

# **Banks and Labor as Stakeholders: Impact on Economic Performance**

Stijn Claessens and Kenichi Ueda\*

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## **Abstract**

Traditionally, the impacts of the rights of financial institutions and workers on corporate performance have been analyzed independently. Yet theory clearly indicates that it is the combination of (changes in) relative powers of different stakeholders that affects a firm overall performance. Using U.S. state level and state-industry level data, we investigate how output growth is affected by bank branch deregulation, and change in equity rights and employment protection occurring over the period 1972-1994. We find that financial liberalization positively and greater workers' rights ambiguously impact overall state growth. In terms of channels, while the effect of financial liberalization does not differ across industries that vary in external financing dependency, employment protection promotes those industries that are more knowledge (skilled-labor and intangibles)-intensive. The results hold controlling for changes in shareholders' rights, which itself is not significant. They suggest that financial liberalization operates mostly through an efficiency channel (re-allocating resources better), while employment protection creates better incentives and encourages more sector-specific, human capital investments. Overall, the results show that the strength of stakeholders' protection affects performance through efficiency channels and provide support for a stakeholders' view of corporate governance.

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Author's E-Mail Address: [sclaessens@imf.org](mailto:sclaessens@imf.org); [kueda@imf.org](mailto:kueda@imf.org)

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<sup>1</sup> International Monetary Fund, 700 19<sup>th</sup> Street, NW, Washington, DC. The views expressed in this paper are those of the authors and should not be attributed to the International Monetary Fund, its Executive Board or its management. We would like to thank seminar participants at the University of Amsterdam for their comments and Liliya Repa for help with the data.

## I. INTRODUCTION

Many, although mostly in theory, have debated the merits of a shareholders' versus stakeholders' view of corporate governance. Is corporate governance sufficiently framed in terms of only shareholder's value maximization? Or should good corporate governance be defined in a broad sense on the basis of the contributions of all stakeholders? The first view, especially prevalent in the US and other Anglo-Saxon countries, is that shareholders' value maximization alone is a sufficient definition of corporate governance. In this view, if there are no frictions in contracting with other stakeholders in a firm, e.g., when markets for finance and labor are well-developed and transparent, maximizing shareholders' value is also socially optimal. Under this view, the regulatory system only needs to assure that shareholders have the means to maximize share value. The second view is that all stakeholders together need to be considered for a firm to maximize its performance. This view is prevalent in many countries, especially continental Europe as well as Japan, with otherwise well-developed factor markets. Under this view, regulatory interventions aimed at increasing stakeholders' rights are desirable because they maximize overall stakeholders' welfare, and firms will do better than with share value maximization alone.<sup>1</sup> A negative-sum version of this view also exists, however. It describes the outcome of a political economy process that protects certain interest groups and overall welfare is consequently not (necessarily) maximized.

In this paper, we do not expect to resolve this (controversial) debate on which view is "right" or whether governments should adjust the regulatory environment to promote a stakeholders' view. Rather, we want to address the more specific, but related issue whether certain regulatory interventions aimed at enhancing stakeholders' rights can be justified on efficiency grounds. Shareholder value maximization does not mean a manager of a firm should not consider other

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<sup>1</sup> We also abstract here from valid public policy objectives such as protecting consumers from fraud and the environment from pollution that can require government interventions and regulations, regardless whether a shareholders' or stakeholders' view is taken.

stakeholders' inputs. On the contrary, she needs to make sure that other stakeholders contribute as much as possible to the firm's performance. As such, a firm will care not just about its employees' current provision of labor, but more generally about their welfare so that they perform well in the long run. Similarly, the firm will need to consider and treats its creditors, suppliers and customers from a long-run value maximization point of view. It is also generally agreed that not all contracting problems can be resolved through private agreements. In the context of stakeholders' contribution to firm performance, this means that a good judicial framework can help firms derive the most value from their stakeholders. Akin to laws and courts providing shareholders with some forms of protection, laws standardizing employee contracts and courts adjudicating ex-post negotiations may enhance firm performance. Laws and courts may, for example, save transactions costs in private contracting. They may also serve as external commitment devices. Workers or suppliers, for example, may only agree to make firm-specific investments if their relationships can not be terminated unilaterally by the firm. And a greater commitment may also enhance workers' and suppliers' monitoring of the firm and management, helping overcome agency issues facing shareholders, and thereby increasing output.

Regulatory interventions in labor, financial and other factor markets can thus be justifiable from an efficiency point of view even if one adopts a pure shareholders' view. We investigate the validity of these efficiency arguments empirically by studying the effects of (relative) changes in legal protection for classes of stakeholders in the US. Doing this analysis for the US has several advantages. First, we can take advantage of some natural experiments. There have been relatively large changes in the last four decades in the US with banks being deregulated gradually, while workers have become more protected over time. Those changes have occurred on a state by state basis, but at different points in time. Shareholder protection laws, although more similar across states, have changed as well over time, varying by state. These legal changes may affect firm performance as they affect the protection and bargaining powers of banks and workers—with local bankers getting less and workers more protected over time. At the same time, given the nature of these changes, we have to concern ourselves less about reverse

causality, e.g., when performance is driving changes in stakeholders' rights at the individual firm level (as when better performing firms give greater employment protection).

Second, we can investigate the effects of (changes in) shareholders', creditors' and workers' rights in one consistent empirical framework. So far, the empirical literature on corporate governance has primarily focused on shareholder protection and to some degree on creditor protection, but almost always investigated either aspect independently. By using changes in multiple stakeholders' rights, we can reduce potential omitted variable biases. We can also explore the interactions among (changes in) stakeholders' rights, since one can expect that only in certain combinations laws defining stakeholders' rights and positions affect firm performance. Third, and importantly, the US state case is useful since relatively uniform and high levels of information, contracting, and enforcement environments prevail across all states. Changes in stakeholders' formal rights varying by states can therefore be expected to show up in economic outcomes. It also means that we can be reasonably confident that effects identified by states are relevant across states as well as for other countries with US-like institutional environments.

To investigate the effects of changes in financial liberalization, shareholders' rights and employment protection at the state level for the period 1972 to 1994, we use as a measure of the collective welfare of all stakeholders the growth of state-level GDP or state-industry level GDP. To identify the channels by which judicial changes may affect firm performance, while avoiding potential simultaneity biases, we use a modified Rajan-Zingales (1998) methodology, where we consider the natural external financing dependency and knowledge-intensity of the various industries using benchmark data from a later period. We find consistent evidence that judicial changes altering the powers of stakeholders affect output growth. We find a large positive effect of bank branch deregulation and ambiguous effects of employment protection on state level output growth. For state-industry level output growth, we find a large positive effect of bank branch deregulation and a negative effect of employment protection. Equity rights protection does not seem to affect state or state-industry level output growth.

These results are broadly consistent with the existing literature, although they indicate the presence of some omitted variable biases in previous studies since our empirical magnitudes differ. In terms of channels, financial liberalization does not have industry-specific effects varying with firms' external financing dependency. It means that financial liberalization more improves the efficiency of resources allocation than increases the volume of external financing, a channel somewhat different from Rajan and Zingales (1998). Since banks had tight control over their borrowers prior to deregulation, it also suggests that too strong rights for some stakeholders can hurt output. Judicial changes enhancing employment protection promote relatively the growth of more skilled-labor, knowledge and intangible intensive industries, but hurt overall output growth. By highlighting the efficiency channels of employee rights' enhancement, we shed some new light on the literature on industry-specific growth related to real factors (Buera and Kaboski, 2006).

We interpret these channel findings as evidence that enhancing some stakeholders' rights, especially employment protection, can be justified on efficiency grounds, at least for certain type industries. While there is a negative overall impact for general employment protection and bank branch (over-) regulation, there is a positive one for employment protection in knowledge-intensive industries. Besides the efficiency arguments, we also shed light on the more general stakeholders' debate. The positive coefficients we find on cross-terms between bank branch deregulation for external financial dependent industries and employment protection for skilled-labor industries suggest some complementarity among the roles of stakeholders in firm performance. This may reflect channels suggested by the incomplete contract-based theories, such as workers monitoring management, or more generally that firm performance and growth are influenced by the relative bargaining powers of multiple stakeholders. We interpret this as some supporting evidence of the stakeholders' views of corporate governance:

The rest of the paper is organized as follows. In Section 2 we describe the related literature. In Section 3 the database used is described and the methodology used. Section 4 includes the main results and various robustness tests. The last Section concludes.

## II. RELATED LITERATURE

The financial liberalization literature for the U.S. has focused on how changes in bank power and market structure affect economic performance. Jayaratne and Strahan (1996) describe the history of branch deregulation in U.S. banking. Before the first wave of deregulation, unit banking was the rule which meant that banks could not open any branch and could operate from headquarters' location only. Starting in the early 1970's, and except for some states, banks were allowed to operate multiple branches within each state, first through mergers and acquisitions of other banks, and then by establishing new branches (de novo branch). This deregulation took place at different times in each state, with large variations. Finally in 1994, the federal government permitted banks to operate branches in different states (interstate banking).

With more competitive pressures, banks lost some of their bargaining power over local borrowers. This change could be bad for overall performance if banks had used their de-facto stronger rights to channel more resources to firms in need of external financing (since they would have had less concerns about repayments) and thereby enhanced overall economic performance. The change could be good, however, for other stakeholders and overall economic activity, if banks' monopoly power had meant capital was allocated inefficiently, banks had charged too high interest rates, or if potential entrepreneurs had been discouraged by denying access or charging too high interest rates to new firms. The second view is most often found in empirical analyses. Jayaratne and Strahan (1996) show that states that liberalized their banks experienced faster growth. They argue that efficiency channels most likely caused the increase in growth as they find no evidence for increases in bank lending.<sup>2</sup> Acharya, Imbs and Sturgess (2006) study industry-level effects and also find efficiency effects since the industry-composition

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<sup>2</sup> In a subsequent study, Stiroh and Strahan (2003) show that one efficiency channel may be the result of competitive shake-out: efficient banks drove out inefficient ones. Black and Strahan (2001) show that the female share in managerial position increased after deregulation. This suggests that bank employers and employees might have enjoyed rents, which dissipated after the deregulation.

converges to an “efficient frontier” after bank branch deregulation. A cross-country study along the same lines is Abiad, Oomes and Ueda (2008).

The employment protection literature has also focused on its effects on economic activities, including employment creation and (un)-employment rates. Autor, Donohue III and Schwab (2006) describe the history of employment protection of workers in the U.S., improving upon previous studies. They document how, using initial precedent-setting case law, states adopted de-facto wrongful discharge protection for employee. Historically, employers could freely fire workers, but from the early 1970s on, states gradually established common law exceptions for wrongful discharges so that workers could no longer be fired without good reason.

Autor et al. (2006) classify these employment protection laws into three categories: public policy, good faith, and implied contract. Under the public policy exemption, employers cannot fire employee just because they follow public policy, such as performing jury duty, filing worker’s compensation, reporting employer’s wrongdoing, and so forth. Under the good faith exemption, employers cannot fire workers for “bad cause,” primarily applied to “bad timing” cases such as firing just before the salary due date or the threshold date of pension. The implied contract exemption is a somewhat vaguer notion: without clearly stating in the employment contract that a company can fire a worker at will, under this exemption, workers should be kept employed according to their length of service, history of promotion, general company policy, industry practice, and so forth.

These forms of employment protection may retard or contribute to growth, with multiple potential channels possibly going either way. As is typically argued, with greater employment protection, employers are less likely to hire workers, thus decreasing employment and lowering output. Stronger laws also means there will be higher direct costs of observing the laws, again potentially lowering output. Stronger worker protection may even destroy firm values, for example, when workers oppose the placement of substitute new machines (Parente and Prescott, 2000 provide an example in India). Early empirical work indeed found large negative effects (Dertouzos and Karoly, 1992, 1993) of employment protection on employment. More recent

work, however, finds that adoption of these type of labor exemptions have no effect on employment (Miles, 2000) or a negative, albeit small effect on employment accompanied by little effects on wages (Autor, Donohue III and Schwab, 2006). In subsequent work, Autor, Kerr and Kugler (2007) find that the wrongful discharge protection affects firm-level productivity by reducing employment flows and firm entry rates.

However, some forms of empowerment of employees may improve firm performance and also help shareholder's value maximization. Employees' contractual and legal rights will affect their incentives to directly and indirectly contribute. And with inefficiencies in enforcing privately-negotiated contracts, it can be beneficial to secure some rights by law. For example, good faith laws prevent firing workers just before their pay day. Without such a law, fearing it could happen, workers may demand (excessive) premiums, leading to poor labor markets, hurting especially newly created firms. A law can thus avoid inefficiencies. Another example is when there are large firm- or sector-specific human capital investment needs. Protecting workers from firing without good reason can promote workers to acquire more specialized skills and thereby enhance firm performance (see Hart, 1995, for the microeconomic literature, and, for macro-level efficiency point of view, see Murphy 1988, Takizawa 2001, and Mukoyama and Sahin 2006). Also, each stakeholder may contribute not only directly to a firm's output, whether through labor, supplies or financing, but also in other ways, such as through skills embodied or associated with their respective inputs. Management monitoring may be associated with bank or equity financing, for example. Similarly, labor that is more protected may help overcome agency issues since workers' incentives are better aligned with long-run firm performance. Of course, judicial means are not the only tool to protect workers. Unions, for example, could also provide some enforcement, especially if the required skills are industry-, but not firm-specific. At the same time, unions can engage in rent-seeking behavior and be value subtracting.

These strands in the literature consider the role of each stakeholders separately. The stakeholders' view, however, argues that in a second best world with information asymmetries, agency issues, incomplete contracting and other problems, it is a proper configuration of all stakeholders' rights that leads to firm value maximization (e.g., Allen 2005, Allen, Carletti and

Marquez, 2007; see also see the review in Tirole, 2006). Rather than being based on explanations where stakeholders affect firm performance unilaterally (e.g., bank's monitoring of a manager), the incomplete contract-based theory suggests that firm performance varies with the rights and relative bargaining powers of multiple stakeholders. In this view, interactions and possible tradeoffs among various stakeholders' influences help maximize a firm's overall value. For example, creditors and employees jointly may monitor management, thereby prevent entrenchment and private benefits, and thus increase overall firm value. Under this view, all stakeholders' actions and rights together need to be considered.

The general argument of this view is that the balance of power of various stakeholders affects the degree of agency issues in firm management. Altering the various stakeholders' powers can then matter as they serve to balance several stakeholders' varying and, at times, conflicting interests. Stakeholders such as equity holders and creditors, for example, will typically have a congruence of interests, but in case of (near) financial distress their interests can sharply diverge (Jensen and Meckling, 1976). Enhancing creditors rights even in situation of no financial distress, including issues normally reserved for shareholders, can then improve overall firm performance. Another specific example is that in the presence of private information, shareholders can benefit from workers reporting wrongdoing of managers to the public or shareholders. However, without having some job protection, workers will be less willing to be informers. More generally, when only incomplete contracts can be written, altering the allocation of bargaining powers of stakeholders may increase overall firm value (see Hart, 1995, for a review).

Although many theories recognize the importance of various stakeholders' claims, empirically, the role and effects of stakeholders have so far most often been studied in isolation, without considering other stakeholders. Many have investigated separately the role of minority shareholders' and creditors' rights, using either aggregate data (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1997 and 1998; and Djankov, McLiesh and Shleifer, 2007) or data on firm behavior and characteristics and relating these to country institutional features (e.g., De Nicolo, Laeven, and Ueda, 2006 on corporate governance, and Acharya, Amihud and Litov 2008 on

creditor rights), but without controlling for employment protection. In the labor literature, the effects of employment protection on wage and unemployment have been studied extensively as mentioned above (also see Botero et al. 2004 for a cross-country study), but similarly also without controlling for shareholder protection or creditors' rights.

Only a few papers have investigated how variations in several stakeholders' powers may affect the economic performance across countries or firms. A paper using country level analysis is Fonseca and Uterzo (2007). They investigate the effects of labor regulation and barriers to entrepreneurship in the presence of credit market frictions. They show that stricter employment protection laws and more barriers to entry negatively affect firms that are more dependent on external financing. Taking a country perspective as well, but more a political economy point of view, Pagano and Volpin (2005) explain the observed negative correlation between shareholder protection and employment protection across OECD countries as the outcome of a combination of incumbent workers and inside owners/managers erecting barriers against minority shareholders.

A few papers have analyzed the joint effects of creditor and labor rights using firm-specific data. Atanassov and Kim (2006) investigate cross-country differences in firm-level restructuring and find that a reaction to distress, either by asset sales or layoffs, depends on both the degree of investor protection and employment protection. Stronger labor union laws can prevent layoffs and assets sales, but only in countries with good investor protection, whereas in weak investor protection countries, strong union laws are associated with less management turnover and more assets sales, suggesting collusion between management and workers. Studies on employment share ownership (ESOP) are relevant as well since the adoption can mean a change in the relative balance of shareholders and employees. Kim and Quimet (2007), for example, find that ESOPs add to firm value when the plan is small, but not when the plan is larger than 5% of outstanding shares. Larger plans are associated with substantial increases in worker compensation, suggesting insiders gain too many control rights. In these studies, however, overall economic impact is not the focus.

Besides bank and employee rights, there will also be an impact of changes in shareholder protection on firm performance, running through both the availability of external financing and through governance channels. Empirically, this has been well documented on a cross-country basis, but has been hard to detect effectively in a within US context. This is basically since there is little regional variation in the U.S. in equity rights. Most securities laws are Federal Laws. And large firms typically list on stock exchanges, thus subjecting themselves to the rules of the respective exchange, making regional variations, i.e., where the firms is head-quartered, less relevant from an equity rights perspective. These large firms often also establish their headquarters in states with laws most conducive to their businesses, making local laws less relevant.

Nevertheless, there is some variation, especially in state anti-takeover protections, that can be expected to affect mostly non-listed firms' behavior. Indeed, Bebchuk and Cohen (2003) find that states that offer stronger anti-takeover protections are substantially more successful both in retaining in-state firms and in attracting out-of-state incorporations. Compared to no anti-takeover statutes, adopting all standard anti-takeover statutes increases the percentage of local firms incorporated in state from 23 to 49 percent. This does not answer, however, the question whether firms' owners and managers choose states with weak laws at the expense of minority shareholders and other stakeholders. Other papers though find a decrease in market values for firms in jurisdictions that enact anti-takeover statutes (Karpoff and Malatesta, 1989, 1995; Szweczyk and Tsetsekos, 1992). And Wald and Long (2007) find that, correcting for the endogenously determined choice of where to incorporate, state anti-takeover laws are positively associated with debt as a fraction of market value, possibly due to lower market values for these firms. But these papers do not study the overall economic impact of (changes) in equity rights.

### III. DATA, EMPIRICAL METHODOLOGY AND REGRESSIONS RESULTS

#### A. Data

We have data on financial deregulation, shareholders' protection, employment protection, and state and state-industry level outputs. The banks' power is proxied by branch deregulation, equity rights by anti-takeover statutes, and the employment protection by so-called exceptions for wrongful discharges. Specifically, we use the data from Jayaratne and Strahan (1996) for financial deregulation, differentiating the steps of allowing for bank merger and acquisitions from allowing for the establishment of de-novo branches (see their paper for a full description of branch deregulation). The anti-takeover index comes from Bebchuk and Cohen (2003) and is available for each year for every US state for the years 1986-2001 (see their paper for a full description of the data). The index captures the degree to which takeover statutes are in place facilitating the ability to adopt anti-takeover protections. The data for the changes in employment protection are from Autor, Donohue III and Schwab (2006), where they document whether and in which year the state adopts one of the three categories (described above): public policy, good faith, and implied contract. Altogether we have 1056 state-year observations with these dummies.

Figures 1a-1c provide a sense for the evolution of the financial deregulation, shareholder protection, and changes in employment protection. Figures 1a depicts the number of states that have allowed M&A or de-novo branches. Figures 1b depicts the (weighted) number of states that have adopted anti-takeover provisions, weighting states by the severity of the provisions adopted (there is thus not an exact correspondence with Figures 1a and 1c). Figures 1c depicts the number of states that have adopted three forms of employment protections. It shows the accelerated financial liberalization, the increase in anti-takeover laws, and the move to greater employment protection in the 1980s across the US. Changes did not occur at the same time, though, in each state. Figures 2a-2b depict the number of years between the financial deregulation, and the changes in employment protection at the individual state level (changes in equity rights are not depicted as the overlap of the data in smaller). It makes clear that the policy changes have occurred in some states at quite different points in time as the number of years in

between the reforms can vary from minus 20 (when financial deregulation lagged changes in employment protection) to plus 20 (when financial deregulation proceeded changes in employment protection).

Table 1a provides some further indication of the (lack of) overlaps in stakeholders' protection by showing the raw correlations between the various indexes. It shows that there is a strong correlation among the financial deregulation indexes, with a correlation of 0.78. Similarly, there is some correlation among the three employment protection indexes, with the highest between contract and public policy, 0.53. Still, the other two correlations among the employment protection indexes are quite low, 0.29 and 0.14. Most correlations between the financial liberalization and employment protection indexes are low as well, between 0.16 and 0.32, reflecting the substantial variation when the reforms were adopted at the state level. The correlations between the anti-takeover rights index and all indexes, including the financial deregulation indexes, are very low, always less than 0.15.

Our dependent variables are output data and come from the US Bureau of Economic Analysis (BEA). The data cover the value-added produced in a state and each state-industry combination and can be considered the state and state-industry level counter part to the country's GDP. The industry breakdown is at the 2-digit SITC level with 63 industries at most per state, based on US SIC (rev 2). We include all industries except financial services, but also analyze separately manufacturing, i.e., excluding services and mining (not reported). We restrict our sample to start in 1972 when bank deregulation data starts, to 1994, when inter-state branch deregulation starts. We use growth in value added output of a state and or industry, where all growth rates are adjusted for national prices (CPI) changes, as dependent variables. We do this to be comparable to Jayaratne and Strahan (1996) and since state-specific price indexes are available only from 1978, which would make our sample more restricted. Data are available for all 50 US states and the District of Colombia, but following a convention in the literature, Delaware and South Dakota are dropped from the sample, as they allowed much more open financial systems early on in attempts to serve as financial centers in the U.S. Altogether we have some 1,000 state level observations and some 50,000 state-industry level observations.

In addition to these variables, we use firm level data to create industry-specific benchmark external financing and knowledge dependency measures, and use industry level data to create industry-specific skill-intensity measures. The industry-level tendency of external finance is defined in the Rajan and Zingales (1998) way as the ratio of investment minus internal cash-flows from operations to capital investments. An industry's "knowledge" dependency is defined in two ways: the reciprocal of capital intensity, i.e., Sales over Fixed Assets, and the ratio of Intangible Assets to Fixed Assets. These two indicators thus measure the industry-level dependency on labor and non-tangibles, knowledge-type inputs, rather than fixed assets in production. All three ratios are obtained using firm-specific sales and balance sheet information for the same sample of firms. Financing and knowledge dependency industry characteristics are constructed as the mean of median values in each industry for the years 1991-2006, based on the Worldscope firm level database. We use the 1991-2006 data since by then the firm level dependency on external financing and knowledge can be expected to be in a natural state, i.e., with financial and labor markets function in equilibrium, since major financial markets and labor reforms had been completed by then. An alternative knowledge-intensity index we employ is the use of skilled labor in the respective industries, calculated as the average fraction of labor in the specific industry that was college educated for the years 1940 and 2005, thus covering the output growth period we study, using data on schooling from Kaboski (2006).<sup>3</sup>

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<sup>3</sup> We calculated this index as follows. Kaboski (2006) provides, at a very detailed industry level, data on the fraction of labor in the specific industry that was college educated for the years 1940 and 2005. When there is an exact overlap with the industry classification, we use the share directly. If we need to aggregate, we derive for the specific industry a weighted fraction of college-educated labor for the two years, using as weights the income share in the more detailed industry classifications for the period 1994-2000. Using instead of either year the average of the two years leads to the same results.

## B. Benchmark Regression Specifications

We conduct both state-level regressions, comparable to Jayaratne and Strahan (1996) and Autor, Donohue III and Schwab (2006), and state-industry level regressions, comparable to Acharya, Imbs and Sturgess (2006).

The state-level regression uses a state and year fixed effect model to control for the state specific trends and nation-wide business cycles:

$$g_{s,t} = \alpha_s + \alpha_t + \beta FinLib_{s,t-1} + \gamma EquRight_{s,t-1} + \delta WorkRight_{s,t-1} + \varepsilon_{s,t}. \quad (1)$$

Financial liberalization is defined in one of two ways:  $FinLib = M\&A$ , which is a dummy equal to 0 when bank branch through M&A is restricted, and 1 if deregulated; or  $FinLib = De\ novo$  which is a dummy equal to 0 when bank branch is restricted 0, and 1 if deregulated. For robustness, we investigate the effects of both measures, but since M&A bank deregulation always precedes de novo deregulation, we find the most impact from M&A bank deregulation and only report those results. The equity rights index,  $EquRight$  is the anti-takeover index of Bebchuk and Cohen (2003), which runs from 0 to 6.

In terms of employment protection, we use four indexes, depending on which of the three employment (wrongful discharge) protection is adopted or if any of the three is adopted. If a protection is recognized by the specified state court, the following binary variables have a value of 1 and otherwise 0:  $WorkRight = public\ policy; good\ faith; implied\ contract; or\ earliest$ , with the latter if any of the previous three is introduced.

For the state-industry level regressions, we include state-industry and year fixed effects to control for state-industry specific trends and country-wide business cycles. To investigate the specific channels by which stakeholders' powers affects performance, we use our two benchmark characteristics of each industry, natural external financing dependence and

knowledge dependence, and interact these characteristics with the financial deregulation and employment protection indexes. The full specification is then as follows:

$$\begin{aligned} g_{j,s,t} = & \alpha_{s,j} + \alpha_t + \beta_1 FinLib_{s,t-1} + \beta_2 FinLib_{s,t-1} * ExtFinDep_j \\ & + \gamma_1 WorkRight_{s,t-1} + \gamma_2 WorkRight_{s,t-1} * KnowledgeDep_j + \varepsilon_{j,s,t}. \end{aligned} \quad (2)$$

Where *ExtFinDep* denotes the industry's dependency on external finance, and *KnowledgeDep* the industry's "knowledge" dependency, defined in the three alternative ways (the reciprocal of capital intensity, i.e., Sales over Fixed Assets, the ratio of Intangible Assets to Fixed Assets, and the average fraction of labor that was college educated). The correlations among these industry level characteristics are generally as expected (Table 1b). The external financing and knowledge dependence ratios have a negative correlation of 0.52, implying more external financial dependent firms tend to have lower sales to fixed assets, i.e., they use more fixed assets to produce their output. Similarly, the correlation between the external financing dependence and intangible ratios is a negative 0.44, meaning that those firms that use more intangibles assets tend to also have lower external financing needs. Still, these correlations are far from perfect, making the variables cover distinctive industry characteristics. As expected, the two knowledge dependence ratios are highly correlated, 0.71, suggesting these two variables capture similar industry characteristics. The use of skilled labor variable has a correlation of 0.37 with the sales to fixed assets ratio and 0.53 with the intangible ratio, but an insignificant correlation with the external financing dependence variable, making it a good variable for a robustness test on the importance of knowledge intensity. Note that, since we use in the regressions also state-industry fixed effects, we have very general controls and do not need to include the time-invariant component of the cross-terms (*ExtFinDep* and the various *KnowledgeDep* variables) separately in the regression model.

Table 1c provides the mean, standard deviations and some other descriptive statistics of the main variables we use. It shows that the average growth is some 2.4 percentage points, with large variations however. There is also much variation in reforms, as the high standard deviations of

the reform indexes show. Finally, industry characteristics vary considerably, making them useful to identify the channels by which regulatory and judicial reforms may affect output growth.

### C. State-Level Benchmark Regression Results

The first column of Table 2 shows the results with only the financial liberalization variable. The statistically significant positive effect of financial liberalization on state-wide growth is consistent with the hypothesis that curtailing local monopolistic power of banks creates more efficient financial intermediation. Using the M&A deregulation dummy, the effect of bank branch deregulation is about an 1.6 percent increase in state level growth rates, somewhat larger than Jayaratne and Strahan (1996). This larger effect may be because we use state fixed effects. If we run the regression without state fixed effect, the effect is about 1.06 percent (regression results omitted), which is almost identical to that found by Jayaratne and Strahan (1996). The effect is always lower for de novo branch deregulation (not reported), again in line with Jayaratne and Strahan (1996), and reflects the fact that the de novo branch deregulation typically came later than M&A deregulation.

Columns 2, 4, and 6 show the effects of the three types of wrongful discharge protection measures. Interestingly, the results show a mixed picture, with the public policy based employment protection showing a positive effect, while the other two types are associated with negative effects. This result is somewhat in line with Miles (2000) who finds little effect on unemployment rates, but different from Autor, Donohue III and Schwab (2006) that find uniform negative effects on unemployment. The two negative coefficients, however, are only statistically significant at the 10% level. Using the earliest of the three wrongful discharge protection as an employment protection index, column 8, does not lead to significant results.

When we include both bank branch deregulation and the wrongful discharge protection, the effect of financial liberalization becomes somewhat stronger, i.e., generally larger coefficients (columns 3, 5, 7 and 9 in Table 2). Given the correlation between the two institutional changes, controlling for the degree of employment protection apparently produces less biased estimates

for the effect of financial liberalization. The effects of employment protection do not change much, with the public policy based employment protection still showing a positive effect, while the other two types are associated with negative effects, although now never statistically significant.

When we include the anti-takeover protection variable (not reported), we find that although the coefficients on the index are generally negative as expected, they are never statistically significant. The fact that the anti-takeover protection variable has no effect on state output growth maybe because the number of observations drops sharply, from about 1000 to 330, since the anti-takeover protection variable is only available from 1986 on. It could also be that these anti-takeover statutes do not capture the equity rights very well. Or it could be that for the more general class of firms, i.e., those not listed on stock exchanges, these rights are less relevant for general economic output. For these reasons, we do not explore the importance of equity rights further. Including the equity rights does not change, however, the regression results for the other two measures.

#### **D. State-Industry Level Results**

The state-level results may contain spurious effects. These can stem from compositional change of industries towards those with naturally high growth trends, such as the IT sector, at the same time of financial liberalization or changes in equity and employment protection. It also does not allow one to easily control for other time varying state-specific changes. And, most importantly, the state level regressions have no power in detecting the channels through which financial deregulation and equity and employment protection affect output growth, and consequently do not inform on the aspects of the stakeholders' view of interest to us. By studying state-industry specific effects, we can eliminate spurious effects and control for other omitted factors. And by introducing the cross-terms, we can identify better the channels through which financial and labor reforms affect growth. Table 3 shows the results for the state-industry level regressions focusing on the nonfinancial sectors.

Similar to the state level results, the effects of bank branch M&A deregulation are positive and statistically significant (Table 3, columns 1). The size of the effects of the financial liberalization is about 1.1 percent, somewhat lower than the effects for state-level output growth. This confirms that the state-level estimates contain some spurious effects. We find again that deregulation through M&A to be most important in changing firms' behavior, with the de novo deregulation not showing any significant effects (not reported). The effects are of very similar order when controlling for changes in employment protection (columns 3, 4, 6, 7, 9, 10 and 12, 13).

In the state-level regressions, the coefficients of the employment protection index are uniformly negative and statistically significant (columns 2-13). The quantitative impact is -0.7 to -2.4 percent lower growth rates, with the highest for the good faith protection. The differences with the state level regressions show that using the state-industry data allows us a more powerful tool, including on how to deal with the problems of spurious correlations. The effects can be compared to Autor, Donohue III and Schwab (2006), who show state-level employment rate to fall by about -0.8 to -1.6 percent without any effect on wages. While we study output growth and not employment rates, both their and own findings suggest that the effects of employment protection are of considerable economic importance.

Most importantly, our state-industry level regression results show, through the coefficients on the cross-terms between state level reform and the industry characteristics of external financing and knowledge dependence, the channels by which stakeholders' powers affect growth and the dynamics among industries. Financial liberalization appears to spur growth regardless of industry's external financing needs since most of interaction coefficients between financial liberalization and external financing dependence are not statistically significant (columns 3, 6, 7, 9 and 12) or even negative statistically significant (columns 4, 10 and 13). This may contrast with the general expectation that more external financial dependent industries should grow faster with financial liberalization. Our contrary finding may be due to a combination of factors. Financial deregulation can, on the one hand, promote the growth of external financial dependent

industries. On the other hand it may reduce inefficient allocation of resources. The latter could have been the case when before deregulation banks had special relations with relatively large and capital-intensive companies, relationships that were severed with liberalization. The net effect of financial liberalization may be that external financial dependent firms do not necessarily grow faster, but that other firms grow faster or new firms get established as resources are being reallocated efficiently toward them, leading to higher overall economic performance (for similar cross-country evidence on the effects of financial liberalization, see Abiad, Oomes and Ueda, 2008).

We do find evidence, however, that increased employment protection adds to growth in value added through industry-specific channels (columns 2-13). Although more employment protection suppresses overall economic activity—as the negative coefficients on workers' right shows, it helps those industries that are more knowledge-dependent since for all four labor measures the interaction terms between workers' rights and knowledge dependency are consistently positive and statistically significant (at the 1% level).

These results support a view of the firm where rights of workers importantly influence the economic performance of firms, possibly as employees are more interested in acquiring firm and industry-specific skills, and in general show a higher productivity when more secure of their jobs. The result also helps explain why in the state level regression results the coefficients on employment protection were not always statistically significant or of the same sign. In those regressions, the general effect of greater employment protection leading to lower output growth was confounded with the industry-level specific effect of greater employment protection leading to more output in knowledge-intensive industries. Finally, the result is consistent with the notion of the overall U.S. transformation over the sample period to a more knowledge-based economy, higher specialization and firm-specific human capital accumulation accompanied by better labor standards and employment protection (e.g., Murphy 1986, Takizawa 2003, and Mukoyama and Sahin 2006).

We also test for evidence of complementarity by including the product of the two interaction terms as another independent variable. We find evidence of complementarity in that the coefficients on the double interactions terms are always positive and highly statistically significant (columns 4, 7, 10 and 13). This means that the combination of a state having financial liberalized and adopted employment protection statutes is particularly useful to boost the growth of firms with high external financing and knowledge dependencies. At the same time, including the double interactions terms does not lower the coefficient on the financial liberalization variable, makes the coefficient on the worker right variable only marginally more negative, and actually leads to an increase in the coefficient on the worker right variable interacted with the knowledge-intensive variable. The coefficient on the liberalization variable interacted with the external financing dependence variable, however, becomes statistically significant negative, except for the regressions including the good faith workers rights index. The latter finding is in line with the argument that financial liberalization can reduce inefficient relationship-based banking, particularly in industries requiring high capital inputs with little knowledge inputs.

We next conduct a number of robustness checks on the channels by which increased employment protection increases value added growth in knowledge-intensive industries and on econometric robustness. We first use our two alternative measures for knowledge-dependency. The first one is firms' natural use of intangible assets relative to fixed assets, calculated at the industry level. The second is the industry level use of skilled labor (college graduates) relative to total labor. Both measures capture the degree to which the specific industry relies on knowledge-intensive assets or labor. Tables 4 and 5 present the regression results using the same specifications as in Table 3, that is, using interactions between financial liberalization and external financing dependence and the workers right index and these two knowledge-intensity measures (columns 1, 2, 4, 5, 7, 8, 10 and 11), as well as using the double interactions (columns 3, 6, 9 and 12).

We see that the results for the interactions between employment protection and knowledge-intensity are generally confirmed when we use either of the two alternative knowledge-intensity variables since almost all interaction terms are highly statistically significant, except for the

interaction term when using the good faith workers rights index and the skilled-labor index. Also the negative direct effects of the various employment protection variables are confirmed, at generally high significance levels. It confirms that, while employment protection in general may be detrimental to output growth, for knowledge-intense industries, more protection leads to higher growth in value added, potentially as employees invest more in their firm and human skills.

The financial liberalization dummy remains statistically significant and of equal magnitude in all regressions, but the interaction terms for financial liberalization and external financing dependence are again never statistically significant positive and turn statistically significant negative again when including the double interactions (except again for the interaction term when using the good faith workers rights index and intangible assets). At the same time, adding the financial variables does not change the size or significance of the coefficients of the knowledge-intensity variables. The significant double interactions (except when using the good faith workers and the schooling index) show again complementarity in that financial liberalization and increased workers' rights increase output growth independently, one through improving the overall allocation of resources and the other through enhancing the incentives and productivity of workers in knowledge-intensive industries, but jointly even more so.

We conduct a number of additional robustness checks. We first use a number of alternative knowledge-intensity indexes. Specifically, we use two additional industry-median ratios derived from individual firm data (sourced again from Worldscope and using data from 1991 to 2006). The first is the ratio of research and development (R&D) expenditures to sales, which captures, to some degree, industries' knowledge intensity (it does so imperfectly as in some industries R&D is capital- rather than knowledge-intensive, whereas in other industries much knowledge generation is not recorded under R&D, but under general expenses). The second is the ratio of staff costs to total sales. This indicator can be expected to be higher for both knowledge intensive as well as low skilled labor industries, and may thus be a poor proxy as well. Nevertheless, and while not as consistent and at much lower levels of significance, which is to be expected since

these are less close proxies to our concept of knowledge intensity, the regression results (not reported) for the two variables broadly confirm our earlier results.<sup>4</sup>

Econometrically, we conduct some robustness tests as well. We run the regressions for a somewhat different sample period, specifically 1978-1994, to reflect that data quality improves and to account for the progression in reforms. We find all major regression results to be confirmed for this shorter period (regression results omitted). We also check if the state-industry growth shows high serial correlation since then the standard errors of OLS would be biased. Specifically, we run the same regression but with lagged state-industry growth rate based on a system panel GMM estimation (Blundell and Bover, 1998). However, the results show that the autocorrelation is not significant and the overall identification is not valid (regression results omitted).

#### IV. CONCLUSIONS

We study the role of multiple stakeholders' powers in firms and the channels through which stakeholders may affect corporate performance. Our approach differs from the existing empirical literature in which the impact of some stakeholders—financial institutions and workers rights—on corporate sector performance has largely been analyzed separately. Yet theory clearly

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<sup>4</sup> Specifically, the regression results for R&D variable are broadly similar, but at much lower levels of significance. Financial liberalization is always significantly positive, the interaction of financial liberalization with external financing dependence is negative and sometimes significant, employment protection is also negative and sometimes significant, and the interaction of employment protection with the R&D variable is positive and sometimes significant. The double interaction is always significant positive. The regression results for the staff costs are similar, but also at low levels of significance. Financial liberalization is always significantly positive, the interaction of financial liberalization with external financing dependence is negative and always significant, employment protection is mostly not significant—only once is it statistically significant (negative), and the interaction of employment protection with the staff cost variable is never significant. The double interaction is in two out of four cases significantly positive.

indicates that it is the combination of relative (changes in) powers of different stakeholders that affects a firm overall performance. Using US state level and state-industry level output, we investigate how overall economic performance is affected by the combination of bank branch deregulation and changes in employment protection over the period 1972 to 1994. We find that financial liberalization positively and greater powers of workers negatively impact overall economic growth. In terms of channels, while the effects of financial liberalization do not differ across industries that vary in their natural external financing dependency, employment protection appears to promote those industries that are more labor-intensive and knowledge-based. This suggest that financial liberalization operates mostly through an efficiency channel, (re-)allocating resources better, while employment protection allows for more sector- and firm-specific, human capital investment.

We think our evidence mainly speaks to the efficiency arguments of the regulatory and judicial system encouraging all stakeholders to contribute according to their best comparative advantage to the firm. However, and even though we identify the relevance of stakeholders' protection using data from the US, we consider our results to also speak to the broader view of corporate governance. This view is more relevant in other developed countries (e.g., continental Europe, Japan), where banks and labor play a large role in firm monitoring and governance. And this view may be especially important for emerging markets, given their more limited stock market development and the typical dominance of banks in financial intermediation. Although poor stakeholders' protection has long been recognized as a possible source of limited economic and financial development (for review of the general literature, see Acemoglu, Johnson and Robinson, 2005, and of the law and finance literature, see Levine 2005) as well as of macro-economic vulnerabilities and possible contributing to financial crises (see Johnson and others, 2000, Mitton, 2002, Joh, 2003 for shareholders protection), it is difficult to explain the good performance of some economies on the basis of shareholders' oversight alone as shareholders appear to have limited (effective) legal powers. This may be because other stakeholders in such economies are more effective in enhancing firm performance. Whether this is the correct

interpretation and how, if at all, this can be generalized, remains unclear since the role of stakeholders in firm performance is still poorly understood.

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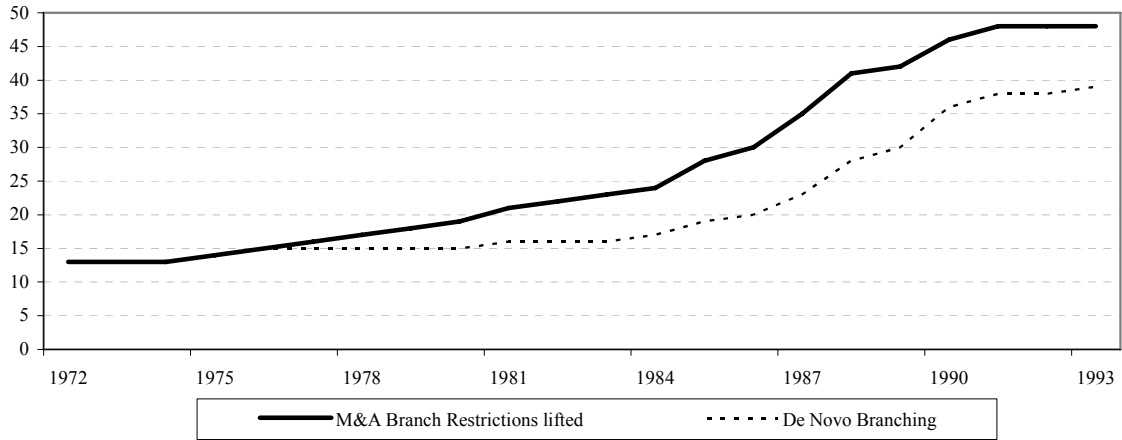
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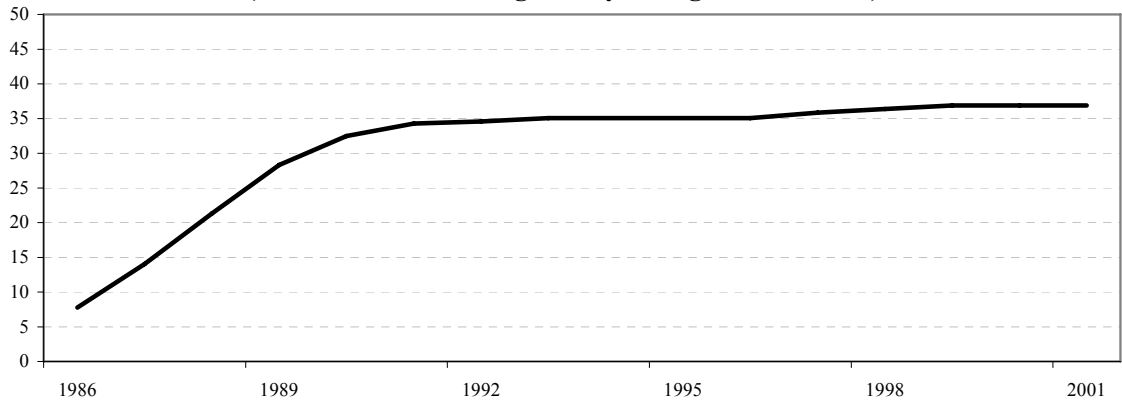
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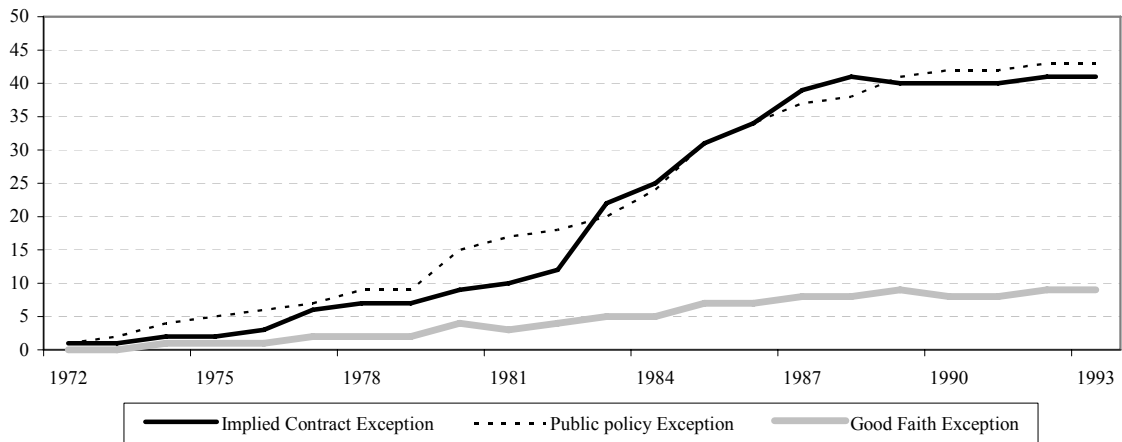
**Figure 1a: The Adoption of Financial Deregulation  
(number of states deregulated)**



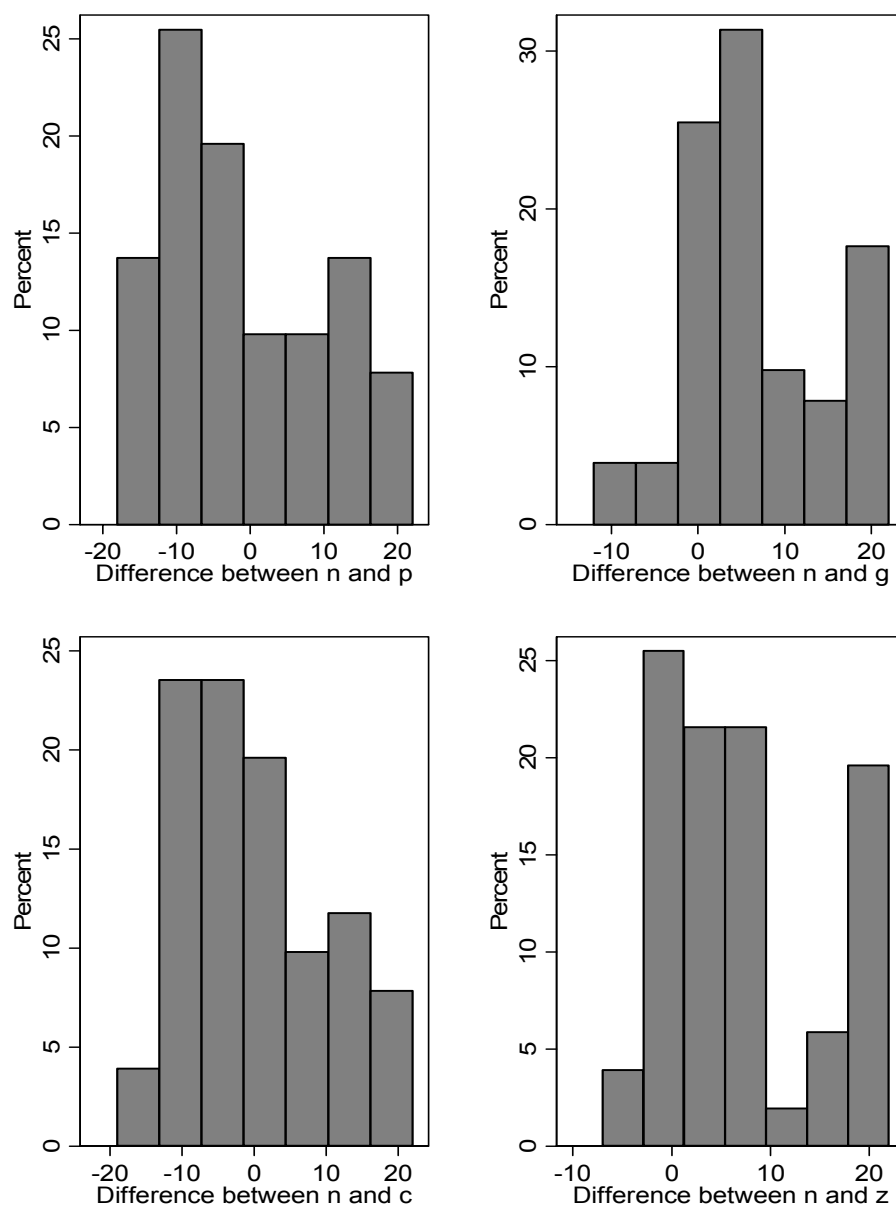
**Figure 1b: The Adoption of Anti-Takeover Statutes  
(number of states, weighted by strengths of statutes)**



**Figure 1c: The Adoption of Employment Protection  
(number of states with employment protection)**



**Figure 2a: The Pattern of Financial Deregulation and Adoption of Employment Protection**



Notes:

n is dummy indicating the year branch restrictions were lifted via de novo branching

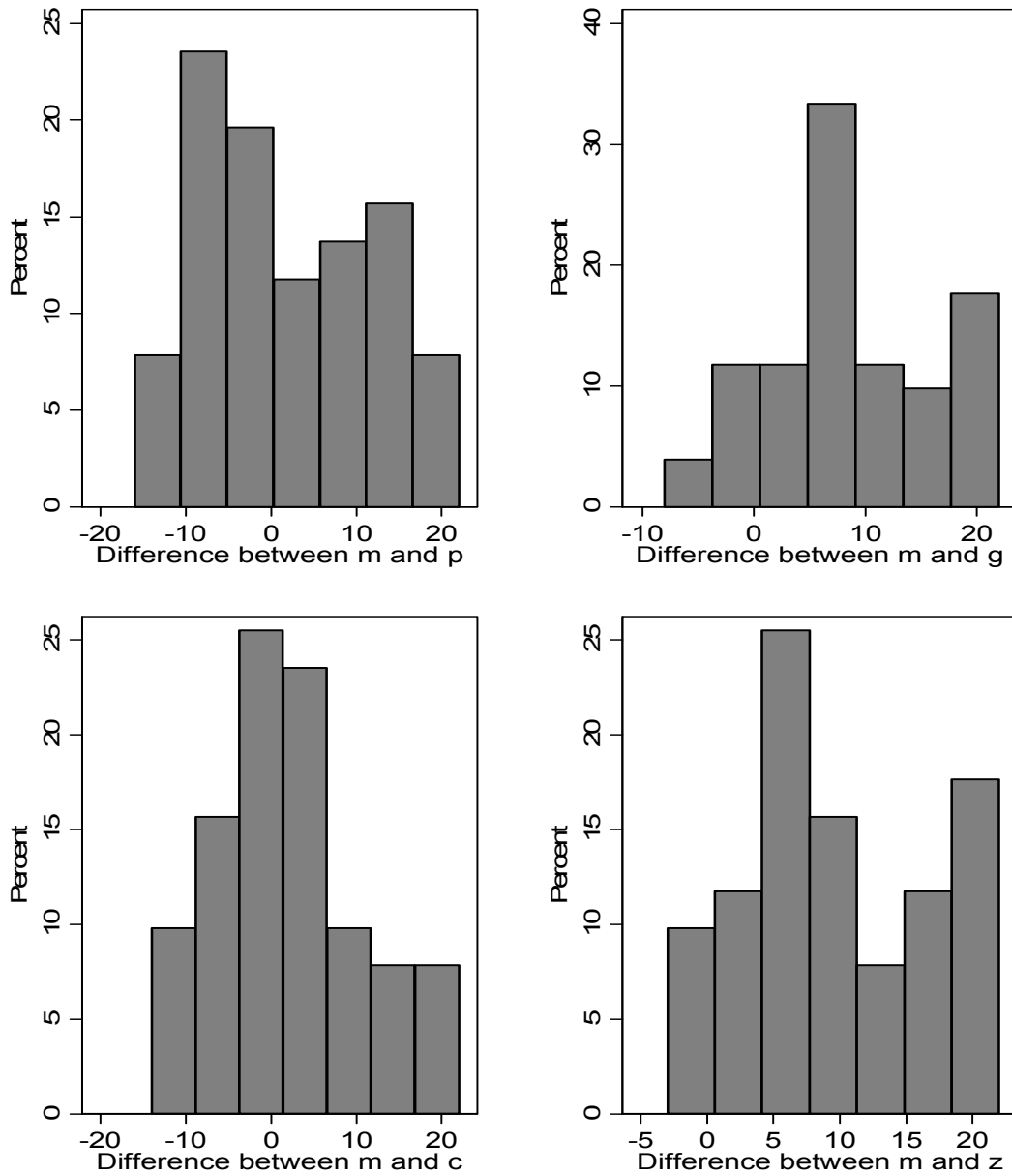
p is public policy index

g is good faith index

c is implied contract index

z is combination of p, g and c

**Figure 2b: The Pattern of Financial Deregulation and Adoption of Employment Protection**



Notes:

m is dummy indicating the year M&A branch restrictions were lifted

p is public policy index

g is good faith index

c is implied contract index

z is combination of p, g and c

**Table 1a. Correlations among State-Level Institutional Changes**

	Financial Liberalization		Employment Protection			Anti-Takeover
	M&A	de novo	Public Policy	Good Faith	Contract	
M&A	1					
	<i>1078</i>					
de novo	0.7828*	1				
	<i>1078</i>	<i>1078</i>				
Public Policy	0.2510*	0.1573*	1			
	<i>1056</i>	<i>1056</i>	<i>1056</i>			
Good Faith	0.1642*	0.1590*	0.2916*	1		
	<i>1056</i>	<i>1056</i>	<i>1056</i>	<i>1056</i>		
Contract	0.3243*	0.2298*	0.5304*	0.1411*	1	
	<i>1056</i>	<i>1056</i>	<i>1056</i>	<i>1056</i>	<i>1056</i>	
Earliest	0.2764*	0.1721*	0.8160*	0.2907*	0.7599*	1
	<i>1056</i>	<i>1056</i>	<i>1056</i>	<i>1056</i>	<i>1056</i>	<i>1056</i>
Anti-Takeover	0.1307*	0.1144*	0.025	-0.0665	-0.1414*	1.0000
	<i>384</i>	<i>384</i>	<i>376</i>	<i>376</i>	<i>376</i>	<i>392</i>

Note: Italics numbers show the observation numbers. Asterisk (\*) denotes significance level at 5 %.

**Table 1b. Correlations among Industry-Level Characteristics**

	External Financial Dependence	Sales to Fixed Assets	Intangible Assets to Fixed Assets	Ave. Fraction of College Grad in 1940 and 2005
Ext. Fin. Dep.	1.0000 <i>59</i>			
Sales/ Fixed Assets	-0.5236* <i>59</i>	1.0000 <i>59</i>		
Intangible/ Fixed Assets	-0.4360* <i>59</i>	0.7079* <i>59</i>	1.0000 <i>59</i>	
Average Schooling	-0.1039 <i>49</i>	0.3718* <i>49</i>	0.5279* <i>49</i>	1.0000 <i>49</i>

Note: Italics numbers show the observation numbers. Asterisk (\*) denotes significance level at 5 %.

**Table 1c. Averages and Standard Deviations of Main Variables**

<i>Variable</i>	<i>Value Added Growth(St ate level)</i>	<i>M&amp;A</i>	<i>De novo</i>	<i>Anti- Takeover</i>	<i>Public Policy</i>	<i>Implied contract</i>	<i>Good faith</i>	<i>Earliest RZIndex</i>	<i>Sales/Fixe d assets</i>	<i>Intangible Assets/ Fixed Assets</i>	<i>Schooling Average</i>
Mean	2.45	2.37	0.51	0.39	1.97	0.45	0.42	0.10	-0.49	6.00	0.29
Std. Dev.	4.31	19.17	0.32	0.22	0.79	0.38	0.39	0.10	1.99	5.66	0.12

**Table 2. State Level Regressions**

The dependent variable is the real growth rate of gross state product, deflated by national CPI index, over the period 1973 to 1994. FinLib is M&A based bank branch deregulation in each state. It is a binary variable, taking the value of one if deregulated. WorkRight is the exception for wrongful discharges based on either public policy, good faith, the implied contract, or the earliest of them in each state. It is a binary variable, taking the value of one if established. State level fixed effects as well as year dummies are included, but not reported. The t-statistics reported are based on robust standard errors: \* denotes significant at 10%; \*\* at 5%; and \*\*\* at 1%.

	(1)	Public Policy		Good Faith		Contract		Earliest	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
FinLib	1.621*** [4.382]		1.785*** [4.677]		1.575*** [4.399]		1.690*** [4.501]		1.708*** [4.524]
WorkRight		0.816* [1.784]	0.950** [2.072]	-1.637* [-1.809]	-1.347 [-1.511]	-0.691* [-1.699]	-0.643 [-1.594]	-0.174 [-0.423]	-0.011 [-0.026]
Number of Obs.	1029	1008	1008	1008	1008	1008	1008	1008	1008
R-square	0.3447	0.3398	0.3506	0.3423	0.3507	0.3390	0.3489	0.3374	0.3474

**Table 3. State-Industry Level Regressions**

The dependent variable is the real growth rate of gross state-industry product, deflated by national CPI index, over the period 1973 to 1994. FinLib is M&A based bank branch deregulation in each state. It is a binary variable, taking the value of one if deregulated. ExtFinDep is the industry level tendency of external finance as defined in Rajan-Zingales (1998), calculated as the mean of median of each year from 1991 to 2006 using the Worldscope database. WorkRight is the exception for wrongful discharges based on either public policy, good faith, the implied contract, or the earliest of them in each state. It is a binary variable, taking the value of one if established. KnowledgeDep is the sales-to-fixed asset ratio, the reciprocal of capital intensity, measuring the industry level reliance on knowledge rather than physical capital in production. State-industry level fixed effects as well as year dummies are included, but not reported. The t-statistics reported are based on robust standard errors: \* denotes significant at 10%, \*\* at 5%, and \*\*\* at 1%.

	(1)	Public Policy			Good Faith			Contract			Earliest		
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
FinLib	1.118*** [3.957]		1.234*** [4.359]	1.153*** [4.046]	1.046*** [3.679]	1.034*** [3.631]	1.118*** [3.938]	1.192*** [4.221]	1.118*** [3.938]	1.238*** [4.371]	1.153*** [4.039]	1.238*** [4.371]	1.153*** [4.039]
FinLib *ExtFinDep	-0.058 [-1.016]		0.064 [1.069]	-0.218** [-2.542]	-0.044 [-0.771]	-0.075 [-1.255]	-0.197** [-2.363]	0.051 [0.827]	-0.197** [-2.363]	0.073 [1.219]	-0.231** [-2.464]	0.073 [1.219]	-0.231** [-2.464]
WorkRight		-0.722** [-2.155]	-0.659* [-1.940]	-0.898** [-2.560]	-2.292*** [-3.385]	-2.079*** [-3.049]	-2.375*** [-3.235]	-0.980*** [-2.857]	-0.968*** [-2.775]	-1.191*** [-3.319]	-0.841** [-2.500]	-0.756** [-2.213]	-0.962*** [-2.740]
WorkRight *KnowledgeDep		0.175*** [6.102]	0.181*** [6.102]	0.239*** [7.027]	0.202*** [2.947]	0.199*** [2.906]	0.271*** [3.119]	0.140*** [5.035]	0.145*** [4.960]	0.201*** [5.912]	0.181*** [6.605]	0.187*** [6.602]	0.237*** [7.328]
FinLib*ExtFinDep *WorkRight *KnowledgeDep				0.020*** [6.393]			0.016*** [2.879]			0.019*** [5.947]			0.019*** [5.767]
Number of Obs.	51201	50276	50276	50276	50276	50276	50276	50276	50276	50276	50276	50276	50276
R-square	0.0454	0.0471	0.0474	0.0476	0.0469	0.0472	0.0472	0.0468	0.0472	0.0474	0.0471	0.0474	0.0477

**Table 4. State-Industry Level Regressions—Intangible Assets**

The dependent variable is the real growth rate of gross state-industry product, deflated by national CPI index, over the period 1973 to 1994. FinLib is M&A based bank branch deregulation in each state. It is a binary variable, taking the value of one if deregulated. ExtFinDep is the industry level tendency of external finance as defined in Rajan-Zingales (1998), calculated as the mean of median of each year from 1991 to 2006 using the Worldscope database. WorkRight is the exception for wrongful discharges based on either public policy, good faith, the implied contract, or the earliest of them in each state. It is a binary variable, taking the value of one if established. Intangible asset to fixed asset ratio is used to measure the industry level reliance on knowledge rather than physical capital in production. State-industry level fixed effects as well as year dummies are included, but not reported. The t-statistics reported are based on robust standard errors: \* denotes significant at 10%; \*\* at 5%; and \*\*\* at 1%.

	Public Policy			Good Faith			Contract			Earliest			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
FinLib		1.216*** [4.299]	1.158*** [4.066]		1.045*** [3.675]	1.038*** [3.648]		1.175*** [4.168]	1.122*** [3.952]		1.219*** [4.306]	1.168*** [4.093]	
FinLib *ExtFinDep		0.032 [0.554]	-0.188** [-2.108]		-0.050 [-0.863]	-0.068 [-1.153]		0.021 [0.348]	-0.172** [-1.969]		0.038 [0.660]	-0.164* [-1.648]	
WorkRight		-0.727** [-2.028]	-0.645* [-1.781]	-0.699* [-1.921]	-2.109*** [-2.881]	-1.901*** [-2.580]	-1.970*** [-2.639]	-0.936** [-2.535]	-0.981*** [-2.649]	-0.838** [-2.331]	-0.732** [-2.016]	-0.772** [-2.116]	
WorkRight *Intangible/Fixed Capital		1.711*** [5.435]	1.730*** [5.414]	1.946*** [5.864]	1.630** [2.251]	1.610** [2.224]	1.847** [2.381]	1.338*** [4.350]	1.350*** [4.293]	1.553*** [4.757]	1.752*** [5.715]	1.774*** [5.694]	1.930*** [5.983]
FinLib*ExtFinDep *WorkRight *Intangible/Fixed Capital			0.196*** [4.550]		0.123** [2.035]				0.177*** [4.165]			0.156*** [3.402]	
Number of Obs.	5026	5026	5026	5026	5026	5026	5026	5026	5026	5026	5026	5026	
R-square	0.0470	0.0474	0.0475	0.0468	0.0471	0.0471	0.0468	0.0472	0.0473	0.0471	0.0474	0.0475	

**Table 5. State-Industry Level Regressions—Education**

The dependent variable is the real growth rate of gross state-industry product, deflated by national CPI index, over the period 1973 to 1994. FinLib is M&A based bank branch deregulation in each state. It is a binary variable, taking the value of one if deregulated. ExtFinDep is the industry level tendency of external finance as defined in Rajan-Zingales (1998), calculated as the mean of median of each year from 1991 to 2006 using the Worldscope database. WorkRight is the exception for wrongful discharges based on either public policy, good faith, the implied contract, or the earliest of them in each state. It is a binary variable, taking the value of one if established. Schooling is the average fraction of college graduates in 1940 and 2005 and measures the industry level reliance on knowledge rather than physical capital in production. State-industry level fixed effects as well as year dummies are included, but not reported. The t-statistics reported are based on robust standard errors: \* denotes significant at 10%; \*\* at 5%; and \*\*\* at 1%.

	Public Policy			Good Faith			Contract			Earliest		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
FinLib		1.222*** [4.092]	1.152*** [3.827]		1.104*** [3.668]	1.100*** [3.654]		1.192*** [4.008]	1.121*** [3.739]		1.228*** [4.108]	1.161*** [3.846]
FinLib *ExtFinDep		-0.062 [-1.070]	-0.276*** [-3.215]		-0.089 [-1.545]	-0.098* [-1.678]		-0.068 [-1.175]	-0.274*** [-3.246]		-0.064 [-1.106]	-0.278*** [-2.943]
WorkRight	-1.904*** [-3.474]	-1.788*** [-3.256]	-1.928*** [-3.484]	-2.529** [-2.083]	-2.312* [-1.898]	-2.377* [-1.956]	-1.661*** [-3.063]	-1.602*** [-2.949]	-1.739*** [-3.181]	-1.720*** [-3.184]	-1.580*** [-2.917]	-1.698*** [-3.111]
WorkRight *Schooling	7.393*** [5.236]	7.332*** [5.181]	8.047*** [5.560]	5.324 [1.627]	5.310 [1.624]	5.647* [1.684]	5.283*** [3.851]	5.212*** [3.785]	5.943*** [4.210]	6.719*** [4.947]	6.665*** [4.899]	7.255*** [5.214]
FinLib*ExtFinDep *WorkRight *Schooling			0.634*** [4.591]			0.202 [1.037]			0.629*** [4.541]			0.555*** [3.831]
Number of Obs.	43385	43385	43385	43385	43385	43385	43385	43385	43385	43385	43385	43385
R-square	0.0469	0.0474	0.0475	0.0467	0.0471	0.0471	0.0467	0.0472	0.0473	0.0469	0.0473	0.0474