

**Democracy, Autocracy, and Tax Incentives to Foreign Direct Investors:  
A Cross-National Analysis**

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**Abstract**

While offering tax incentives to attract foreign direct investment has become a global phenomenon and part of economic globalization in the 1990s, it also is political and controversial. But the political determinants of tax incentive policies have rarely been analyzed. This article fills this gap by making two contributions. First, I offer a theory that explains how political regime type influences tax incentive policy in the cross-national setting. Second, I evaluate the theory with a statistical analysis of 52 developing countries. The findings support my main theoretical expectations. Countries with better rule of law offer lower levels of tax incentives, and the effect is stronger for more democratic countries. In democracies, FDI inflows are negatively associated with the level of incentives. Autocratic regimes maintaining restrictions on foreign entry adopt lower levels of incentives than those without restrictions. I discuss the policy implications of these findings.

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Offering tax incentives to attract foreign direct investment (FDI) has become a global phenomenon and part of economic globalization in the 1990s, spreading throughout Europe, Asia and even Africa (Cannon 1996; Dean 1988; Ashiabor 1996). For example, Korea rewrote its foreign investment law in 1998, expanding the scope of tax incentives to foreign investors (Yun 2001). Slovakia reduced its corporate tax from by 20% in the 2000 budget. The Netherlands excludes qualifying subsidiaries from taxable income (Turkenburg 1993). Singapore offers various preferential tax treatments such as concessionary tax rates and tax exemptions to attract foreign banks (Tan 1997). Germany allows companies belonging to the same multinational corporation (MNC) to be taxed on a consolidated basis (Meister 1993). China also has engaged actively in the competition for FDI by offering tax incentives (Abrahamson 1996). Taiwan, Iran and Nepal all have offered tax incentives to attract FDI in chemical, oil industries or public utilities (Westbrook 1996; Rhodes 1999).

Increasingly adopted by developing host countries, tax incentive programs can have significant economic and political consequences. While tax incentives to foreign-owned multinationals may arguably increase the short-term employment opportunities and demand for domestic intermediate inputs, such effect depends on whether the additional FDI attracted by incentive programs raises the net value of domestic production (Haaland and Wooton 1999). More important, incentives to foreign investors represent direct government intervention in the capital market and have distributive consequences for domestic and foreign interests. They affect the allocation of scarce financial resources, influence government revenues, and favor particular groups at the expense of others. Unless a sufficiently large number of foreign firms compete for entry, investment-promotion competition among national governments transfers the rents to a few multinationals and may reduce market competition. As Moran (1999) and Oman (2000) point out, FDI promotion programs often cause rent-seeking behaviors in host countries where governments

directly pick winners and losers in the market, discriminate against small and local firms, and design these programs through behind-the-door negotiations. To the extent that large MNCs pursue monopoly status in the host, tax incentives strengthen their competitiveness and their ability to monopolize the host market (Moran 1999). The beneficiaries of these policies may use their political power to influence the policy process, making incentive programs objects of political conflict. Despite their economic and political significance, the political causes of tax incentive policies have not received sufficient scholarly attention. This analysis seeks to further our understanding of the political determinants of incentive policies both theoretically and empirically.

The existing political economy literature has offered two explanations for the causes of investment promotion programs, none of which has been tested in a large N analysis. One explanation argues that the intensifying competition among national governments for limited investment capital has caused the growing adoption of incentive programs (Guisinger 1985; Stopford and Strange 1991; Thomas 2000). As capital mobility and financial integration increase, governments compete with each other to attract and keep capital investment at home as if rival firms compete in the market. As a result, firms have gained more bargaining power relative to states (Guisinger 1985; Stopford and Strange 1991). Countries find themselves increasingly involved in an n-person prisoners' dilemma type of competition, compelled to offer more and more location subsidies to attract foreign investors (Thomas 2000). This explanation appears consistent with the anecdotal examples noted above, the trend in the bidding among states for foreign capital, and the widespread use of investment incentives.<sup>1</sup> Interstate competition, however, does not explain how domestic politics in host countries influences the variations in their levels of tax incentives.

As part of their analysis investigating the causes of FDI inflows to the developing countries, Li and Resnick (2003) provide one domestic explanation for cross-national variations in fiscal incentives. They argue that investment incentives represent a transfer of benefits from domestic taxpayers to foreign

investors. Because democratic institutions on average allow a wide range of interests, including groups hurt by foreign capital, to influence public policy, democratic governments are less likely than non-democratic ones to obtain the acquiescence of interests opposing to generous incentives. But Li and Resnick's argument has several weaknesses. Their analysis does not account for the role of supporters of FDI and why opponents of FDI do not influence public policy in autocratic countries. Their argument is only one plausible explanation for how political regime type affects tax incentive policy. Finally, Li and Resnick (2003) provide no direct empirical evidence for their argument.<sup>2</sup>

This article makes two contributions to the research on the political economy of fiscal incentive policies. First, focusing on the role of domestic political institutions, I propose a theory that specifies the conditions under which different types of political regime offer more or less tax incentives. Testable hypotheses are derived. Second, based on new data on tax incentive programs, I conduct a cross-national statistical analysis of the hypothesized effects of regime type. It is to the best of my knowledge the first cross-national analysis of the political causes of tax incentives.

### **Theoretical Argument**

Tax incentives to foreign investors refer to preferential host government policies over value added tax, corporate income tax, property tax, licensing fees, import duties, and sales tax.<sup>3</sup> I argue that democratic governments differ systematically from autocratic governments in the level of tax incentives because of two distinct but related causal mechanisms.

#### **Political Regime Type and the Compensating Effect of Tax Incentives**

Tax incentives are designed to lure foreign capital. FDI location decisions are influenced by the characteristics of host countries, such as endowment of natural resources and labor, level of

economic development, or macroeconomic and political conditions (e.g., Caves 1996; Dunning 1988, 1993). Tax incentive policy is part of the host characteristics. Shah and Toye (1978) argue that tax incentives may affect investment decisions via the “illusory compensating effect”. Host countries that lack appropriate economic conditions such as natural resources, infrastructure and modern technology often offer generous incentives to compensate those weaknesses. Tax incentives thus signal to foreign investors about high operating costs in this type of countries.

The compensating effect of investment incentives is not limited to host economic conditions alone. Janeba (2002), for example, suggests that because host countries with low credibility are not attractive investment sites, their governments can offer upfront subsidies to compensate foreign investors for their sunk cost. Foreign investors also value the host institutional environment in terms of property rights protection and government policy credibility (see, e.g., Porcano and Price 1996; Rolfe and White 1992; Rondinelli and Brupitt 2000; Single 1999). Host countries of better conditions in these regards provide better investment climate and higher returns. They do not need to offer as generous tax incentives as those of poorer conditions to be equally attractive. Therefore, host countries that have weak property rights institutions and low policy credibility tend to offer generous tax incentives to attract foreign capital.

One reason that democracy and autocracy adopt different levels of tax incentives is because they differ systematically in terms of property rights protection and policy credibility. Foreign direct investment involves cross border jurisdiction. Foreign direct investors have to bear a relatively higher cost of monitoring and enforcing their private property rights in the host country than in their home countries (see, e.g., Frieden 1994). Their long time horizon leaves them vulnerable to the obsolescence of their bargaining power vis-à-vis the host government. The possibility of property rights violations, such as expropriation, seizure of assets, contract repudiation, and government corruption, weigh heavily in the calculus of FDI decisions (see, e.g., Kobrin 1984). Democratic

institutions, such as the dispersion of power, the constrained executive, the large number of veto players over public policy, legislative and judicial power, the diversity of views in the legislature, and the independent judiciary, collectively serve to strengthen the rule of law and secure private property rights. These institutions constrain the power of the leaders, allow political representation of various interests, and raise the costs of supplying private benefits, all of which make state commitment to the rule of law credible (e.g., Bates 2001; North and Weingast 1989; Olson 1993, 2000). Empirically, more democratic countries are found to have better property rights institutions than less democratic ones (see, e.g., Clague et al 1996). Better property rights protection reduces the risks of expropriation, contract repudiation, and government corruption for private businesses, which is shown to improve the investment environment for foreign investors (Li and Resnick 2003).

Democratic institutions also ensure government policy credibility for MNCs. As Jensen (2003) argues, because FDI is mobile *ex ante* but illiquid *ex post*, foreign investors are concerned not only about the safety of their private property but also value the credibility of the host government's policy regime. Host policies over taxation, trade, foreign exchange, and capital control all impact firm operations, investment decisions and returns (see, e.g. Guisinger 1985). The host government may attempt to design or modify these policies in ways that harm foreign investors. In democratic polity the existence of multiple veto players and institutional constraints make policy reversals difficult, reducing the political hazard for foreign investors and enhancing the host government policy credibility (Henisz 2000; Jensen 2003).

To the extent that the rule of law in democratic countries brings about stronger property rights protection and policy credibility, they only need to offer lower tax incentives to be equally attractive investment sites as autocratic hosts. If we consider tax incentives as contracts between host governments and foreign investors, we derive the same theoretical expectation for two reasons. First, consider such contracts as the outcomes of their negotiations. Their relative bargaining power

determines the level of tax incentives. According to the bargaining model in international business (see, e.g., Fagre and Wells 1982; Grieco 1982; Kobrin 1987), a better host institutional environment gives the host government more bargaining power vis-à-vis foreign firms. Because more democratic countries tend to have more credible rule of law in the eyes of the private sector, they are expected to be more likely to comply with the agreements they make (Simmons 2000). Therefore, they hold relatively more bargaining power vis-à-vis foreign firms than less democratic ones, implying less concession to foreign investors. Second, in more democratic countries, because the risk of contract repudiation tends to be lower, the risk adjusted returns from the incentive contract should be higher for investors, given the same level of incentives. Thus, for investors, lower levels of incentives in more democratic hosts are as attractive as higher levels of incentives in less democratic hosts.

Finally, it is worth noting that the difference in the institutional environment between democracy and autocracy is often confounded by regime changes. New regimes often are weak in property rights protection and policy credibility. For example, new democracy may be predatory over private property rights (Przeworski 1991). Stable autocracy with a long time horizon also may offer secure property rights (Clague et al 1996; Olson 1993, 2000). In the end, however, it is secure democratic institutions that are most credible and effective at protecting private property. Olson (2000) points out that the same institutional mechanisms that are essential for the survival of democracy, such as limited executive and independent judiciary, inherently implies stronger rule of law and secure private property rights, an advantage over even stable autocracy. As regime changes heighten uncertainty for foreign investors and reduce FDI inflows (Resnick 2001), countries that experience them will need to compensate investors due to credibility deficit.

**Hypothesis 1: More democratic regimes tend to have more credible rule of law, which in turn are associated with lower levels of tax incentives.**

**Hypothesis 2: Countries experiencing regime changes offer higher levels of tax incentives.**

## **Political Regime Type and Societal Conflict over Tax Incentive Policy**

Tax incentive policies have distributive consequences. They intensify the conflict of interest between the winners and losers FDI inflows produce in the host economy. Democracy and autocracy resolve such conflict of interest differently, causing variations across regime types in the level of tax incentives.

How does the entry of foreign capital produce winners and losers in the host economy? Compared with host firms, MNCs possess ownership-specific advantages in terms of intangible assets such as product innovations, management skills, marketing techniques and brand names. By establishing hierarchical control over production facilities across borders, MNCs protect their intangible assets, achieve economy of scale, and acquire internalization advantages over host firms (e.g., Caves 1996; Dunning 1988, 1993). These attributes produce competing forces.

On the one hand, certain individuals and groups in the host country benefit from the presence of multinational firms (see, e.g., Lipsey 2002). MNCs bring into the host capital, advanced technology, and managerial skills. They also may increase employment in the host country and mobilize local savings. MNCs also are argued to produce positive spillovers in terms of productivity, wage, and export in the host countries, especially those abundant in labor.

On the other hand, because MNCs are more productive and competitive, they threaten the survival of rival host firms (e.g., Gorg and Strobl 2003; Aitken and Harrison 1999). Since MNCs typically produce at lower marginal costs, they have an incentive to increase output and divert demand away from competing host firms. Forced to cut production and facing fixed production costs, host firms end up with higher average costs, lower productivity, and a reduced chance to survive. In addition, increased production by foreign rivals often causes output prices to decline, at

least in the short run, hurting the profitability and survival of host firms. MNCs may bid up wage demands in the host economy, again raising the local firm's average costs. FDI also may increase firms' elasticity of demand for labor, raising the volatility of wages and employment and making workers feel less secure (Scheve and Slaughter 2004). At the aggregate level, FDI stock, inflows and financial openness are found to raise income inequality in host countries (Quinn 1997; Reuveny and Li 2003), which further marginalizes low-income groups.

Tax incentives transfer resources and benefits from domestic tax payers to foreign investors and to those who benefit from foreign capital inflows. These incentives strengthen the competitiveness of incoming MNCs and their beneficiaries, but increase the risks and losses for those individuals and groups that lose due to foreign entry. Since benefits accruing from foreign entry do not necessarily go to compensate the losers, it is not surprising that tax incentives intensify the conflict of interest between the winners and losers in the host economy.

That FDI threatens rival host firms and raises inequality is not the only source of opposition to tax incentives to foreign investors. Tax incentives often erode the host tax base by benefiting investments that would have occurred anyway or by attracting investments that should not have taken place but occur due to the abuse of relevant laws and regulations (Zee, Stotsky and Ley 2002). They cause resentment by those who have to pay extra tax because of the revenue loss caused by incentive programs. Those who oppose the incentives will seek political recourse to their grievance and lobby against those policies, while the beneficiaries will lobby to support those programs. The resolution of such conflict of interest differs between regime types.

#### *Democracy and Societal Pressures*

Representative democracy implies that free and fair elections are held for the executive and legislative offices, that citizens have the right to vote and compete for public office and are entitled

to the freedom of association and expression (see, e.g., Dahl 1971, 1998). Politicians need to acquire enough votes from the electorate to win re-election and stay in office. Consequently, the size of the winning coalition in a democracy is large and the legislature consists of competing political interests. Therefore, public policymaking in general and tax incentive policy in particular are exposed to a wider range of societal influences in democracy than in autocracy. Opponents resort to regularly held elections, freedom of speech and association, political representation of local interests by legislators to question, criticize and reject government tax incentive policies (Li and Resnick 2003), while supporters employ the same means to praise, advocate and champion incentive programs. The level of tax incentives in a democracy results from the compromise between these two forces.

The relative preference intensity between the opponents and supporters is conditioned on the level of foreign capital inflows for several reasons. First, more FDI inflows do not necessarily strengthen the societal support for tax incentives. Where foreign firms pursue market monopoly and stifle competition, compete with host firms for local financing, and adopt overly capital intensive technologies, the benefits foreign firms bring to the host will be limited. Empirical evidence on the positive spillovers of FDI in productivity, wage, and export in the host economy is largely mixed and rarely robust (for relevant empirical evidence, see the reviews by Lipsey 2002 and Gorg and Greenaway 2004). These benefits often are shown to accrue to narrow and particular interests, mostly wholly foreign owned firms or joint ventures (see, e.g., Aitken and Harrison 1999). To the extent that benefits from FDI are neither robust nor widespread, support for foreign firms in the democratic host will be weak, and collective action in lobbying may be difficult and ineffective.

Second, the strength of the opposition to tax incentives is sensitive to the level of threat by foreign firms. More capital inflows bring in more foreign competition and increase the threat to competing host firms. The more competitive the foreign firms, the greater the threat to rival host firms, the stronger the opposition. As noted, more inflows also raise worker insecurity and income

inequality. The concentration and degree of losses increase the intensity of the opposition, facilitating their collective action in lobbying. Furthermore, those who bear additional financial burden due to incentive programs may use rising inflows to argue for either merely maintaining or curtailing the current level of incentives on grounds of equity and fairness. Therefore, on balance, more FDI inflows strengthen the opposition to incentive policies in the democratic host, reducing its level of tax incentives.

**Hypothesis 3: Democratic hosts that experience greater FDI inflows offer lower levels of tax incentives.**

#### *Autocracy and Elite Preference*

Autocratic regimes are characterized by narrow elite control and small winning coalition (see, e.g., Linz 2000). Their public policies bias in favor of the ruling elite. In autocracy, the outcome of the conflict between supporters and opponents of incentive programs depends on the preference of the ruling elite for foreign capital. While it is beyond the scope of this paper to construct a theory on the preference of the autocratic ruling elite for foreign capital, it suffices for the purpose of analyzing the effect of regime type to identify how different types of autocracies have different levels of tax incentives.

For this analysis, autocratic governments are conceptualized into two ideal types. In the first type, the ruling elite have a conflict of interest with foreign capital. The entry of foreign capital hurts the economic interest of the ruling elite. This type of autocratic government maintains restrictions over FDI inflows. Thus the host control over FDI inflows reveals the preference of the ruling elite. Where FDI inflows are restricted, it indicates that the ruling elite have a conflict of interest with foreign capital. Such an autocratic government tends to offer foreign investors little tax incentive or some incentives with strings attached.

In the second type of autocracy, the interest of the ruling elite coincides with that of foreign capital. This type of autocratic government does not restrict FDI inflows. The absence of restrictions over FDI inflows signals that the ruling elite take a welcoming attitude toward foreign capital. Such an autocratic government tends to offer foreign investors generous tax incentives to please the ruling elite.<sup>4</sup>

**Hypothesis 4: Autocratic governments that restrict FDI inflows offer lower levels of tax incentives than those that do not.**

It is worth noting that the policy over FDI inflows is employed to distinguish variations of the tax incentive level among authoritarian regimes. This is plausible to the extent that the focus of the paper is to explain variations of tax incentives across regime types. However, one should be aware that the policy over FDI inflows and the level of tax incentives are most likely correlates, both of which reflect the regime's more general attitude toward foreign investment. The empirical results should be interpreted accordingly. Future research may usefully explore why authoritarian regimes have different preferences for foreign capital.

### **Research Design: Data and Methods**

This section discusses the research design for an empirical test of the hypotheses regarding the effect of regime type on the level of tax incentives to foreign direct investors.

#### **Dependent Variable**

A main obstacle in studying investment incentives to foreign capital is the lack of systematic data on incentive policies. I collect data on tax incentive policies in 52 developing countries for the year 2001 from the U.S. Commercial Service and construct an ordinal measure of the latent level of tax incentives to foreign investors. The U.S. Commercial Service, founded in 1980, is the global

business solutions unit within the Department of Commerce. The Country Commercial Guides of its Non-Agricultural Market Research Reports contain information on the business, economic and political situation of foreign countries. The 2002 Country Commercial Guide has a chapter on the investment climate for each of the 52 countries in my sample, with a section on investment incentives as of 2001. A list of the 52 countries is included in the supplemental appendix posted on the journal website ([www.journalofpolitics.org](http://www.journalofpolitics.org)).

The sample includes only developing countries but excludes the advanced industrialized countries for several reasons. The industrialized countries tend to be important FDI origins and recipients at the same time. Investment promotion policies are often coordinated, especially among the EU members. Investment promotion policies also exhibit much larger variations within those countries. Hence, the causal process for these countries is likely to be qualitatively different from that in the developing world, warranting a separate future analysis.<sup>5</sup>

Data on six types of tax incentives are collected, including value added tax, corporate income tax, property tax, licensing fees, import duties, and sales tax.<sup>6</sup> For each host country, each of the six incentive types receives a value of 1 or 0, based on the presence or absence of a particular type of incentive in the country. Incentives on sales tax and value added tax may be applied to imported goods only (mostly capital goods for the manufacturing industry), or to exported goods only, or to all products or goods in general. In my empirical analysis, I focus on incentives that apply to all products because these policies affect a broader range of interests. Focusing on the general scope tax incentives also partially helps to resolve the problem that the incentive programs may carry restrictions with them. Robustness tests based on alternative constructions of the variable are conducted and presented in the supplemental appendix on the journal website ([www.journalofpolitics.org](http://www.journalofpolitics.org)).

I measure the level of tax incentives of each host country by summing its values on the six types of incentives into an index. The index ranges from 0 to 6, with larger values indicating higher levels of incentives. Because my focus is on the underlying continuum of the level of tax incentives, studying the index is more appropriate than investigating the disaggregated types separately.<sup>7</sup>

### **Independent Variables**

To test Hypothesis 1, I use the *rule of law* indicator for year 2000 from Kaufmann, Kraay and Mastruzzi (2003), which measures the degree to which agents have confidence in and abide by the rules of society, including perceptions of a large number of enterprise, citizen and expert survey respondents in industrial and developing countries of the incidence of violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. It is widely used in previous cross-national research as an indicator of property rights protection and governance quality (see e.g., Oliva and Rivera-Batiz 2002; Kaufmann and Aart 2002).

The variable *transition* for testing Hypothesis 2 is coded 1 if a country has experienced a major regime change, defined as a three-point change in the POLITY score, in the last three years before 2001, and 0 otherwise. It is based on the durability variable from the POLITY IV database (Marshall and Jagers 2000).

Testing Hypotheses 3 and 4 requires separating democratic and autocratic countries. A country is defined for year 2000 as a democracy (or autocracy) if the widely-used composite indicator of regime type from POLITY IV (Marshall and Jagers 2000), computed as the difference between the 10-point democracy index (DEMOC) and the 10-point autocracy index (AUTOC), is greater than or equal to 6 (or smaller than or equal to -6).<sup>8</sup> The variable *democracy* is coded 1 if a country is democratic and 0 otherwise. The interaction term between *democracy* and the level of FDI inflow<sup>9</sup> into the host country is created. These two terms together test Hypothesis 3. *Autocdir* is

coded 1 if a country is an autocracy and maintains restrictions on FDI inflows and 0 otherwise, while *autocfdio* is coded 1 if a country is an autocracy but has no restriction on FDI inflows and 0 otherwise.<sup>10</sup> These two variables allow us to test Hypothesis 4.

### **A Latent Variable Model of the Level of Tax Incentives**

Conceptually, the level of tax incentives has an underlying continuum and should be a continuous variable, but the continuum is unobservable and latent. What is observable is the additive index from 0 to 6 that measures the rank order of the level of tax incentives. The observable variable does not imply equal distance between index values like an interval measure and hence, should be treated as an ordinal indicator.

The latent model is specified as follows:

$$y_i^* = \beta_0 + \beta_1 \text{Rule of Law}_i + \beta_2 \text{Transition}_i + \beta_3 \text{Democracy}_i + \beta_4 (\text{Democracy}_i * \text{Inflow}_i) + \beta_5 \text{Inflow}_i + \beta_6 \text{Autocfdir}_i + \beta_7 \text{Autocfdio}_i + \beta_8 \text{Control}_i + \varepsilon_i$$

where  $y_i^*$  is the continuous latent variable—the level of tax incentives of country  $i$ ,  $\beta$  is the vector of unknown parameters for the independent variables and various control variables, and  $\varepsilon_i$  is the error term, normally distributed with mean zero.  $\beta_1$  measures the effect of the rule of law on the level of tax incentives, while  $\beta_2$  measures the difference in the level of tax incentives between a country going through regime change and one that does not.  $\beta_1$  should be negative based on Hypothesis 1, while  $\beta_2$  should be positive based on Hypothesis 2.

The total effect of being a democracy, relative to the excluded reference semi-regime (semi-democratic or semi-autocratic) country, is  $(\beta_3 + \beta_4 \text{Inflow}_i)$ , that is, conditional on the level of FDI inflows. Since the inflow variable is centered,  $\beta_3$  is the difference in the level of tax incentives between a democracy at the mean level of inflows and the semi-regime country.  $\beta_4$  is the effect of

FDI inflows on the level of tax incentives in democracies.  $\beta_3$  and  $\beta_4$  in particular should be negative based on Hypothesis 3.  $\beta_5$  is the effect of FDI inflows for the semi-regime countries (i.e., when the variable *democracy* equals zero). As the model is interactive, FDI inflows by itself also needs to be included. Countries that experience more inflows and are more open to foreign capital are more likely to respond to tax competition (Mutti 2003), offering higher levels of tax incentives.  $\beta_5$  should be positive.

$\beta_6$  is the difference in the level of tax incentives between an autocracy that restricts FDI inflows and the excluded reference—the semi-regime country, while  $\beta_7$  is the difference between an autocracy that does not restrict foreign entry and the semi-regime country. Hypothesis 4 leads us to expect that  $\beta_6 < \beta_7$ .

Instead of  $y_i^*$ , we observe an ordinal indicator of the level of tax incentives, denoted as  $y_i$ , which is related to  $y_i^*$  as follows:

$$\begin{aligned}
 y_i &= 0 \text{ if } y_i^* \leq \mu_0 \\
 &= 1 \text{ if } \mu_0 < y_i^* \leq \mu_1 \\
 &= 2 \text{ if } \mu_1 < y_i^* \leq \mu_2 \\
 &= 3 \text{ if } \mu_2 < y_i^* \leq \mu_3 \\
 &= 4 \text{ if } \mu_3 < y_i^* \leq \mu_4 \\
 &= 5 \text{ if } \mu_4 < y_i^* \leq \mu_5 \\
 &= 6 \text{ if } \mu_5 < y_i^*
 \end{aligned}$$

where  $y_i$  is the observed index of tax incentives,  $\mu$  is a vector of unknown threshold parameters to be estimated together with the  $\beta$  vector, with 7 ordered categories from 0 to 6. Hence, ordered probit is employed to estimate the effects of the explanatory variables on the latent variable.<sup>11</sup> Since the hypotheses are directional, one-tailed test is applied.

Huber/White robust standard errors adjusted for clustering over region are estimated. These estimated standard errors are robust to both heteroskedasticity and to a general type of correlation within region (Rogers 1993; Williams 2000). Policy behaviors of states with the same

region often affect each other. The robust standard errors clustered over region remain consistent in the presence of such correlation.

### **Control Variables**

I use two variables *external pressure* and *external pressure*<sup>2</sup> to directly model the effect of interstate competition. As noted, as countries bid offers to attract foreign capital, their tax incentive policies become interdependent. Such competition often occurs among countries in the same geographical region because they share similar resource endowments and cultural conditions (e.g. Guisinger 1985; Sweeney 1993).<sup>12</sup> But because tax incentives are costly, implying an immediate loss of revenues, the host has to deal with resource scarcity and budget constraint. This implies that the host government is not able to respond to international competition with unlimited tax incentives. Thus, its tax incentive provision is likely to decline once above a threshold. To model the non-linear effect of international competition, the average level of the tax incentive index of all countries in a country's region<sup>13</sup> *external pressure* and its squared term are applied. The *external pressure* should have a positive effect while its squared term should have a negative effect.

I also control for the size of the host economy and its level of economic development. The size of the host economy may be related to the level of tax incentives in multiple ways (Guisinger 1985, 35-6). Large countries tend to have large markets that attract investors and possess more bargaining power vis-à-vis foreign investors. In addition, large countries may have multi-level government agencies (national, regional, and local) that each have some regulatory power, rendering the coordination of incentive policies among them difficult. In contrast, small countries have smaller markets and have to pursue foreign capital actively. They also have centralized authority and are able to coordinate their incentive policies internally. Hence, the size of the host economy can be negatively related to the level of tax incentives. The size of the host economy is measured by its

gross domestic product, an indicator of market size in many studies of FDI (e.g., Chan and Mason 1992). The variable is converted to international dollars using purchasing power parity rates (PPP) and log transformed. Data are from the World Bank's *World Development Indicators*. The possible effect of federalism is directly assessed in the robustness test, which is discussed in detail later.

Economic development may have competing effects on tax incentives. On the one hand, only countries with the ability to be highly productive can afford to use tax holidays (Bond and Samuelson 1986). More developed countries are able to offer more generous incentives. On the other hand, more developed countries have better infrastructures and investment environments. Since tax holidays signal to potential investors the high nontax costs in operating a subsidiary in the holiday-granting country (Shah and Toye 1978), more developed countries are as attractive as less developed ones with lower levels of incentives. The level of development is measured as logged, PPP-based GDP per capita. Data are from the World Bank's *World Development Indicators*.

## Findings

Table 1 presents the statistical results. Model 1 includes the *rule of law* and *transition* variables, Model 2 adds *democracy*, *inflow* and their interaction term, Model 3 further adds *autocfdir*, *autocfdio*, and their inequality test, and Model 4 is Model 3 plus the controls. The model specification follows a specific-to-general approach.

### [Table 1 about here]

The findings for the key variables are consistent across the models. The effect of the rule of law is statistically significant and negative as expected. Countries that have better rule of law offer foreign investors lower levels of tax incentives. A regression of the rule of law variable on the level of democracy, reported in the footnote, shows that more democratic countries have better rule of

law, as expected in the literature.<sup>14</sup> These results support Hypothesis 1 that more democratic regimes have more credible rule of law and as a result are associated with lower levels of incentives.

The effect of regime change is not statistically significant in any of the models in Table 1. The result does not support Hypothesis 2. Countries that have recently experienced major regime changes do not necessarily offer more generous tax incentives. The finding is not surprising. Since Hypothesis 2 is temporal in nature, it may need to be tested in a pooled design.<sup>15</sup>

The coefficient of the *democracy* variable is statistically significant and negative. A democracy with mean level FDI inflows offers a lower level of tax incentives than the semi-regime country. More important, the coefficient for the interactive term is statistically significant and negative, as expected. Democratic countries that experience more FDI inflows have lower levels of tax incentives than those with less FDI inflows. The result supports Hypothesis 3.

The effect of FDI inflow by itself is positive and significant as expected. FDI inflows in the semi-regime countries lead to higher levels of tax incentives. The result is consistent with Mutti's (2003) finding from a sample of 59 countries that those with open trade and investment policies tend to reduce both statutory and effective corporate tax rates. One possible interpretation is that more success in attracting foreign capital reinforces the push for more generous incentives.

The difference in the level of incentives between an autocracy that restricts foreign entry and one that does not is statistically significant. The finding supports Hypothesis 4 that autocratic governments that restrict FDI inflows offer lower levels of tax incentives than those that do not. In addition, the difference in the level of tax incentives between an autocracy that restricts FDI inflows and the semi-regime country is not statistically significant in Model 3, but is significant and negative when the control variables are included in Model 4. Not surprisingly, an autocracy that restricts FDI inflows adopts less generous tax incentives than the semi-regime country. In contrast, there is not a

statistically significant difference in the level of incentives between an autocracy that does not restrict foreign entry and the semi-regime country.

The control variables also produce interesting results. The interstate competition variables behave as expected. External pressure is positive and significant while its squared term is negative and significant. As countries in a region adopt more generous tax incentives, the competitive pressures will lead a country to follow suit. But the effect of such competitive pressures is not linear and tends to decline once above a threshold level. The result supports the general expectation in the literature, with the qualification that the effect is non-linear.

Country size and the level of development are statistically insignificant. Larger countries do not appear to offer higher levels of tax incentives than smaller ones. More developed countries do not appear to offer more generous incentives than less developed ones. One possible interpretation of the latter result is that the negative compensating effect of favorable nontax cost conditions in a more developed country may have cancelled out the positive effect from that the country also possesses more resources to extend generous incentives.

Extensive robustness tests are conducted to verify the main results reported in Table 1 above. These tests are reported in the supplemental appendix on the journal web site. Here I provide a brief summary of those tests. Interested readers should consult the appendix for details. First, some may suspect that the results on the democracy-related variables are an artifact of the failure to control for federalism. I use two different measures of federalism in the robustness test. Second, one may wonder if the labor endowment conditions in a country have confounded the effects of regime type reported in Table 1. I construct a measure of the labor-capital ratio for each country to test this possibility. Third, it is suggested that the natural resource endowment conditions may confound the effects of regime type reported in Table 1. I employ a resource variable to test this possibility. Fourth, national governments sign a lot of bilateral investment treaties, which may

correlate with the rule of law and affect tax incentives. In the robustness test, I control for the number of bilateral investment treaties by each country. Fifth, I test whether the results in Table 1 are sensitive to the alternative measure of tax incentives that also includes incentives that apply to imported or exported goods only. Finally, the dichotomous coding for each tax incentive type does not measure the magnitude of each particular incentive. I test whether the results in Table 1 are an artifact of this possibility. Throughout these robustness tests, the effects of all the key variables (*rule of law*, *transition*, *democracy*, *FDI inflow*, their interaction term, *autocfdir*, *autocfdio* and their inequality test) remain largely robust and broadly consistent with those reported in Table 1.

### **Conclusion**

While tax incentives to foreign investors have been widely discussed, adopted and debated, scholars know very little about the political mechanisms that generate such policies. This analysis argues that the nature of host political system affects the level of tax incentives. Evidence from a cross-national analysis of 52 developing countries supports my main theoretical expectations. Countries with better rule of law offer lower levels of incentives, an effect that is more pronounced in more democratic countries. In addition, in democratic countries, FDI inflows are negatively associated with the level of tax incentives. Furthermore, autocratic regimes that maintain restrictions over foreign entry adopt lower levels of incentives than those without such restrictions. These results are robust in a battery of sensitivity analyses.

Analysis in this article sheds light on several debates on tax incentives to foreign investors. As discussed in various studies and the media, tax incentives involve controversial issues (see, e.g., Broadway and Shah 1995; Oman 2000; Thomas 2000; Zee, Stotsky and Ley 2002). First, investment incentives represent a form of state interference with the capital market. If the market is perfectly competitive and behaves efficiently, investment incentives distort the efficient allocation of

resources in the host economy. Second, there often is the concern that re-election oriented politicians favor generous tax incentives because they pursue the latter's financial support, rather than for the sake of maximizing social welfare. Also, bureaucrats may engage in corruptive practices because incentive programs are not monitored closely and their costs remain unknown to the public. Third, tax incentives also involve equity issues. Capital income is treated more favorably than labor income, worsening the income inequality between capital and labor. Fourth, the bidding war for foreign capital causes a race to the bottom phenomenon in tax incentive policy, shrinking the financial resources of the host countries and hurting their interests in the long run. Finally, tax incentives appear to be part of the global trend toward cutting corporate taxes, which shifts tax burdens to the middle class and the poor, weakening the political power of these groups and undermining democratic governance.

One implication of this analysis is that to the extent that FDI is conducive to the host economy, the more cost-effective strategy to attract foreign capital is by building and strengthening the governance institutions in a country. Improving the rule of law is a first-best policy choice. It improves the investment environment for domestic as well as foreign investors. It also helps to reduce the severity of possible economic and political problems the adoption of tax incentives may bring about. These implications are consistent with the spirit of the increasingly large literature in political economy regarding the fundamental role of governance institutions in many issue areas. This paper contributes to that burgeoning literature by looking at an issue area where the effect of the rule of law has never been investigated before.

Another important implication of this analysis is that democratic countries are more likely to avoid some of the pitfalls created by investment promotion programs. More likely to provide better rule of law, the democratic country can offer a lower level of incentives without reducing its attractiveness to foreign investors. The negative effect of democracy conditional on the level of

inflows, however, further dampens the generosity of incentive programs by the democratic government. While these effects together may lead to an incentive package less attractive to foreign investors, the political gain is that the forces opposing to foreign firms may not be as alienated as in other regimes. It also shows that institutional checks and balances are at work and prevent an all-out race to the bottom. Furthermore, these democratic countries may experience less state interference in the capital market, less misallocation of resources, less rent-seeking behaviors of politicians and bureaucrats, and less income inequality, all of which arguably are associated with generous incentive programs.

This analysis also highlights the importance of variations among autocratic countries in an important policy area. Not all autocracies adopt the same incentive policy. The evidence shows how elite preference drives policy outcomes across autocratic regimes. The absence of checks and balances accounts for both the low level of incentives in the autocratic country that restricts foreign entry and the high level of incentives in the autocracy that permits free foreign entry.

The race to the bottom effect is shown to be more complex than commonly believed. The effect of interstate competitive pressures exhibits a curvilinear pattern that has largely been overlooked in the literature. A country's level of tax incentives rises with growing external pressures, but the effect is non-linear. The evidence is consistent with the view that the state still retains some policy autonomy in the presence of growing external influence.

Analysis in this article is by no means final on this important policy issue. Future research could fruitfully address many related issues. For example, scholars could consider constructing a panel dataset of tax incentives to test whether the proposed theory explains temporal variations in tax incentive policies. Scholars also could look at whether countries such as Brazil, Argentina, and Chile offer different levels of tax incentives before and after their respective democratic transitions. One could also examine the policy differences among parliamentary and presidential democracies

and investigate the effects of the ruling party's ideology, the intensity of partisan competition, the autonomy and power of the state's administrators, and the extent of a welfare safety net. To address these questions, new theoretical arguments need to be constructed and new data have to be collected. These future efforts will help us better manage an important policy instrument and better understand broader political implications of economic globalization.

## References

- Abrahamson, John. 1996. "Planning for Foreign Investment." *International Tax Review* 7(2): 32-36.
- Aiken, Leona S., and Steve G. West. 1991. *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Aitken, Brian and Anne Harrison. 1999. "Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela." *American Economic Review* 89(3): 605-18.
- Ashiabor, Hope. 1996. "The Taxation of Foreign Investments in Developing Countries under the Treaty Regime: The African Experience." *International Tax Journal* 22(4): 69-99
- Bates, Robert H. 2001. *Prosperity and Violence*. New York: Norton.
- Beck, Thorsten, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh. 2001. "New tools in comparative political economy: The Database of Political Institutions." *World Bank Economic Review* 15(September): 165-76.
- Bond, Eric, and Larry Samuelson. 1986. "Tax Holidays as Signals". *American Economic Review* 76 (September): 820-826.
- Breton, Albert. 1991. "The Existence and Stability of Interjurisdictional Competition." In *Competition among States and Local Governments: Efficiency and Equity in American Federalism*, eds. D. A. Kenyon, and J. Kincaid. Washington, DC: The Urban Institute.
- Broadway, Robin and Anwar Shah. 1995. "Perspectives on the Role of Investment Incentives in Developing Countries." In *Fiscal Incentives for Investment and Innovation*, eds. A. Shah. Oxford: Oxford University Press.
- Cannon, Phillippa. 1996. "Europe Competes for Investors." *International Tax Review* 7(2): 15-19.
- Caves, Richard E. 1996. *Multinational Enterprise and Economic Analysis*. Cambridge: Cambridge University Press.
- Chan, Steve and Melanie Mason. 1992. "Foreign Direct Investment and Host Country Conditions: Looking from the Other Side Now." *International Interactions* 17 (3): 215-32.
- Clague, Christopher, Philip Keefer, Stephen Knack and Mancur Olson. 1996. "Property and Contract Rights in Autocracies and Democracies." *Journal of Economic Growth* 1(2): 243-76.
- Dahl, Robert A. 1971. *Polyarchy: Participation and Opposition*. New Haven: Yale University Press.
- Dahl, Robert A. 1998. *On Democracy*. New Haven: Yale University Press.
- Dean, Genevieve. 1988. "Investment Incentives throughout Asia." *The China Business Review* 15(2): 49-52.
- Dixon, William J. 1994. "Democracy and the Peaceful Settlement of International Conflict." *American Political Science Review* 88: 14-32.
- Dunning, John. 1988. *Explaining International Production*. London: Unwin Hyman.

- Dunning, John. 1993. *Multinational Enterprises and the Global Economy*. New York: Addison-Wesley.
- Fagre, Nathan and Louis T. Wells. 1982. "Bargaining Power of Multinationals and Host Governments." *Journal of International Business Studies* 13(2):9-23.
- Flochel, Lourent and Thierry Madies. 2002. "Interjurisdictional Tax Competition in a Federal System of Overlapping Revenue Maximizing Governments." *International Tax and Public Finance* 9: 121-41
- Frieden, Jeffrey A. 1994. "International Investment and Colonial Control: A New Interpretation." *International Organization* 48 (4): 559-93.
- Gorg, Holger and Eric Strobl. 2003. "Multinational Companies, Technology Spillovers and Plant Survival: Evidence for Irish Manufacturing." *Scandinavian Journal of Economics* 105(4): 581-95.
- Gorg, Holger and David Greenaway. 2004. "Much Ado about Nothing? Do Domestic Firms Really Benefit From Foreign Direct Investment?" *World Bank Research Observer* 19: 171-97.
- Greene, William. 2000. *Econometric Analysis*. Upper Saddle River, N.J.: Prentice Hall.
- Grieco, Joseph. 1982. "Between Dependency and Autonomy: India's Experience with the International Computer Industry." *International Organization* 36(3): 609 - 32.
- Guisinger, Stephen. 1985. *Investment Incentives and Performance Requirements, Patterns of International Trade, Production, and Investment*. New York: Praeger.
- Haaland, Jan I. and Ian Wooton. 1999. "International Competition for Multinational Investment." *Scandinavian Journal of Economics* 101(4): 631-49.
- Henisz, Witold. 2000. "The Institutional Environment for Multinational Investment." *Journal of Law, Economics and Organization* 16(2): 334-64.
- IMF. 2001. *Annual Report on Exchange Arrangements and Exchange Restrictions*. Washington, DC: International Monetary Fund.
- Janeba, Eckhard. 2002. "Attracting FDI in a Politically Risky World." *International Economic Review* 43(4): 1127-55.
- Jensen, Nathan. 2003. "Democratic Governance and Multinational Corporations: The Political Economy of Foreign Direct Investment." *International Organization* 57(3): 587-616.
- Kaufmann, Daniel, A. Kraay, and M. Mastruzzi. 2003. "Governance Matters III: Governance Indicators for 1996–2002." World Bank Policy Research Working Paper 3106.
- Kaufmann, Daniel and Aart Kraay. 2002. "Growth Without Governance." *Economia* 3(1):169-229.
- Kenyon, Daphne A. 1997. "Theories of Interjurisdictional Competition." *New England Economic Review* March/April 1997: 13-28.
- Kobrin, Stephen J. 1984. "Expropriation as an Attempt to Control Foreign Firms in LDCs: Trends from 1960 to 1979." *International Studies Quarterly* 28 (3): 329-48.

- Kobrin, Stephen J. 1987. "Testing the Bargaining Hypothesis in the Manufacturing Sector in Developing Countries." *International Organization* 41(4): 609-38.
- Levy, David L. and Aseem Prakash. 2003. "Bargains Old and New: Multinational Corporations in Global Governance." *Business and Politics* 5(2): 131-50
- Li, Quan and Adam Resnick. 2003. "Reversal of Fortunes: Democracy, Property Rights and Foreign Direct Investment Inflows in Developing Countries." *International Organization* 57(1): 175-214.
- Linz, Juan. 2000. *Totalitarian and Authoritarian Regimes*. Boulder, CO: Lynne Rienner.
- Lipsey, Robert. 2002. "Home and Host Country Effects of FDI." NBER Working Paper 9293.
- Long, J. Scott. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks, CA: Sage Publications.
- Long, J. Scott and Jeremy Freese. 2001. *Regression Models for Categorical Dependent Variables Using Stata*. College Station, TX: Stata Press.
- Marshall, Monty G. and Keith Jagers. 2000. "Polity IV Project: Political Regime Characteristics and Transitions, 1800-1999." Center for International Development and Conflict Management, University of Maryland. ([www.bsos.umd.edu/cidcm/inscr/polity/index.htm](http://www.bsos.umd.edu/cidcm/inscr/polity/index.htm))
- Meister, Norbert. 1993. "Germany Attempts to Lure Foreign Investors." *International Tax Review* 4(9): 29-30.
- Moran, Theodore. 1999. *Foreign Direct Investment and Development*. Washington DC: Institute for International Economics.
- Mutti, John H. 2003. *Foreign Direct Investment and Tax Competition* Washington, D.C.: Institute for International Economics.
- Nehru, Vikram and Ashok Dhareshwar. 1993. "A New Database on Physical Capital Stock: Sources, Methodology and Results." *Rivista de Analisis Economico* 8(1): 37-59
- North, Douglass C. and Barry R. Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutional Governing Public Choice in Seventeenth-Century England." *Journal of Economic History* 49(4): 803-32.
- Oates, Wallace E. 2001. "Fiscal Competition or Harmonization? Some Reflections." *National Tax Journal* LIV(3): 507-12.
- Oliva, Maria-Angels and Luis A. Rivera-Batiz. 2002. "Political Institutions, Capital Flows, and Developing Country Growth: An Empirical Investigation." *Review of Development Economics* 6(2): 248-62.
- Olson, Mancur. 1993. "Dictatorship, Democracy, and Development." *American Political Science Review* 87(3):567-76.
- Olson, Mancur. 2000. *Power and Prosperity*. New York: Basic Books.

- Oman, Charles. 2000. *Policy Competition for Foreign Direct Investment*. Paris: OECD.
- Porcano, Thomas and Charles E. Price. 1996. "The Effects of Government Tax and Nontax Incentives on Foreign Direct Investment." *Multinational Business Review* 4(Spring): 9-19.
- Przeworski, Adam. 1991. *Democracy and the Market*. New York: Cambridge University Press.
- Quinn, Dennis. 1997. "The Correlates of Change in International Financial Regulation." *American Political Science Review* 91 (3):531-51.
- Rauscher, Michael. 1998. "Leviathan and Competition among Jurisdictions: The Case of Benefit Taxation." *Journal of Urban Economics* 44: 59-67.
- Resnick, Adam L. 2001. "Investors, Turbulence, and Transition: Democratic Transition and Foreign Direct Investment in Nineteen Developing Countries." *International Interactions* 27 (4): 381-98.
- Reuveny, Rafael and Quan Li. 2003. "Economic Openness, Democracy and Income Inequality: An Empirical Analysis." *Comparative Political Studies*. 36 (5): 575-601.
- Rhodes, Anne. 1999. "Iran Pressing Fiscal Incentives, Assurances to Attract Investors to its Petrochemical Sector." *Oil & Gas Journal* 97(33): 20-24.
- Rogers, W. H. 1993. "Regression Standard Errors in Clustered Samples." [\*Stata Technical Bulletin\*](#) 13: 19–23. Reprinted in [\*Stata Technical Bulletin Reprints\*](#) 3: 88-94.
- Rolfe, Robert J. and Richard A. White. 1992. "Investors' Assessment of the Importance of Tax Incentives in Locating Foreign Export-Oriented Investment: An Exploratory Study." *The Journal of the American Taxation Association* 14(Spring): 39-57.
- Rondinelli, Dennis and William J. Brupitt. 2000. "Do Government Incentives Attract and Retain International Investment? A Study of Foreign-owned Firms in North Carolina." *Policy Sciences* 33(2): 181-205
- Scheve, Kenneth and Matthew J. Slaughter. 2004. "Economic Insecurity and the Globalization of Production." *American Journal of Political Science* 48(4): 662-74.
- Shah, S. M. S., and J. F. J. Toye. 1978. "Fiscal Incentives for Firms in Some Developing Countries: Survey and Critique." In *Taxation and Economic Development*, eds. J. M. J. Toye. London, UX: Frank Cass & Co. Ltd.
- Simmons, Beth. 2000. "International Law and State Behavior: Commitment and Compliance in International Monetary Affairs." *American Political Science Review* 94(4): 819-35.
- Simmons, Beth and Zachary Elkins. 2004. "The Globalization of Liberalization: Policy Diffusion in the International Political Economy." *American Political Science Review* 98(1): 171-89.
- Single, Louise. 1999. "Tax Holidays and Firms' Subsidiary Location Desires." *The Journal of the American Taxation Association* 21(2): 17-34.
- Stopford, John, and Susan Strange. 1991. *Rival States, Rival Firms: Competition for World Market Shares*.

Cambridge: Cambridge University Press.

- Sweeney, Richard J. 1993. "The International Competition for Investment." In *The Global Race for Foreign Direct Investment: Prospects for Future*. eds. Lars Oxelheim. New York: Springer-Verlag.
- Tan, Peter. 1997. "Tax Tempts Banks to Singapore." *International Tax Review* 8(3): 29-30.
- Thomas, Kenneth P. 2000. *Competing for Capital: Europe and North America in a Global Era*. Washington D. C.: Georgetown University Press.
- Treisman, Daniel. 2000. "Decentralization and Inflation: Commitment, Collective Action, or Continuity?" *American Political Science Review* 94(4): 837-57.
- Tung, Samuel and Stella Cho. 2001. "Determinants of Regional Investment Decisions in China: An Econometric Model of Tax Incentive Policy." *Review of Quantitative Finance and Accounting* 17: 167-85
- Turkenburg, Mariette. 1993. "The Netherlands Woos Foreign Investors." *International Tax Review* 4(9): 31-2.
- Westbrook, John. 1996. "Taiwan Targets Investors." *Chemical Week* 158(29): 42.
- Williams, R. L. 2000. "A Note on Robust Variance Estimation for Cluster-Correlated Data." *Biometrics* 56: 645-46.
- World Bank. 2002. *World Development Indicators CD-ROM*. Washington, D.C.: World Bank.
- Yun, Ando. 2001. "Korea." *International Tax Review* 2: 51-56.
- Zee, Howell H., Janet G. Stotsky and Eduardo Ley. 2002. "Tax Incentives for Business Investment: A Primer for Policy Makers in Developing Countries." *World Development* 30(9):1497-516.

**Table 1 Effect of Political Regime Type on Level of Tax Incentives**

<i>Variable</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Rule of law	-0.331** (0.098)	-0.376** (0.204)	-0.422** (0.214)	-0.417** (0.198)
Transition	-0.275 (0.496)	-0.391 (0.658)	-0.413 (0.748)	-0.120 (0.723)
Democracy	--	-0.906** (0.168)	-0.990** (0.232)	-0.551** (0.245)
Democracy*Inflow	--	-0.133** (0.039)	-0.141** (0.049)	-0.223** (0.043)
Inflow	--	0.123** (0.019)	0.131** (0.026)	0.210** (0.022)
Autocfdir	--	--	-0.397 (0.768)	-1.817** (0.794)
Autocfdio	--	--	0.072 (0.782)	0.693 (0.851)
Autocfdir < Autocfdio	--	--	21.07**	39.84**
External pressure	--	--	--	1.042** (0.148)
External pressure <sup>2</sup>	--	--	--	-0.033** (0.005)
Development	--	--	--	0.120 (0.188)
Size	--	--	--	0.053 (0.110)
$\mu_0$	-0.806 (0.289)	-1.562 (0.296)	-1.653 (0.363)	7.220 (1.570)
$\mu_1$	-0.278 (0.282)	-1.054 (0.242)	-1.142 (0.348)	7.782 (1.678)
$\mu_2$	0.732 (0.214)	0.058 (0.352)	-0.058 (0.399)	9.043 (1.880)
$\mu_3$	1.374 (0.152)	0.820 (0.331)	0.728 (0.339)	9.953 (2.061)
$\mu_4$	1.714 (0.259)	1.334 (0.295)	1.251 (0.353)	10.534 (2.195)
$\mu_5$	2.006 (0.419)	2.533 (0.312)	2.446 (0.265)	12.018 (1.904)
N	53	52	51	51

\*\* p<0.05; \* p<0.1. Robust standard errors in parentheses.

## Endnotes:

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<sup>1</sup> In the public finance literature, a lot of theoretical work (e.g., Kenyon 1997; Rauscher 1998; Oates 2001; Breton 1991) uses Tiebout type of models to examine interjurisdictional tax competition among state and local governments in the US or among member nations in the EU. Future research may study how this type of models helps us understand interstate competition over tax incentives.

<sup>2</sup> Broadly related conceptually, Levy and Prakash (2003) examine the role of MNCs in international governance by looking at the MNC preference for both market-enabling and regulatory regimes, as well as the location of authority at international, national and private levels.

<sup>3</sup> Other non-tax investment promotion incentives include financial incentives (e.g. government grants, preferential credits) and non-financial ones (e.g., dedicated infrastructure and services). I focus on fiscal incentives because they are most prominent both in the public policy circle and the academic literature. They also are more comparable cross-nationally than other types of incentives.

<sup>4</sup> Arguably some autocracy may welcome foreign capital that can strengthen their own domestic interest (e.g., forming joint ventures in the ruling-elite controlled industry), but oppose to offering incentives to all foreign companies alone. This type of autocracy, however, will most likely allow foreign entry selectively and offer conditional incentives only, thus still belonging to the first ideal type. However, I acknowledge that while the conceptualization of two ideal types of autocracies is useful for this analysis, it is not perfect, but delimiting in nature.

<sup>5</sup> See Oman (2000) for further discussion.

<sup>6</sup> Two separate coders are used to ensure that the coding of the dependent variable is consistent.

<sup>7</sup> Different types of tax incentives can be substitutes or complements. One may argue for examining different types of incentives separately. For the purpose of this paper, a disaggregated analysis does not bring much value added, but complicates the analysis unnecessarily.

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<sup>8</sup> The cutoff value follows the conventional practice in the political science literature (see, e.g., Dixon 1994).

<sup>9</sup> FDI inflows are those investments that acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. Data are for year 2000 from the *World Development Indicators*. To reduce collinearity and facilitate interpretation, the variable is centered following the suggestion of Aiken and West (1991).

<sup>10</sup> Data on FDI inflow restriction for year 2000 are collected from IMF (2001).

<sup>11</sup> See Greene (2000), Long (1997) and Long and Freese (2001) for discussions of treating the ordinal regression model as a latent variable model.

<sup>12</sup> While region is chosen as the grouping basis here, there may be other ways to group countries. For example, countries may compete more vigorously with those in the similar development stage. Future research should take a closer look at these issues. See Simmons and Elkins (2004) for a discussion of various mechanisms of liberal economic policy diffusion, including regional pressures.

<sup>13</sup> The regions include Europe, Middle East, Africa, Asia, and North and South America.

<sup>14</sup> The OLS regression of the rule of law for the developing countries is as follows, with \*\* denoting 5% level statistical significance and robust standard errors in parentheses:

$$\text{Rule of Law} = -0.455 + 0.036*\text{Level of democracy} + 0.279*\text{Regime durability} - 0.015*\text{Population}$$

(0.916) (0.016)\*\* (0.093)\*\* (0.044)

<sup>15</sup> Alternative measures of regime changes, such as continuous regime duration or only regime changes passing the democratic regime cutoff on the POLITY score, do not change this finding.

**Web Appendix for  
Democracy, Autocracy, and Tax Incentives to Foreign Direct Investors:  
A Cross-National Analysis**

This web-appendix reports a number of additional tests for verifying the robustness of the results reported in Table 1. The sensitivity analyses are reported in Table 2.

First, one may argue that in federalist countries, subnational governments often compete with each other and with the central government in offering incentives. If democracies are more likely to be decentralized than autocracies, the empirical finding that democracies offer lower levels of incentives could be an artifact of fiscal decentralization and the competition between the central and local governments and among the local governments.<sup>1</sup> Models 1 and 2 test this possibility using two different measures of federalism, respectively. The first measure *federalism1* is coded 1 if a country has a constitutionally guaranteed division of power between central and regional governments with autonomy in at least one area for each level of governance and 0 otherwise, following Treisman (2000). The second measure *federalism2* is coded 1 if the provincial level government has authority over taxing, spending, or legislating and 0 otherwise, taken from Beck et al. (2001). *Federalism1* is statistically insignificant in Model 1 while *federalism2* is statistically significant and positive in Model 2. The findings are reasonable. A general type of federalism is not associated systematically with tax incentives. But fiscal decentralization itself brings about higher levels of incentives, a result consistent with the theoretical proposition of Flochel and Madies (2002). More important, with decentralization controlled for in both models, the effects of all the key variables

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<sup>1</sup> In a theoretical model of tax competition between two overlapping governments (federal and local) sharing the same tax base, Flochel and Madies (2002) show that interjurisdictional tax competition reduces the global tax rate set by both federal and local governments. Tung and Cho (2001) empirically show that areas in China that offer lower tax rates and higher tax incentives attract more FDI.

(*rule of law*, *transition*, *democracy*, *FDI inflow*, their interaction term, *autocdir*, *autocdio* and their inequality test) remain robust and consistent with those in Table 1.

Second, one may suspect that the labor endowment conditions may have either confounded or motivated the regime type results in Table 1. On the one hand, many of the developing countries in the sample are labor abundant. Because the abundant factor labor arguably benefits from FDI in terms of more jobs, higher productivity and wage rates, labor may support tax incentives that encourage FDI inflows. Democratic governments that seek labor's political support will adopt more generous incentive programs. Hence, the results on democracy in Table 1 should be stronger once we control for labor endowment. On the other hand, in some democratic developing countries, opposition to FDI may also come from labor unions, thus resulting in populist government policies. The regime type effects in Table 1 may have originated from labor opposition in democracy. I need to evaluate whether it is labor's influence that drives the regime type results. Furthermore, MNCs may be attracted to labor abundant countries because they can exploit low-cost labor and use these countries as export platforms. This may motivate a type of compensating effect similar to that produced by the rule of law. To assess whether labor endowment affects the findings in Table 1, Model 3 employs the commonly-used measure, the labor-capital ratio, which is computed as a country's population between ages 15 and 64 divided by its total physical capital stock in 1987 constant dollars, log transformed to address skewed distribution.<sup>2</sup> High values of labor-capital ratio imply capital scarcity and labor abundance while low values suggest capital abundance and labor scarcity. Model 3 shows that the labor-capital ratio is statistically significant and negative. Countries

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<sup>2</sup> Data on the total physical capital stock in 1987 constant domestic price and the population between ages 15 and 64 are collected from Nehru and Dhareshwar (1993). The total physical capital stock in 1987 constant domestic price is converted into the 1987 constant US dollar. The labor-capital ratio for 1990 is used in analysis because the 1990 data on physical capital stock are the most recent from Nehru and Dhareshwar's comprehensive database. While not perfect, the measure is a reasonably good proxy, given data availability, because factor endowment conditions tend to be stable over time.

that are abundant in labor tend to offer lower levels of tax incentives than those scarce in labor. The result is plausible because abundant labor may not be effectively organized to lobby for more incentives but scarce domestic capital may put up more effective opposition. Or low labor cost eliminates the need for more generous incentives to compensate the investors. The most important findings in this test are that the effects of all the key independent variables remain robust and consistent as those in Table 1, showing that they are not an artifact of alternative mechanisms related to labor. The labor-capital ratio result also is consistent with an earlier observation that rival host firms are not the only source of opposition to incentives to foreign firms.

Third, one reviewer suggests that some countries with abundant natural resource endowment such as oil and minerals offer tax incentives to attract large amounts of FDI. The governments of these countries often are autocratic and suffer from credibility deficit due to past expropriations of foreign assets (Kobrin 1984). The rule of law effect on tax incentives in Table 1 may arguably be driven by the presence of natural resource endowment. I measure natural resource endowment using the logged resource variable from Jensen (2003), which is the share of fuel and mineral exports in merchandise exports. Model 4 shows that the resource variable is negative but statistically insignificant. In contrast, the rule of law variable remains negative and highly significant. The effect of the rule of law is not an artifact of natural resource endowment. The effects of other regime type variables remain robust as in Table 1, with one minor exception. The autocracy without restriction over foreign entry now offers a significantly higher level of incentives than the semi-regime country.

Fourth, governments often sign bilateral investment treaties with property rights guarantees for foreign investors and through this channel, communicate expectations and information about capital account openness (Simmons and Elkins 2004). These treaties therefore may provide an alternative explanation for the effect of the rule of law variable. Model 5 includes the total number

of bilateral investment treaties (*totalbit*) for each country, collected from the Country Commercial Guide. The effect of *totalbit* is statistically significant and positive. One interpretation of this result is that the number of bilateral investment treaties by a country signals its desire to actively pursue foreign capital under the influence of policy diffusion, thus positively associated with its level of tax incentives. The results for the key variables are consistent with those in Table 1, with one minor exception. The democracy at mean level of FDI inflows now offers the same level of incentives as the semi-regime country.

Fifth, as noted, the dependent variable includes only incentives that apply to all products, which is most appropriate for testing the theoretical argument. One may ask whether the results in Table 1 are sensitive to the alternative measure that also includes incentives that apply to imported or exported goods only. Model 6 presents this analysis. The results for the key variables are consistent with those in Table 1, except for some interesting differences. These differences suggest that both democracies and autocracies are selective in choosing tax incentives. First, the democratic country at mean level inflows adopts incentives of all types at the same level as the semi-regime country. Even though rising FDI inflows above the mean level still raise societal opposition, the level at which societal pressures affect policymaking is much higher for these narrow, selective tax incentives. Democratic governments may take more time designing incentive programs that cause less societal opposition. Second, the autocracy that retains restrictions over foreign entry now offers the same level of incentives as the semi-regime country. The difference between the two types of autocracies is much weaker with respect to the alternative dependent variable measure. This is consistent with the notion that even authoritarian regimes that have conflicts of interest with foreign capital may use tax incentives selectively to strengthen their own interest. While they oppose general tax incentives that may hurt their own interest, they remain strategic and flexible in utilizing foreign capital to their own advantage.

Finally, the dependent variable measure may be argued to suffer from the same problem as many other quantitative indicators of policy outcomes. Within each of the six incentive types, there is only one dichotomous choice. The coding of 1 or 0 is based on the presence or absence of a particular type of incentive by a host country. A generous corporate tax break, for example, is coded as 1, and so is a small corporate tax break. One implication is that a package of 3 types of incentives with larger magnitude, for example, could be at the same level on the latent continuum of incentives as a package of 4 or even 5 types of incentives with smaller magnitude. The possibility is more probable for adjacent scores and the high end values on the index. Despite the weakness, one justification for using the ordinal index is that different types of incentives appear to be complements with positive correlations between them in the sample (with correlation mostly between 0.1 and 0.4). More types imply higher levels on the latent scale. A second justification is that an incentive offer that is generous only in one type may be weakened by limitations and restrictions on other dimensions, especially when it is up to the bureaucrat to interpret the laws and regulations. As such, a package of more types of incentives is likely to be an offer at a higher level on the latent scale, because less interference and restriction by the government is involved. Still, it is worth investigating the robustness of the results in Table 1 to the possibility that adjacent index values (such as 1 and 2) or high values on the index reflect equally attractive offers. I therefore collapse the 0-6 scale into a 0-2 scale (merging 1 and 2 into 1, and merging values 3 and above into 2).<sup>3</sup> The results are presented in Model 7. It is reassuring that the effects of all the key variables remain consistent with those in Table 1.

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<sup>3</sup> The results are not sensitive to other alternative coding schemes.

**Table 2 Effect of Political Regime Type on Level of Tax Incentives: Sensitivity Analyses**

<i>Variable</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>
Rule of law	-0.416** (0.210)	-0.455** (0.204)	-0.561** (0.180)	-0.512** (0.277)	-0.730** (0.143)	-0.935** (0.227)	-0.574** (0.237)
Transition	-0.139 (0.743)	-0.104 (0.686)	0.152 (1.069)	-0.775 (0.541)	-0.076 (0.608)	-0.277 (0.775)	-0.394 (0.688)
Democracy	-0.554** (0.218)	-0.672** (0.174)	-1.136** (0.425)	-0.707** (0.429)	-0.368 (0.342)	0.049 (0.281)	-0.280* (0.206)
Democracy*Inflow	-0.233** (0.047)	-0.260** (0.031)	-0.350** (0.064)	-0.248** (0.070)	-0.222** (0.048)	-0.118** (0.047)	-0.129** (0.055)
Inflow	0.213** (0.024)	0.227** (0.015)	0.228** (0.047)	0.236** (0.041)	0.232** (0.018)	0.150** (0.031)	0.119** (0.021)
Autocfdir	-1.777** (0.851)	-1.860** (0.716)	-2.731** (1.599)	-1.659** (0.772)	-2.130** (0.762)	-0.016 (0.747)	-1.120** (0.678)
Autocfdio	0.523 (0.875)	0.813 (0.887)	0.295 (1.350)	1.021** (0.569)	0.602 (0.771)	0.401 (0.588)	0.685 (0.975)
Autocfdir < Autocfdio	6.10**	36.32**	59.70**	17.77**	36.43**	2.29*	5.86**
Federalism1	0.288 (0.966)	--	--	--	--	--	--
Federalism2	--	0.793** (0.382)	--	--	--	--	--
Labor/Capital	--	--	-0.216** (0.046)	--	--	--	--
Resource	--	--	--	-0.050 (0.112)	--	--	--
Totalbit	--	--	--	--	0.023** (0.012)	--	--
External pressure	1.061** (0.131)	1.046** (0.192)	0.868 (0.854)	1.161** (0.147)	1.401** (0.276)	0.649** (0.109)	1.132** (0.323)
External pressure <sup>2</sup>	-0.034** (0.004)	-0.033** (0.006)	-0.029 (0.023)	-0.037** (0.005)	-0.044** (0.008)	-0.018** (0.003)	-0.036** (0.010)
Development	0.127 (0.189)	0.047 (0.131)	-0.071 (0.367)	-0.037 (0.336)	0.172 (0.305)	0.494** (0.298)	0.262 (0.291)
Size	0.026 (0.176)	0.028 (0.108)	0.195 (0.153)	0.051 (0.075)	-0.098 (0.156)	-0.186** (0.077)	0.122 (0.142)
$\mu_0$	6.717 (3.095)	5.892 (3.167)	8.750 (10.272)	5.721 (2.550)	6.916 (1.817)	3.018 (2.056)	10.780 (2.866)
$\mu_1$	7.280 (3.174)	6.478 (3.217)	9.272 (10.349)	6.432 (2.488)	7.495 (1.957)	3.349 (2.075)	12.539 (2.975)
$\mu_2$	8.547 (3.399)	7.789 (3.463)	10.685 (10.036)	7.655 (2.390)	8.807 (2.062)	4.479 (1.943)	--
$\mu_3$	9.458 (3.551)	8.699 (3.637)	12.067 (9.921)	8.779 (2.051)	9.750 (2.197)	5.597 (1.836)	--
$\mu_4$	10.034 (3.559)	9.270 (3.633)	12.793 (10.349)	11.473 (2.211)	10.352 (2.221)	6.116 (2.009)	--
$\mu_5$	11.501 (3.439)	10.871 (3.405)	14.013 (9.940)	--	11.980 (2.112)	7.266 (1.866)	--
N	51	51	42	42	51	51	51

\*\* p<0.05; \* p<0.1. Robust standard errors in parentheses.

### List of Countries in Estimation Sample

Albania	Ghana	Peru
Algeria	Guatemala	Philippines
Argentina	Guinea	Poland
Bangladesh	Honduras	Romania
Bolivia	Hungary	Russia
Botswana	India	Singapore
Brazil	Indonesia	Slovak Rep
Bulgaria	Jamaica	South Africa
Chile	Jordan	Sri Lanka
China	Kenya	Thailand
Colombia	Korea	Trinidad Tobago
Costa Rica	Malawi	Turkey
Cote d'Ivoire	Malaysia	Uganda
Czech Rep	Mexico	Uruguay
Dom Rep	Nicaragua	Venezuela
Ecuador	Pakistan	Zimbabwe
Egypt	Panama	
El Salvador	Paraguay	