CORRUPTION AND INCOME INEQUALITY IN THE UNITED STATES

OGUZHAN C. DINCER and BURAK GUNALP*

In this study we analyze the effects of corruption on income inequality. Our analysis advances the existing literature in three ways. First, instead of using one of the corruption indices assembled by various investment risk services, we use an objective measure of corruption: the number of public officials convicted in a state for crimes related to corruption. Second, we minimize the problems which are likely to arise because of data incomparability by examining the differences in income inequality across the United States. Finally, we exploit both time series and cross-sectional variation in the data. We find robust evidence that an increase in corruption increases income inequality. (JEL D31, D73, I32)

I. INTRODUCTION

An increasing number of empirical studies (e.g., Keefer and Knack 1997; Knack 1996; Knack and Keefer 1995; Mauro 1995; Mo 2001; Pellegrini and Gerlagh 2004) present persuasive evidence regarding the detrimental effects of corruption on various economic variables such as the growth rate of income. Corruption is defined in all of these studies as the use of public office for private gain.

Corruption not only affects the growth rate of income but also affects the income inequality. *The benefits from corruption are likely to accrue to the better connected individuals ... who belong mostly to high income groups* (Gupta, Davoodi, and Alonso-Terme 2002, 23). According to Johnston (1989), corruption favors the "haves" rather than the "have nots" particularly if the stakes are large. In other words, the burden of corruption falls disproportionately on low-income individuals.

Corruption affects income inequality through several channels. First, individuals who belong to low-income groups pay a higher proportion of their income as bribes than the individuals who belong to high-income groups. A corruption survey conducted by World Bank in Cambodia

reveals that low-income individuals on average spend 2.3% of their income on bribes compared to 0.9% for higher income individuals. Second, as Gupta, Davoodi, and Alonso-Terme (2002) argue, corruption generates a tax system which disproportionately favors the high-income individuals. Corruption leads to tax evasion, which in turn leads to lower tax revenues. Lower tax revenues reduce the government's ability to finance programs to improve the distribution of income. Corruption also leads to a less-progressive tax structure worsening the income distribution. Third, corruption causes inequality in asset ownership (Gupta, Davoodi, and Alonso-Terme 2002). As Tanzi (1998) argues, only the better connected individuals get the most profitable government projects. This leads to the creation of a small group of asset owners who have the resources to bribe the government officials and increase their assets even further causing inequality in asset ownership. Because assets are used as collateral to borrow and invest, high inequality in asset ownership reduces the ability of lower income individuals to borrow and invest and hence reduces their opportunities to increase their incomes. Fourth, corruption diverts government spending away from programs that benefit mostly low-income individuals such as education and health to, for example,

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ABBREVIATIONS

BEA: Bureau of Economic Analysis

BLS: Bureau of Labor Statistics

GMM: Generalized Method of Moments

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defense programs that create opportunities for corruption (Chetwyn, Chetwyn, and Spector 2003). This creates skill inequality which increases income inequality. Finally, corruption raises the costs of public goods provision and reduces the quantity of public goods provided by the government. As tax revenues are used in the provision of public goods, higher costs lead to higher taxes. This again disproportionately favors high-income individuals for two reasons. First, the low-income individuals are the ones who mostly benefit from public goods provided by the government and second, high-income individuals are the ones who have the resources to evade taxes by bribing the government officials.

II.   A BRIEF OVERVIEW OF THE LITERATURE

Although there are some theoretical studies analyzing the effects of corruption on income inequality (Chong and Gradstein 2007; Eicher, Garcia-Penalosa, and Van Yperspele 2009; Mandal and Marji 2010; Spinesi 2009), surprisingly, there are not too many empirical studies (Chong and Calderon 2000a, 2000b; Gupta, Davoodi, and Alonso-Terme 2002; Gyimah-Brempong 2002; Li, Xu, and Zou 2000; Uslaner 2006, 2008; You and Khagram 2005). Using cross-country data Li, Xu, and Zou (2000) and Chong and Calderon (2000) find an inverse U-shaped relationship between corruption and income inequality. They find a positive relationship between corruption and income inequality in high-income countries and a negative relationship in low-income countries. Gupta, Davoodi, and Alonso-Terme (2002) and Gyimah-Brempong (2002), on the other hand, find a positive and linear relationship between corruption and income inequality. While Gupta, Davoodi, and Alonso-Terme (2002) use cross-country data from a small number of countries in their analysis (<40), Gyimah-Brempong (2002) uses data from approximately 20 African countries over time.

In this study, we analyze the effects of corruption on income inequality using data from the United States. Using data from the United States is quite advantageous. The likelihood of the problems arising because of data incomparability is minimal. Data on corruption as well as on income inequality for the United States are more comparable than those for different countries, and the United States are more similar

in other dimensions that are difficult to measure. We find robust evidence that an increase in corruption increases income inequality across the United States.

Our analysis advances the existing literature in two ways. First, instead of using subjective cross-country corruption indices assembled by various investment risk services, we use an objective measure of corruption: the number of government officials convicted in a state for crimes related to corruption. Second, we exploit both time-series and cross-sectional variation in the data.

III.   DATA

A. Measurement of Corruption

We use annual data from 48 contiguous states for 17 years, from 1981 to 1997. Owing to the nature of our corruption measure, our definition of corruption is narrower than the literature. We define corruption as the use of government office for private gain.[1] For our measure of corruption (*Corruption*), we use the number of government officials convicted in a state for crimes related to corruption in a year. The data are from the Justice Department's "Report to Congress on the Activities and Operations of the Public Integrity Section." The Public Integrity Section reports the number of public officials convicted for the crimes related to corruption annually. These data were used in several studies by Goel and Rich (1989), Fisman and Gatti (2002), Fredriksson, List, and Millimet (2003), Glaeser and Saks (2006), and Dincer (2008) to measure corruption across states. They cover a broad range of crimes from election fraud to wire fraud. Following Meier and Holbrook (1992), Hill (2003), and Maxwell and Winters (2004), we deflate the number of convictions by the number of elected officials in a state.[2] As Meier and Holbrook (1992) argue, the number of convictions is a good measure of corruption as a result of at least three reasons. First, it not only has face validity but also has construct validity. It has face validity because while states such as

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1. In the literature, public official is more broadly defined than the government. The corruption definition of Transparency International, for example, is not limited to government officials. We would like to thank the reviewer who pointed this out.
2. Following Maxwell and Winters (2004) we use the log of corruption convictions per 1,000 elected officials in a state in our estimations.

Louisiana, Florida, and New York rank high on corruption, states such as Vermont, Oregon, and Utah rank low. It has construct validity because all of the aforementioned studies using the same measure found empirical results supported by theory. Second, it is not related with the resources available to the federal prosecutors and the federal courts. *If convictions were simply the result of slack prosecution resources rather than levels of corruption, we would expect that the number of convictions would be positively related to the number of prosecutors and the number of judges* (Meier and Holbrook 1992, 137). Nevertheless, Meier and Holbrook (1992) do not find a statistically significant relationship between them. Third, as it is based on federal corruption convictions it does not depend on the effectiveness of law enforcement in a state. The corruption cases tried by state and local prosecutors are not included in the data. Otherwise it would be possible to argue that in a corrupt state a corrupt official would never get convicted. It is also possible to question how corruption among government officials such as U.S. House and Senate members affect income inequality in the state they represent. Nevertheless, in our opinion, federal convictions, although not a perfect measure, at least provide the evidence of the existence of a "culture of corruption" in a state.

B. Measurement of Income Inequality

We measure income inequality across states using the Gini index (*Gini*), as well as the various Atkinson indexes (I_ε) given by Wu, Perloff, and Golan (2006).[3] As mentioned by Wu, Perloff, and Golan (2006), all of these measures are scale-free relative measures. Following Sen (1997), if we consider distributions of income over persons, $i = 1, 2, 3, \ldots, n$, and let y_i be the income of person i, and the average level of income be μ, the Gini index is

$$Gini = \left(\frac{1}{2}n^2\mu\right) \sum_{i=1}^{n}\sum_{j=1}^{n} |y_i - y_j|.$$

Atkinson index (I) is an inequality measure which is based on the concept of what Atkinson (1970) calls the equally distributed equivalent

level of income. It is

$$I_\varepsilon = \begin{cases} 1 - \left[\frac{1}{n}\sum_{i=1}^{n}\left(\frac{y_i}{\mu}\right)^{1-\varepsilon}\right]^{\frac{1}{1-\varepsilon}} & \text{if } \varepsilon \neq 1 \\ 1 - \left[\prod_{i=1}^{n}\left(\frac{y_i}{\mu}\right)\right]^{\frac{1}{n}} & \text{if } \varepsilon = 1, \end{cases}$$

where ε measures the degree of inequality aversion. It takes values ranging from 0 to ∞. An index of 0.25, for example, means that it would be possible to achieve the same level of social welfare with 75% of total income if the income distribution were equal. As ε increases the Atkinson index becomes more sensitive to changes at the lower end of the income distribution and as ε decreases it becomes more sensitive to changes at the higher end of the distribution. If ε is equal to 0, income distribution does not affect the social welfare whereas if $\varepsilon \to \infty$ the social welfare depends on the lowest income in the society. The index equals zero when distribution of income is equal and approaches 1 as inequality increases.[4] We assume ε is equal to 0.25, 0.50, and 1.[5]

On the basis of the averages across the 17 years, Texas has the highest inequality regardless of the inequality measure used, whereas Wisconsin has the lowest inequality. Florida and Vermont are the most and the least corrupt states, respectively.

As expected, the correlations between the inequality measures and corruption are positive: the correlation coefficients between corruption and the inequality measures are around 0.35. Pairwise correlations of the inequality measures and corruption are given in Table 1.

C. Measurement of Control Variables

Following the literature, we include a set of control variables in our regressions. First, following Wu, Perloff, and Golan (2006), we include a policy variable: the federal marginal income tax rate for the top bracket (*High Tax*)

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3. We wish to thank Ximing Wu, Jeffrey M. Perloff, and Amos Golan for making their data publicly available.

4. See Atkinson (1970), Sen (1997), and Wu, Perloff, and Golan (2006a) for an excellent discussion of the Atkinson index as well as the traditional inequality measures.
5. Atkinson (1970) assumes ε lies within the range of (0, 2.5). The index is given for 0.1, 0.25, 0.50, 1, 1.5, 2, and 2.5 by Wu, Perloff, and Golan (2006). Nevertheless, to save space we do not report the results for 0.1, 1,5, 2, and 2.5.

TABLE 1
Pairwise Correlations between Inequality and Corruption

	Gini	$I_\varepsilon = 0.25$	$I_\varepsilon = 0.50$	$I_\varepsilon = 1.00$	*Corruption*
Gini	1.00				
$I_\varepsilon = 0.25$	0.99	1.00			
$I_\varepsilon = 0.50$	0.99	0.99	1.00		
$I_\varepsilon = 1.00$	0.98	0.97	0.99	1.00	
Corruption	0.38	0.35	0.36	0.38	1.00

and for the bottom bracket (*Low Tax*). Progressive taxation is used heavily by the federal government to redistribute income (Piketty and Saez 2003). Wu, Perloff, and Golan (2006) find that raising marginal tax rates reduces inequality. The data are from the study described by Wu, Perloff, and Golan (2006). Second, we include two macroeconomic variables: log of real per capita personal income (*Income*) and the unemployment rate (*Unemployment*). The income data are from the Bureau of Economic Analysis (BEA) and the unemployment data are from the Bureau of Labor Statistics (BLS). Third, we include a set of demographic variables: *Education* and *Age*, the share of population below age 24 and above age 64. Nielsen and Alderson (1995) argue that higher educational attainment in the society is expected to lower income inequality. We measure educational attainment as the share of the population with a high school degree or higher. The data are from the work by Frank (2009). As people below age 24 and above age 64 have low incomes, there is likely to be a relationship between age distribution and the income distribution. Our age data are from the Census Bureau. As Glaeser (2005) argues, stronger unions generally mean increased equality. Several studies by Caniglia and Flaherty (1989), Card and Freeman (1994), and Levernier, Rickman, and Partridge (1995) find a negative relationship between unionization and income inequality in the United States. Hence, we include the unionization rate (*Union*) as another control variable using the estimates provided by Union Membership and Coverage Database of Hirsch, Macpherson, and Vroman (2001). Finally, following Levernier, Rickman, and Partidge (1995) we include industry composition variables: the employment shares of agriculture (*Agriculture*) and manufacturing (*Manufacture*). As Levernier, Rickman, and Partridge (1995) argue, industries such as manufacturing provide opportunities for low-skilled labor to earn high

incomes. Several studies by Braun (1988) and Levernier, Rickman, and Partridge (1995) find a negative relationship between share of manufacturing employment and income inequality and a positive relationship between share of agricultural employment and income inequality. The data are from the BEA. The summary statistics across 48 states between 1981 and 1997 for all of the inequality measures and corruption as well as the control variables are given in Table 2.

IV. THE MODEL AND RESULTS

A. The Model

Because income inequality changes very slowly, current inequality is likely to be affected by inequality in the previous period. Owing to this dynamic nature of inequality, to analyze its relationship with corruption, we estimate the following dynamic panel data model:

$$Inequality_{s,t} = \alpha Inequality_{s,t-1} + \beta Corruption_{s,t}$$
$$+ \gamma' X_{s,t} + t_t + \eta_s + u_{s,t}$$

where $Inequality_{s,t}$ represents each of our measures of income inequality in state s during period t. $Corruption_{s,t}$ represents corruption, whereas $X_{s,t}$ represents the set of control variables that affect income inequality (*High Tax*, *Low Tax*, *Age*, *Education*, *Income*, *Unemployment, Union*, *Agriculture*, *Manufacture*) other than *Corruption* and lagged *Inequality*. η_s represents the state-fixed effects, while t_t represents the time-fixed effects, and u_{st} represents the error term. By construction, lagged *Inequality* is correlated with state-fixed effects, η_s, making the estimators inconsistent. Arellano and Bond (1991) construct a generalized method of moments (GMM) estimator by differencing the model to remove the state-fixed effects and using the lagged values of the

TABLE 2
Summary Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
Gini	33.628	3.293	25.6	44.600
$AI_{0.25}$	4.793	1.002	2.69	8.750
$AI_{0.50}$	9.562	1.894	5.42	16.600
$AI_{1.00}$	19.260	3.487	11.1	30.600
Ln *Corruption*	−2.930	2.389	−9.853	0.590
Education	47.839	5.946	30.287	59.118
Unemployment	6.436	2.167	2.200	18.000
Farm	3.481	2.747	0.243	14.044
Manufacture	14.159	5.317	3.303	27.256
Union	15.403	6.448	3.300	38.300
Ln *Income*	9.921	0.159	9.473	10.393
Low Tax	13.576	1.816	11.000	15.000
High Tax	41.270	10.624	28.000	69.100
Age	30.125	1.552	25.209	34.732

Source: Gini, $AI_{0.25}$, $AI_{0.50}$, $AI_{1.00}$, *Low Tax*, *High Tax* (Wu, Perloff, and Golan 2006); *Corruption* (U.S. Justice Department); *Education, Age* (U.S. Census Bureau); *Unemployment* (BLS); *Income, Farm, Manufacture* (BEA); *Union* (Hirsch, Macpherson, and Vroman 2001).

endogenous as well as the exogenous variables as instruments to form moment conditions. Alonso-Borrego and Arellano (1999) and Blundell and Bond (1998) show that in the case of a persistent autoregressive process, lagged values of these variables are weak instruments for the model in differences. In small samples, weak instruments are likely to produce biased coefficient estimates. To reduce the potential bias, Arellano and Bover (1995) and Blundell and Bond (1998) construct a system GMM estimator that combines the regression in differenc es with the regression in levels. It uses moment conditions in which lagged differences are used as instruments for the level equation as well as the moment conditions in which lagged levels are used as instruments for the difference equation. We use the Arellano-Bover/Blundell-Bond system GMM estimator to estimate our dynamic panel data model.

B. The Results

The results of the Arellano-Bover/Blundell-Bond system GMM estimation are given in Table 3. The Sargan test of overidentifying restrictions is satisfactory, as is the Arellano-Bond test for AR(2) errors. In all regressions, the estimated coefficient of corruption is positive and significant indicating that corruption

increases income inequality.[6] As mentioned earlier, as ε increases, the Atkinson index becomes more sensitive to changes at the lower end of the income distribution. The estimated coefficient of *Corruption* increases as ε increases, indicating that effects of corruption on the lower end of the distribution are higher.

Our results about the effects of macroeconomic and demographic control variables on income inequality are mostly consistent with the earlier studies. The estimated coefficients of *Education*, *Unemployment*, Ln *Income*, Ln *Income*^{2}, *Low Tax*, and *High Tax* are significant in all but one of the estimations. There is a vast literature on the effects of education on income inequality. Previous studies generally emphasize two distinct effects of education on income distribution: the "composition effect" and the "compression effect" (Knight and Sabot 1983). The "composition effect" increases the relative size of the educated people and tends to raise income inequality first, but eventually to lower it. "Compression effect," on the other hand, lowers income inequality as the return on education decreases as the relative supply of educated people increases. Hence, the effects of education on income inequality depend on the strength of these two effects. Previous empirical studies find a negative relationship between

6. Following the literature, to test for a possible nonlinear relationship between corruption and income inequality, we included corruption in the model in quadratic form as well. Nevertheless, it was never significant.

TABLE 3

Corruption and Income Inequality Arellano-Bover/Blundell-Bond Estimation

	Gini	$AI_{0.25}$	$AI_{0.50}$	$AI_{1.00}$
Gini(-1)	0.475	0.424	0.434	0.407
	(0.027)***	(0.028)***	(0.028)***	(0.028)***
Ln *Corruption*	0.069	0.024	0.041	0.069
	(0.026)**	(0.008)***	(0.016)***	(0.030)**
Education	−0.116	−0.031	−0.064	−0.119
	(0.027)***	(0.009)***	(0.017)***	(0.032)***
Unemployment	0.292	0.089	0.171	0.339
	(0.043)***	(0.014)***	(0.026)***	(0.051)***
Farm	−0.074	−0.019	−0.043	−0.099
	(0.036)**	(0.012)**	(0.022)**	(0.043)***
Manufacture	−0.053	−0.014	−0.029	−0.075
	(0.018)***	(0.006)***	(0.011)***	(0.021)***
Union	−0.079	−0.026	−0.048	−0.089
	(0.019)***	(0.006)***	(0.012)***	(0.024)***
Ln *Income*	−122.976	−38.261	−77.689	−164.524
	(39.369)	(12.730)***	(23.975)***	(46.306)***
Ln *Income*^{2}	6.272	1.950	3.951	8.335
	(1.961)***	(0.634)***	(1.195)***	(2.307)***
Low Tax	−0.129	−0.042	−0.091	−0.264
	(0.079)*	(0.026)*	(0.048)**	(0.094)***
High Tax	−0.046	−0.015	−0.031	−0.081
	(0.022)**	(0.007)**	(0.013)***	(0.025)***
Age	2.254	0.613	1.212	2.383
	(1.054)**	(0.342)**	(0.645)**	(1.245)**
Age^2	−0.038	−0.010	−0.020	−0.039
	(0.018)**	(0.006)**	(0.011)**	(0.021)**
Year Dummies	Yes	Yes	Yes	Yes
Sargan test for overidentification[a]				
p-Value	0.214	0.127	0.162	0.159
Wald test for Joint significance				
p-Value	0.000	0.000	0.000	0.000
Arellano-Bond test for Autocorrelation[b]				
p-Value	0.615	0.178	0.236	0.535
Observations	816	816	816	816

Note: Robust standard errors in parentheses.
[a]The null hypothesis is that the instruments used are not correlated with the residuals.
[b]The null hypothesis is that the errors in the first-difference regression exhibit no second-order serial correlation.
All tests are one-tailed. *Significant at 10%; **significant at 5%; ***significant at 1%.

education and income inequality in developed countries. Becker and Chiswick (1966) are the first to show that income inequality is indeed negatively related to the education in the United States. Following their study, the same relation is shown to hold also across countries and within countries over time (De Gregorio and Lee 2002). The negative and significant coefficient found in all of our estimations for *Education* is in line with the findings of these studies.

The fact that unemployment raises income inequality is well established in the literature. As Mocan (1999) argues, income inequality is countercyclical in behavior, that is, increases in

unemployment worsen the relative position of low-income groups. Using U.S. data covering the second half of the 1900s, he finds that an increase in structural unemployment increases the income share of the highest quintile, and decreases the shares of the bottom 60% of the population. Several other studies arrive at a similar conclusion using U.S. data (Beach 1977; Blinder and Esaki 1978; Budd and Whiteman 1978; Jantti 1994; Metcalf 1972; Mirer 1973; Schultz 1969; Thurow 1970). In all these studies, unemployment is identified as one of the major channels through which business cycles affect the income distribution. This is because of

two reasons. First, unemployment hurts primarily people from lower income groups. Second, poorer people lose their jobs more often and so their incomes become even lower. Similar to the previous studies that use U.S. data, our results indicate a positive relationship between *Unemployment* and income inequality.

Kuznets (1955, 1963) suggests that income distribution in a country worsens in the early stages of the economic development but then it improves as the country reaches later stages of development. According to Kuznets, this is because of a shift of labor from low-productivity to high-productivity sectors in the initial stages of development, which results in an increasing disparity in wages. As the country develops, however, the high-productivity sector dominates the economy, and wage inequality decreases. Therefore, income inequality and economic growth are related to each other via an "inverted-U curve" (the Kuznets curve). This hypothesis is called the "inverted-U hypothesis" or the "Kuznets hypothesis." Our results do not support the "inverted-U hypothesis" for the United States. The coefficient of Ln *Income* is negative and significant, while that of Ln *Income*^{2} is positive and significant across alternative inequality measures. In other words, the results suggest that income inequality initially declines and then increases as economic development proceeds, indicating a U-shaped relationship between the two variables. This result is consistent with findings of previous studies of U.S. income inequality (e.g., Amos 1988; Kim, Huang, and Lin 2010; Levernier, Rickman, and Partridge 1996; Piketty and Saez 2003, 2006; Ram 1991; Tribble 1996).

According to our results, progressive taxation does serve as an important tool to redistribute income. The coefficients of both *Low Tax* and *High Tax* are negative and significant indicating that an increase in either the low or high marginal tax rate statistically significantly reduces income inequality. These results are similar to the results in the study by Wu, Perloff, and Golan (2006). The coefficient of *Low Tax* is greater (in absolute value) than that of *High Tax* in all estimations. As Wu, Perloff, and Golan (2006) argue, the income tax for the bottom tax bracket has a larger equalizing effect, in part because a change in the tax rate of the bottom bracket affects the majority of the population while only a small minority is affected by the tax rate of the top bracket. Regarding the industry composition variables, our results indicate

a positive relationship between agricultural and manufacturing employment and income inequality, supporting Levernier, Rickman, and Partidge (1995), and Gupta, Davoodi, and Alonso-Terme (2002). Finally, we find an inverted-U-shaped relationship between *Age* and income inequality.

V. CONCLUSION

Corruption is not a phenomenon peculiar to low-income countries. It is possible to find examples of corruption in high-income countries as well. In Germany, for example, corruption led to an increase in cost of about 20% to 30% during the construction of Terminal 2 at Frankfurt Airport. In Italy, the cost of major construction projects fell significantly in the aftermath of corruption investigations in the early 1990s (Rose-Ackerman 1999). The arrest of Illinois Governor Rod Blagojevich for corruption charges is probably the most recent example. It is not a new phenomenon either. Prior to the New Deal, welfare programs in the United States were administered by local governments which were almost always associated with corruption. In 1933, when unemployment reached 25%, the federal government introduced welfare programs which redistributed 4% of the gross national product to millions of families. Knowing that he would incur enormous losses if the New Deal were perceived as corrupt, President Roosevelt took the fight against corruption in the administration of welfare programs very seriously by establishing offices to investigate complaints of corruption which led to vigorous prosecution of corrupt government employees (Wallis, Fishback, and Kantor 2006).

In this study, we analyze the effects of corruption on income inequality using the data from the United States. Where previous analyses relied on cross-sectional variation in cross-country data, our analysis is less sensitive to bias because of unobserved country-specific heterogeneity. Of course, data on our variables of interest—corruption and income inequality—as well as on control variables such as unionization rate are more comparable across the United States than those across different countries. We find robust evidence that an increase in corruption increases income inequality.

Using Atkinson indexes with different degrees of inequality aversion helps us see if the effects of corruption on the lower end of the distribution differ from the effects on the higher end. We find that the coefficient estimate

of corruption increases as the degree of inequality aversion increases, indicating that effects of corruption on the lower end of the distribution are higher.

What are the policies available to us to reduce income inequality? Reducing corruption is one of them. Why are some states, such as Illinois, more corrupt than the others? Economics, sociology, and political science literatures identify several factors causing corruption. Here, we would like to talk about three of those factors that apply to the United States: voter turnout, education, and the lack of representation of women in public office. The biggest penalty for an elected official other than imprisonment, if caught, is an electoral defeat. A low-voter turnout is definitely not a strong incentive for an elected public official to stay away from corruption. In 2006, when Rod Blagojevich was reelected as the Governor of Illinois, according to the *United States Elections Project*, the voter turnout was around 40% which was below the U.S average, while in Minnesota, one of the least corrupt states, it was around 60%. According to Patterson (2002) there are two major obstacles as far as the voting laws are concerned. First, polling hours could be extended. Almost half of the states shut down their polls before 8.00 p.m. Second, states could allow registering at the local polling places on Election Day. Most of the states shut down registration two or more weeks before Election Day. Almost one-fifth of the unregistered voters in these states are not aware of the registration deadline (Patterson 2002). In the states which allow same day registration (Idaho, Maine, Minnesota, New Hampshire, Wisconsin, and Wyoming), voter turnout is significantly higher. Glaeser and Saks (2006) argue that voters with more education are more willing and able to monitor government employees and to take action when these employees become corrupt. They find that states that are more educated are less corrupt. Our results support their findings. Dollar, Fisman, and Gatti (2001) argue that corruption decreases as the representation of women in public office increases. According to the World Values Survey conducted in the early 1990s in a mixed group of developed and developing countries, men are more likely to think that bribery is justified than women.[7] Women make up less than 25% of the state legislature in Illinois while in Washington, one of the least corrupt states, they make up more than 40%. Introducing gender quotas to increase the representation of women might help. Women make up almost 40% of the legislature in Scandinavian countries. Almost all parties in Norway and some parties in Sweden have quotas targeting women (Freidenvall 2003). Introduction of the gender quotas by the African National Congress made women's representation in South Africa increase to 30%. Today, in Louisiana, it is 15%. Finally, using both cross-country and cross-state data, several studies find a significant negative relationship between corruption and the decentralization of powers to tax and spend.[8] It is easier to monitor government employees if the government is decentralized.

One of the distinctive features of the political system in the United States is that individual states are the major policy makers. We know that there is no single policy that we can follow to reduce corruption in every state. On the other hand, we can at least identify the common factors that cause corruption across states. Identifying the root causes of corruption is probably the first and most important step.

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7. See Azfar, Lee, and Swamy (2001).

8. Fisman and Gatti (2002), Arikan (2004), and Dincer, Ellis, and Waddell (2010).

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