CEO Power and Labor-friendly Policy

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Abstract

This study examines the association between CEO power and labor-friendly policy. While most of the previous studies have examined the effect of CEO power on corporate social responsibility, we focus on one key stakeholder class – employees and examine how powerful CEOs influence the quality of the workplace. Our study finds that CEO power and labor-friendly policy is significantly negatively related. The analysis of labor-friendly policy and financial performance relation shows that powerful CEOs increase firm value by investing less in labor. However, we find that powerful CEOs invest more in the labor welfare program when the bargaining power of labor is high in industries such as mobile industries, competitive markets, and innovation-intensive firms. In each of these markets, we find powerful CEOs labor friendliness positively affects firm value.
JEL Classifications: G30, J30, J53

1.Introduction

Human capital is the key intangible asset and the most important factor for a firm's competitive success. With this powerful factor today's dynamic business world distinguishes one firm from another. Employees are the most unique and value-relevant stakeholders who are closely involved with the company's operations to execute firm's strategies to create value (Faleye and Trahan, 2011). Adopting labor-friendly culture is the foundation of a firm's profit chain, from which employee productivity and retention follow. However, employee welfare programs require investment of significant resources which results in inferior financial performance unless productivity and other gains outweigh the costs. This raises the question of whether what is good for employees is also good for shareholders. Among top managers, CEO plays a critical role in making decisions that affect long-term value (Crossland et al., 2014). Arguing that CEO with substantial power possess significant discretion to influence the quality of workplace and firm value, this study examines whether

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granting a CEO more power is associated with firms' investment in labor-friendly policies and how such initiatives in turn influence firm performance.

The principal-agent literature has documented a variety of viewpoint about the role of powerful CEOs. A strand of literature shows that there are efficiency gains from having a powerful CEO as they possess significant knowledge of the firm's resources and business, have greater familiarity with firm capabilities and can make better strategic decision (Finkelstein and D'Aveni, 1994; Boyd, 1995; Li et al., 2018). However, when they gain more control over corporate board, power might motivate them to act unitarily and accept value-reducing projects to maximize personal interests. A large body of empirical literature has found powerful CEOs taking sub-optimal strategies which include extracting high compensation, engaging in value destroying merger and acquisition (M&A) deals, investing in pet project, building empire and enjoying quite life (Jensen and Meckling, 1976; Bebchuk and Fried, 2002; Pan et al., 2016). However, research on how CEO Power affects employee welfare policies is scant. As empirical literature documents both positive and negative aspects of CEO Power, the direction of the likely impact of CEO power on employee welfare policy is unclear.

We develop our hypothesis based on two strands in the empirical literature that exhibit conflicting findings about the role that powerful CEOs play. In an agency theory framework, powerful CEOs pursue labour-friendly programs to build reputation as good social citizens, increase control over organizational resources and enlarge their own power (Cennamo et al., 2009). However, another

strand of literature focuses on powerful CEOs' expertise and dynamic decision-making capability. That strand argues that while allocating resources on labor-friendly program, powerful CEOs consider how their allocation on labor affects firms operating flexibility, the ability to respond to changing market condition and shareholders value. We label this as 'Value creation' hypothesis and it predicts that powerful CEOs undertake optimal level of investment in labor.

In our study we test the above hypotheses by investigating the impact of CEO power on labor-friendly policy. We also take into consideration of different industries, such as high mobile industries, competitive industries and intellectual property (IP) intensive industries and examine whether these specific environments induce powerful CEOs to undertake more employee welfare programs. Bargaining power of labor is high in these industries as firms operating in these industries rely on knowledgeable and efficient workers to reap firm-specific payoffs and economic efficiency (Faleye and Trahan, 2010; Donangelo, 2014). Powerful CEOs' firm-specific knowledge and ability to make quick decision are argued to help firms to reap the benefit and stay abreast of the threats in the changing market conditions (Li et al., 2018). Therefore, it would be interesting to examine whether granting a CEO more power helps firms to stimulate workforce loyalty and productivity in these markets.

To measure CEO power, we follow Finkelstein (1992) and construct a CEO power index based on six variables: founder, duality, triality, tenure, CEO ownership and dependent directors. Endogeneity might be an issue here since more variability in labor-friendly decision may lead to increase in CEO power

(Hermalin and Weisbach, 1998). We approach this issue by Two Stage Least Square (2SLS) method using dead founder and state median power as the instruments following previous literature (Adams et al.,2005; Li and Jiraporan, 2010; Knyazeva et al., 2013; Han et al., 2016)

We test our predictions on a sample of 18,512 firm-year observations representing 2253 unique US firms over the period of 1996-2014. Our results show that there is a significant negative relation between CEO power and labor-friendly policy. This relation is robust to endogeneity and alternative measure of CEO power. The analysis of labor policy-financial performance nexus shows that powerful CEOs increase firm value by investing less in labor. But they invest more in employee welfare in mobile industries, competitive market and intellectual property (IP) intensive firms. Our study thus supports the 'value creation' hypothesis. By investing less in labor welfare program, they keep the firms' ability to adapt quickly to changing market conditions and thereby creating more value for shareholders. They devote significant resources to employee welfare when doing so enhances the ability to maximize value and improve efficiency.

Our paper contributes to a growing body of literature providing empirical evidence on the determinants of labor-friendly policy. Previous literature so far has examined the institutional pressures, market pressures, firm size, resource availability, female workforce, past performance etc as the determinants of labor-friendly policy. In our study, we examine how powerful CEOs, who possess

significant power to influence the quality of workplace, view investment in labor-friendly policies.

Previous literature examines the impact of CEO power on CSR, firm performance, risk taking, M&A deals, excess compensation, innovation etc. Our study explores how granting more power to CEO influences labor-friendly policy. To the best of our knowledge, this study is the first to examine the relation between CEO power and labor-friendly policy.

The reminder of the paper is organized as follows. Section 2 develops testable hypotheses. Section 3 presents the data and research methodology, and section 4 describes the empirical results. Section 5 summarizes and concludes.

2. Hypothesis

2.1 CEO Power and Employee Welfare Policies

Agency theory suggests that managers have an interest in overinvesting in social program to build reputation as good social citizens (Jensen and Meckling's, 1976; Barnea and Rubin, 2010). When CEOs gain more control over corporate board, power motivates them to act unitarily to fulfil their personal interests disregarding expert advice from their boards (Bebchuk and Fried, 2002; Pan et al., 2016). When a CEO undertakes labour-friendly program, employees get positive perceptions of the CEO's capabilities, put a blind eye to managerial excesses and attribute merits to the CEO, while failure is accredited to external factors. Consequently, employees grant the CEO greater control over organizational resources and decision processes and the CEOs further increase

their power (Cennamo et al., 2009). Therefore, in an agency theory framework, powerful CEOs are predicted to pursue labour-friendly programs to fulfil their personal interest.

H1a: Agency View: CEO Power is positively associated with labor-friendly policy.

Powerful CEO is regarded as the chief architect of a firm's innovation strategy and leader in creating value (Quinn, 1985, Papadakis, 2006; Berger et al., 2016). They possess significant knowledge of the firm's resources and business and make better strategic decision (Finkelstein and D'Aveni, 1994; Adams et al., 2005; Li et al., 2018). They are risk takers, take quick decision and respond quickly to changes in market conditions, take proactive decisions to increase market value which help firms to get ahead of the changes and threats in the industries (Li et al., 2018).

The basic argument in favour of the employee welfare programs is to stimulate workforce loyalty, productivity and market value. However, labor-friendly program requires significant investment which can be costly resulting in inferior financial performance unless productivity and other gains outweigh the costs. A sense of entitlement often emerges among workers from these program that further cause distress to the company's financial condition (Faleye and Trahan, 2011). Commitment of significant fund for long term leads to the rejection of financially sound investment project. This also reduces the ability to adapt quickly to changing industry conditions. Therefore, there should be an optimal level of investment in labor that maximizes firm value. The level of

investment also varies across industries based on the bargaining power of labor and firms' reliance on the knowledgeable and efficient workers (Merz et al., 007).

Managers are less likely to make decisions in isolation and when they invest for social improvement, they do not rule out the possible effects of the social program on firm value (Hong and Minor, 2015). Considering powerful CEOs' firm specific knowledge and the ability to respond quickly to changing market condition, it is expected that while allocating resources on labor-friendly program, they consider how such allocation affects labor productivity, operating flexibility and firm value. The broad base of expertise and firm specific knowledge that powerful CEOS possess, allow them to evaluate the quality of available investment opportunities, industry demand for labor and the level of productivity. Their ability to respond quickly to the changing market conditions is more likely to help them to adjust the investment in labor based on industry conditions. Therefore, powerful CEOs are more likely to undertake optimal level of investment in labor.

H1b: "Value Creation" Hypothesis: The relation between CEO power and labor-friendly policy depends on investment opportunity and industry condition.

3. Methodology

3.1 Data

We collect the financial data from COMPUSTAT Fundamental Annual database from 1996 to 2014 and governance data from ExecuComp and ISS database (formerly known as Risk Metrics). The data from ExecuComp is matched with COMPUTSTAT and ISS database which results in a total of 43,210 firm-year observations. The resulting sample is then matched with the MSCI ESG STATS dataset which provides ratings given to firms in relation to their employee treatment. This sample is matched with institutional investors data, obtained from CDA/Spectrum, which provides quarterly reports on firms' ownership structures. The last quarter of each year has been used for each institutional investor. We exclude financial firms (two digits SIC code between 60 and 69). Our final sample comprises 18,512 firm-year observations, representing 2253 unique US firms over the period 1996-2014.

3.2 Methodology

We formally test our hypothesis i.e. how firms with powerful CEOs affect labor-friendly policy using following regressions:

$$Emp\_Policy_{it} = \alpha_{i,t} + \alpha_2 CEO\ Power_{\ it-1} + \sum_{j=1}^{N} \alpha_j\ Control_{j,t-1} + Ind + Year + \varepsilon_{i,t}$$

where $\alpha_{i,t}$ and ε_{it} represent the intercept and residual term respectively. Standard errors are adjusted for potential heteroskedasticity and serial correlation and clustered by firm. To mitigate the influence of extreme values, all financial variables are winsorized at the 1% and 99% levels. Independent

variables are lagged by 1 year. The dependent variable is labor-friendly policy, whilst the test variable is CEO power. Endogeneity might be a concern. We address this problem by means of Two Stage Least Square (2SLS) approach.

3.3 Variable Measurement

3.3.1 Dependent Variables

To measure how a firm treats its employees we use MSCI ESG STATS dataset which provides ratings given to firms in relation to their employee treatment. Bae et al. (2011) report that this is the most comprehensive dataset available of employee treatment standards and has been used in many studies as the proxy for employee treatment (Turban and Greening, 1997 ; Cronqvist, Low, and Nilsson, 2007; Landier, Nair, and Wulf, 2009). The database includes ratings on labor-related screens. The rating has two sub dimensions of employee relations: “strength” and “concern”. The “strength” dimension correlates more with “good” practices, while “concern” is related with “causing harm” practices (Boulouta 2013). Each company scores 1 if it meets the strength/concern requirements and 0 otherwise. We construct an index of Emp_Policy by summing over the indicator variables in each category of the strength: union relations, cash profit sharing, employee involvement, retirement benefits, health and safety strengths, no-layoff policy, employee involvement, retirement benefit, labor management, supply chain labor standards, compensation, professional development and human capital management. A higher value of the index indicates better employee treatment.

3.3.2 Independent Variables

Power is a concept which is both structural and relational. Finkelstein (1992) define CEO power by identifying four dimensions of CEO power: structural, ownership, expert and prestige power. We examine how the sources of CEO power identified by Finkelstein (1992) influence labor-friendly policy. We construct our CEO power measure emphasizing on their formal positions, expertise and ownership and calculate *CEO power* index aggregating all the components of CEO power. We estimate CEO structural power by Founder[1], duality (CEO also acts as a chairman), triality (CEO additionally holds other senior posts) and inside directors (Dependent directors above industry median). 'CEO Ownership above industry mean' and 'Tenure above industry mean' are used to measure CEO ownership and expert power. We calculate *CEO Power* index aggregating the six components of the CEO power, thus, the index value ranges from 0 to 6.

Following previous literature, we control for several variables that can affect labor-friendly policy. Firms make several decisions throughout their business cycle. We include firm age to control for this (current year–established year). Small firms have incentives to increase their growth by investing in labor-friendly policies but may lack enough fund whilst larger firms are more publicly visible, so they are under intense public-pressure to adopt a labor-friendly culture (Cowen et al., 1987). To control for firm size, we include logarithm of total assets (*Firm Size*). Firms with lower market-to-book ratios tend to invest more in

[1] We thank Murali Jagannathan for providing these data.

employees to be more highly valued. Therefore, we include M-B ratio, measured as the market value of equity over the book value of equity. Availability of fund allows a business to invest cash into growth opportunities, so we include FCF, measured as cash flow from operation divided by total sale. Greater use of leverage increases expenses and the risk of bankruptcy; and provides less incentive to invest in employee welfare program. We include the leverage ratio, measured as total debt divided by total assets (*Leverage*). To represent future investment opportunities (Titman, 1984), we include, *R&D Intensity* (the ratio of R&D expenses to total assets).

Lastly, previous literature has found that corporate governance attributes such as board size and ownership structure affect the firm's social program (Johnson and Greening, 1999; Ibrahim et al., 2003; Oh et al., 2011). Thus, we include the board size, shareholdings owned by block holders and institutional investors.

3.4 Sample Profile

Table 1 summarizes the descriptive statistics of the sample. Panel A of table 1 reports the summary statistics of the components of the CEO Power index. In 64% of the firms, the position of CEO and chair of the board is combined and in 34% of firm-year observation, the CEO-Chair holds other titles. The CEO is the founder or a descendant of the founder 23.4% of the time, has an average tenure of twelve years, and owns a little more than 1.1% of the firm. The CEO power index shows a mean value of 1.61 and the index ranges from 0 to 6. These measures are like prior studies (Li et al, 2018; Han et al., 2016).

Panel B of table 1 reports descriptive statistics of the full sample. In terms of dependent variable, the mean Emp_Policy Index is 0.36 with a minimum and maximum value of 0 and 9. *Leverage ratio* average 20.1%. The average corporate board is made up of 10 members. *M_B ratio* and *Firm Age* have mean values of 1.824 and 13, respectively. These values are consistent with prior research (Li, 2008; Gomeriz and Baleesta, 2014).

Panel C shows that firms with high CEO Power are bigger and older and high market to book ratio and associated with more debt and are less employee friendly. These results provide preliminary support for our H1b hypothesis-that powerful CEOs invest less in labor-friendly policies.

Panel D of table 1 shows the correlations among the individual components that comprise our *CEO Power Index*. Although almost all the components are significantly correlated with one another, most correlations are not high. Overall, it appears our individual components are detecting different aspects of CEO power. The correlation between CEO power and Emp_Policy is negative which provides preliminary support for our H1b hypothesis. The highest correlation between the other variables is not high, therefore, it does not raise concerns for multicollinearity in our study.

Table 1. Descriptive Statistics

The table provides summary statistics for data employed in the analysis. The appendix provides a detailed description of the construction of the variables. The sample consists of an unbalanced panel of 18512 observations from 2253 firms for the period 1996-2014. Data on governance are obtained from Execucump and ISS, financial information data from Compustat and ownership structures data from CDA/Spectrum. *'Founder'* is an indicator variable that equals one if any source explicitly mentions that the current CEO is one of the original founders of the firm at the time the company was founded. ' 'Duality' is an indicator variable that equals one if CEO is also the chairman of the board; *Triality*, is a dummy variable which is one if CEOs hold more than two titles and zero otherwise; *CEO Ownership* is the proportion of ownership held by CEOs; *CEO Ownership above industry median* is an indicator that equals one if the ownership of CEOs is greater than industry median; *Tenure* is the number of years the CEO has served as CEO; Tenure above industry median is a dummy variable that equals one if the tenure of CEO is above the industry median; *Board Dependency Ratio* is the ratio of inside directors divided by board size; *Board Dependency above industry median* is an indicator that equals one if the ratio of the board dependency is greater than industry median dependent directors. *CEO Power* is an index which is an aggregate measure of the five components of CEO power and thus the index value ranges from 0 to 5. *Board Size* is the total number of directors on the board; *Firm Size* is the log of total assets; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year;: *M_B* is ratio of the market value of total assets to book value of total assets; *Leverage is the* ratio of long-term debt to the totals assets; *FCF* is the ratio of CFO to sales; R&D is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by bloackholders; *Emp_Policy* is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. The continuous variables are winsorized at 1% level, Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0.1 (*) level.

Panel A: CEO power components

Variable	Mean	Std. Dev.	Min	Max
Founder	0.234	0.423	0	1
Duality	0.639	0.480	0	1
Triality	0.336	0.472	0	1
CEO_Ownership	0.011	0.042	0	1
CEO Ownership above industry median	0.242	0.428	0	1
CEO Tenure	11.552	8.108	-16	61
CEO Tenure above industry median	0.458	0.498	0	1
Board Dependency Ratio	0.274	0.163	0	1
Board Dependency above industry median	0.460	0.498	0	1
CEO Power	1.610	1.322	0	6

Panel B: Summary Statistics of full sample

Variable	Mean	Std. Dev.	Min	Max
Board Size	9.556	3.277	2	55.000
CEO Age	49.302	19.242	0	96.000
Firm Size	7.372	2.118	1	12.382
Firm Age	17.252	7.403	1	26.000
M_B	1.824	1.213	1	7.950
Tobins Q	4.549	4.112	-8.378	14.394
Leverage	0.201	0.194	0	0.901
FCF	-0.019	0.481	-3.877	0.465

R&D	0.030	0.066	0	0.416
Inst_Ownership	0.597	0.308	0	1.126
Block_Ownership	0.175	0.143	0	0.588
Emp_Policy	0.362	0.816	0	9.000
Dummy Death	0.292	0.455	0	1.000

Panel C: T-test of differences in means

Firm Characteristics	Low Power	High Power	Mean Difference	P-value
Firm Size	7.145	7.557	-0.408***	0
Firm Age	16.023	18.555	-2.532***	0
M_B ratio	1.725	1.907	-0.1823***	0
Board Size	9.534	9.565	-0.031	0.451
Leverage	0.193	0.205	-0.008***	0
R&D intensity	0.033	0.027	0.007***	0
Emp_Policy	0.042	0.017	0.032***	0

Panel D: Correlation matrix of CEO Power components and variables

	Founder	Duality	Triality	CEO_Ownership	CEO Tenure	Dependency ratio
Founder	1					
Duality	0.006	1				
Triality	-0.141	0.259	1			
CEO_Ownership	0.208	0.009	-0.057	1		
CEO Tenure	0.432	0.016	-0.070	0.160	1	
Dependency	0.273	-0.188	-0.240	-0.001	0.189	1

Panel E: Correlation between the variables of the full sample

	Board Size	CEO Age	Firm Size	Firm Age	ROA	M_B	Debt_TA	R&D_TA	Inst_Ownership	Block_Ownership	CEO Power	Emp_Policy
Board Size	1											
CEO Age	0.029	1										
Firm Size	0.378	0.092	1									
Firm Age	0.187	0.101	0.281	1								
ROA	0.022	0.054	0.318	0.101	1							
M_B	-0.070	0.001	-0.195	0.151	0.008	1						
Debt_TA	0.050	0.002	0.176	0.001	-0.038	-0.153	1					
R&D_TA	-0.148	-0.059	-0.323	-0.064	-0.360	0.279	-0.145	1				
Inst_Ownership	-0.105	0.065	0.056	0.035	0.087	-0.025	0.031	-0.025	1			
Block_Ownership	-0.187	0.037	-0.142	-0.083	-0.018	-0.085	0.065	0.009	0.709	1		
CEO Power	-0.042	0.138	-0.075	0.039	0.016	0.025	-0.054	-0.011	-0.043	-0.042	1	
Emp_Policy	0.059	0.010	0.096	0.052	0.038	0.052	-0.024	0.068	-0.037	-0.058	-0.051	1

4. Empirical Results

4.1 CEO Power and Labor-friendly Policy: Ordinary Least Square (OLS)

In table 2 we present results of Ordinary Least Square (OLS) regression relating our labor-friendly measures to CEO power index. As the table shows, Emp_Policy index is negatively related to CEO power and the co-efficient is significant at the 1% level. In terms of economic significance, a one standard deviation increase in the CEO power is associated with a 0.036 (0.0304*1.61) decrease of Emp_Policy index. Since the average Emp_Policy index of the sample is 0.362, decrease of 0.048 is economically significant. In terms of control variables, we find that bigger, older and innovation intensive firms are more labor-friendly.

This suggests that powerful CEOs invest less in employee friendly program.

Table 2. CEO Power and Labor-friendly Policy (OLS)

This table represents OLS regression results for the relationship between CEO Power and labor-friendly policy. The dependent variable is *Emp_Policy* which is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio. *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year; *Firm Size* is the log of total assets; *M_B* is ratio of the market value of total assets to book value of total assets; *FCF* is the ratio of CFO to sales*; Leverage is the* ratio of long-term debt to the totals assets; R&D is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by bloackholders; *Emp_Policy* is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. The continuous variables are winsorized at 1% level. Standard errors are adjusted for potential heteroskedasticity and serial correlation and they are clustered by firm. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

VARIABLES	Emp_Policy
CEO Power	-0.0304***
	(-4.820)
Board Size	0.0106***
	(3.683)
CEO Age	-5.99e-05
	(-0.116)
Firm Age	0.0117***
	(7.569)
Firm Size	0.0632***
	(8.735)
M_B	0.0166**
	(2.172)
FCF	0.0407**
	(2.073)
Debt_TA	-0.00897
	(-0.175)
R&D_TA	1.272***
	(6.390)
Inst_Ownership	0.0360
	(0.865)
Block_Ownership	-0.412***
	(-5.199)
Constant	0.578
	(1.457)
R2	0.21
Observations	18,512
Year Effect	Yes
Industry Effect	Yes

4.2 CEO Power and Labor-friendly Policy: Endogeneity Issue

Studies on CEO power suggest that there is a correlation between CEO power to influence firm decision regarding employee policy issue. Reverse causality is a major concern since employees appreciates labor-friendly program and boards may give successful CEOs more power (Adams, 2005; Kim and Liu, 2011; Faleye and Trahan, 2011; Li et al.,2016). It is hard to distinguish the impact of powerful CEOs from firm characteristics that have empowered them (Hermalin and Weisbach, 1998). There may also exist omitted time-varying variables that affect both labor-friendly program and CEO power. We approach this issue by Two Stage Least Square (2SLS) method.

Following previous literature, I use two instruments: dead founder and state median CEO power (Adams et al. 2005; Kedia and Rajgopal, 2009; Knyazeva et al., 2013; Dougal et al., 2015). Our first instrument is dead founder which takes the value of one if the founder died before the firm enters our sample. Since dead founders cannot be CEOs it is an exogenous event that affects the probability of a current CEO being the founder or chair or president and is less likely to influence labor-friendly policy. Geographical peer effects have also been shown to influence corporate governance and actions. As our second instrument, I consider state median CEO power which is a measure of state expectation or pressure for exerting more power to CEOs. We report the 2SLS regression results in table 2. From the first-stage regressions (reported in the first column), state power and dead founder are significantly correlated (1% significant) with CEO power. The F-statistics 26.31 of the significance of the instrumental variable is much greater than 10, suggesting the soundness of the

instrument. Sargan (1958) over-identifying restriction tests shows the p values of the over-identifying restrictions test is 0.13, therefore, the tests fail to reject the joint exogeneity of the instrument. Hence, our instrument is valid.

Column 2 reports the second stage regression model where dependent variable is Emp_Policy and independent variable is the predicted CEO power. The results show that predicted CEO power has a significant ($p<0.01$) negative impact on employee policy. This result suggests that our main finding is robust after addressing the reverse causality relation between CEO power and labor-friendly policy.

Next, we report how powerful CEOs investment in labor-friendly policy affect firm value. Dependent variable in column 3 is Tobins Q. The interaction variable (Power_hat times Emp_Policy) is positive and statistically significant at 10% level.

The results that powerful CEOs are negatively associated with labor-friendly policy and this negative relation has a positive effect on firm value provides support for our value creation (H1b) hypothesis, suggesting that CEO power improves firm value by investing less in employee welfare policy.

Table 3. CEO Power and Labor-friendly Policy (2SLS)

This table represents 2SLS regression results for the relationship between CEO Power and Emp_Policy. Column 1 reports first stage regression and second stage is reported in column 2. Dependent variables in column 1 and 2 and 3 are CEO Power, Emp_Policy and Tobins Q respectively. *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio; *Emp_Policy* is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees; Tobins Q is the ratio of the MKT assets to Book assets; *State Power* is the state median CEO power; Dead_dummy is a dummy variable that takes the value of one if the founder died before the firm enters our sample; *Firm Size* is the log of total assets; *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year; *M_B* is the ratio of the market value of total assets to book value of total assets; *Leverage is the* ratio of long-term debt to the totals assets; *FCF* is the ratio of CFO to sales; *R&D* is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by bloackholders. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

	1st Stage	2SLS	
VARIABLES	CEO Power	Emp_Policy	Tobins Q
	(1)	(2)	(3)
State_power	0.0637***		
	-2.908		
Death_dummy	-0.358***		
	(-7.478)		
Power_hat		-0.104*	-0.643***
		(-1.857)	(-5.327)
Emp_Policy			-0.441*
			(-1.900)
Power_hat times Emp_Policy			0.180*
			(1.672)
Board Size	-0.00929**	0.00929***	-0.0104
	(-2.419)	-3.338	(-0.897)
CEO Age	0.00713***	-0.000111	-0.00292
	-9.721	(-0.190)	(-1.273)
Firm Age	0.00768***	0.0135***	0.0219*
	-2.643	-6.902	-1.767
Firm Size	-0.0232**	0.0660***	0.280***
	(-1.988)	-10.31	-7.805
M_B	0.0312**	0.00967	
	-2.394	-1.273	
FCF	0.0791**	0.0505**	0.295***
	-2.442	-2.188	-2.666
Leverage	-0.182**	0.016	1.130***
	(-2.042)	-0.3	-4.545
R&D	-0.488	1.267***	4.046***
	(-1.478)	-6.671	-4.165
Inst_Ownership	0.097	0.00892	-0.874***
	-1.472	-0.231	(-5.004)
Block_Ownership	-0.18	-0.394***	0.875***
	(-1.323)	(-5.263)	-2.644
Constant	1.036***	0.660**	5.222**
	-3.417	-2.147	-2.075
R2	0.08	0.22	0.29
Observations	22,342	15,056	11,677
Partial F-statistics	26.31		
Sargan Test (p-value)	0.13		
Year Effect	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes

4.3 Robustness Check-Alternative CEO Measures

We create an indicator variable that equals one if CEO power index is above the industry median CEO power index and reported the results in the column 1 of the table 4.

We also consider alternative CEO power measure as each component of the CEO power may be correlated or may differently affect the CEOs' influence in the firm (Li et al., 2016). Following Bebchuk et al. (2011), we construct CEO pay slice which reflects the CEO's relative standing and the ability to extract rents. CEO Pay Slice is measured as the CEO's total compensation as a fraction of the total compensation for the firm's top five executives (following Bebchuk et al., 2011). We create an indicator variable that equals one if CEO Pay Slice is above the industry median pay slice.

Table 4 presents the regression results. The coefficient on CEO power is negative and significant at 1* and 10% level respectively. Therefore, our result is robust to alternative measure of CEO power.

Table 4. CEO Power- Labor-friendly Policy

This table represents regression results for the relationship between CEO Power and Emp_Policy. Dependent variable in column 1 and 2 is Emp_Policy. *Emp_Policy* is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. In column 1, *CEO Power* above the industry CEO Power index is used to measure CEO power. *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio. In Column 2, *CEO Power is measured by* CEO Pay_Slice which is an indicator variable that equals one if CEO Pay Slice is above the industry median. CEO Pay Slice is measured as the CEO's total compensation as a fraction of the total compensation for the firm's top five executives. *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Size* is the log of total assets; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year;: *ROA* is the net income divided by total assets; *M_B* is the ratio of the market value of total assets to book value of total assets; *Leverage is the* ratio of long-term debt to the totals assets; *FCF* is the ratio of CFO to sales; *R&D* is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by block holders. The continuous variables are winsorized at 1% level. Standard errors are adjusted for potential heteroskedasticity and serial correlation and they are clustered by firm. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

	CEO_Power over industry mean	CEO Pay_Slice
VARIABLES	Emp_policy	Emp_policy
CEO Power	-0.0553***	-0.0800*
	(-3.458)	(-1.724)
Board Size	0.00936***	0.00946***
	(3.287)	(4.076)
CEO Age	-0.000283	-0.000443
	(-0.564)	(-0.881)
Firm Age	0.0202***	0.0201***
	(2.644)	(3.252)
Firm Size	0.0111***	0.0109***
	(7.239)	(8.513)
M_B	0.0784***	0.0800***
	(9.571)	(16.66)
FCF	0.0181	0.0164
	(0.968)	(0.980)
Leverage	-0.0589	-0.0518
	(-1.112)	(-1.210)
R&D	1.308***	1.314***
	(6.444)	(9.002)
Inst_Ownership	0.000417	0.00471
	(0.0101)	(0.149)
Block_Ownership	-0.340***	-0.344***
	(-4.322)	(-5.339)
Constant	0.0425	0.0416
	(0.113)	(0.176)
R2	0.22	0.22
Observations	18,814	18,778
Year Effect	Yes	Yes
Industry Effect	Yes	Yes

4.4 CEO Power and Labor-friendly Policy: Bargaining Power of Labor

Our previous findings suggest that powerful CEOs invest less in labor. In this section we examine the relation between CEO power and labor-friendly policy on settings in which bargaining power of labor is high: high mobile industries, competitive industries and innovation intensive firms. Firms operating in these industries rely on knowledgeable and efficient workers to reap the firm-specific payoffs and economic efficiency. When employees leave an organisation, they can be replaced physically; however, replacing their knowledge is difficult as skills and experience that each employee possess are unique. We, therefore, examine whether powerful CEOs adopt more labor-friendly policy to stimulate loyalty and productivity when bargaining power of labor is high.

4.4.1 CEO Power and Labor-friendly Policy: Labor Mobility

Labor Mobility is the flexibility of workers to walk away from an industry for better opportunities (Donangelo, 2014). This flexibility is determined by the nature of labor skills. The more industry-specific the labor skills are, the less mobile the labor supply is[2]. High mobile industries lack full control over labor as they rely on workers with more general skills that can search for higher wages across other industries (Donangelo, 2014)[3]. As the bargaining power of labor is high in mobile industries, investment of significant resources in this industry might stimulate workforce loyalty, reduce turnover and improve productivity. Therefore, we expect that LM induces powerful CEOs to invest more in labor-friendly policies.

To empirically investigate whether CEO power is more beneficial for labor mobile industries we follow Donangelo (2014) to construct the measure of LM using workers data from Bureau of Labor Statistics (BLS) from 1997 to 2014. LM measure is constructed in two stages, at the occupation level and the industry level. At first, concentration ratio is calculated, to measure workers intrinsic flexibility to switch industries, at the occupation-level:

$$CONC_{j,t} = \left(\frac{emp_{i,j,t}}{\sum emp_{i,j,t}}\right)$$

where $emp_{i,j,t}$ is the number of workers assigned to occupation j who are employed in industry i at time t.

[2] As an example: doctors, nurses and health technicians have significant levels of industry-specific skill, so health care industry is less mobile whereas workers in the wholesale trade (salesperson, computer analysts, operation managers etc) is relatively more mobile as their skills are less industry-specific.

[3] Workers in occupations concentrated in a few industries are associated with low LM, while workers in occupations dispersed across the economy are associated with high mobility

Then the occupation-level CONC is aggregated into industry, weighting by the wage expense related to each occupation:

$$LM_{i,t} = (\sum_j CONC_{j,t} * \frac{emp_{i,j,t} * wage_{i,j,t}}{\sum_j emp_{i,j,t} wage_{i,j,t}})^2$$

where wage i, j,t is a measure of the average annual wage paid to workers in industry i that are assigned to occupation j in year t.

We test the effect of LM on the relation between powerful CEOs and labor-friendly policies by estimating regressions that include an additional term interacting the CEO power and high mobility dummy variable. High mobility dummy variable is an indicator variable that equals one when *LM* is over the sample median for a given year. The results are reported in table 5. As the table shows, the interaction term is significantly ($p<0.10$) positive. This suggests that powerful CEOs undertake more labor-friendly policies in industries with high mobility.

In table 6 we report how powerful CEOs employee friendliness in mobile industries affect firm value. Column 1 and 2 show high mobile and low mobile industries. Results show that powerful CEOs investment in labor is associated with significantly (10%) high Tobins Q in high mobile industries. This suggests, in high mobile industry powerful CEOs create value by undertaking labor-friendly policies.

Table 5. CEO Power- Labor-friendly Policy: Labor Mobility

This table represents 2SLS regression results for the relationship between CEO Power and firm value. The dependent variable *Emp_Policy* is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio. Power_hat is the predicted value of CEO Power index. High mobility dummy variable is an indicator variable that equals one when LM is over the sample median for a given year. LM is constructed following Donangelo (2014). *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year; *Firm Size* is the log of total assets; *M_B* is the ratio of the market value of total assets to book value of total assets; *FCF* is the ratio of CFO to sales; *Leverage is the* ratio of long-term debt to the totals assets; R&D is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by block holders; *Emp_Policy* is the difference between total Strength and total concern. The continuous variables are winsorized at 1% level. Standard errors are adjusted for potential heteroskedasticity and serial correlation and they are clustered by firm. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

VARIABLES	Emp_Policy
Power_hat	-0.156**
	(-2.518)
High_Mobility	-0.251**
	(-2.318)
Power_hat times High_Mobility	0.0933*
	(1.948)
Board Size	0.00946***
	(3.398)
CEO Age	-0.000108
	(-0.185)
Firm Age	0.0136***
	(6.922)
Firm Size	0.0657***
	(10.26)
M_B	0.00893
	(1.175)
FCF	0.0512**
	(2.219)
Debt_TA	0.0179
	(0.335)
R&D_TA	1.275***
	(6.710)
Inst_Ownership	0.00803
	(0.208)
Block_Ownership	-0.394***
	(-5.253)
Constant	0.845***
	(2.661)
R2	0.19
Observations	15,056
Year Effect	Yes
Industry Effect	Yes

Table 6. CEO Power, Labor-friendly Policy, Firm Value: Labor Mobility

This table represents 2SLS regression results for the relationship between CEO Power and firm value. The dependent variable is *Emp_Policy* which is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. Tobins Q is the ratio of the MKT assets to Book assets; *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio. Power_hat is the predicted value of CEO Power index. High mobility dummy variable is an indicator variable that equals one when LM is over the sample median for a given year. LM is constructed following Donangelo (2014). *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year; *Firm Size* is the log of total assets; *M_B* is the ratio of the market value of total assets to book value of total assets*; FCF* is the ratio of CFO to sales*; Leverage is the* ratio of long-term debt to the totals assets; R&D is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by block holders. The continuous variables are winsorized at 1% level. Standard errors are adjusted for potential heteroskedasticity and serial correlation and they are clustered by firm. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

	High_Mobility	Low_Mobility
VARIABLES	Tobins Q	Tobins Q
Power_hat	-1.032***	-0.252
	(-7.186)	(-1.585)
Emp_policy	-0.408	0.220
	(-1.516)	(0.724)
Power_hat times Emp_policy	0.217*	-0.109
	(1.673)	(-0.772)
Board Size	0.000247	-0.0327*
	(0.0160)	(-1.798)
CEO Age	-4.81e-05	-0.00305
	(-0.0146)	(-0.920)
Firm Age	0.0234	0.0179
	(1.483)	(1.019)
Firm Size	0.297***	0.284***
	(6.243)	(5.481)
FCF	0.323**	0.0844
	(2.121)	(0.530)
Debt_TA	1.220***	0.210
	(3.731)	(0.543)
R&D_TA	4.585***	1.517
	(3.736)	(0.959)
Inst_Ownership	-0.634***	-0.593**
	(-2.578)	(-2.311)
Block_Ownership	0.748*	0.663
	(1.652)	(1.348)
Constant	3.980	4.491*
	(1.153)	(1.685)
R2	0.25	0.18
Observations	6,971	4963
Year Effect	Yes	Yes
Industry Effect	Yes	Yes

4.4.2 CEO Power and Labor-friendly Policy: Product Market Competition

We empirically investigate whether CEO power is more beneficial for labor in competitive market. The notion is that firms in competitive market are expected to make good managerial decisions (Li et al., 2018). Product market competition is an effective disciplinary mechanism for achieving economic efficiency and the disciplining effect of competition provides incentives and motivates managers to increase productivity (Alchian, 1950; Stigler, 1958; Li et al., 2018).

We use two primary measures to capture a firm's product market conditions. First, we use the Herfindahl Index (*H-Index*) defined as the sum of the squared market shares for all firms in an industry group (Giroud and Mueller, 2011; Grullon and Michaeily, 2014; Han et al., 2016). We create an indicator *High_competition* variable that equals one when *H-Index* is below the sample median for a given year. To verify the robustness of our results, we use a text-based measure of product market fluidity from Hoberg et al. (2014). It measures the change in a firm's product space due to moves made by competitors. This measure is constructed using words in a firm's product description section in its 10-K and how they are similar to the change in rival firms' product words from rival firms' 10-Ks. Greater similarity implies that a firm faces greater threats from its rivals. We create an indicator *High_competition* variable that equals one 1 if firm level fluidity is greater than sample median fluidity.

The results are depicted in table 7. We then run 2SLS regressions after including two new variables: *High_competition* and the product of the predicted

CEO power and *High_competition.* In column 1, we report CEO power-labor-friendly regression that include market competition measured by H-index. Column 2 reports the same where market competition is measured by market fluidity. In both column the interaction variable enters with a positive sign and significant at 10% and 5% level respectively. This suggests that firms confronting high competition, powerful CEOs devote significant resource to improve their lives/working condition.

In table 8, we report how powerful CEOs employee friendliness in competitive market affects firm value. Column 1 and 2 show high and low competitive market measured by HHI-index whereas column 3 and 4 report competitiveness measured by fluidity. Results show that in competitive market (measured by HHI-index) powerful CEOs' investment in labor is associated with significantly (5%) high Tobins Q. Therefore, in competitive industries, powerful CEOs add value to firm by undertaking labor-friendly policies.

Table 7. CEO Power- Labor-friendly Policy: Mkt Competition

The dependent variable in column 1 and 2 is *Emp_Policy* which is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio. Power_hat is the predicted value of CEO Power index. High competition variable in column 1 is measured by H-index which is an indicator variable that equals one when H-Index is below the sample median for a given year. In column 2, High competition indicator variable in column 2 equals one when firm level fluidity is greater than sample median fluidity. *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year; *Firm Size* is the log of total assets; *M_B* is the ratio of the market value of total assets to book value of total assets*; FCF* is the ratio of CFO to sales*; Leverage is the* ratio of long-term debt to the totals assets; R&D is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by block holders. The continuous variables are winsorized at 1% level. Standard errors are adjusted for potential heteroskedasticity and serial correlation and they are clustered by firm. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

	H-Index (1)	Fluidity (2)
VARIABLES	Emp_policy	Emp_policy
Power_hat	-0.147**	-0.0960**
	(-2.432)	(-2.247)
High_competition	-0.241**	-0.146
	(-2.110)	(-1.527)
Power_hat times High_Competition	0.0900*	0.0879**
	(1.840)	(2.055)
Board Size	0.00932***	0.00863***
	(3.350)	(3.131)
CEO Age	-0.000113	0.000141
	(-0.194)	(0.237)
Firm Age	0.0136***	0.0123***
	(6.934)	(6.610)
Firm Size	0.0662***	0.0794***
	(10.34)	(12.56)
M_B	0.00953	0.0110
	(1.256)	(1.464)
FCF	0.0493**	0.0329
	(2.138)	(1.485)
Leverage	0.0145	-0.0191
	(0.271)	(-0.363)
R&D	1.266***	1.321***
	(6.667)	(6.955)
Inst_Ownership	0.00867	-0.0225
	(0.224)	(-0.585)
Block_Ownership	-0.393***	-0.330***
	(-5.246)	(-4.399)
Constant	0.724**	0.166
	(2.343)	(0.551)
R2	0.21	0.23
Observations	15,056	15,132
Year Effect	Yes	Yes
Industry Effect	Yes	Yes

Table 8. CEO Power, Labor-friendly Policy, Firm Value: Mkt Competition

The dependent variable in column 1 and 2 is *Emp_Policy* which is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. Tobins Q is the ratio of the MKT assets to Book assets; *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio. Power_hat is the predicted value of CEO Power index. High competition variable in column 1 is measured by H-index which is an indicator variable that equals one when H-Index is below the sample median for a given year. In column 2, High competition indicator variable in column 2 equals one when firm level fluidity is greater than sample median fluidity. *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year; *Firm Size* is the log of total assets; *M_B* is the ratio of the market value of total assets to book value of total assets*; FCF* is the ratio of CFO to sales*; Leverage is the* ratio of long-term debt to the totals assets; R&D is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by block holders. The continuous variables are winsorized at 1% level. Standard errors are adjusted for potential heteroskedasticity and serial correlation and they are clustered by firm. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

	High_HHI (1)	Low_HHI (2)	High_Fluidity (3)	Low_Fluidity (4)
VARIABLES	Tobins Q	Tobins Q	Tobins Q	Tobins Q
Power_hat	-0.225	-0.291*	1.259***	-0.601*
	(-1.368)	(-1.830)	(2.883)	(-1.747)
Emp_policy	-0.693**	-0.0501	-0.206	-0.154
	(-2.149)	(-0.175)	(-0.524)	(-0.532)
Power_hat times Emp_policy	0.312**	-0.0156	0.0686	0.0968
	(2.036)	(-0.117)	(0.378)	(0.713)
Board Size	-0.0138	0.0478***	-0.00876	0.0207
	(-0.826)	(3.235)	(-0.462)	(1.308)
CEO Age	-0.000338	-0.00197	0.00271	-0.00518*
	(-0.111)	(-0.650)	(0.684)	(-1.710)
Firm Age	0.00840	-0.0117	-0.0223	0.0337**
	(0.533)	(-0.717)	(-1.170)	(2.049)
Firm Size	0.168***	0.369***	0.492***	0.149***
	(3.710)	(7.832)	(10.06)	(2.948)
FCF	0.0598	0.315**	-0.234*	0.925***
	(0.470)	(2.034)	(-1.686)	(5.326)
Debt_TA	0.519	0.0418	-0.408	1.957***
	(1.608)	(0.124)	(-1.159)	(5.589)
R&D_TA	3.200***	1.697	1.929	14.78***
	(2.998)	(0.808)	(1.624)	(8.257)
Inst_Ownership	-1.191***	-0.835***	-0.724**	-0.0953
	(-4.993)	(-3.548)	(-2.512)	(-0.388)
Block_Ownership	0.826*	0.912**	2.241***	-0.244
	(1.797)	(2.024)	(3.974)	(-0.562)
Constant	3.962***	2.840***	0.116	3.889***
	(6.048)	(4.390)	(0.106)	(4.368)
R2	0.1	0.17	0.16	0.08
Observations	6,479	6,693	4,754	7,162
Year Effect	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes

4.4.3 CEO Power and Labor-friendly Policy: Innovation Intensive Firms

We next examine whether powerful CEOs adopt more labor-friendly policy when firms' strategy is more innovation intensive. Firms with higher *R&D Intensity* is argued to be more strongly associated with the introduction of the new and improved processes and products (Hitt et al., 1996; McWilliams and Siegel, 2000). Those firms depend on highly skilled employees because of the technical expertise required to reap the risky firm-specific payoffs associated with R&D expenditures. They also derive the most benefit from engaging in labor-friendly practices (Faleye and Tranhan,2011).

We use two measures of innovation intensity. First, we use innovation intensity using the ratio of R&D expenditures to total assets (following Faleye and Trahan, 2011). We create an indicator *R&D_dummy* that equals one when *R&D* is above the sample median for a given year.

We also use IP-intensive industries following Chen et al. (2018), which is defined as industries that produce or use significant amounts of intellectual property and rely most intensely on patents, copyrights and trademarks to protect them. In a report by the ESA and USPTO, 75 four-digit NAICS industries are identified as IP-intensive industries. We create a dummy variable *IP_Intensive_dummy* which equals one if it is one of the 75 IP-intensive industries identified by the ESA and USPTO.

The results are reported in table 9. Column 1 reports CEO power-labor-friendly regression that include innovation intensity measured by R&D_dummy whereas column 2 reports innovation intensity measured by market fluidity. In these regressions, the coefficient of the interaction variable (product of predicted

CEO power and *R&D Intensity*) comes with a significantly positive sign, 1% and 5% level respectively. Therefore, our results provide evidence that powerful CEOs invest more in employees in innovation intensive market.

In table 10, we report how powerful CEOs' employee friendliness in innovative market affects firm value. Results show that in innovation intensive market powerful CEOs' investment in labor is associated with significantly (10%) high Tobins Q. This suggests that powerful CEOs add value to firm by undertaking labor-friendly policies in innovation intensive industries.

Table 9. CEO Power-Labor-friendly Policy: Innovative Firms

The dependent variable in column 1 and 2 is *Emp_Policy* which is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio. Power_hat is the predicted value of CEO Power index. Innovation intensity variable in column 1 is measured by R&D dummy that equals one when R&D is above the sample median for a given year. In column 1, Innovation intensity equals one if R&D is above the sample median for a given year. In column 2, Innovation intensity IP Intensive dummy which equals one if it is one of the 75 IP-intensive industries identified by the ESA and USPTO. *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year; *Firm Size* is the log of total assets; *M_B* is the ratio of the market value of total assets to book value of total assets*; FCF* is the ratio of CFO to sales*; Leverage is the* ratio of long-term debt to the totals assets; R&D is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by block holders; The continuous variables are winsorized at 1% level. Standard errors are adjusted for potential heteroskedasticity and serial correlation and they are clustered by firm. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

	R&D_dummy	IP Intensive_dummy
VARIABLES	Emp_policy (1)	Emp_policy (2)
Power_hat	-0.191***	-0.0619
	(-3.309)	(-1.166)
Innovation_Intensity	-0.313***	-0.153
	(-2.843)	(-1.121)
Power_hat times Innovation_Intensity	0.202***	0.123**
	(4.047)	(2.143)
Board Size	0.00887***	0.0131***
	(3.190)	(4.353)
CEO Age	-0.000164	-0.000392
	(-0.282)	(-0.615)
Firm Age	0.0141***	0.0134***
	(7.229)	(6.426)
Firm Size	0.0613***	0.0647***
	(9.760)	(9.688)
M_B	0.0134*	0.0132
	(1.779)	(1.630)
FCF	0.0218	0.0114
	(0.966)	(0.473)
Debt_TA	0.0352	0.0205
	(0.659)	(0.361)
Inst_Ownership	0.00600	0.0239
	(0.155)	(0.579)
Block_Ownership	-0.403***	-0.421***
	(-5.385)	(-5.280)
Constant	0.898***	0.683**
	(2.881)	(2.129)
R2	0.21	0.21
Observations	15,056	13,968
Year Effect	Yes	Yes
Industry Effect	Yes	Yes

Table 10. CEO Power, Labor-friendly Policy, Firm Value: Innovative Firms

The dependent variable in column 1 and 2 is *Emp_Policy* is the summation of indicator variables from MSCI ESG STATS dataset reflecting firms' relationship with employees. Tobins Q is the ratio of the MKT assets to Book assets; *CEO Power* is an index which is an aggregate measure of the five indicators- whether CEO is founder, chairman, CEO holds both chairman and president positions, tenure of CEOs is above the median tenure of CEOs and ownership of CEOs is above the industry median of the CEO's ownership, dependent directors ratio of the firms is above the industry median dependent ratio. Power_hat is the predicted value of CEO Power index. In column 1, Innovation intensity equals one if R&D is above the sample median for a given year. In column 2, Innovation intensity IP Intensive_dummy which equals one if it is one of the 75 IP-intensive industries identified by the ESA and USPTO. *Board Size* is the total number of directors on the board; *CEO Age* is the age of the CEO; *Firm Age* is the difference between the first year when the firm appears in CRSP and the current year; *Firm Size* is the log of total assets; *M_B* is the ratio of the market value of total assets to book value of total assets*; FCF* is the ratio of CFO to sales*; Leverage* is the ratio of long-term debt to the totals assets; R&D is the ratio of research and development expenditures to total assets; *Ins_Investors* is the fraction of shares owned by institutional investors; *Block_Ownership* is the fraction of shares owned by block holders; The continuous variables are winsorized at 1% level. Standard errors are adjusted for potential heteroskedasticity and serial correlation and they are clustered by firm. Asterisks indicate significance at the 0.01 (***), 0.05 (**) and 0. 1 (*) level.

	High_R&D intensity	Low_R&D intensity	High_IP_Intensity	Low_IP_Intensity
VARIABLES	Tobins Q	Tobins Q	Tobins Q	Tobins Q
Power_hat	-0.449***	-0.663***	-0.647***	-0.591***
	(-3.324)	(-2.669)	(-3.871)	(-3.480)
Emp_policy	-0.413	0.157	-0.625*	-0.0866
	(-1.588)	(0.374)	(-1.829)	(-0.303)
Power_hat times Emp_policy	0.204*	-0.117	0.293*	0.0527
	(1.682)	(-0.576)	(1.800)	(0.395)
Board Size	0.0348**	0.0146	0.0276	-0.00197
	(2.286)	(0.713)	(1.593)	(-0.119)
CEO Age	-0.00246	-0.00708	-0.00501	-4.38e-05
	(-0.921)	(-1.450)	(-1.561)	(-0.0123)
Firm Age	0.0157	0.0180	-0.00194	0.0520***
	(1.058)	(0.787)	(-0.116)	(2.780)
Firm Size	0.216***	0.126**	0.281***	0.0813
	(5.208)	(2.105)	(6.408)	(1.630)
FCF	-0.117	0.126	0.0194	0.697***
	(-0.762)	(0.806)	(0.149)	(3.641)
Debt_TA	0.286	1.220***	0.678**	0.738*
	(0.953)	(2.737)	(2.087)	(1.920)
Inst_Ownership	-0.908***	-0.488	-0.929***	-0.660**
	(-4.491)	(-1.268)	(-3.788)	(-2.445)
Block_Ownership	1.130***	-0.305	0.256	1.360***
	(2.975)	(-0.432)	(0.547)	(2.771)
Constant	3.600***	5.086***	4.458***	3.783***
	(6.356)	(5.663)	(6.986)	(5.308)
R2	0.10	0.13	0.19	0.18
Observations	8,513	3,531	7,074	4,970
Year Effect	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes

5. Summary and Conclusions

In this study we empirically investigate the relation between CEO power and labor-friendly policy. We also examine whether granting the CEO enough power helps firms to adopt more employee-friendly policy in industries where bargaining power of labor is high such as high mobile industries, competitive industries and innovation intensive firms. Our study considers a two-stage least squares approach to control for the potential endogeneity between CEO power and labor-friendly policy.

Based on a sample of 18,512 firm-year observations representing 2253 US firms over the period of 1996-2014, we find that there is a significant negative relation between the CEO power and labor-friendly policy. The analysis of labor-friendly policy- firm performance show that powerful CEOs increase firm value by investing less in labor. We also find that powerful CEOs invest more in employee welfare in mobile industries, competitive market and innovation intensive firms and this investment is associated with high market value.

In general, we find no support that powerful CEOs invest more in employees. By investing less in labor welfare program, they keep the firms' operation flexible and thereby increase market value. They invest more in employee welfare in mobile industries, competitive market and intellectual property (IP) intensive firms. Firms operating in these industries rely on knowledgeable and efficient workers to reap the firm-specific payoffs and economic efficiency. Our study suggests that powerful CEOs' greater familiarity with firm resources and quick decision-making capability lead firms to get ahead of the changes and threats in the industries.

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