Comments

Rafael di Tella: This paper is concerned with one of the most important questions in the corruption literature, namely, would raising bureaucratic wages reduce corruption? This is a key policy question that also has important theoretical implications. If the answer is yes, it would provide an indication that the basic incentive model is applicable to the problem of corruption, as argued in a seminal paper by Becker and Stigler.[1] The hypothesis, however, has received relatively little empirical attention. Panizza looks at the correlation between the public sector wage premium and corruption across countries in Latin America and the Caribbean. The author also discusses the relationship between the wage premium and measures of bureaucratic quality, but I am unsure about the interpretation of these results.

The paper starts by documenting the public-private wage differential in Latin America. Since presumably only a fraction of public sector workers have opportunities for corruption, the overall premium is only of moderate interest. Panizza then partitions the sample to obtain information concerning public sector workers who are in charge of making decisions and who thus have the opportunity to become corrupt. This approach is promising, and it is certainly an improvement over the previous literature, which just looks at the average premium for the public sector. The problem is that the results show a very small premium for male public sector workers with little education and a wage penalty for those with high levels of education. Thus as the opportunities for corruption increase, the premium decreases. Since Becker and Stigler predict no relationship between bureaucratic wages and corruption when there is a public sector wage penalty, the results do not present a direct test of the theory. Even if there were some premium to working in the public sector, we would still need some reassurance regarding the presence of auditing, given that, again, the theory does not offer many interesting predictions concerning the relationship between wages and corruption in the absence of auditing.

1. Becker and Stigler (1974).

As to why the results on corruption and wage premiums are so weak, the lack of auditing is as equally good an explanation as Panizza's citing of the poor quality of the corruption data. This is particularly true considering that the ICRG data correlate so well with other corruption indexes, the exceptional cases pointed out by the author notwithstanding.

Another issue is the simultaneous determination of corruption and public sector wages. This is a serious problem in previous work using cross-country data, and it is also a concern in this paper. Clearly, the government cannot afford high wages when corruption is a drain on public resources, so the presumed correlation is again negative. The author seems to be aware of this problem, as well as of the difficulty of finding a plausible instrument. Without some reassurance regarding causality, however, the exercise is bound to generate few policy implications.

Perhaps the most interesting finding of the study concerns the pattern of wage premiums. Although informal knowledge indicates that public sector employment performs some kind of redistributive role, Panizza documents this process across gender and education. He finds that the group that is worst off actually suffers a wage penalty. This has important implications for students of public sector dynamics in Latin America. The analysis suggests that if public sector promotions are biased in favor of those who have formal educational achievements and who are male, as is generally held to be the case, then the system is not likely to place the more talented and honest professionals at the top of the public sector hierarchy. This is because these two characteristics are associated with the lowest wage premiums—and sometimes even a penalty. Thus the question is why would a highly educated male seek employment in the public sector in the first place. It must be that the public sector offers perks not found in the private sector. Maybe the public sector subjects workers to low monitoring, and these workers either like to get away with low effort or like to take advantage of any opportunities for extra income. Whatever the case, the author is suggesting that if there is a culture of promoting males with formal education, then society may find itself governed by the lazy and the dishonest. Everything that is known about Latin America suggests this is an important area of research.

Caroline Van Rijckeghem: This useful paper examines two critical issues. First, the level and compression of government wages are important from a public policy point of view, yet to date, no good information exists on these variables. Panizza's use of household survey data to this end represents an important contribution. Second, the paper examines the relationship between the quality of the government bureaucracy (and corruption) and government pay, which is a crucial area for policy research. In sum, the paper advances the research agenda on whether (and why) public service pay is different from that in the private sector and how this affects performance.

The Advantages of Survey Data

Panizza uses survey data to help establish the facts about public sector pay. By contrast, most empirical work to date is based on relative average wages, which, unfortunately, are not comparable across countries for a number of reasons. First, government encompasses higher paying occupations in some countries than in others (for example blue-collar versus white-collar workers and the inclusion or exclusion of the education sector, the health sector, and the armed forces); second, the degree of part-time and temporary work in the private and public sectors varies across countries; and third, in some countries, wages in certain sectors, such as universities and hospitals, are paid through extra budgetary funds that do not enter the government wage bill, and the jobs are therefore not counted as part of government employment, which biases average wages downward.

Survey data allow a researcher to control for the worker characteristics that affect wages—experience, education, gender—and to estimate Mincerian wage regressions (with a dummy variable for public sector employment), thereby attenuating the first set of difficulties. The survey data also provide hourly wage data, which helps in addressing the other two sets of difficulties. Finally, the data facilitate the exploration of many additional issues, including wage compression and pay according to gender.

Mixed Findings on the Public Sector Wage Premium and Wage Compression

While at first sight the paper appears to find evidence in favor of a public sector wage premium, this premium is quite small on average, and it varies greatly across countries. Over 1993–99, this wage premium over private sector pay was 3 percent for formal sector workers, which is not a large amount.[1] The paper also finds that male workers earn 1 percent less than their private sector counterparts. Female workers have substantially higher wages (by 8 percent). In addition, the public sector wage premiums vary substantially across countries, and not all countries have public sector wage premiums. Bolivia, the Dominican Republic, Honduras, and Panama are characterized by large public sector penalties, while Colombia, Costa Rica, Ecuador, and El Salvador exhibit large premiums for male workers.

The same applies to the finding of wage compression. The evidence points to some wage compression compared to the private sector, but the process is not universal. The wages of workers with high education are similar, on average, to those of workers in the private sector. While highly educated women enjoy higher pay (by 3 percent), highly educated men have 3 percent lower wages. Workers with less than secondary education have 4 percent higher wages than their private sector counterparts. These results point to the existence of some wage compression, whereby the pay line (linking pay with skills) is less steep than in the private sector.

For a large number of countries, two proxies for wage compression generate coefficients greater than one, namely, the relative public-private wage differentials for workers with high and low skills, measured as RHL = (PRH + 1)/(PRL + 1), and the ratio between the return to education in the public sector and the return to education in the private sector (REL) (table B4). This indicates that the finding of wage compression is not universal. Thus, against expectations, wages appear to be less compressed in the public sector than in the private sector in those countries.

These variations across countries in wage differentials and in wage compression constitute an interesting area for future research. Such differences in pay policies point to different constraints (such as unionization, hiring and firing constraints, and budgetary constraints) and government objectives (such as employment objectives and self-enrichment).[2] Uncovering

1. Comparisons that include informal sector workers are invalid, as public sector employment is all formal.

2. See Freeman and Ichniowsky (1988) for a discussion of public sector unionism; Panizza (1998) for a two-sector model with firing constraints; Kraay and Van Rijckeghem (1995) and Haque, Montiel, and Sheppard (1998) for an analysis of the effect of employment considerations and revenue constraints in an efficiency wage model; and Charap and Harm (2000) for a discussion of the so-called kleptocratic state.

the reasons for the differences might provide insights into how to encourage countries to adopt more effective pay policies. Is it the case, for example, that in countries with social safety nets, governments are less compelled to use the civil service as the employer of last resort, hence freeing up resources for adequate pay?

In the study at hand, the data cover the public sector, as opposed to the civil service, and thus include public enterprises. Presumably, the civil service is of greatest policy interest, as in the case of the link between pay and corruption or pay and the quality of the bureaucracy (the focus of the second part of the paper). A key stylized fact is that public enterprise workers tend to earn higher wages than civil servants. For this reason, the public sector wage premium could be a biased estimate of the civil service wage premium (if any). Basing the analysis on the public sector rather than the civil service may also account for the downward trend in public wages and employment that the author finds: both trends could simply be the result of the privatization of state enterprises.

This issue could potentially be addressed by exploiting data for the sector of occupation, which are included in the surveys (for example, mining; manufacture; construction; water and electricity; retail, restaurant and hotel; transport and telecommunications; financial services; and other services). Civil service employment tends to be classified as other services, whereas public enterprise employment is typically in the mining, water and electricity, and transport and telecommunications sectors. It would thus be worthwhile to check whether average wages are higher for government workers than private sector workers in other services, controlling for education and other variables.

Evidence on Relative Wages and the Quality of the Bureaucracy

The paper tests the relationship between the quality of the bureaucracy and relative public sector pay (on average and for low and high educated workers separately), on the one hand, and relative returns to education, on the other. It finds that average public sector pay bears no relationship to bureaucratic quality, while relative public sector pay for educated workers and relative returns to education are associated with a high-quality bureaucracy.[3] Similarly, relative public sector pay for educated workers has a statistically significant effect on the corruption index. The results also indicate that it would be cost effective to raise only the wages of more educated workers, since raising the wages of less educated workers has no statistically significant effect on either the quality of the bureaucracy or corruption.

The findings that the relative wage of educated workers and relative returns to education are positively related to the quality of the bureaucracy are in accord with the views in the policy literature on the pay of higher officials and the incentives structure. However, the methodology carries a number of caveats. First, the dependent variable appears to be an input rather than an output. The author argues against the use of the International Country Risk Guide (ICRG) corruption variable because the length of time the government has been in power—an input—is an important factor in the definition of corruption.[4] However, the variable measuring the quality of bureaucracy, which is also from ICRG, suffers from the same problem. It is defined as policy independence and an established mechanism for recruiting and training; these are inputs rather than an objective measure of the quality of the bureaucracy.

Second, the economic significance of the pay compression variables is not very large, though it is possible that the regression results suffer from downward bias. A one standard deviation change in the pay compression measures RHL or REL is associated with a 0.3 standard deviation change in the quality of the bureaucracy. This means that RHL and REL must be raised to the extremes to engineer a 1 standard deviation change in quality of the bureaucracy. Implementing such a policy would not be easy.

3. A high-quality bureaucracy reflects the existence of policy independence and established mechanisms for recruitment and training.

4. In the case of the corruption variable, earlier International Country Risk Guides emphasize the measurement of corruption more than indicated in the excerpt quoted by the author: "The highest risk ratings tend to signify a democratic country whose government has been in office for less than five years, and where government officials do not often seek special payments. An intermediate rating indicates a country whose government has been in office for more than ten years, where a large number of officials are appointed rather than elected, and bribery demands are fairly frequent. The lowest ratings are given to countries that usually are nondemocratic, where the government has been in power for more than ten years, high government officials are likely to demand special payments, and illegal payments are generally accepted throughout society" (Coplin, O'Leary, and Sealy, 1993, p. 47). It would be useful to ascertain what is the current practice.

Nevertheless, as the author postulates and as rough calculations based on the author's results indicate, it appears that pay decompression is likely to be more cost-effective than an across-the-board increase in public sector wages. For corruption, for example, the results indicate that a doubling in relative wages of more educated workers would lead to a decrease in the ICRG corruption index of some 1.65 points, whereas a doubling of average wages would lead to a decline of only 0.7 points (while at the same time being more costly).[5]

Third, the regression results may suffer from downward bias if public sector pay is determined in an efficiency wage setup, in which relative pay and efficiency are determined simultaneously.[6] In a country with strong firing constraints, monitoring difficulties, low penalties for corruption, a poor court system, and so forth, one would expect the government to choose both higher pay and lower efficiency (or higher corruption), even if pay has a positive effect on efficiency.[7] The author does control for GDP per capita, which is correlated with variables such as rule of law, which is a proxy for the difficulty in controlling corruption, but this does not necessarily remove all bias.

Closing Remarks

While the author interprets his results as consistent with those of Rauch and Evans, the results of the two studies complement rather than corroborate each other. Rauch and Evans examine different dimensions of meritocracy: meritocratic hiring, internal promotions, and career stability.[8] They also study the effects of a composite of the level and the trend in relative public-private wages for top civil servants. They find that meritocratic hiring matters for the quality of the bureaucracy, as well as for corruption. Internal promotions, career stability, and the wage composite do not affect either the quality of the bureaucracy or corruption once mer-

5. These results appear contradictory at first. They imply that raising the wages of less educated workers tends to increase corruption, which is, in fact, what the regressions that include the relative wages of both educated and less educated workers seem to indicate.

6. See, for example, Walsh (1999).

7. Acemoglu and Verdier (2000) also make this point.

8. Rauch and Evans (2000).

itocratic hiring is controlled for.[9] Rauch and Evans do not investigate returns to education, which is the subject of the current paper. Panizza's finding that proxies of wage compression are linked to bureaucratic quality and corruption thus complements the Rauch-Evans findings, rather than simply being consistent with those findings.

As for the pay of civil servants, Panizza finds that the pay of more educated civil servants has a statistically significant effect on both the quality of the bureaucracy and corruption. Rauch and Evans, in contrast, find that a wage composite pertaining to top civil servants has no effect on these variables. A possible reason for this discrepancy is that Rauch and Evans use a composite of the level of and trend in relative public-private wages, whereas the current paper simply uses relative wages. Indeed, Van Rijckeghem and Weder (2001) find, using the Rauch-Evans data, that the level of relative public-private wages does have a significant effect on the corruption index.[10]

9. The Rauch-Evans wage composite does, however, appear to have an impact on bureaucratic delays.

10. Van Rijckeghem and Weder (2001).

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