Financial Structure, Financial Development and Industrial Growth: Evidence from Indian States

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Abstract

Employing data for 1981-2008, the paper examines how state and industry characteristics interact with financial characteristics to influence industry growth. The findings suggest that bigger, capital-intensive industries grow faster in states with greater financial development. More importantly, the findings testify that financial development of states tends to overwhelm their financial structure in influencing industrial growth.

1. Introduction

1.1 The linkage between the real and financial sectors of an economy has always been of serious concern to policymakers. This assumes even greater relevance in developing economies typically characterized by lower levels of investment and concentration of economic activity in one or a few regions. A key concern for policymakers is therefore to ensure balanced expansion across regions in their quest for equitable growth and development.

1.2 Towards this end, using state-industry data for the period 1981-2008 and employing India as a case study, the paper examines how state and industry characteristics interact with financial characteristics (financial sector) to influence industry growth (real sector). We choose three important state financial characteristics: financial structure, the extent of financial development and the degree of financial penetration. Similarly, we employ three relevant industry characteristics: size, external (finance) dependence and capital intensity. We control for state and industry fixed effects and consider the interaction between the relevant state and industry characteristics. The coefficient on this variable enables us to discern how the interplay of industry and state characteristics influences industry growth.

1.3 As observed earlier, our data spans the period 1981 to 2008, which is an especially interesting period: the liberalization of the economy, which begun somewhat hesitantly in the 1980s and was rapidly pushed forward in 1991 post inception of a wider process of economy-wide reforms. The period is thus one of rapid change and growth in the Indian economy, coupled with the emergence of inequalities in the state-level growth process (Bollard et al., 2013).

1.4 Our choice of India rests on three considerations. First, India is presently one of the most important developing countries with a rich history of industrial sector controls.

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Second, like the US, India is a federal polity comprising of states with their own governments and a measure of policy autonomy. Third, the country has a rich history of state-level industrial data. The cross-sectional and time series variation in the data provides an ideal laboratory to explore the effects of industrial policies on state-level industrial growth.

1.5 The reminder of the paper unfolds as follows. Section 2 presents an overview of the literature, and a brief description of the evolution of industrial policies in India. The empirical strategy and the database are detailed in Section 4. Section 5 discusses the results, followed by the policy implications and the concluding remarks.

2. Related Literature

2.1 In the Indian case, two sets of studies have explored the interlinkage between industrial policies and economic growth. The first set examines the role of labor lawsin affecting manufacturing performance. Besley and Burgess (2004) find that movement towards pro-worker policies at the state-level is linked to declines in employment and output in manufacturing.Thereafter, employing a much disaggregated codification of state labour laws, Ahsan and Pages (2009) document that pro-worker labor legislations are associated with lower elasticity of demand for labour. Hasan et al. (2009) find that states with relatively restrictive labour regulations have experience slower growth of employment. Hasan and Jandoc (2013) show that the share of labor-intensive employing less than 10 workers is much higher in restrictive labor regulation states as compared to other (pro-employer) states. Dougherty et al. (2014) show that total factor productivity in firms in labour-intensive industries were on average about 11-14% higher in the states with less restrictive labour laws.

2.2 The second set of studies evaluates the effect of liberalization on Indian industry. Thus, Aghion et al (2005) uncovers evidence that state- industries with greater technological capability benefited more from liberalization. Using industry level data, Hasan et al. (2003) report that trade liberalization had a positive effect on labor demand elasticities in manufacturing, especially in states with flexible labor regulations. Utilising industry-level data on major Indian states, Mitra and Ural (2008) show that the impact of trade reforms on productivity to be over 30% higher in states with flexible labor markets.

2.3 Several features of our study are of interest. First, unlike prior studies on this aspect (e.g., Gupta et al., 2008), we focus on how the interaction of state financial structure and industry characteristics influence industry growth. Second, borrowing from cross-country literature, we examine the effect of a state's financial structure as well as its financial development on industrial growth. The latter assumes relevance for India, since our dataset includes information from 1981 to 2008, which falls on both sides of the massive economic liberalization program. Finally, unlike research which focuses primarily on the impact of labor regulations on manufacturing output (Besley and Burgess, 2004), the present study is concerned more with how financial structure and development interact with industrial characteristics to shape industrial growth of sub-national regions.

2.4 The paper therefore, connects three strands of literature. First, it contributes to the development economics literature by addressing the pattern of industrial growth for a

leading emerging economy. Second, it supplements the industrial organization literature by directly exploring the interlinkage between industrial characteristics and understanding its impact on industry growth. Finally, it augments the literature on regional economics by exploring how state-level industrial policies influence the geography of industrial location across sub-national regions within an economy.

3. Industrial Policies in India

3.1 The focus on a socialist economy in the 1960s with its overarching emphasis on poverty reduction and social equality meant that the policies pursued by the authorities were highly restrictive. This permeated all spheres of macroeconomic activity. As regards industrialization, the motto was one of self-reliance. As a result, the policy pursued was heavy-industry oriented industrialization within a closed economy setup. A key feature of this process was industrial licensing whereby firms would have to apply for a license for setting up new units or for capacity expansion. This was buttressed by a highly protective trade policy, often providing tailor-made protection to each sector of industry. The significant dead-weight losses that these policies entailed led to an overhaul of the extant architecture, creating a consensus on the need for greater liberalization and openness.

3.2 The economic reforms beginning 1991 laid strong emphasis on enabling markets and globalization coupled with gradual scaling down of government involvement in non-productive economic activities. The process of industrial licensing was dispensed with, except for a few hazardous and environmentally-sensitive industries. The requirement that investment by large industrial houses needed a separate clearance under the Monopolies and Restrictive Trade Practices Act to discourage the concentration of economic power was replaced by a new competition law to regulate anti-competitive behavior. As a result, the liberalization program, which reduced the extent of regulation, would be expected to exert differential impact on the relative roles of the government and the market as regards the location of production by industries.

3.3 The net effect of this process has been a sharp rise in industrial growth. From an average of 4% in the 1970s and around 6.5% in the 1980s, industrial growth jumped to over 8% during the period 1992-98, reflecting the effect of liberalization of various controls. Industry growth has improved thereafter, reflecting among others, a combination of pro-active economic policies and a conducive regulatory environment. Illustratively, industry growth averaged 7.5% during the ten-year period following 1998, peaking at 12.2% in 2006-07.

3.4 Notwithstanding these advancements, there is evidence to suggest that the investment climate varies widely across states, and these differences are reflected in a disproportional share of investment being concentrated in certain states perceived as more investor-friendly. By way of example, the share of industry in state NSDP averaged roughly 18% over the entire period (1981-2008); for only three states, this share was in excess of the all-India average. The level of industrialization appears to have declined over the period, with more and more states falling below the all-India average over the period; only a few states have been able to maintain a consistently high level of industrialization during the entire period (Table 1). These differences could have entailed a variation in state growth

rates, with the 'reform-oriented' states growing at a faster clip *vis-à-vis* the 'lagging reformers (Bajpai and Sachs, 1999)'.[2] Because liberalization created a more competitive environment for industry to operate, the payoff from pursuing good policies increased, emphasizing the importance of state-level actions.

4. Empirical Strategy

4.1 We utilize a state-industry panel framework for our analysis. The basic model(Model 1) is given by Eq. (A1):

$$\text{(Model 1)} \quad g_{ij} = \alpha_i + \gamma_j + \beta(FS_i * IC_j) + \delta z_{ij} + \varepsilon_{ij} \qquad \textbf{(A1)}$$

In Model 1, the dependent variable $g(i, j)$ represents the annual average growth in industry j in state i. The industrial growth rate is measured as the change in real value added per employee, averaged over the sample period. In addition α_i and γ_j are included to account for state and industry fixed effects respectively.

FS(i) is a measure of the state's financial structure. It is computed as the share of banking and finance in net state domestic product (NSDP).

IC (j) represents the characteristics of industry j. We consider three such characteristics: factory size, capital intensity and external dependence.

4.2 The factory size is measured as the number of employees divided by the number of factories. In large industries, workers enjoy both income and employment security through various labor laws. To counter this, the employer also hires specialized expertise on disputes and personnel management. Therefore, it is likely to be the case that disputes will be resolved much more quickly in large industries and consequently, growth will be higher for such industries.

4.3 Capital intensity is defined as the ratio of total capital stock divided by the total number of employees. Hasan et al (2013) observe that the actual capital labor ratios in Indian manufacturing are much higher than those predicted for the US. According to their analysis, labor market rigidities, especially those induced by curbs on hiring and firing, push up indirect labor costs. Economically, although such restrictions might entail higher wages, in effect, such regulations can actually dampen labor demand and consequently, adversely affect industry growth. As compared to this, if higher industry growth envisages more capital intensive techniques which can be funded relatively more easily in states with greater bank penetration, this might ensure robust industry growth.

4.4 The final industry characteristic is external dependence. Following Gupta et al. (2009), this is measured as the ratio of outstanding loans to invested capital. Following from Rajan and Zingales(1998), greater financial development lowers the cost of external

[2]Bajpai and Sachs (1999) classified Indian states into three categories – reform oriented, intermediate reformers and lagging reformers – and claimed that reform oriented states performed better in terms of economic growth in the post-reform period.

finance and as a result, industries with greater dependence on external finance tend to expand faster.

4.5 The interaction term - FS (*i*)*IC(*j*) - tests whether industrial growth is affected by financial structure (the financial structure hypothesis). From Model 1, $\partial g(i, j) / \partial IC(j) = \beta FS(i)$. Therefore,if β>0, it implies that bigger industries grow relatively faster in better-banked states. Finally, an additional term, z(*i,j*) to measure industry *j*'s share in total value added in 1981 is included to test for convergence: industries with a larger share in a state will tend to grow slower over time and *vice versa*.

4.6 The existing literature suggests more than financial structure, it is financial development that affects the real economy (the financial development hypothesis).[3] To address this aspect, we specify model 2, as in Eq.(A2):

(Model 2) $$g_{ij} = \alpha_i + \gamma_j + \beta(FD_i * IC_j) + \delta z_{ij} + \varepsilon_{ij} \quad \textbf{(A2)}$$

4.7 In this specification, FD (*i*) measures state *i*'s financial development. The financial development measure is measured as the ratio of bank credit to NSDP. The specification is employed to examine whether the coefficient of the interactive term FD (*i*)*IC(*j*), is statistically significant.

4.8 An alternate way to measure financial development is the ratio of credit per lac of population, better known as financial penetration (FP). Following from recent developments in financial inclusion, this variable measures demographic credit outreach and can be utilised to test the impact of credit outreach on industry growth as in Model 3.

(Model 3) $$g_{ij} = \alpha_i + \gamma_j + \beta_1(FP_i * IC_j) + \delta z_{ij} + \varepsilon_{ij} \quad \textbf{(A3)}$$

4.9 Finally Model 4 includes both FS(*i*)*IC(*j*) and FD(*i*)*IC(*j*). This is to test whether the significance of FS(*i*)*IC(*j*) changes after the effect of FD(*i*)*IC(*j*) has been taken on board. A significant coefficient on the variable would imply that financial structure has a net impact on the growth of industries over and above the impact of financial development.

(Model 4) $$g_{ij} = \alpha_i + \gamma_j + \beta_1(FS_i * IC_j) + \beta_2(FD_i * IC_j) + \delta z_{ij} + \varepsilon_{ij} \quad \textbf{(A4)}$$

4.10 Finally, Model 5 includes both FS(*i*)*IC(*j*) and FP(*i*)*IC(*j*). This is to test whether the significance of FS(*i*)*IC(*j*) changes after the effect of FP(*i*)*IC(*j*) has been considered. A significant coefficient on the variable would imply that financial structure has a net impact on the growth of industries over and above the impact of financial development.

(Model 5) $$g_{ij} = \alpha_i + \gamma_j + \beta_1(FS_i * IC_j) + \beta_2(FP_i * IC_j) + \delta z_{ij} + \varepsilon_{ij} \quad \textbf{(A5)}$$

[3]Beck et al. (2001), Beck and Levine (2002) and Levine (2002).

5. Data and Measurement

5.1 Our study covers the period 1981-2008 and exploits annual data on three sets of variables. First, it utilizes state-level information on national accounts. Second, it employs data on manufacturing industries at the two-digit level. Third, it utilizes information on state-level credit data.

5.2 We confine our attention to 14 major Indian states.[4] There are several reasons for restricting ourselves to these states. First, these states have existed for the entire sample period. Among the states that have been left out, several have moved from being centrally administered to ones where they elect their own state-level governments. Second, over 80% of the population resides in these states. Third, over three-quarters of all factories and close to 95% of all industrial output is produced in these states. The data collection methodology for the 14 states has remained largely unaltered throughout the period of analysis. Most analysis on India that utilizes state-level data are typically confined to these states (Ahluwalia, 2002; Sachs *et al.*, 2002; Nachane*et al.*, 2002; Ghosh, 2013).

5.3 Information on state-level national accounts and population numbers is published by the Economic and Political Weekly Research Foundation (EPWRF). The national accounts data on states is available at annual frequency over the sample period and is further decomposed into that arising from agriculture, industry and services. Utilizing this database, we compute the shares of banking and finance in NSDP by appropriately splicing the NSDP series with different base years and adjusting them to a uniform base at 2004-05 prices.

5.4 The Annual Survey of Industries (ASI) data is collated by the Central Statistical Organization of India, a data collection agency of the Federal Government. Among others, the ASI data provides information on industry at the 2-digit level at the state-level. The data covers all factories registered under the Factories Act 1948 (defined as units employing 20 or more workers). The ASI frame can be classified into two sectors –the census sector and the sample sector. Units in the 'census' sector (all factories will more than 100 workers) are covered with a sampling probability of one, while units in the 'sample' sector (employing between 20 and 99 persons) are covered with probabilities one-half or one-third. The census sector covers over 80% of the formal sector of Indian industry and is considered more reliable than the sample sector. We utilize the census database to cull out information on 21 industries at the 2-digit level.[5] Concordance is worked out between NIC 1987 and those that

[4]These states, in order are regional location are, Andhra Pradesh, Karnataka, Kerala and Tamil Nadu in Southern region, Haryana, Punjab, Rajasthan and Uttar Pradesh in the Northern region, Bihar, Orissa and West Bengal in the Eastern region and Gujarat, Maharashtra and Madhya Pradesh in the Western region.

[5] The 18 industries (along with their National Industrial Classification or NIC code) are the following: manufacture of food products (NIC 20-21), manufacture of beverages, tobacco and related products (NIC 22), manufacture of cotton textiles (NIC 23), manufacture of wool, silk and man-made fibre textiles (NIC 24), manufacture of jute and other vegetable fibre textiles, except cotton (NIC 25), manufacture of textile products, including wearing apparel (NIC 26), manufacture of wood and wood products (NIC 27), manufacture of paper and paper products and printing (NIC 28), manufacture of leather and products of leather, fur and substitutes of leather (NIC 29), manufacture of basic chemicals and chemical products, except products of petroleum or coal (NIC 30), manufacture of rubber, plastic, petroleum and coal products and processing of nuclear fules (NIC 31), manufacture of non-metallic mineral products (NIC 32), basic metal and alloys industries (NIC 33), manufacture of metal products and parts, except machinery and equipment (NIC 34), manufacture of machinery and equipment other than transport equipment (NIC 35-36), manufacture of transport equipment and parts (NIC 37), other manufacturing industries (NIC 38) and electricity (NIC 40).

took place in subsequent years to reflect the changes in industrial classification that occurred during this period. For each state-industry pair, data is available on a wide range of variables, including among others, the number of factories, capital, number of employees, value added and depreciation.

5.5 Third, we extract information on credit extended by banks in a particular state. Information on this variable is obtained from the *Basic Statistical Returns*, a yearly publication of the Reserve Bank of India (RBI), which provides extensive data on the business of commercial banks based on data on advances collected under the Basic Statistical Returns System. The main types of data available from this publication are advances and deposits classified according to population groups, bank groups and at the sub-national level.

5.6 To moderate the influence of outliers, all variables are winsorized at 1 percent at both ends of the distribution.Table 2 provides a summary of all the variables and the methods of their measurement.

5.7 Table 3 records the correlation matrix of the relevant variables of interest. Growth in industry value added is negatively correlated with the initial industry share, indicating a convergence effect whereby industries with a large share grow slowly over time. Noteworthy for our analysis, the growth in value added is positively correlated with both financial structure and financial development, suggesting that greater financial expansion is more conducive to industry growth. The bottom half of the panel presents the interrelationship between value added and industry characteristics. To exemplify, growth in value added is positively associated with capital intensity and external dependence. These results indicate that higher capital intensity and greater external dependence have growth-enhancing effects.

6. Results and Discussion

6.1 In Table 4, the industry-specific variable is capital intensity. The results show that the coefficient of the interaction between capital intensity and financial structure is negative and statistically significant. In other words, capital--intensive industries tend to grow faster in states that have higher levels of banking penetration. This, in essence, testifies the complementarity between the financial and real sector: paucity of finance can impede industry growth.

6.2 These results are not only statistically significant, but economically meaningful as well. Take the coefficient on the interaction term in column 1, which equals 0.027. To understand its economic significance, consider two industries - food products in Karnataka and textiles in Punjab - with similar capital intensity equal to 3.88, the median for the sample. The average share of banking in NSDP for the period in Punjab equals 0.19, whereas that in Karnataka equals 0.26, a difference of roughly 36%. The point estimates in column 1 then suggest that, notwithstanding the similar capital intensities, food industry in Karnataka would grow by roughly 1% (=0.027*36) per year faster as compared to the textile industry in Punjab. With average industry growth in the sample being 13.3%, this is quite a sizeable difference.

6.3 The coefficient for the convergence effect is negative and strongly significant, and concurs with our earlier perception: industries with larger initial shares in a state grow slowly over time.

6.4 The result of Models II and III explore the financial development hypotheses. In Model II, the coefficient on the interaction term is positive and strongly significant, suggesting that industries with high capital per worker grow faster in states with higher levels of financial penetration. Thus, not only financial structure but financial development also affects the growth of industries.

6.5 The coefficient on the interaction between financial widening and capital intensity is not significant (Model III).

6.6 It is well acknowledged that the role of market-based financing tends to increase as financial sector develops. As a result, it is possible that the financial structure measure embeds the information contained in the financial development measure.

6.7 Therefore, in Model IV, we include interactions between capital intensity and financial structure on the one hand and between capital intensity and financial development on the other.The findings suggest that the coefficient on the financial development declines only slightly and is significant and the coefficient on financial structure continues to remain significant. What this would suggest is the information contained in the financial development measure is quite distinct as that contained in the measure of financial structure.

6.8 As compared to this, when financial penetration is measured as credit per lac of population, the coefficient on the interaction between capital per employee and the financial widening measure is not statistically significant, although the interaction between capital intensity and financial structure continues to remain significant (Model 5). This indicates that so far as states are concerned, it is financial structure and its development that matters for industry growth.

6.9 Table 5 presents the regression results with size as the industry characteristic. The results indicate strong complementarities between banking and factory size, although in isolation, neither of these measures are significant. In Model IV for example, the interaction between financial structure and factory size is negative and strongly significant with a point estimate equal to -0.79. Similarly, the coefficient between financial development and factory size is strongly significant. What this suggests is that although financial structure is not necessarily conducive to the growth of bigger firms, bigger industries in states with greater financial development tend to experience higher growth.

6.10 Finally, the analysis in Table 6 considers financial dependence as the industry characteristic. The results provide strong support in favor of Rajan-Zingales (1998): industries with greater financial dependence grow faster in states with greater financial development. In Model 1 for example, the coefficient on the interaction term is 0.25. To understand its relevance, consider a state with financial dependence equal to 0.53, the average for the sample. For such a state, a 80% increase in the share of banking from 3.7% to 6.6% - equal to a move from the 25^{th} to the 75^{th} percentile of the distribution - would improve industry growth by roughly 20% (=0.251*80).

6.11 In a similar vein, the coefficient on (Bank credit/NSDP)*Dependence equals 0.05. That is to say, for a state with credit-to-NSDP equal to 0.18, an increase in dependence by 100% from 0.36 to 0.72, which equals a move from the 10th to the 90th percentile of the distribution would improve industry growth by 5% (=0.052*100). All in all, greater dependence on external finance appears to be beneficial for industries, especially in states that are financially more developed.

6.12 The empirical results presented earlier appear to suggest that larger industries with higher capital intensity tend to grow faster in states with better financial development. However, it may very well happen that even industries with low capital intensity grow faster (or, decline slower) in states with lower financial penetration. Even in this case, the coefficient on the interaction term would be positive.

6.13 To examine this issue, we rank industries in terms of their capital intensity and consider the top three and the bottom three industries. As to states, we divide the sample into two groups: those with high financial development and those with low financial development, based on the median value of this variable across states. We thus have four groups. We then regress the industry growth rate on state and industry fixed effects and control for initial industry shares. The residual growth rates of the groups, show that as in so far as capital intensity is concerned, industries with high labor productivity grow faster [0.09 – (-0.62)=0.71(%)] in states with high financial development; low labor productive industries grow slower [-0.06-(-0.16)=0.22(%)] in states with low financial development.

7. Concluding Remarks

7.1 The paper applies the Rajan and Zingales (1998) methodology to examine the relationship between financial structure of Indian states and the differential growth rate of industries with different characteristics. The results suggest that bigger, capital-intensive industries grow faster in states with higher penetration of banking. More importantly, the findings testify that financial development of states tends to overwhelm their financial structure in influencing industrial growth.

7.2 Such evidence provides interesting policy implication for states where governments influence industrial policies. While the economic reforms have reduced the burden of Union government controls on investment activity, there is need for concomitant liberalization at the state-level. This is an area that remains to be explored in future research.

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Table 1: Shares of industry in NSDP across states

States	1981-1991	1992-2001	2002-2008	1981-2008
Andhra Pradesh	0.150	0.164	0.143	0.154
Bihar	0.209	0.064	0.057	0.119
Gujarat	0.276	0.304	0.279	0.287
Haryana	0.194	0.191	0.189	0.192
Karnataka	0.170	0.179	0.176	0.175
Kerala	0.159	0.129	0.088	0.130
Madhya Pradesh	0.177	0.176	0.159	0.172
Maharashtra	0.287	0.255	0.208	0.256
Odisha	0.144	0.152	0.173	0.154
Punjab	0.162	0.159	0.173	0.164
Rajasthan	0.146	0.165	0.158	0.155
Tamil Nadu	0.269	0.247	0.183	0.239
Uttar Pradesh	0.144	0.156	0.141	0.147
West Bengal	0.203	0.165	0.112	0.167
All India	**0.192**	**0.179**	**0.159**	**0.179**

Source: Author's calculations based on state national accounts data

Table 2: Variables in Panel Model

Notation	Measurement	Data source	Mean (SD)
g (*i*, *j*)	Natural log difference for two consecutive periods in gross value added per employee for industry *j* in state *i*	Annual Survey of Industries	0.133 (0.062)
State dummies	Dummy variable with value 0 or 1 for each state		
Industry dummies	Dummy variable with value 0 or 1 for each industry		
State-specific			
FS (*i)*	Share of banking/ NSDP, proxy for financial structure	EPW Research Foundation	0.052 (0.021)
FD (*i*)	Bank credit/ NSDP, proxy for financial development	Reserve Bank of India EPW Research Foundation	0.184 (0.072)
FP (*i*)	Bank credit/100,000 persons, proxy for financial penetration	Reserve Bank of India	7.623 (0.665)
Industry-specific			
Size	Average size of industry *j* where, size=number of employees/total number of factories	Annual Survey of Industries	3.802 (0.546)
Capital/ labor	Average capital intensity of industry *j*, where capital intensity= Capital stock/ number of employees	Annual Survey of Industries	5.896 (5.964)
Dependence	Average external dependence of industry *j*, where dependence=outstanding loans/ invested capital	Annual Survey of Industries	0.529 (0.189)
z (*i*, *j*)	Industry *j*'s share in GVA of state *i*in the initial year	EPW Research Foundation	0.057 (0.087)

Table 3: Correlation matrix

Panel A	**Growth in GVA/employee**	**Share in GVA**	**Share of banking/ NSDP**	**Bank credit/ NSDP**	**Credit/ Population**
Growth in GVA/ employee					
Initial share in GVA	-0.126**				
Share of banking/NSDP	0.117**	-0.004			
Bank credit/ NSDP	0.115**	-0.002	0.889***		
Credit/Population	0.004*	-0.0006	0.743***	0.819***	
Panel B	Growth in GVA/employee	Capital/ Labor	Size	Dependence	
Growth in GVA/ employee					
Capital/labor	0.328***				
Size	0.001	0.169***			
Dependence	0.101**	0.051	0.143**		

* p<0.10; ** p<0.05; *** p< 0.01

Table 4: Panel model estimation when industry characteristic is capital intensity

Variables	**Model I**	**Model II**	**Model III**	**Model IV**	**Model V**
State dummy	Included	included	included	included	included
Industry dummy	Included	included	included	included	included
Industry share	-0.112*** (0.030)	-0.109*** (0..029)	-0.107*** (0..031)	-0.109*** (0..029)	-0.107*** (0.032)
(Share of banking/NSDP)*(Capital/labor)	0.027** (0.012)			0.024** (0.011)	0.023** (0.011)
(Bank credit/NSDP)*(Capital/labor)		0.008*** (0.003)		0.007* (0.004)	
(Bank credit/100,000)*(Capital/labor)			0.0002 (0.0001)		0.0003 (0.005)
R-squared	0.389	0.391	0.346	0.393	0.387
Observations	247	247	247	247	247

Standard errors (clustered by industry) within parentheses.
***, ** and * indicates statistical significance at 1, 5 and 10%, respectively.

Table 5: Panel model estimation when industry characteristic is size

Variables	Model I	Model II	Model III	Model IV	Model V
State dummy	included	included	included	included	included
Industry dummy	included	included	included	included	included
Industry share	-0.108*** (0.029)	-0.108*** (0.030)	-0.112*** (0.032)	-0.104*** (0.029)	-0.114*** (0.032)
(Share of banking/NSDP)*(Factory size)	0.085 (0.119)			-0.785* (0.451)	-0.691 (0.566)
(Bank credit/NSDP)*(Factory size)		0.036 (0.037)		0.269* (0.148)	
(Bank credit/100,000)*(Factory size)			0.002 (0.001)		0.007 (0.005)
R-squared	0.380	0.381	0.386	0.388	0.375
Observations	247	247	247	247	247

Standard errors (clustered by industry) within parentheses.
***, ** and * indicates statistical significance at 1, 5 and 10%, respectively.

Table 6: Panel model estimation when industry characteristic is external dependence

Variables	Model I	Model II	Model III	Model IV	Model V
State dummy	Included	Included	included	included	included
Industry dummy	Included	Included	included	included	included
Industry share	-0.102*** (0.029)	-0.101*** (0.028)	-0.104*** (0.027)	-0.100*** (0..027)	-0.109*** (0.026)
(Share of banking/NSDP)*(Dependence)	0.251** (0.124)			0.203* (0.120)	1.048** (0.548)
(Bank credit/NSDP)*(Dependence)		0.052* (0.029)		0.175* (0.097)	
(Bank credit/100,000)*(Dependence)			0.0002 (0.003)		0.006 (0.004)
R-squared	0.379	0.378	0.379	0.381	0.380
Observations	247	247	247	247	247

Standard errors (clustered by industry) within parentheses.
***, ** and * indicates statistical significance at 1, 5 and 10%, respectively.