
Observations	102	102	102	102	102	100	102
Adj. R-squared	0.36	0.36	0.38	0.36	0.4	0.40	0.40

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1

Table 8: Correlations of Weberian scale components and measures of private sector management quality

The table shows raw pair-wise correlations between the components of the Weberian scale index and measures of private sector management quality for the full sample of countries with letters data. Significance levles: (a) if p<0.01; (b) if p<0.05; (c) if p<0.10

	Will to delegate authority	Innovation capacity	Quality of management schools	Management practices index	Monitoring management subindex	Targets management subindex	Incentives management subindex
Professional & non-political public administration (4 questions)							
Skills and merits decide who gets the job when recruiting	0.596 [a]	0.593 [a]	0.551 [a]	0.561 [b]	0.493 [c]	0.428 [c]	0.626 [a]
Political connections do not decide who gets the job when recruiting	0.610 [a]	0.573 [a]	0.512 [a]	0.521 [b]	0.499 [b]	0.469 [c]	0.461 [c]
Political leadership does not hire and fire senior public sector officials	0.397 [a]	0.407 [a]	0.378 [a]	-0.052	-0.113	-0.378	0.002
Senior public officials are hired from the ranks of the public sector	0.324 [a]	0.435 [a]	0.303 [a]	0.247	0.346	0.237	0.073
Closed public administration (3 questions)							
Public sector employees hired via formal examination system	0.158	0.155	0.078	-0.275	-0.367	-0.237	-0.132
If recruited, one stays as public sector employee for the rest of one's career	0.019	0.151	0.124	-0.261	-0.159	-0.177	-0.398
Terms of contracts regulated by special laws not applying to private sector	0.177 [c]	0.047	0.040	-0.107	-0.179	-0.049	-0.050
Salaries (2 questions)							
Senior officials have salaries comparable to those of similar private sector managers	0.136	0.075	0.145	-0.196	-0.180	-0.198	-0.164
Salaries of public administration workers are linked to performance appraisals	0.435 [a]	0.442 [a]	0.380 [a]	0.489 [c]	0.480 [c]	0.362	0.501 [b]

Table 9 : Private sector management quality and mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back						
Ln permanent offices per capita	0.092 [a] [0.017]	0.077 [a] [0.018]	0.091 [a] [0.016]	0.127 [0.090]	0.104 [0.087]	0.121 [0.086]	0.160 [0.095]
Postcodes databases	0.155 [b] [0.062]	0.140 [c] [0.075]	0.097 [0.060]	0.115 [0.128]	0.135 [0.110]	0.130 [0.122]	0.153 [0.170]
Alphabet used is latin-based	0.136 [a] [0.050]	0.148 [a] [0.051]	0.120 [b] [0.047]	0.020 [0.085]	0.006 [0.073]	0.042 [0.089]	0.027 [0.113]
Will to delegate authority	0.064 [b] [0.026]						
Innovation capacity		0.071 [a] [0.025]					
Quality of management schools			0.115 [a] [0.024]				
Management practices index				0.381 [b] [0.145]			
Monitoring management subindex					0.349 [a] [0.107]		
Targets management subindex						0.264 [c] [0.132]	
Incentives management subindex							0.290 [0.183]
Constant	-0.159 [0.107]	-0.083 [0.095]	-0.355 [a] [0.112]	-1.037 [0.672]	-0.890 [0.563]	-0.680 [0.540]	-0.923 [0.776]
Observations	136	133	136	16	16	16	16
Adj. R-squared	0.37	0.37	0.42	0.53	0.59	0.46	0.44

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1

Figure 1

This figure presents the text of the one-page letter that was sent to each of the 10 recipients in the largest 5 cities in all 159 countries

---

December 1, 2010
Re: Confidential

URGENT RESPONSE REQUESTED

Rafael La Porta
Tuck School of Business at Dartmouth
100 Tuck Hall
Hanover, NH 03755, USA

Dear Mr. XXXXX,

I hereby confirm receipt of the previous correspondence.

Please let me know if you would like to continue with the collaboration project.

I will wait to hear from you, but please respond as soon as possible as this matter is of absolute importance.

Regards,

Rafael La Porta

Figure 2

This figure presents the front of the envelope of several returned letters.

Professor Rafael La Porta
Tuck School of Business at Dartmouth
100 Tuck Hall
Hanover, NH 03755

PLEASE RETURN TO SENDER IF UNDELIVERABLE

BOSTON MA 021
04 FEB 2011 PM 1 L

1-5

Insoff. Addess

Madzimoyo Mia
Services Professionals United
Tinbergen Rd 6
Lilongwe
MALAWI

NIXIE 100 12-30-11

RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD

00247/0001

La Porta
Business at Dartmouth
755

RN TO SENDER IF UNDELIVERABLE

10-17

BOSTON MA 021
31 DEC 2010 PM 1 T

Abjit Handique
Smart Company Supply Services
4 Klein Rd
Baghazar
Kolkata - 700002
INDIA

00174/0001

a Porta
siness at Dartmouth
5
TO SENDER IF UNDELIVERABLE

11-3

BOSTON MA 021

Julio Hernández
Supply Management United
71 Avenida Simon
Myrdal y Stigler
Camagüey 3
CP 70200 Camagüey
CUBA

INT

00470-0001

orta
ess at Dartmouth

O SENDER IF UNDELIVERABLE

BOSTON MA 021

31 DEC 2010 PM 14 T

CORREOS DE COSTA RICA S.A.
Sucursal o Centro: CCP
Cartero Nº 6
☐ Cambio de Domicilio ☐ Falleció
☐ Venció el Apartado ☐ Rehusado
☒ Dirección Insuficiente ☐ Ausente
☐ Desconocido
☐ No pertenece al Apartado

Braulio Hernández
Smart Company Supply Services
Avenida Sharpe 2860
Puntarenas
60101
Costa Rica

10-13

NIXIE 100 5E 1 00 10/10/11
RETURN TO SENDER

---

a Porta
iness at Dartmouth
5
O SENDER IF UNDELIVERABLE

BOSTON MA 021

RTS/ANK
9-20-11

Harsallah Kohistani
Business Management Specialists [بازرگانی مدیریت متخصصین]
7436 Meade str
Herāt
AFGHANISTAN

10-10

NIXIE 100 5C 1 00 10/02/11
RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD
BC: 03755900000 *1421-21454-09-43

00180

Professor Rafael La Porta
Tuck School of Business at Dartmouth
100 Tuck Hall
Hanover, NH 03755

PLEASE RETURN TO SENDER IF UNDELIVERABLE

1-3-2012

Retour

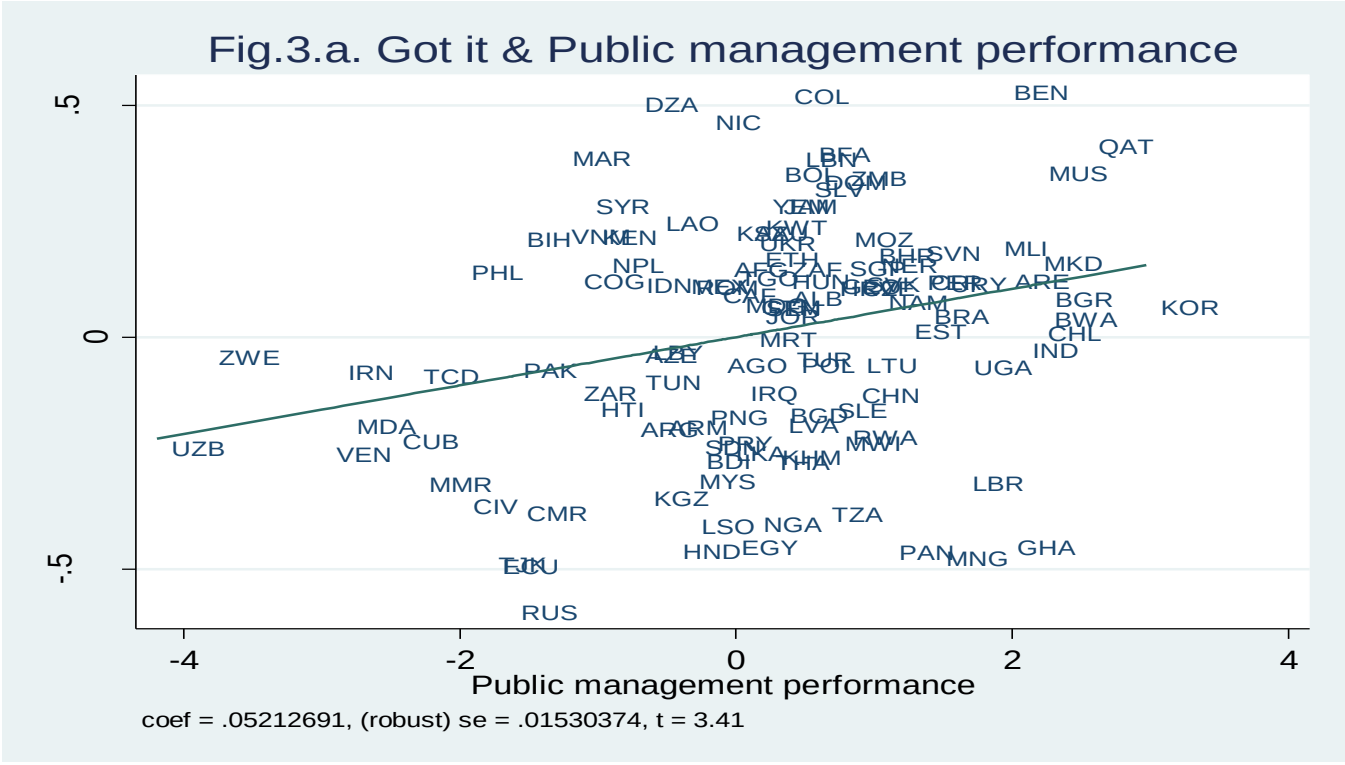
Reagan Urbano
Services Professionals United
Avenida Kantorovich 8
Luanda
REPÚBLICA DE ANGOLA

NIXIE 100 5E 1 00 12/23/11
RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD
BC: 03755900000 *1021-08246-31-44

00244

Figure 3. Got it back and measures of management quality

The following four graphs show the partial scatter plot of "got the letter back" and the measures of management quality used in Table 4 of the paper for the sample of countries with available data. These plots correspond to the first four regressions in Table 4 of the paper.



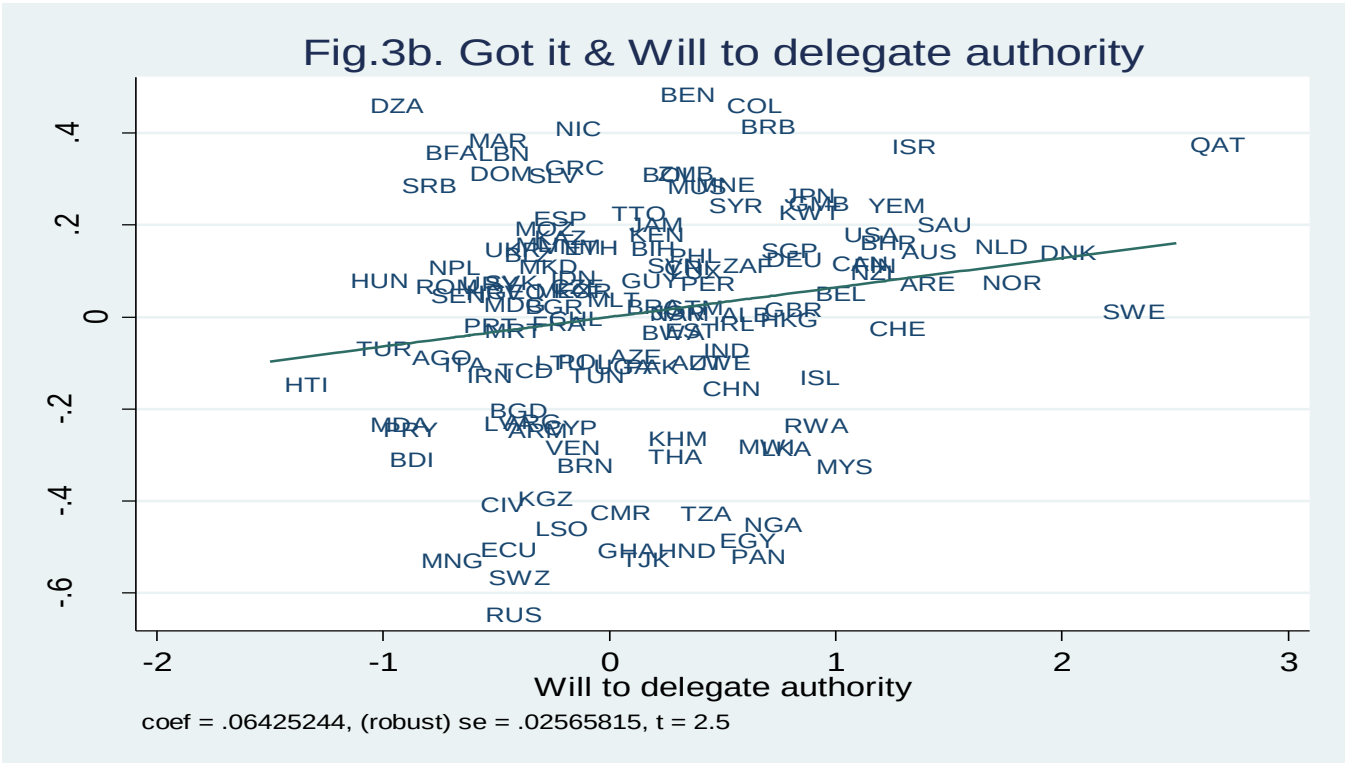
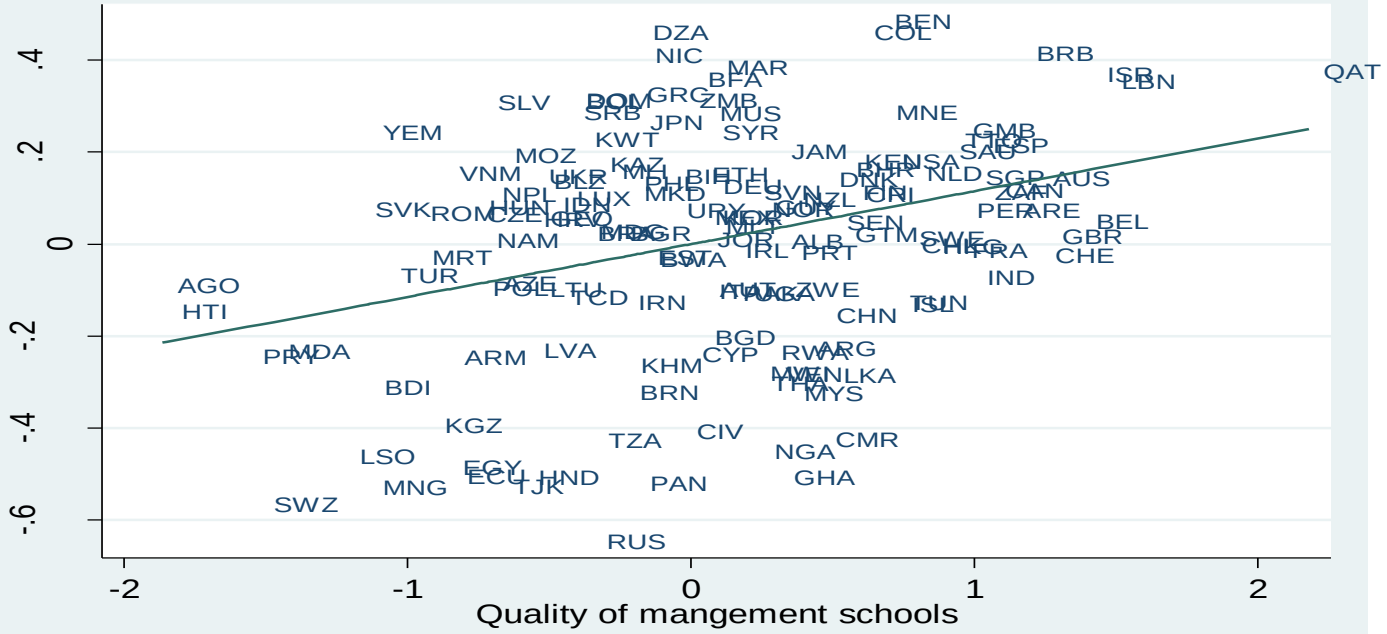
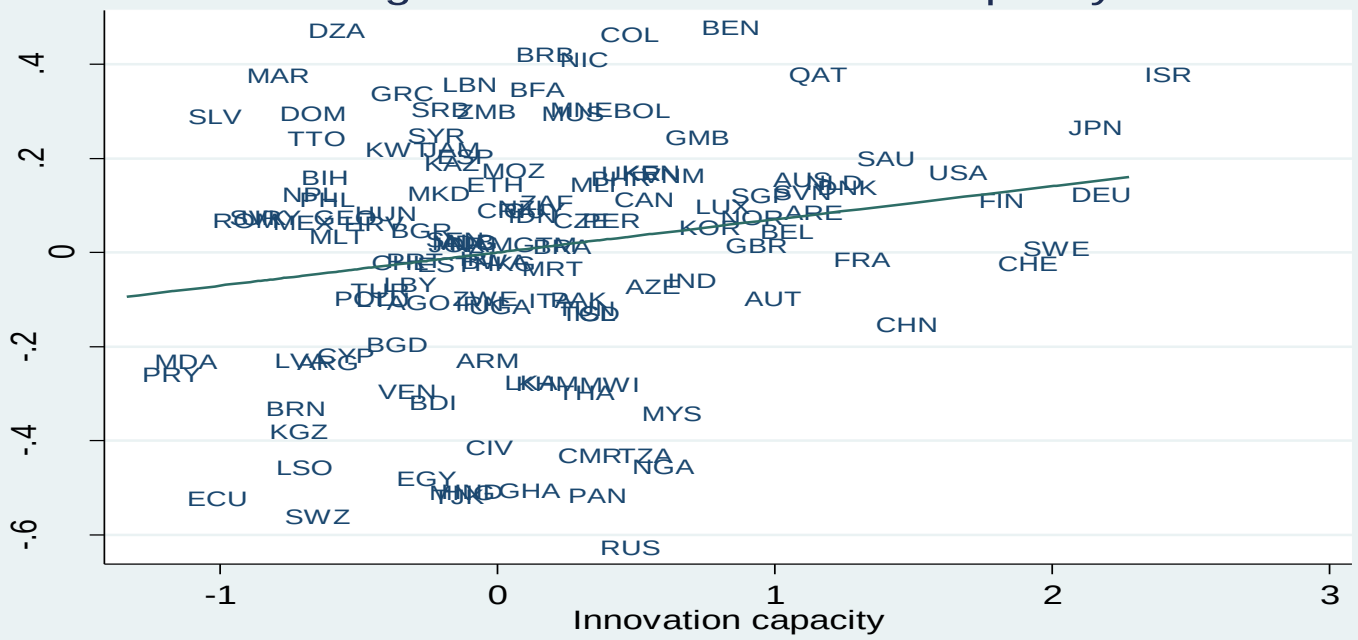


Fig.3c. Got it & Quality of mangement schools



coef = .11503741, (robust) se = .02396721, t = 4.8

Fig.3d. Got it & Innovation capacity



coef = .07051067, (robust) se = .02516035, t = 2.8

Appendix A: Variable definitions and basic descriptive statistics

Variable name	No. Obs	Mean	Std. Dev.	Coeff. Variation	Min	Max	Definitions and sources
Got the letter back	159	0.59	0.33	1.80	0.00	1.00	Fraction of the number of letters that were received back as "return to sender." We sent 10 letters to 5 different cities in each country. This variable is scaled to have values between zero (i.e., no letters were received back), to 1 (i.e., all letters were received back). *(Source: Own calculation).*
Got the letter back in 90 days	159	0.35	0.32	1.11	0.00	1.00	Fraction of the number of letters that were received back as "return to sender" in 90 days. We sent 10 letters to 5 different cities in each country. This variable is scaled to have values between zero (i.e., no letters were received back in 90 days), to 1 (i.e., all letters were received back in 90 days). *(Source: Own calculation).*
Ln number of days to get the letter back	159	5.04	0.71	7.09	2.69	6.04	Natural logarithm of the average number of calendar days that took to get back all the letters that returned as "return to sender." We sent 10 letters to 5 different cities in each country. This number is calculated for all the letters. For those letters which we did not get back, we calculated this number as the number of calendar days between our cutoff date (February 4, 2012) and the date when we sent the letter. *(Source: Own calculation).*
Ln permanent offices percapita	157	4.04	1.36	2.97	0.58	6.35	Natural logarithm of the number of permanent post offices per million people in a given country in 2010. If the data for 2010 is unavailable, we use the most recent value between 2005 and 2009. Source: Universal Postal Union, except for Taiwan, who does not belong to the UPU Postal Union and for which we used the its Post Office annual Report. *(Source: Own calculation based on UPU data).*
Ln postal staff percapita	157	5.94	1.56	3.81	2.29	8.97	Natural logarithm of the number of postal staff per million people in a given country in 2010. If the data for 2010 is unavailable, we use the most recent value between 2005 and 2009. Source: Universal Postal UnionSource: Universal Postal Union, except for Taiwan, who does not belong to the UPU Postal Union and for which we used the its Post Office annual Report. *(Source: Own calculation based on UPU data).*
Poscode databse	158	0.46	0.41	1.13	0.00	1.00	The type of postcode database used in each country in 2011. We elaborated this data using the information of the classification of postcode databases that countries have according to the Universal Postal Union. The data is based on the classification made by the Universal Postal Union of the type of postcode databse that each country sends them. UPU creates a Universal DataBase of raw postcodes containing all available information on the postal addressing data. This database contains the postcode data to town locality, street and delivery point level, depending on the particular country's system. UPU classifies countries in four groups: (A) the database of teh counry contains postcodes for localities and streets, to which we assign a value of 1; (B) the database containd postcodes for localities and districts, to which we assigned a value of 0.66; (C) the database contains postcodes for localities, to which we assigned a value of 0.33; and (D) the database only contains names of localities only, to which we assigned the value of 0. *(Source: Own calculation based on UPU data).*
Alphabet used is Latin-based	159	0.66	0.48	1.39	0.00	1.00	The variable equals one if the alphabet used in the country is derived from the latin alphabet, and zero otherwise. *(Source: Own calculation based on the classificaiton of alphabets in wikipedia.org).*
							Public sector management
Public management performance	118	5.65	1.76	3.21	1.62	9.23	Management performance index from the Bertelsmann Stiftung BTI Bertelsmann Transformation Index. This index focuses on the steering and management of development and transformation processes. The index reviews and evaluates the reform activities of political decision makers, thus providing valuable information on the key factors of success and failures for states on their way to a market-based economy. The values range from 0 to 10. *(Source: Bertelsmann Stiftung BTI Bertelsmann Transformation Report).*
Weberian public administration (index of 9 questions)	102	4.11	0.67	6.08	2.44	5.66	Index of "Weberian" qualities of the public administration. Each expert was asked to provide a quantitative answer in a scale from 1 (hardly ever) to 7 (almost always) to each question included in the Quality of Government Survey. The questions included in the Weberian index are: (1) When recruiting public sector employees, the skills and merits of the applicants decide who gets the job; (2) When recruiting public sector employees, the political connections of the applicants decide who gets thejob (we inverted the scale for this question); (3) The top political leadership hires and fires senior public officials (we inverted the scale for this question); (4) Senior public officials are recruited from within the ranks of the public sector; (5) Public sector employees are hired via a formal examination exam; (6) Once one is recruited as a public sector employee, one stays a public sector employee for the rest of one's career; (7) The terms of employment for public sector employees are regulated by special laws that do not apply to private sector employees; (8) Senior officials have salaries that are comparable with the salaries of private sector managers with roughly similar training and responsibilities; and (9) The salaries of public sector employees are linked to appraisals of their performance. To construct the index for each country, we average the responses of all country experts to each question and then average the scores of the nine questions. We include all countries for which at least 2 expert responses were obtained. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
Professional & non-political public administration (subinidex of 4 questions)	103	3.93	0.99	3.98	2.08	6.28	Subindex of "Weberian" qualities of the public administration that refer to the professionalism and non-political interference in hiring of the buraucracy following Dahlstrom, Lapuente and Teorell (2011). This subindex covers questions (1), (2), (3) and (4) of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
Closed public administration (subindex of 3 questions)	103	5.04	0.88	5.69	2.67	6.67	Subindex of "Weberian" qualities of the public administration that refer to meritocratic recruitment and the closedness of the buraucracy following Dahlstrom, Lapuente and Teorell (2011). This subindex covers questions (5), (6) and (7) of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
							Public sector wages
Senior officials with salaries comparable to salaries of managers of private sector	103	3.18	1.02	3.13	1.33	6.00	This variable corresponds to question (8) of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*

Appendix A: Variable definitions and basic descriptive statistics

Variable name	No. Obs	Mean	Std. Dev.	Coeff. Variation	Min	Max	Definitions and sources
Salaries of public administration workers are linked to performance	102	2.96	0.95	3.13	1.24	5.63	This variable corresponds to question (9) of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
Avg. government wage / GDP percapita 2000	84	2.58	2.37	1.09	0.54	10.75	Average government wage of all public sector employees over Gross Domestic product per capita in 2000 in constant US dollars. *(Source: World Bank)*
Postman salary / GDP percapita 2005	25	0.66	0.48	1.38	0.23	2.38	Postman job average net monthly income in constant 2005 US dollars PPP adjusted as a proportion of GDP per capita in constant 2005 US dollars. The postman job includes the following responsiilities: (i) sorts mail according to streets and street numbers; (ii) delivers mail along a regular route to private home or business establishments. The gross income is obtained from data provided to the international Labor Organization by government agencies. *(Source: World Salaries Organization).*
							Attitudes and decision making by public officials
Public sector employees strive to be efficient	103	4.29	1.00	4.29	2.00	6.36	This variable measures the goals and objectives of the public bureaucracy. It is built on comparable expert evaluations of employment-related bureaucratic structures. Each expert was asked to provide a quantitative answer in a scale from 1 (hardly ever) to 7 (almost always) to the question: To what extent would you say that public sector employees strive to be efficient? The methodology is identical to one used in the construction of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
Public sector employees strive to be implement policies decided by top politicians	103	4.91	0.80	6.14	3.00	7.00	This variable measures the goals and objectives of the public bureaucracy. It is built on comparable expert evaluations of employment-related bureaucratic structures. Each expert was asked to provide a quantitative answer in a scale from 1 (hardly ever) to 7 (almost always) to the question: To what extent would you say that public sector employees strive to implement the policies decided upon by the top political leadership? The methodology is identical to one used in the construction of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
Public sector employees strive to help citizens	103	4.28	0.93	4.59	2.25	6.00	This variable measures the goals and objectives of the public bureaucracy. It is built on comparable expert evaluations of employment-related bureaucratic structures. Each expert was asked to provide a quantitative answer in a scale from 1 (hardly ever) to 7 (almost always) to the question: To what extent would you say that public sector employees strive to help citizens? The methodology is identical to one used in the construction of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
Public sector employees strive to follow rules	103	4.88	0.99	4.93	2.53	7.00	This variable measures the goals and objectives of the public bureaucracy. It is built on comparable expert evaluations of employment-related bureaucratic structures. Each expert was asked to provide a quantitative answer in a scale from 1 (hardly ever) to 7 (almost always) to the question: To what extent would you say that public sector employees strive to follow rules? The methodology is identical to one used in the construction of the Weberian public administration index described above. (Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011))
Public sector employees strive to fulfill the ideology of the parties in government	103	4.37	0.94	4.67	2.33	6.50	This variable measures the goals and objectives of the public bureaucracy. It is built on comparable expert evaluations of employment-related bureaucratic structures. Each expert was asked to provide a quantitative answer in a scale from 1 (hardly ever) to 7 (almost always) to the question: To what extent would you say that public sector employees strive to fulfill the ideology of the party/parties in government? The methodology is identical to one used in the construction of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
Impartiality of public sector employees (index of 3 questions)	101	4.06	1.19	3.41	2.00	6.50	Index of the impartiality of the bureaucracy following Dahlstrom, Lapuente and Teorell (2011). It is built on comparable expert evaluations of employment-related bureaucratic structures. Each expert was asked to provide a quantitative answer in a scale from 1 (hardly ever) to 7 (almost always) to each question included in the Quality of Government Survey. The questions included in the impartiality index are: (1) Firms that provide the most favbvorable kickbacks to senior officials are awarded public procurement contracts in favor of firms making the lowest bid? (we inverted the scale for this question); (2) When deciding how to implement policies in individual cases, public sector employees treat some groups in society unfairly? (we inverted the scale for this question); and (3) When granting licenses to start up private firms, public sector employees favor applicants which they have strong personal contacts? (we inverted the scale for this question). The methodology is identical to one used in the construction of the Weberian public administration index described above. *(Source: Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).*
Public sector officials act impartially when deciding to implement a policy in a case	103	4.34	1.05	4.15	2.00	6.40	This variable measures the impartiality of the public bureaucracy. It is built on comparable expert evaluations of employment-related bureaucratic structures. Each expert was asked to provide a quantitative answer in a scale from 1 (hardly ever) to 7 (almost always) to the question: Generally speaking, how often would you say that public employees today act impartially when deciding how to implement a policy in an individual case? The methodology is identical to one used in the construction of the Weberian public administration index described above. (Own calculation based on expert data from the Quality of Government Survey (2011) and Dahlstrom, Lapuente and Teorell (2011)).
							Private sector management
Will to delegate authority	137	3.74	0.79	4.72	2.30	6.30	An index of the willingness to delegate authority. This index is constructed from the answers to the question "in your country, how do you assess the willingness to delegate authority to subordinates? The values go from 1, in situations where top management controls important decisions to 7, where authority is mostly delegated to business unit heads and other lower-level management. *(Source: World Economic Forum).*

Appendix A: Variable definitions and basic descriptive statistics

Variable name	No. Obs	Mean	Std. Dev.	Coeff. Variation	Min	Max	Definitions and sources
Quality of management schools	137	4.20	0.85	4.94	1.80	6.10	An index of thequality of the business schools in the country. This index is constructed from the answers to the question "how would you assess the quality of the business schools in your country? The values go from 1, poor to 7, excellent. *(Source: World Economic Forum).*
Innovation capacity index	134	3.20	0.92	3.47	1.72	5.88	An index of the innovation capacity in the country. This index is constructed from the answers to the question "how would you assess the innovation capacity your country? The values go from 1, poor to 7, excellent. *(Source: World Economic Forum).*
Management practices	16	2.94	0.22	13.52	2.64	3.33	Index of firm overall management practices in each country. The index is based on an interview-based evaluation that defines and scores 1 (worst practice) to 5 (best practice) 18 basic management practices of a sample of firms in the country. The practices fall in three broad areas: (1) monitoring; (2) targets; and (3) incentives. *(Souce: Bloom and Van Reenen, 2010).*
Monitoring	16	3.12	0.28	11.26	2.63	3.53	Sub-index of firm "monitoring management practices" in each country. Monitoring practices measure how well companies monitor what goes on inside their firms and use this for coninuous improvement. The subiindex is the average of six of the 18 basic management practices in the overall management practices index. *(Souce: Bloom and Van Reenen, 2010).*
Targets	16	2.92	0.25	11.78	2.53	3.24	Sub-index of firm "targets in management practices" in each country. The questions included in this sub-index measure if companies set the right targets, track the right outcomes and take the appropriate action if the two are inconsistent. The subiindex is the average of five of the 18 basic management practices in the overall management practices index. *(Source: Bloom and Van Reenen, 2010).*
Incentives	16	2.81	0.19	14.67	2.50	3.30	Sub-index of firm "incentive management practices" in each country. Incentive management practices measure if companies are promoting and rewarding employees based on performance, and if they are trying to hire and keep their best employees. The subiindex is the average of seven of the 18 basic management practices i n the overall management practices index. *(Source:Bloom and Van Reenen, 2010).*
Ln GDP per capita	153	8.76	1.40	6.24	2.15	11.33	Natural logarithm of gross domestic product per capita in PPP constant 2005 international dollars in 2010. When data for 2010 is not available, we use the most recent information available for the period 2004-2009. *(Souce: World Development Indicators 2011).*
Full state monopoly or some service reserved for the state	141	0.74	0.44	1.70	0.00	1.00	Dummy variable equal to one if the state postal service has complete monopoly over all parcels or over letters and/or packages up to a certain weight, and zero otherwise. *(Souce: Own calcualtion using UPU data).*

Appendix B: Mail efficiency data for the Czech Republic and Russia

Name	Street Address	Postcode and City	Date letter sent	Date letter received	Date of limit (02/04/2012)	Got it back	Got it back in 90 days	Number of days (up to limit of 04/02/2012)	Ln Number of days (up to limit of 04/02/2012)	Number of days (missing if not returned)	Ln Number of days (missing if not returned)
Panel A: Letters sent to the Czech Republic											
Zdenek Dvořák	Debreuská 1	110 00 Praha	09/12/2010	07/03/2011	04/02/2012	1	1	88.00	4.4773	88.00	4.4773
Vaclav Veselý	Meadeská 4	602 00 Brno	09/12/2010	08/03/2011	04/02/2012	1	1	89.00	4.4886	89.00	4.4886
Milan Růžička	Haavelmoská 2	301 00 Plzeň-Jižní	11/12/2010	04/01/2011	04/02/2012	1	1	24.00	3.1781	24.00	3.1781
Petr Svoboda	Buchananova 1704	602 00 Brno	14/12/2010	04/03/2011	04/02/2012	1	1	80.00	4.3820	80.00	4.3820
Jiri Kučera	Frischova 7526	120 00 Praha 2	15/12/2010	03/02/2011	04/02/2012	1	1	50.00	3.9120	50.00	3.9120
Milos Novotný	Millerská 7400	460 01 Liberec IV-Perštýn	29/12/2010	25/01/2011	04/02/2012	1	1	27.00	3.2958	27.00	3.2958
Jan Sedlářek	Lewisova 4051	702 00 Moravská Ostrava	29/12/2010	08/03/2011	04/02/2012	1	1	69.00	4.2341	69.00	4.2341
Kazimir Svoboda	Markowitzova 6404	460 07 Liberec III	31/12/2010	31/01/2011	04/02/2012	1	1	31.00	3.4340	31.00	3.4340
Kazimir Pospíšil	Hayekova 7	301 00 Plzeň-Jižní	31/12/2010	02/02/2011	04/02/2012	1	1	33.00	3.4965	33.00	3.4965
Zdenek Pokorný	Arrowská 48	713 00 Slezská Ostrava	04/02/2011	08/03/2011	04/02/2012	1	1	32.00	3.4657	32.00	3.4657
Average						**1.00**	**1.00**	**52.30**	**3.8364**	**52.30**	**3.8364**
Panel B: Letters sent to Russia											
Roman Avdeyev	Ulitsa Debreuska 8689	gorod Moskva 115487	08/12/2010	.	04/02/2012	0	0	423.00	6.0474	.	.
Ivan Zhakov	Ulitsa Modiglianaya 6802	Sankt-Peterburg 199178	09/12/2010	.	04/02/2012	0	0	422.00	6.0450	.	.
Oleg Golikova	Ulitsa Arrowlok 8547	Novosibirsk, Novosibirskaya Obl	10/12/2010	.	04/02/2012	0	0	421.00	6.0426	.	.
Fillyp Zubkov	Ulitsa Haavelmo ave 3	Ekaterinburg, Sverdlovskaya Obl	11/12/2010	.	04/02/2012	0	0	420.00	6.0403	.	.
Dmitri Avdeyev	Ulitsa Ohlinov 2	Sankt-Peterburg 199178	13/12/2010	.	04/02/2012	0	0	418.00	6.0355	.	.
Oleg Skryannik	Ulitsa Myrdalok 983	Nizhnij Novgorod, Nizhegorodskaya Obl	13/12/2010	.	04/02/2012	0	0	418.00	6.0355	.	.
Pavel Ivanov	Ulitsa Allaiska 45	Novoe Devyatkino, Leningradskaya Obl	14/12/2010	.	04/02/2012	0	0	417.00	6.0331	.	.
Ivan Zhakov	Ulitsa Hayeka 63	Ekaterinburg, Sverdlovskaya Obl	14/12/2010	.	04/02/2012	0	0	417.00	6.0331	.	.
Eduard Zhakov	Ulitsa Frischpik 402	gorod Moskva 101000	15/12/2010	.	04/02/2012	0	0	416.00	6.0307	.	.
Ludvig Sobyanin	Ulitsa Stiglerova 2709	Nizhnij Novgorod, Nizhegorodskaya Obl	15/12/2010	.	04/02/2012	0	0	416.00	6.0307	.	.
Average						**0.00**	**0.00**	**418.80**	**6.0374**	**.**	**.**

Appendix C: Mail efficiency and other dimensions of government efficiency and institutional quality (OLS and Instrumental Variables)
(Instrumenting the average of the second letter sent to each of the 5 cities in each country with the average of the first letter sent to each of the 5 cities in each country)

This table shows the results of robust OLS and robust Instrumental Variables regressions using the full sample of countries with letters data. Each row shows regression results using each of our three mail efficiency variables on the measure of government efficiency or quality of institutions shown in the first column. For each of the three mail efficiency variables, the first two columns show the results of robust OLS regressions. The first column shows the coefficient and significance level for the mail variable used as regressor and the second column the R-squared of the specification. The third and fourth columns show the results of robust Instrumental Variables regressions. For the Instrumental Variables regressions, each mail efficiency variables is calculated as the average of the second letter sent to each of the five different cities in each country, and is instrumented by the average of the first letter sent to each of the five different cities in each country. For each of the three mail efficiency variables, the last column shows the number of observations used in the regressions. All OLS and IV regressions includes a constant, but the coefficients of the constant is not shown.

			Got the letter back				Got the letter back in 90 days				Ln Avg. number of days to get the letter back			
			OLS		IV		OLS		IV		OLS		IV	
Dependent Variables:	**Source**	**Obs.**	**Coeff.**	**R-sq.**	**Coeff.**	**R-sq.**	**Coeff.**	**R-sq.**	**Coeff.**	**R-sq.**	**Coeff.**	**R-sq.**	**Coeff.**	**R-sq.**
Government Effectiveness (1996-2007)	Kaufmann et al. 2008	157	0.585 [a]	0.13	2.077 [a]	0.39	0.830 [a]	0.12	1.980 [a]	0.34	-0.381 [a]	0.15	-0.965 [a]	0.41
Bureaucratic quality (1995-2008)	BERI	132	1.890 [a]	0.31	2.030 [a]	0.30	1.730 [a]	0.26	1.824 [a]	0.26	-0.874 [a]	0.33	-0.898 [a]	0.32
Extent of bureaucratic red tape	Global Competitiveness Report 2011	125	-0.988 [a]	0.39	-1.093 [a]	0.34	-0.838 [a]	0.31	-0.938 [a]	0.25	0.434 [a]	0.39	0.462 [a]	0.34
Overall Ease of doing business rank	Doing Business Report 2011	153	-81.129 [a]	0.24	-85.169 [a]	0.25	-83.369 [a]	0.24	-88.500 [a]	0.23	41.212 [a]	0.30	43.025[a]	0.28
Starting a business procedures	Doing Business Report 2011	153	-0.429 [a]	0.07	-0.476 [a]	0.07	-0.458 [a]	0.08	-0.544 [a]	0.05	0.220 [a]	0.09	0.249 [a]	0.07
Starting a business days	Doing Business Report 2011	153	-0.932 [a]	0.10	-0.996 [a]	0.10	-0.936 [a]	0.10	-1.013 [a]	0.09	0.455 [a]	0.12	0.488 [a]	0.10
Time to import	Doing Business Report 2011	153	-1.158 [a]	0.28	-1.264 [a]	0.27	-1.227 [a]	0.30	-1.367 [a]	0.25	0.593 [a]	0.35	0.641 [a]	0.30
Documents to export	Doing Business Report 2011	153	-0.471 [a]	0.21	-0.454[a]	0.25	-0.430 [a]	0.16	-0.442 [a]	0.17	0.219 [a]	0.21	0.220 [a]	0.21
Construction permit procedures	Doing Business Report 2011	153	-0.189 [b]	0.03	-0.527 [a]	0.06	-0.094	0.01	-0.546 [a]	0.05	0.046	0.01	0.272 [a]	0.06
Enforcing contracts procedures	Doing Business Report 2011	153	-0.183[a]	0.10	-0.173 [a]	0.12	-0.163 [a]	0.08	-0.157 [a]	0.09	0.083 [a]	0.10	0.081 [a]	0.10
Paying taxes rank	Doing Business Report 2011	153	-31.549 [a]	0.04	-28.690 [c]	0.05	-39.846 [a]	0.06	-47.550 [a]	0.03	17.906 [a]	0.06	18.708[a]	0.05
Business Freedom	Heritage Foundation 2008	150	29.608 [a]	0.30	32.679 [a]	0.27	29.754 [a]	0.30	33.139 [a]	0.24	-14.376 [a]	0.34	-15.343 [a]	0.30
Time firms spend meeting with tax officialas	WB Enterprise Surveys	99	-2.559 [b]	0.11	-2.329 [b]	0.14	-1.757 [b]	0.04	-1.225	0.06	1.096 [b]	0.08	0.872 [c]	0.10
Regulatory quality (1996-2007)	Kaufmann et al. 2008	157	1.867 [a]	0.41	2.005 [a]	0.40	1.830 [a]	0.37	1.910 [a]	0.36	-0.895 [a]	0.44	-0.929 [a]	0.41
Infrastructure quality	Global Competitiveness Report	134	1.661 [a]	0.19	1.928 [a]	0.14	1.681 [a]	0.20	1.814 [a]	0.18	-0.824 [a]	0.23	-0.906 [a]	0.18
% household with running water at home	Gallup 2007	128	0.570 [a]	0.28	0.597 [a]	0.28	0.601 [a]	0.32	0.654 [a]	0.29	-0.278 [a]	0.34	-0.286 [a]	0.32
ICRG corruption index (2000-2008)	ICRG	132	2.053 [a]	0.34	2.290 [a]	0.29	2.009 [a]	0.33	2.289 [a]	0.25	-0.961 [a]	0.36	-1.059 [a]	0.28
% firms expect to give gifts for water connection	WB Enterprise Surveys	97	-20.702 [a]	0.15	-20.249 [a]	0.17	-22.509 [a]	0.15	-22.247 [a]	0.15	11.250 [a]	0.18	11.433 [a]	0.17
Voice and accountability index (1996-2004)	Kaufmann et al. 2008	156	1.875 [a]	0.41	1.910 [a]	0.45	1.836 [a]	0.37	1.865 [a]	0.39	-0.897 [a]	0.44	-0.898 [a]	0.45
Expropriation risk (1982-1997)	BERI	121	3.056 [a]	0.32	3.380 [a]	0.28	2.865 [a]	0.27	2.992 [a]	0.27	-1.388 [a]	0.32	-1.436 [a]	0.31
Protection of property rights and law enforcemen	Heritage Foundation 2008	150	41.382[a]	0.31	45.287 [a]	0.29	41.746 [a]	0.31	45.285 [a]	0.28	-20.471 [a]	0.36	-21.760 [a]	0.32
Judicial independence	Global Competitiveness Report	134	1.859 [a]	0.19	2.189 [a]	0.13	1.541 [a]	0.14	1.735 [a]	0.11	-0.823 [a]	0.19	-0.913 [a]	0.14
Democracy index (1990-2006)	Polity IV	148	6.576 [a]	0.34	6.353 [a]	0.39	6.601 [a]	0.32	6.592 [a]	0.33	-3.188 [a]	0.37	-3.067 [a]	0.39
Executive constraints (1990-2006)	Polity IV	147	3.488 [a]	0.33	3.358 [a]	0.39	3.530 [a]	0.31	3.441 [a]	0.34	-1.687 [a]	0.36	-1.601 [a]	0.40
Freedom of the press	Freedom House 2006	157	-40.223 [a]	0.33	-41.652 [a]	0.35	-40.937 [a]	0.33	-42.413 [a]	0.32	19.569 [a]	0.37	19.687 [a]	0.37

Appendix D: The UPU Universal Database and Our Postcodes

This tables shows several examples of the United Postal Union Universal Database and our postcodes deatabse variable. The first three columns of the table describe the level of dissagregation of postcodes in the UPU Universal Database classification and our value assignments to create our poscode database variable. The remaining columns provide illustrations of the information that is provided by each different level of the postcodes database.

UPU Universal Database		Postcode database	Name	Company	Street Address	District	Postcode	City	Country
Data level		(our variable)							
Names of localities only	C	0.00	Steven Taylor	Computer Management Professionals	7444 Stone Rd			**Kingston**	**Jamaica**
Names of localities only	C	0.00	Soleymane Umbelina	Os profissionais de gerenciamento de inventário	Avenida Miller 4294			**Kuito**	**República de Angola**
Names of localities only	C	0.00	Hakeem al-Otaiba	Business Inventory Management	1 Modigliani St			**Ash-Shariqah**	**United Arab Emirates**
Postcodes for localities	B	0.33	Intizara Cham	Business Management Specialists	6123 Rue Meade		**31017**	**Ouahran**	**Algeria**
Postcodes for localities	B	0.33	Yuval Goldblatt	Computer Management Professionals	6 Frisch Rd		**91999**	**Jerusalem**	**Israel**
Postcodes for localities	B	0.33	Oshin Yeritsian	Business Manufacturing Group International	Schultz Ave 349		**901**	**Vagharshapat, Armavir**	**Armenia**
Postcodes for localities and districts	B+	0.66	Eber Vega	Servicios Informáticos Inteligentes	Av Tobin 659	**Col Real de Guadalupe**	**72016**	**Puebla, Puebla**	**Mexico**
Postcodes for localities and districts	B+	0.66	Baba Senaviratne	Supply Area Partners	1 Stone St	**Horagala**	**10502**	**Colombo**	**Sri Lanka**
Postcodes for localities and districts	B+	0.66	Raúl Ortega	Socios De Tecnología Profesional	Avenida Ohlin 324	**Las Acacias**	**1040**	**Caracas, DF**	**Venezuela**
Postcodes for localities and streets	A	1.00	Aaron Macay	Supply Area Partners	**213 Friedman St**		**ON M5C 1R6**	**Toronto**	**Canada**
Postcodes for localities and streets	A	1.00	Akihito Ozawa	Supply Management United	**Simonuki**	**Chuo-ku**	**541-0045**	**Osaka-shi, Osaka-fu**	**Japan**
Postcodes for localities and streets	A	1.00	Leo Jönsson	Försörjningsområde Grupp	**Frischgatan 1047**		**111 47**	**Stockholm**	**Sweden**
Postcodes for localities and streets	A	1.00	Ethan Brown	Technology Professional Partners	**626 Kuznets St**		**90033**	**Los Angeles, CA**	**United States**
Postcodes for localities and streets	A	1.00	Rafael Fernández	Profesionales De La Gestión De Inventario	**Carrer de Tobin 65**		**29015**	**Málaga**	**Espana**

Appendix E -Postal Office Characteristics Robustness: Postal office characteristics and alphabet as determinants of mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back									Got it back in 90 days									Ln Avg. Number of days to get it back								
Ln permanent offices per capita	0.0971[a]							0.0507[c]	0.0881a	0.0963[a]							0.0566[b]	0.0884[a]	-0.1849[a]							-0.0683	-0.1909[a]
	[0.015]							[0.026]	[0.017]	[0.015]							[0.027]	[0.017]	[0.027]							[0.051]	[0.035]
Ln postal staff percapita		0.0957[a]						0.0569[b]			0.0919[a]						0.0486			-0.1950[a]						-0.1427[b]	
		[0.017]						[0.028]			[0.017]						[0.030]			[0.032]						[0.057]	
Ln area per office			-0.0537[a]									-0.0351[a]									0.0835[a]						
			[0.011]									[0.012]									[0.022]						
Ln sorting offices percapita				0.0440[b]									0.0517[a]									-0.0960[b]					
				[0.019]									[0.018]									[0.037]					
Ln postal full-time staff per capita					0.0905[a]									0.0887[a]									-0.1881[a]				
					[0.017]									[0.017]									[0.033]				
Ln postal staff per permanent office						0.0099									0.0024									-0.0491			
						[0.030]									[0.033]									[0.063]			
Ln postal full-time staff per permanent office							-0.0055									-0.0070									-0.0240		
							[0.027]									[0.029]									[0.057]		
Full State monopoly or some service reserved for the State									0.0996									0.0244									-0.0798
									[0.105]									[0.048]									[0.111]
Postcodes databases	0.2416[a]	0.1796[b]	0.2725[a]	0.3429[a]	0.2049[a]	0.4095[a]	0.4157[a]	0.1856[a]	0.2565[a]	0.2428[a]	0.1883[b]	0.3188[a]	0.3583[a]	0.2086[a]	0.4134[a]	0.4164[a]	0.1950[a]	0.2749[a]	-0.5569[a]	-0.4084[a]	-0.6627[a]	-0.7619[a]	-0.4518[a]	-0.8586[a]	-0.8740[a]	-0.4165[a]	-0.6715[a]
	[0.059]	[0.070]	[0.064]	[0.060]	[0.069]	[0.059]	[0.057]	[0.069]	[0.067]	[0.065]	[0.075]	[0.072]	[0.062]	[0.073]	[0.060]	[0.058]	[0.074]	[0.070]	[0.129]	[0.146]	[0.146]	[0.130]	[0.142]	[0.121]	[0.118]	[0.145]	[0.147]
Alphabet used is Latin-based	0.1239[a]	0.1122[b]	0.1234[b]	0.0735	0.1041[b]	0.0756	0.0825	0.1232[a]	0.1477[a]	0.1153[a]	0.1023[b]	0.0965[b]	0.0484	0.0953[b]	0.0686	0.0735	0.1147[a]	0.1038[b]	-0.2729[a]	-0.2562[a]	-0.2530[a]	-0.1522[c]	-0.2412[a]	-0.1774[b]	-0.1859[b]	-0.2711[a]	-0.2487[b]
	[0.047]	[0.047]	[0.050]	[0.051]	[0.047]	[0.051]	[0.052]	[0.046]	[0.050]	[0.044]	[0.043]	[0.046]	[0.043]	[0.043]	[0.044]	[0.044]	[0.044]	[0.047]	[0.083]	[0.083]	[0.087]	[0.087]	[0.083]	[0.088]	[0.088]	[0.083]	[0.103]
Constant	0.0060	-0.1316	0.6859[a]	0.4319[a]	-0.0920	0.3383[a]	0.3619[a]	-0.1168	-0.0322	-0.2272[a]	-0.3487[a]	0.3367[a]	0.1971[a]	-0.3197[a]	0.1127[c]	0.1268[b]	-0.3321[a]	-0.2256[a]	6.4437[a]	6.7719[a]	5.2630[a]	5.6237[a]	6.7096[a]	5.8564[a]	5.8136[a]	6.7519[a]	6.3680[a]
	[0.063]	[0.089]	[0.078]	[0.052]	[0.088]	[0.060]	[0.054]	[0.088]	[0.072]	[0.061]	[0.092]	[0.086]	[0.044]	[0.090]	[0.058]	[0.051]	[0.093]	[0.072]	[0.105]	[0.169]	[0.165]	[0.089]	[0.166]	[0.115]	[0.101]	[0.174]	[0.147]
Observations	157	157	157	146	157	155	154	157	141	157	157	157	146	157	155	154	157	141	157	157	157	146	157	155	154	157	141
R-squared	0.41	0.41	0.37	0.31	0.40	0.29	0.30	0.42	0.44	0.42	0.42	0.33	0.34	0.41	0.31	0.31	0.44	0.44	0.45	0.47	0.38	0.36	0.46	0.35	0.35	0.48	0.48

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1

Appendix F - Geography Robustness: Postal office characteristics, alphabet and geographic variables as determinants of mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back								Got it back in 90 days								Ln. Avg Number of days to get it back							
Ln permanent offices per capita	0.0913[a]	0.0973[a]	0.0934[a]	0.0990[a]	0.0776[a]	0.0930[a]	0.0725[a]	0.0938[a]	0.0848[a]	0.0964[a]	0.0935[a]	0.0955[a]	0.0861[a]	0.0815[a]	0.0554[a]	0.0716[a]	-0.1636[a]	-0.1854[a]	-0.1820[a]	-0.1858[a]	-0.1334[a]	-0.1602[a]	-0.0899[b]	-0.1565[a]
	[0.016]	[0.015]	[0.016]	[0.015]	[0.018]	[0.018]	[0.020]	[0.018]	[0.014]	[0.015]	[0.015]	[0.015]	[0.017]	[0.018]	[0.018]	[0.017]	[0.029]	[0.028]	[0.028]	[0.027]	[0.032]	[0.032]	[0.037]	[0.032]
Postcodes databases	0.2318[a]	0.2353[a]	0.2441[a]	0.2220[a]	0.2053[a]	0.1582[b]	0.1921[a]	0.1463[b]	0.2236[a]	0.2382[a]	0.2446[a]	0.2507[a]	0.2240[a]	0.1587[b]	0.2267[a]	0.1854[a]	-0.5212[a]	-0.5424[a]	-0.5589[a]	-0.5479[a]	-0.4613[a]	-0.3347[b]	-0.4186[a]	-0.3128[b]
	[0.057]	[0.060]	[0.059]	[0.061]	[0.066]	[0.066]	[0.066]	[0.069]	[0.057]	[0.066]	[0.065]	[0.068]	[0.070]	[0.070]	[0.063]	[0.067]	[0.117]	[0.130]	[0.129]	[0.139]	[0.138]	[0.139]	[0.133]	[0.142]
Alphabet used is latin-based	0.0889[c]	0.1238[a]	0.1218[a]	0.1342[a]	0.1149[b]	0.1184[a]	0.0791	0.0923[c]	0.0464	0.1152[a]	0.1137[b]	0.1111[b]	0.1109[b]	0.1113[b]	0.0134	0.0325	-0.1452[c]	-0.2727[a]	-0.2712[a]	-0.2776[a]	-0.2489[a]	-0.2586[a]	-0.0900	-0.1460[c]
	[0.048]	[0.047]	[0.046]	[0.049]	[0.046]	[0.045]	[0.050]	[0.049]	[0.041]	[0.044]	[0.044]	[0.046]	[0.044]	[0.043]	[0.043]	[0.042]	[0.079]	[0.083]	[0.083]	[0.086]	[0.082]	[0.080]	[0.081]	[0.078]
Ln distance from capital to US	-0.1005[b]						-0.1109[b]	-0.0997[b]	-0.1976[a]						-0.2022[a]	-0.1876[a]	0.3666[a]						0.3935[a]	0.3501[a]
	[0.043]						[0.043]	[0.043]	[0.047]						[0.048]	[0.047]	[0.114]						[0.113]	[0.108]
Landlock dummy		-0.0448					-0.0055	-0.0195		-0.0322					0.0098	-0.0003		0.1024					-0.0242	0.0133
		[0.049]					[0.049]	[0.048]		[0.041]					[0.040]	[0.037]		[0.082]					[0.079]	[0.074]
Ln area			-0.0133				-0.0066	-0.0023			-0.0097				-0.0230[c]	-0.0172			0.0106				0.0069	-0.0064
			[0.010]				[0.013]	[0.013]			[0.011]				[0.012]	[0.013]			[0.023]				[0.026]	[0.027]
Ln population density				0.0208			0.0076	0.0145				-0.0084			-0.0361[b]	-0.0278				-0.0095			0.0234	-0.0073
				[0.014]			[0.019]	[0.018]				[0.014]			[0.018]	[0.017]				[0.028]			[0.036]	[0.035]
Ln man-hour costs per million letters					-0.0219[c]		-0.0192						-0.0114		-0.0218[c]						0.0578[b]		0.0765[a]	
with geographic adjustments					[0.012]		[0.013]						[0.011]		[0.012]						[0.023]		[0.028]	
UPU fee classification (Group 2)						-0.0584		-0.0589						0.0362		0.0391						0.1039		0.0663
						[0.052]		[0.049]						[0.090]		[0.088]						[0.160]		[0.139]
UPU fee classification (Group 3)						-0.2077[a]		-0.1903[a]						-0.1800[a]		-0.1685[a]						0.5323[a]		0.5048[a]
						[0.052]		[0.053]						[0.060]		[0.061]						[0.121]		[0.123]
UPU fee classification (Group 4)						-0.1911[a]		-0.1664[a]						-0.1443[b]		-0.1145[c]						0.4599[a]		0.4219[a]
						[0.057]		[0.059]						[0.066]		[0.064]						[0.136]		[0.140]
UPU fee classification (Group 5)						-0.1613[b]		-0.1131						-0.1923[a]		-0.1304[c]						0.4895[a]		0.3771[a]
						[0.071]		[0.077]						[0.073]		[0.073]						[0.135]		[0.142]
Constant	0.9589[b]	0.0188	0.1804	-0.0865	0.2015	0.2050[b]	1.2834[a]	1.0675[b]	1.6461[a]	-0.2181[a]	-0.0995	-0.1897[b]	-0.1258	-0.0071	2.3448[a]	2.0525[a]	2.9693[a]	6.4146[a]	6.3048[a]	6.4859[a]	5.9282[a]	5.8688[a]	1.8442[c]	2.7786[a]
	[0.417]	[0.066]	[0.144]	[0.089]	[0.126]	[0.093]	[0.458]	[0.459]	[0.457]	[0.063]	[0.158]	[0.088]	[0.109]	[0.104]	[0.454]	[0.458]	[1.099]	[0.111]	[0.332]	[0.155]	[0.224]	[0.179]	[1.052]	[0.998]
Observations	157	157	157	157	156	157	156	157	157	157	157	157	156	157	156	157	157	157	157	157	156	157	156	157
R-squared	0.43	0.41	0.41	0.42	0.42	0.45	0.45	0.48	0.51	0.43	0.43	0.43	0.43	0.47	0.53	0.56	0.52	0.45	0.45	0.45	0.47	0.52	0.55	0.59
Adj. R-squared	0.41	0.40	0.40	0.40	0.40	0.43	0.42	0.44	0.50	0.41	0.41	0.41	0.41	0.45	0.51	0.53	0.51	0.44	0.44	0.43	0.46	0.50	0.53	0.56

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1

Appendix G -Historical Robustness: Postal office characteristics, alphabet, legal origins, religion, fractionalization, latitude and GDP per capita as determinants of mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back						Got it back in 90 days						Ln. Avg Number of days to get it back					
Ln permanent offices per capita	0.0757[a]	0.0999[a]	0.1002[a]	0.0878[a]	0.0843[a]	0.0867[a]	0.0747[a]	0.0905[a]	0.0967[a]	0.0792[a]	0.0764[a]	0.0731[a]	-0.1599[a]	-0.1770[a]	-0.1817[a]	-0.1561[a]	-0.1435[a]	-0.1302[a]
	[0.016]	[0.017]	[0.015]	[0.018]	[0.019]	[0.024]	[0.015]	[0.015]	[0.015]	[0.016]	[0.019]	[0.021]	[0.034]	[0.028]	[0.027]	[0.032]	[0.034]	[0.042]
Postcodes databases	0.1569[b]	0.2257[a]	0.2441[a]	0.2368[a]	0.2294[a]	0.2214[a]	0.1558[b]	0.2079[a]	0.2172[a]	0.2463[a]	0.2151[a]	0.1967[a]	-0.3756[b]	-0.5062[a]	-0.5431[a]	-0.5410[a]	-0.4987[a]	-0.4904[a]
	[0.067]	[0.061]	[0.063]	[0.067]	[0.065]	[0.072]	[0.074]	[0.066]	[0.067]	[0.072]	[0.065]	[0.074]	[0.150]	[0.139]	[0.135]	[0.145]	[0.135]	[0.158]
Alphabet used is latin-based	0.1318[a]	0.1265[a]	0.1484[b]	0.1344[a]	0.1386[a]	0.1659[b]	0.1308[a]	0.1060[b]	0.0413	0.1198[b]	0.1323[a]	0.0548	-0.2827[a]	-0.2591[a]	-0.1867[c]	-0.2941[a]	-0.3069[a]	-0.2264[b]
	[0.047]	[0.047]	[0.063]	[0.051]	[0.047]	[0.066]	[0.044]	[0.044]	[0.051]	[0.048]	[0.043]	[0.054]	[0.095]	[0.083]	[0.103]	[0.091]	[0.083]	[0.108]
Ln GDP per capita	0.0573[a]						0.0598[a]						-0.1512[a]					
	[0.019]						[0.017]						[0.041]					
French legal origin		0.0599				0.0384		0.0383				-0.0060		-0.0559				-0.0131
		[0.049]				[0.054]		[0.045]				[0.049]		[0.096]				[0.092]
German legal origin		0.0416				0.0289		0.0906				0.0671		-0.1232				-0.0418
		[0.060]				[0.072]		[0.070]				[0.080]		[0.145]				[0.168]
Scandinavian legal origin		0.0884				0.0216		0.2998[a]				0.2068		-0.4456[b]				-0.0181
		[0.065]				[0.145]		[0.059]				[0.161]		[0.222]				[0.411]
Catholic % in 1980			0.0005			0.0001			0.0017[b]			0.0015			-0.0018			-0.0011
			[0.001]			[0.001]			[0.001]			[0.001]			[0.002]			[0.002]
Protestant % in 1980			0.0002			0.0003			0.0029[a]			0.0015			-0.0045[b]			-0.0040
			[0.001]			[0.001]			[0.001]			[0.002]			[0.002]			[0.003]
Muslim % in 1980			0.0008			0.0007			0.0009			0.0006			-0.0011			-0.0006
			[0.001]			[0.001]			[0.001]			[0.001]			[0.001]			[0.001]
Ethnic fractionalization in 1985				-0.0720		-0.0594				-0.1316		-0.0666				0.2714		0.2223
				[0.089]		[0.104]				[0.090]		[0.103]				[0.178]		[0.200]
Latitud					0.1329	0.0965					0.2359	0.0725					-0.4938	-0.3064
					[0.161]	[0.206]					[0.149]	[0.186]					[0.302]	[0.382]
Constant	-0.3709[b]	-0.0403	-0.0631	0.0717	0.0103	-0.0229	-0.6307[a]	-0.2226[a]	-0.2786[a]	-0.1022	-0.2193[a]	-0.1535	7.3705[a]	6.4381[a]	6.5046[a]	6.2087[a]	6.4258[a]	6.2583[a]
	[0.144]	[0.073]	[0.083]	[0.096]	[0.064]	[0.136]	[0.135]	[0.065]	[0.073]	[0.087]	[0.060]	[0.113]	[0.307]	[0.117]	[0.133]	[0.178]	[0.104]	[0.237]
Observations	154	157	153	152	154	150	154	157	153	152	154	150	154	157	153	152	154	150
R-squared	0.44	0.41	0.42	0.41	0.41	0.42	0.46	0.45	0.45	0.43	0.44	0.46	0.51	0.46	0.47	0.46	0.46	0.48
Adj. R-squared	0.42	0.39	0.39	0.39	0.40	0.38	0.44	0.43	0.42	0.42	0.42	0.42	0.46	0.44	0.44	0.44	0.45	0.44

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1

Appendix H Panel A: Public sector management quality and mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back in 90 days				Ln. Avg Number of days to get it back			
Ln permanent offices per capita	0.091 [a]	0.091 [a]	0.093 [a]	0.053 [a]	-0.162 [a]	-0.166 [a]	-0.176 [a]	-0.107 [a]
	[0.023]	[0.023]	[0.023]	[0.016]	[0.044]	[0.044]	[0.044]	[0.029]
Postcodes databases	0.259 [a]	0.211 [b]	0.227 [b]	0.266 [a]	-0.545 [a]	-0.455 [b]	-0.517 [a]	-0.440 [a]
	[0.088]	[0.094]	[0.093]	[0.080]	[0.178]	[0.190]	[0.188]	[0.154]
Alphabet used is latin-based	0.114 [c]	0.136 [b]	0.120 [c]	0.036	-0.314 [a]	-0.332 [a]	-0.347 [b]	-0.121
	[0.059]	[0.061]	[0.069]	[0.045]	[0.114]	[0.120]	[0.133]	[0.082]
Weberian public administration (index of 9 questions)	-0.013				-0.085			
	[0.043]				[0.087]			
Professional & non-political public administraiton (subindex of 4 questions)		0.008				-0.086		
		[0.027]				[0.054]		
Closed public administration (subindex of 3 questions)			-0.019				-0.029	
			[0.038]				[0.076]	
Public management performance				0.035 [a]				-0.082 [a]
				[0.013]				[0.023]
Constant	-0.146	-0.209	-0.092	-0.242 [a]	6.686 [a]	6.641 [a]	6.541 [a]	6.530 [a]
	[0.203]	[0.149]	[0.237]	[0.079]	[0.387]	[0.277]	[0.444]	[0.132]
Observations	101	102	102	116	101	102	102	116
Adj. R-squared	0.33	0.3	0.31	0.39	0.37	0.35	0.34	0.42

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1

Appendix H Panel B : Public sector wages and mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back in 90 days				Ln. Avg Number of days to get it back			
Ln permanent offices per capita	0.086 [a]	0.091 [a]	0.080 [a]	-0.056	-0.171 [a]	-0.170 [a]	-0.154 [a]	0.042
	[0.026]	[0.024]	[0.027]	[0.070]	[0.047]	[0.045]	[0.049]	[0.141]
Postcodes databases	0.209 [b]	0.255 [a]	0.326 [a]	0.285	-0.523 [a]	-0.601 [a]	-0.723 [a]	-0.829 [c]
	[0.090]	[0.084]	[0.093]	[0.221]	[0.179]	[0.166]	[0.182]	[0.400]
Alphabet used is latin-based	0.142 [b]	0.120 [b]	0.074	0.142	-0.331 [a]	-0.285 [b]	-0.242 [b]	-0.617 [a]
	[0.062]	[0.060]	[0.058]	[0.143]	[0.121]	[0.116]	[0.102]	[0.209]
Senior officials with salaries comparable to salaries of managers of private sector	0.034				-0.034			
	[0.025]				[0.050]			
Salaries of public administration workers are linked to performance appraisals		-0.012				-0.007		
		[0.029]				[0.064]		
Avg. government wage / GDP percapita (World Bank, constant 2000 US dollars)			-0.001				-0.011	
			[0.012]				[0.023]	
Postman salary / GDP percapita 2005 (constant 2005 US dollars PPP adjusted)				-0.300 [b]				0.319
				[0.120]				[0.215]
Constant	-0.266 [b]	-0.167	-0.187	0.687 [a]	6.472 [a]	6.408 [a]	6.423 [a]	5.551 [a]
	[0.108]	[0.127]	[0.136]	[0.236]	[0.199]	[0.240]	[0.230]	[0.547]
Observations	102	101	84	25	102	101	84	25
Adj. R-squared	0.32	0.33	0.43	0.16	0.34	0.36	0.43	0.3

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1

Appendix H Panel C : Attitudes and decision making by public officials and mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back in 90 days							Ln. Avg Number of days to get it back						
Ln permanent offices per capita	0.093 [a]	0.093 [a]	0.087 [a]	0.089 [a]	0.088 [a]	0.087 [a]	0.087 [a]	-0.174 [a]	-0.163 [a]	-0.156 [a]	-0.163 [a]	-0.165 [a]	-0.157 [a]	-0.151 [a]
	[0.024]	[0.024]	[0.025]	[0.024]	[0.023]	[0.024]	[0.024]	[0.046]	[0.049]	[0.048]	[0.047]	[0.043]	[0.047]	[0.046]
Postcodes databases	0.224 [b]	0.218 [b]	0.197 [b]	0.202 [b]	0.198 [b]	0.224 [b]	0.200 [b]	-0.514 [a]	-0.515 [a]	-0.411 [b]	-0.467 [b]	-0.472 [a]	-0.502 [a]	-0.447 [b]
	[0.087]	[0.091]	[0.095]	[0.100]	[0.089]	[0.091]	[0.094]	[0.173]	[0.181]	[0.186]	[0.194]	[0.179]	[0.176]	[0.187]
Alphabet used is latin-based	0.137 [b]	0.135 [b]	0.124 [b]	0.133 [b]	0.130 [b]	0.096	0.127 [b]	-0.319 [b]	-0.321 [a]	-0.274 [b]	-0.314 [a]	-0.308 [b]	-0.203	-0.287 [b]
	[0.061]	[0.060]	[0.061]	[0.061]	[0.060]	[0.063]	[0.061]	[0.123]	[0.120]	[0.119]	[0.119]	[0.117]	[0.123]	[0.120]
Public sector employees strive to be efficient	-0.009							-0.025						
	[0.029]							[0.060]						
Public sector employees strive to implement policies decided by top politicians		-0.003							-0.064					
		[0.041]							[0.087]					
Public sector employees strive to help citizens			0.034							-0.150 [b]				
			[0.033]							[0.068]				
Public sector employees strive to follow rules				0.017							-0.069			
				[0.038]							[0.075]			
Public sector employees strive to fulfill the ideology of the parties in government					-0.038							0.115 [b]		
					[0.026]							[0.055]		
Impartiality of public sector employees (index of 3 questions)						0.023							-0.102 [b]	
						[0.026]							[0.045]	
Public sector officials act impartially when deciding to implement a policy in a case							0.026							-0.126 [b]
							[0.030]							[0.059]
Constant	-0.158	-0.177	-0.285 [c]	-0.242	0.009	-0.057	-0.259 [c]	6.473 [a]	6.631 [a]	6.834 [a]	6.623 [a]	5.793 [a]	5.805 [a]	6.744 [a]
	[0.147]	[0.191]	[0.147]	[0.183]	[0.159]	[0.182]	[0.152]	[0.264]	[0.366]	[0.271]	[0.332]	[0.317]	[0.334]	[0.276]
Observations	102	102	102	102	102	100	102	102	102	102	102	102	100	102
Adj. R-squared	0.3	0.3	0.31	0.31	0.32	0.33	0.31	0.34	0.34	0.37	0.34	0.36	0.39	0.37

Robust standard errors in brackets

a p<0.01, b p<0.05, c p<0.1

Appendix H Panel D : Private sector management quality and mail efficiency

The table presents robust OLS regressions for all the countries in our sample. Robust standard errors are shown in parentheses under each coefficient.

	Got it back in 90 days							Ln. Avg Number of days to get it back						
Ln permanent offices per capita	0.101 [a]	0.094 [a]	0.102 [a]	-0.102	-0.156	-0.115	-0.030	-0.182 [a]	-0.157 [a]	-0.185 [a]	0.217	0.329	0.262	-0.045
	[0.017]	[0.019]	[0.017]	[0.102]	[0.109]	[0.108]	[0.095]	[0.030]	[0.035]	[0.030]	[0.312]	[0.382]	[0.402]	[0.285]
Postcodes databases	0.176 [b]	0.179 [b]	0.156 [b]	-0.158	-0.118	-0.120	-0.074	-0.381 [a]	-0.326 [c]	-0.320 [b]	-0.156	-0.417 [c]	-0.270	-0.223
	[0.072]	[0.086]	[0.074]	[0.148]	[0.128]	[0.142]	[0.179]	[0.138]	[0.168]	[0.142]	[0.268]	[0.227]	[0.296]	[0.495]
Alphabet used is latin-based	0.114 [b]	0.118 [b]	0.110 [b]	0.099	0.068	0.150	0.115	-0.280 [a]	-0.299 [a]	-0.265 [a]	0.101	0.140	-0.058	0.111
	[0.049]	[0.051]	[0.049]	[0.084]	[0.077]	[0.086]	[0.119]	[0.092]	[0.094]	[0.090]	[0.178]	[0.159]	[0.251]	[0.326]
Will to delegate authority	0.059 [b]							-0.169 [a]						
	[0.024]							[0.056]						
Innovation capacity		0.044							-0.180 [a]					
		[0.028]							[0.069]					
Quality of management schools			0.065 [b]							-0.193 [a]				
			[0.027]							[0.052]				
Management practices index				0.852 [b]							-2.697 [a]			
				[0.277]							[0.805]			
Monitoring management subindex					0.792 [a]							-2.004 [a]		
					[0.237]							[0.641]		
Targets management subindex						0.575 [c]							-1.834 [b]	
						[0.265]							[0.811]	
Incentives management subindex							0.645 [b]							-2.801 [a]
							[0.231]							[0.831]
Constant	-0.422 [a]	-0.324 [a]	-0.467 [a]	-1.377 [c]	-1.075 [c]	-0.550	-1.123	6.955 [a]	6.774 [a]	7.103 [a]	11.569 [a]	9.507 [a]	8.980 [a]	12.868 [a]
	[0.104]	[0.110]	[0.120]	[0.762]	[0.586]	[0.517]	[0.822]	[0.227]	[0.216]	[0.227]	[1.768]	[1.424]	[1.501]	[2.496]
Observations	136	133	136	16	16	16	16	136	133	136	16	16	16	16
Adj. R-squared	0.40	0.38	0.40	0.21	0.38	0.03	0.00	0.43	0.43	0.44	0.53	0.46	0.27	0.50

Robust standard errors in brackets
a p<0.01, b p<0.05, c p<0.1