Employee welfare, social capital, and IPO survival

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Abstract

This paper examines the impact of employee welfare and social capital on IPO survival times using panel data setting to capture the dynamic effects of these factors post listing. We find that employee welfare and social capital have a positive impact on survival times using a sample of IPOs listed in US from 2000 through 2016 and tracking to the end of 2018. Specifically, we find IPOs associated with better employee welfare and or located in a county with enhanced social capital, survive longer after the listing. Our results show that the influence of employee welfare on survival time is stronger when the county is associated with better social capital. Further tests reveal that the positive effect of employee welfare and social capital is driven by the diversity among employees and the number of charity organisations located in the county of the IPO firm. Overall, our results are robust to endogeneity and various model specifications.

Key word: IPO survival, employee welfare, social capital, longevity.

1. Introduction

Modern management theory considers human capital as strategic assets and a unique source of competitive advantage, which leads to better firm performance and productivity (Ostroff, 1992; Harter et al., 2002; Edmans, 2011 and 2012; Edmans et al., 2014; Huang et al. 2015; Ben-Nasr and Ghouma, 2018; Farhadi and Nanda, 2020). Existing studies show that better employee welfare motivates employees to be cooperative, productive and enhance the firms' operational and financial performance (e.g., Edmans, 2011; Faleye and Trahan, 2011; Chen et al., 2001a, Chen et al., 2001b; Fauver et al., 2018). Requena (2003) argues that the level of well-being and employee satisfaction is high when the level of trust and commitment within the social capital is high. In the context of Initial Public Offerings (IPOs), Farhadi and Nanda (2020) show that pre-IPO employees' views of manager's quality predict stronger post-IPO stock performance. This suggests that employee satisfaction is critical to a firm's quality and its future prospects after listing. Typically, IPOs are young and growing companies; transition from private to public has a significant impact on their organisation's structure and potentially affects decisions related to the operations and resource allocation. Hence, resources, employees' inputs, and how the social capital facilitates employees to interact socially are likely to have implications for the IPO survival post listing. Adler and Kwon (2002) document that social capital is associated with affective bonds and connections between individuals and leads to positive effects in raising resources and building trust in the organisation. It also facilitates the discovery of opportunities and the allocation of scarce resources within the organisation (Greene and Brown 1997). Since, IPOs inherently face unstable business environment with high levels of uncertainty (Chahine and Goergen, 2013), better employee welfare and social capital could be valuable assets and play a significant role during their transition from private to public, and post listing.

Our paper aims to explore how these two research themes (employee welfare and social capital) are related to the IPO survivals post listing. First, we examine the relationship between employee welfare and IPO survival. Next, we investigate the impact of social capital on survival and how it moderates the association between employee welfare and the survival of the IPO firm. Chen et al. (2016) document that firms become more innovative and are associated with high patent rights, the better the employee welfare in organisations. Huselid, (1995) documents that better employee welfare improves productivity and cash flow, while Edmans (2011; 2012) finds that employee well-being leads to a higher firm value. Policies that protect employee welfare are likely to enhance employee enthusiasm, strengthen employee relations and engagements, and motivate their commitments to overcome

difficulties and challenges facing the organisations (Ghaly et al., 2015). This is consistent with the stakeholder's view, which suggests firms' decisions are influenced significantly by the stakeholders (Titman, 1984). Therefore, firms could signal their commitments in honouring stakeholder claims by adopting enhanced conservative policies.

Human relations theories view employees as key assets rather than a disposable input. However, some studies show that employee treatment can be a manifestation of agency problems and might have an adverse effect on firms performances. For example, Ben-Nasr and Ghouma (2018) find that high levels of employee welfare standards contribute to stock price crash risk. Their findings support the agency theory indicating that employee welfare plans are powerful strategies that can assist managers to withhold bad news from investors. Nevertheless, bad news accumulates to a certain tipping point when they become public and crash the stock price. Moreover, employee-friendly treatment can have a detrimental effect on labour investment efficiency if self-interested managers adopt employee-friendly practices to over-hire employees for their empire-building (e.g., Atanassov and Kim, 2009; Cao and Rees, 2020) or as a strategy to hide corporate misbehaviour (e.g., Prior et al., 2008). In terms of the impact of social capital on firms' performance, legitimacy theory suggests that companies should establish resemblance between the social norms implied by organisational activities and the norms of the environment in which the company is operating. Differences between a company and social norms may lead to conflict of interests hampering the company's operation and subsequently its success (Chircop et al., 2017). Economists have long recognised that social capital (which includes social norms) is essential to economic success in a society (e.g., Putnam, 1993, 1994). It is a valuable asset to firms and embedded within social structures in local, small-scaled, and geographically bounded communities (Marquis and Battilana 2009). In addition, social capital influences managers' behaviours in making critical decisions that might have significant consequences for the shareholders. For instance, Gupta et al. (2018) find managers in high social capital regions are less likely to take self-interest actions and investors tend to require a lower rate of return. Alternatively stated, social capital influences managers to take less value-destroying actions and encourage them to be more concerned about reputation losses (Mead, 1967; Huang and Shang, 2019). Therefore, a region/county associated with better social capital is likely to influence managers' behaviours and ethics when making critical corporate decisions (Huang and Shang 2019; and Gupta et al., 2018). The positive impact of social capital on firms' value is also explained by the stakeholder view. Jha and Cox (2015) find firms located in a high social capital region exhibits higher corporate social responsibility (CSR). Consistent with the stakeholder's view,

they argue that managers practice corporate social responsibility to maintain better relations with other stakeholders including the employees. Stated differently, firms located in a region with higher social capital are likely to commit to their employees leading to better employee welfare. It is also documented in the literature that well-being and employee satisfaction is affected by social capital dimensions (Requena, 2003; Lange, 2015). Hence, social capital is expected to influence the relationship between employee welfare and IPO survival.

Using a panel sample of IPOs listed in the US between 2000 and 2016 and tracking these IPOs to the end of 2018; we examine how and in what way employee welfare and social capital influence the IPO survival times. We measure employee welfare using the traditional KLD STATS (Statistical Tool for Analysing Trends in Social & Environmental Performance) database. We calculate the welfare by considering identified strengths and concerns included in the "employee relations" for each year provided in KLD database. Next, we subtract the average identified concerns from the average identified strength. The strength includes: union relation strength, Cash profit sharing, employee involvement, retirement benefits strength and work/life benefits. The concerns consist of union relations concerns, health and safety concerns, workforce reductions, retirement benefits and other concerns.[1] A positive value suggests that the firm is associated with better employee welfare. Our method is similar to Ghaly et al., (2015), Faleye and Trahan (2011) and Verwijmeren and Derwall (2010). The region's social capital is computed using county-level social capital index data, collected from the Northeast Regional Center for Rural Development (NRCRD) at the Pennsylvania State University. The index measures the confluence of effects from two variants of social norms (i.e. census mail response rate and votes cast in presidential elections) and two measures of networks (numbers of associations and number of non-profit organisations). Next, we follow Habib and Hasan (2017) studies and use principal component analysis to construct an index for the social capital.

Our results show that a unit increase in welfare lengthen the average survival time by 38%, while a unit increase in social capital increases the survival times by 78%, equivalent to two and four years respectively. Next, we examine the interaction effect of employee welfare and social capital. Specifically, we investigate whether a better employee welfare and social capital jointly enhances IPO survival after listing. We find that the influence of employee welfare on survival time is stronger when a county is associated with better social capital. Then, we explore the source of positive impact of employee welfare and social capital. We

[1] Other concerns include a company being involved in an employee relations controversy that is not covered by other KDL ratings.

find that the positive effect of employee welfare is due to employee involvement and diversity, while for the social capital is mainly driven by the numbers of charity organisations in the county of an IPO firm. We further address the concerns of whether the impact of employee welfare or social capital is explained away by the IPO characteristics such as VC involvement with the IPO firm, auditors' quality or CEO genders. Previous studies show that these factors have a significant positive impact on IPO survival. We find that controlling for these factors does not preclude the positive impact of employee welfare and/or social capital on IPO survival times. These results are robust using Cox Proportional Hazard model or treating M&As as failures rathern than censor. Finally, we address possible endogeneity related to employee welfare and social capital. For instance, it is possible that better employee welfare and social capital are due to higher survival times of the IPOs firms. To disentangle this reverse causality, we match the characteristics of IPOs that survived with those that failed using the entropy balancing method. Our results remain qualitatively consistent that employee welfare and social capital influence the survival times.

Our study contributes to the IPO survival and business ethics literature in a number of ways. We extend the existing IPO studies by showing the extent employee welfare and social capital complement IPO firms' characteristics in enhancing the survival times using panel data setting to capture the dynamic effects of these characteristics over time. Our findings provide an important lesson to managers on the importance of employee welfare and social capital in mitigating IPO failure risks. We show the tangible values of commitments to employee well-being and the importance of a better social capital environment to the IPO firms after listing. We demonstrate the channels through which employee welfare and social capital enhance the IPO survival times. We offer large-scale evidence that enhances our understanding of whether and in what ways the dynamic nature of employee welfare and social capital affect the IPO survival. Our results are useful to the regulators concerned about promoting a successful IPO market. We provide evidence that policymakers could influence societal objectives to enhance IPO survival times. Our results are relevant to the JOBS Act of 2012 aimed to boost US IPO market activities, by showing the importance of social capital and employee welfare in achieving such policy objectives. Finally, we contribute to a broader literature of IPO survivals. For instance, previous studies show that capital raising (Kashefi Pour and Lasfer, 2013), VC backing (Jain and Kini, 2000), audit quality (Jain and Martin, 2005), board effectiveness (Charitou et al., 2007), politically connected CEOs (Fan et al., 2007), CEOs' work experience (specialist CEOs) (Gounopoulos and Pham, 2018), and firms' strategy-making practices (market and entrepreneurial orientations) (Feng et al., 2020)

influence IPO survivals. Our study complements these previous studies by providing strong empirical evidence on the importance of employee welfare and social capital to IPO survival times.

The rest of the paper proceeds as follows. Section 2 discusses the theoretical framework and development of our hypotheses. Section 3 discusses our data and methodology. Section 4 discusses the main empirical results and robustness tests, while section 5 presents the conclusion.

2. Theoretical framework and development of the hypotheses

2.1 IPO survival

Prior IPOs literature investigate the impact of various firms' and managers' characteristics on IPO survival. For example, one of the early studies of IPO survival by Hensler et al. (1997) investigates the relationship between survival time and IPO firm characteristics. The authors find that survival times are positively related to IPO firm age and size, IPO initial returns and insider ownership. Jain and Kini (1999) find that firm size at the time of the IPO, pre-IPO operating performance and investment bankers' prestige positively influence the probability of IPO survival. Similarly, Jain and Martin (2005) and Demers and Joos (2007) find that profitability, size, R&D expenditure, and audit quality enhance the IPO survivals. Jain and Kini (2000) examine whether venture capital (VC) involvement improves the survival profile of IPO firms. Their findings indicate that the probability of post IPO survival is influenced positively by the prestige of the investment bank, underwriting syndicate and VC involvements. In this vein, the recent study of Michala (2019) shows that VC-backed IPOs have a low failure rate, while the failure rates of IPOs backed and unbacked by private equity firms are not different. Howton (2006) and Jain and Tabak, (2008) find that CEO ownership, presence of founder CEO, the proportion of outside versus inside board members, and board tenure influence IPO survival.[2] Rahnamay Roodposhti and Zandi (2020) find that IPO firms with specialist CEOs have a lower probability of failure and a longer survival time post listing.

In addition to firms' traits, Feng et al. (2020) find that market and entrepreneurial orientations improve IPO survival. Anagnostopoulou et al. (2020) examine the effect of earnings management on IPO survival post listing. The authors find that shifting income-

[2] See Baluja (2019) for an IPO survival review documenting that corporate governance measured by board size, board independence, ownership concentration, and dual leadership structure are important determinants of IPO survival.

decreasing expenses from core to special items (classification shifting) has a negative impact on IPO survival. The authors argue that classification shifting sends a negative signal on a company's future profitability resulting in lower survival time.

While the IPO survival studies are mainly US dominated, in the UK, Ahmad and Jelic (2014) find evidence of a positive relationship between survival rates and lock-up periods of the IPO firms. Espenlaub et al. (2012) find on the AIM market that the survival time of the IPO firms is higher when they are associated with reputable nominated advisors (NOMAD). We add to the existing literature by examining an area that is less explored, the impact of employee welfare and social capital on IPO survival. We use panel data setting to capture the dynamic effects of these factors over time. In the following section, we discuss our hypotheses.

2.2 Employee welfare

It is well documented in the stakeholders' theory that non-financial stakeholders including employees influence firms' financial policy. Much of the attention has been devoted to employee well-being as a key corporate variable. In this vein, Cornell and Shapiro (1987) report that honouring promises to employees such as working conditions, benefits, career progression and job security are crucial to employees. Nonetheless, maintaining employee welfare is highly sensitive to a firm's financial health. Failure to adopt and maintain employee-friendly practices might not have financial implications for the firm, but dissatisfied workers could potentially increase the risk of high employee turnover and possibly a loss of reputation in the labour market (Shapiro and Titman, 1986).

Ben-Nasr and Ghouma (2018) argue that firms seem committed to provide superior employment benefits and enhance the workforce's loyalty to improve their productivities within the firm. Also, well-managed firms and firms with employee-friendly environments are attractive to investors and covered by the media, which enhance their reputations. Generally, high reputation is translated into value creation to stockholders. Roberts and Dowling (2002) find that return on assets (ROA) is positively related to firms' reputation and this relationship persists over time. Similarly, Fombrun and Shanley (1990) and Shamsie (2003) find supporting evidence of a positive relationship between reputation and financial performance. Generally, layoffs reduce employee satisfaction, damage firm's reputation (see Flanagan and O'Shaughnessy, 2005), and affect firm performance. Previous studies (eg. Chen et al., 2001a, Chen et al., 2001b, Pouder et al., 1999) show a decline in firms' performances in the years following a layoff.

Moreover, improving employees' working environment might have a positive impact on stakeholders' perception about the firm and possibly enhance stock price stability. For instance, Edmans (2011) investigates the impact of better employee satisfaction on long-run stock returns. He finds that employee satisfaction is positively correlated with shareholder returns. Based on the findings of the prior studies, it is conceivable that managers might use employee satisfaction as a bridge to achieve a better reputation, which aims to enhance investors' engagement and consequently increase stock market stability (i.e. high survival). Furthermore, employees' treatments are becoming increasingly important non-financial factors for many firms, due to the changing nature of the firm and the rising importance of human capital for firms to remain competitive (Zingales, 2000). Thus, we test the following hypothesis

H1a: *Better employee welfare enhances IPO firms' survivals.*

By contrast, some previous studies find that employee treatment can be a manifestation of agency problems. Employee-friendly policies can affect labour investment efficiency in particular when managers are interested to expand their empire by over-hiring employees (e.g., Bertrand and Mullainathan, 2003; Atanassov and Kim, 2009; Cao and Rees, 2020). Furthermore, when managers have the intention of pursuing their personal goals by retaining excessive employees, they are likely to withhold information from investors and hide their misconducts. Their financial reporting is likely to be less transparent and opaque because of accumulated undisclosed information over time. Hence, such behaviours might have a negative impact on firm performance or success. For instance, Ben-Nasr and Ghouma (2018) show that high levels of employee welfare contribute significantly to stock price crash risk. In line with the agency theory, employee-friendly practices can harm performance, which lead us to formulate the following hypothesis:

H1b: Better employee welfare reduces IPO firms' survivals.

2.3 Social capital

Legitimacy theory suggests that companies should establish resemblance between the social norms implied by organisational activities and the norms of the environment in which the company is operating. The social capital studies document that mutual trust and cooperative behaviour are enhanced in a region with better social capital. Guiso et al. (2008) define social capital as "the set of beliefs and values that foster cooperation." Fukuyama (1997) defines social capital "as the existence of a certain set of informal values or norms shared among members of a group that permits cooperation among them." Similarly, Guiso et

al. (2004) argue that “high levels of social capital generate higher levels of trust toward others.” In this vein, Guptal et al. (2018) argue that managers perceived to be more trustworthy in a region with better social capital and viewed as being more credible.

Possibly, differences between a company and social norms may lead to conflict of interests and affect the company's success (Chircop et al., 2017), arguably individuals (including managers), following the prevalent social norms, take into account the costs associated with deviating from the accepted norms (Cialdini et al., 1991; Milgram et al., 1969). Empirical studies show that social capital serves as a societal monitoring mechanism that reduces managers’ opportunistic behaviour. Habib and Hasan (2017) show in high social capital regions, managers hold less cash, which imposes significant social costs to managers. Since agency costs are less pronounced in high social capital regions, managers have less incentive to hold excessive cash. Another related study by Gupta et al. (2018) argue that social capital serves as an incremental monitoring mechanism and hence firms located in high social capital have lower costs of equity. Similarly, Haung and Shang (2019) find that managers in high social capital regions are less likely to take actions that may harm investors. They find that firm leverage and short-term debt ratios are negatively associated with social capital. This suggests that the need to mitigate the agency problem is minimal in a region with better social capital.

In sum, firms that engage in social capital activities could potentially build strong reputations within the county (Preston, 2004). By contrast, firms that do not dedicate efforts to social capital activities are likely to experience resistance and lack of community commitments, which could hinder firms’ success (Schutjens and Völker 2010). Furthermore, firms that are actively involved in social capital activities are likely to limit managers’ opportunistic behaviour and minimise agency costs (e.g., Gupta et al. 2018; Habib and Hasan, 2017; Haung and Shang, 2019). Hence, investors attractions to firms located in a county with better social capital might be high, due to low agency costs and high managerial commitments. Consequently, we formulate the following hypothesis

H2: *IPOs located in counties with better social capital have higher survival time post listing.*

3. Data and Methodology

3.1 Data

Our sample of US IPOs is collected from SDC Platinum New Issue database, Worldscope and Thomson One from 1st January 2000 to 31st December 2016.[3] Information on delisting date and reasons are collected from Compustat database. The missing information on delisting for the firms in our sample is hand collected. To be included in the sample, we impose the following four restrictions consistent with the previous studies: (1) The offer price is at least one dollars a share (e.g., Lin et al., 2013); (2) The IPO is not a spin-off, a privatisation, an American Depositary Receipt (ADR), a leveraged buyout (LBO), a Real Estate Investment Trust (REIT), a unit offering, a rights issue, a limited partnership, a closed-end fund, and a financial institution (e.g., Gounopoulos and Pham, 2018) ; (3) We exclude cross-listed firms as they are likely to be affected by the legal requirements of more than one country (e.g., Espenlaub et al., 2016); (4) For each firm, data should be available on Compustat and/or DataStream. We require both accounting data (e.g., total assets, earnings, sales, and debt level) and market data (first-day price and market capitalisation) to be available. After imposing these restrictions, our final sample consists of 1144 IPOs with full data. In line with previous studies (e.g., Kashefi Pour and Lasfer, 2013), we track each IPO firm from the IPO date to the delisting date or end of 2018 (whichever is earlier). We define survival as firms that continue to trade on the stock market from the IPO date to the end of 2018.[4]

3.2. Methodology

Following Kashefi Pour and Lasfer (2013), we track each IPO firm from the listing date to the end of 2018 to determine whether it is listed or delisted from the stock market. We define time to delisting as the time that elapses between the IPO date and the date in which an IPO is delisted from the market for any reason. IPOs that are not delisted by the end of 2018 are classified as censored IPOs. We estimate time to survive using a survival model known as the Accelerated Failure Time (AFT) model. The model is common and has been used by several previous studies. The AFT model allows us to measure the impact of the independent variables on time to survive. In the AFT model, $\exp(\beta_i X_i)$ is an "acceleration factor". The effect of a covariate is to extend or shrink the length of time to survive by a constant relative amount $\exp(\beta_i X_i)$. If $\exp(\beta_i X_i) > 1$ time to survive is increased, and if $\exp(\beta_i X_i) < 1$ it is

[3] We exclude international IPOs headquartered in the US.

[4] Appendix 2A the definition of the firm specific variables, whereas Appendix 3A provides detailed discussion on how social capital and employee welfare are constructed.

decreased (Bradburn et al. 2003). The AFT model allows for the possibility that the impact of the covariates on survival time may be particularly pronounced in the period soon after the IPO and less so in the longer term. Unlike other previous studies, we use the AFT in panel setting rather than cross-section to measure the dynamic effect of the variables over time. The panel data allow us to measure the covariates up to the failure or censored, which ever occur first.

The AFT model is expressed in terms of a log-linear function with respect to time (see e.g. Hensler et al. 1997; Bradburn et al. 2003)

$$Ln(T_{jt}) = \beta_0 + \beta_1 X_{1t} + \cdots + \beta_p X_{pt} + \varepsilon_{jt}$$

As the AFT is a parametric model, it is necessary to specify the distribution of the baseline survival function. We use the likelihood ratio or Wald tests to determine the appropriate distribution for our data. These distributions include exponential, weibull, gamma log-normal and log-logistic distributions. Next, we use the Akaike Information Criterion (AIC) test to choose the best-fitting model in the case of non-nested models such as between the log-logistic and the log-normal distribution. Based on the AIC test we use the log-logistic distribution for our AFT model.

4. Results

4.1 Univariate analysis

Table 1 shows the descriptive statistics for the full sample of IPOs listed from 2000 to 2016. The table reports the mean, median, standard deviation values. The mean (median) employee welfare (*Employee welfare*) is -0.014 (0.000), while the mean (median) social capital (*Social capital*) in a county is 1.246 (1.277). The logarithm of the average market value (*Ln market value*) is 6.495 and a median of 6.646. The average (median) profitability (*Ln profit*) is 10.892 (11.068), while the mean leverage (*Leverage*) is 17.50% (14.70%). The mean growth opportunity as measured by the market to book (*MTB*) is 1.392 and the median of 1.345. The average stock return volatility (*Volatility*) is 12.067%, while the median value is 10.833%. The average logarithm of capital expenditure (*Ln Capex*) is 10.022 and the mean institutional holding (*Ownership*) is 29.960%. The market liquidity (*Marker liquidity*) and hotness (*Market hotness*) as measured by the average initial returns over the past three months prior to the IPO year are 13.520% and 11.90% respectively.

In table 2 Panel A, we report the descriptive statistics for the IPO characteristics located in a county in high and low social capital counties. In Panel B, we report the characteristics by high and low employee welfare.[5] Panel A, shows significant differences in the characteristics of the IPO firms based on their counties/regions. IPOs located in high social capital regions are associated with high market value, high growth potential measured by the market to book, low institutional holding, and high market hotness compared to those located in low social capital counties. Panel B, compares the characteristics of IPO firms between high and low employee welfare index (based on above or below median value). The results show that IPOs associated with high employee welfare tend to be large as measured by the market value, profitable with high growth opportunities as compared to low employee welfare IPOs. Also, the institutional holding is lower in IPOs with high employee welfare than those with low employee welfare. The time to failure is longer when employee welfare is high and social capital is better. Overall, the results show that the characteristics of the IPO firms are different and influenced by companies' location and commitments to employee welfare.

[Tables 1and 2 here]

Finally, we examine whether delisting is different between IPOs located in high or low social capital counties. The results of Table 3 show that delisting due to M&A is low in a county with high social capital compared to a low social capital county. Similarly, delisting due to bankruptcy, market regulation and voluntary are high in a county with low social capital relative to high social capital county. Nonetheless, IPOs with high employee welfare are often delisted because of M&A compared to IPOs with low employee welfare. Also delisting due to bankruptcy is higher when IPOs are associated with higher employee welfare than when they are associated with lower employee welfare. This seems to suggest that excessive employee welfare could result in a negative impact on firms' value. Interestingly, the voluntary delisting is significantly lower when the IPO firms are concerned than when they are not concerned about the welfare of their employees. Possibly, the lower number of voluntary delisting could be due to higher employee commitment, which enhances IPO survival times.

[Table 3 here]

[5] High social capital and high employee welfare are dummy variables and take a value of one when their corresponding values are above median in a given year and zero otherwise.

4.2. Multivariate analysis

This section reports the multivariate analysis of the IPO survival times. Table 4 reports the results of the impact of employee welfare on survival times. Model 1 shows that employee welfare (*Employee welafare*) has a positive and significant impact on IPO survival times. One unit increase in the employee welfare index (*Employee welafare*) increases the average survival times by approximately 95 % (exp (0.666)-1). In Model 2, we include IPO firm characteristics such as market value (*Ln market value*), profitability (*Ln profit*), leverage (*Leverage*), market to book (*MTB*), volatility (*Volatility*), capital expenditure (*Ln Capx*) and directors ownership (*Ownership)* consistent with the previous IPO survival studies (see Hensler et al. 1997; Espenlaub et al. 2012). We find that firm characteristics influence the time to survive consistent with the previous studies. However, the impact of employee welfare on survival times remained positive and significant at 5 % conventional level. In Model 3, we further control for market condition, which includes market liquidity (*Market liquidity*) and hotness (*Market hotness*) of the IPO market. Our results show that employee welfare has a positive and significant impact on survival times controlling for firm characteristics and market conditions. The results show that a unit increase in the employee welfare index increases the average survival times by 38% (exp (0.321)). Overall, it is evident from the table that employee welfare is an important determinant of firms' survival times. It is also consistent with the stakeholder theory, which suggests that high-quality employee welfare has a positive impact on firms' performance and mitigates the risk of stock failure.

[Table 4 here]

Social capital is likely to have a positive impact on firms' performance. This is due to the fact that social capital promotes a positive relationship between people and businesses. Enhanced relationship between firm and stakeholders is likely to improve firms' survival times. In table 5, we examine the impact of social capital on survival times. Model 1 shows that social capital (*Social capital*) has a positive impact on firms' survival times. The evidence is statistically and economically significant at 1% conventional level. In Model 2, we control for IPO firms' characteristics and in Model 3 we further control for market conditions. The results of Model 3 show that a unit increase in social capital increases the survival times by approximately 78%. The results of Table 5 show that social capital in a county has a significant positive impact on survival times. Together the results of Table 5 show that social capital influences firms' survival profile controlling for firm characteristics and market conditions. So IPO firms, located in a county with better social capital are likely

to survival longer post listing than those located in a low social capital county. These results emphasise the importance of social capital on firms' survival and is consistent with Lins et al. (2017) who find that high social capital leads to better performance as measured by high stock returns.

[Table 5 here]

So far the results of Table 4 and Table 5 show that employee welfare or social capital influence the survival times of IPO firms. In Table 6, we examine the joint effects of both employee welfare and social capital. Model 1 shows that both employee welfare and social capital have a positive and significant impact on survival times. However, the impact of social capital on survival times is stronger than the impact of employee welfare. In Model 2, we control for firms' characteristics, while in Model 3 we further control for market conditions. It is evident from Model 2 and 3 that the coefficient of social capital changes from 0.631 (Model 2) to 0.601 (Model 3), while for the employee welfare from 0.140 (Model 2) to 0.166 (Model 3) controlling for firm characteristics and market conditions. This indicates that the impact of employee welfare and social capital on firm survivals are far stronger regardless of firm characteristics and market conditions. It is evident from Table 6 results that employee welfare and county social capital influence firm survival post listing. Although the magnitudes of the coefficients are higher for the social capital variable than for employee welfare, we cannot infer that social capital is more important than employee welfare due to different units of measurements. Model 4 examines the interaction effect of employee welfare with high social capital (*Employee welfare x High social capital*) on survival times. We define high county social capital when the index value is above the median value in a given year and zero otherwise. Model 4 shows that the survival times increase with employee welfare especially when the county social capital is better. Also, better county social capital increases significantly the survival times of the IPO firms. Although high employee welfare improves survival times, its impact is significantly higher in a county with better social capital. In unreported results, we examine whether our results are different when treating M&As as failures rather than censored observation. We find that our results are consistent when treating M&A as failure instead of censored observation.

[Table 6 here]

4.3 Source of positive effect

So far our results show that social capital and employee welfare have a positive impact on the survival time. IPO firms with better social capital and employee welfare index have higher likelihood of surviving post IPO than their peers. Nonetheless, social capital and

employee welfare index are influenced by various provisions. To investigate the channels of a positive impact of social capital or employee welfare, we examine the impact of these provisions on survival times separately. Table 7 shows the impact of separate provisions related to employee welfare and social capital on survival times. Model 1 of Table 7 shows that the positive impact of employee welfare on survival time is driven by employee involvement (*Employee involvement*) and diversity provisions (*Diversity*). Alternatively stated, IPOs that are engaged with their employees and promote diversity enhance their survival times significantly after listing. Model 2 shows that the positive effect of social capital on survival times is driven by the number of charity organisations in the county. The higher the number of charity organisations (*NCCA*) in the county the higher the survival of the IPO firms post listing. Possibly, this is due to the fact that charity organisations tend to provide voluntary support to the firms, which could potentially minimise their operational costs and enhance their survivability. Overall, the results of Table 7 show that the positive impact of employee welfare on survival is due to employee involvement and diversity, while the positive effect of social capital is due to the number of charity organisations located in the county. Therefore, changes in the above provisions are likely to influence IPO survival times post listing.[6]

[Table 7 here]

4.4 Robustness and other related findings

To investigate the robustness of our results, we use Cox Proportional Hazard model, assuming that the distribution of the failure time can increase and decrease or remain constant. Under the Cox model, the survival time can take any shape and there is no assumption on the distribution of the time to survive. Table 8 reports the results of the Cox Proportional Hazard model. It shows the results of the joint effects of employee welfare and high social capital index (*Employee welfare x High social capital*). Table 8 shows that employee welfare and high social index have negative and significant impact on hazard ratio. Stated differently, employee welfare and high social capital decrease the hazard of failure post listing. So the positive impact of employee welfare and social capital on time to failure is robust controlling for firm characteristics and market conditions. In Model 2 we interact high social capital with employee welfare and the interaction term is negative and significant. This

[6] Other elements of social capital and or employee welfare are not significant and hence not reported but available from the authors.

indicates that employee welfare enhances the IPO survivals located in a county with better social capital. In Model 3 and 4, we re-estimate Model 1 & 2 by treating M&A as failure instead of censored observations. The results are robust and consistent with Model 1& 2 results.

Furthermore, we control for some related variables that are shown to have an effect on IPO survival to ensure that our results are not biased because of the omitted variables. For example, previous studies document that VC involvements with the IPO firms enhance their survival times post listing (Jain and Kini, 2000; and Espenlaub et al., 2016). Others find that the quality of the auditing firm and CEO characteristics at the time of listing increase the survival rates (Jain and Martin 2005; Fischer and Pollock, 2004). Presumably, these factors capture the positive effect of employee welfare or social capital. We repeat our analysis on a reduced sample due to missing data on auditors' quality for some of the IPO firms and the results are reported in Table 9. Model 1 of Table 9, shows the impact of employee welfare by including a dummy for VC presence (*VC-dummy*), CEO gender (*CEO-gender*) and auditors quality. It is evident from the results that employee welfare has a positive and significant impact on survival times controlling for VC presence, CEO characteristics and auditors quality (*Auditors-Quality*). A unit increase in the employee welfare index increases the average survival times by 49%. Similarly, we find a positive and significant impact of social capital index on IPO survivals by including VC presence, CEO characteristics and auditors quality as additional control variables (Model 2). A unit increase in the social capital index lengthens the average survival times by 78%. In Model 3, we use an interaction term between employee welfare and high social capital (*Employee welfare x High social capital*), while in Model 4 we control for additional counties characteristics such as GDP, per capita income and population. The results are consistent with the fact that employee welfare enhances IPO survival, especially in a county with better social capital enviroment. Overall, the results suggest that employee welfare and social capital had incremental effects on IPO survivals that are not explained by VC involvement, auditors' quality, or CEO characteristics.

[Tables 8 and 9 here]

4.5 Endogeneity

Our final test is related to the possible endogeneity associated with employee welfare and social capital. It is possible that the impact of these factors is influenced by the characteristics of survived companies. In another word, companies with higher survival times may be associated with better employee welfare. To disentangle the reverse causality of employee welfare and social capital from firm characteristics, we use the entropy balancing method.

The results are presented in Table 10 and show that our variables of interest (*Employee welfare* and *Social capital*) remain quantitatively consistent with our main results. The entropy balancing examines whether the impact of employee welfare and social capital are explained by observable differences in characteristics between failed and survived IPOs. Typically, entropy balancing provides balanced covariate between survived (treatment) and failed (control) IPOs along with several determinants.[7]

The entropy method works by first determining the distributional properties (i.e. mean and variance) of the treatment observations. These distributional properties become the target distributional properties of the post-weighting control sample (known as "*balance conditions*"). The algorithm proceeds by first assigning possible weights to control observations and then testing whether the balancing conditions have been satisfied (distributional properties of treatment and post-weighted control observations are identical). This process is repeated over multiple iterations until a set of weights that satisfy the balance conditions for control observations are satisfied. The attractiveness of entropy balancing technique is that it preserves the full sample and ensures covariate balance between treatment and control observations by re-weighting observations such that the post-weighting mean and variance for treatment and control group are identical based on the firm characteristics. In addition to these benefits, entropy balancing also has higher model efficiency and less first-stage model dependency than PSM (Hainmueller 2012). Other endogeneity tests such as relevant test or exclusion criteria are not relevant to survival analysis models.

[Table 10 here]

5. Conclusion

In the last decade, there has been a growing interest in the impact of non-firm characteristics on organisational success. Previous literatures on a single country have focused on firm characteristics, while the impact of employee welfare or social capital remained unexplored. This study examines the impact of employee welfare and social capital on IPO survival times using panel data to capture the dynamic effects over time. Our results show that the survival times of IPOs are positively influenced by social capital and/or employee welfare. More specifically, we find that IPO firms with high social capital and employee welfare index are highly likely to survive longer after listing than their counterpart

[7] We choose the entropy balancing method over the propensity score matching approach, because the later reduces the sample size due to imbalances in the observations of the treatment and control group.

IPOs located in lower social capital environment and associated with poor employee well-being. Our findings suggest that enhanced social capital and better employee welfare mitigate the high risk of delisting and valuable tangible asset to the IPO firms. Further analysis shows that the source of positive effect in employee welfare is due to employee involvement and diversity within the organisation; while the positive impact of social capital is driven by the number of charity organisations in the county. Our results on the importance of employee welfare and social capital enviroment are useful to firms with the intention to list in a stock market and IPO investors. Also, our results are relevant to the stock market regulators keen to promote IPO activities and their longevity in a market post listing.

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Table1. Descriptive statistics

Variables	N	Full sample of IPOs		
		Mean	Median	STD
Employee welfare	4953	-0.014	0.000	0.162
Social capital	4953	1.246	1.277	0.774
Ln market value	4953	6.495	6.646	1.301
Ln profit	4953	10.892	11.068	1.588
Leverage	4953	0.175	0.147	0.173
MTB	4953	1.392	1.345	0.646
Volatility	4953	12.067	10.833	7.065
Ln Capx	4953	10.022	10.164	1.913
Ownership (%)	4953	29.960	32.110	9.650
Market liquidity (%)	4953	13.520	13.540	1.339
Market hotness	4953	0.119	0.105	0.206
Time to failure (years)	4953	5.011	4.000	3.321

This table provides descriptive statistics for all variables for the full sample of panel data of IPOs listed from 2000 to 2016. The variables are reported by mean, median, and standard devotions. All the variables are as defined in Appendix Tables 2A and 3A.

Table 2. Descriptive statistics (survived vs delisted IPOs)

Panel A		***High social capital***			***Low social capital***			
	N	Mean	Median	N	Mean	Median	***T-test***	***Z-test***
Employee welfare	2578	-0.013	0.000	2374	-0.016	0.000	-0.058	1.585
Social capital	2578	1.810	1.693	2374	0.702	0.868	-87.351	-74.567
Ln market value	2578	6.501	6.663	2374	6.489	6.624	-1.850	-1.141
Ln profit	2578	10.803	11.037	2374	10.989	11.095	3.744	2.348
Leverage	2578	0.153	0.089	2374	0.200	0.194	7.308	7.974
MTB	2578	1.408	1.373	2374	1.374	1.323	-3.387	-3.291
Volatility	2578	12.263	11.004	2374	11.854	10.626	0.327	-0.524
Ln Capx	2578	9.837	10.018	2374	10.223	10.326	4.544	4.373
Ownership (%)	2578	29.710	31.530	2374	30.230	32.780	2.035	2.110
Market liquidity (%)	2578	12.251	12.260	2374	14.920	15.150	-4.435	-5.047
Market hotness	2578	0.118	0.105	2374	0.121	0.102	0.069	0.714
Time to failure (years)	2578	5.110	4.000	2374	4.681	3.000	-2.412	-2.155
Panel B		***High welfare***			***Low welfare***			
	N	Mean	Median	N	Mean	Median	***T-test***	***Z-test***
Employee welfare	2215	0.362	0.333	2738	-0.044	0.000	-76.375	-50.896
Social capital	2215	1.248	1.291	2738	1.246	1.275	2.322	1.605
Ln market value	2215	6.722	7.197	2738	6.477	6.618	29.885	23.287
Ln profit	2215	11.223	11.634	2738	10.866	11.048	0.917	-1.500
Leverage	2215	0.166	0.144	2738	0.176	0.147	1.699	1.713
MTB	2215	1.477	1.467	2738	1.385	1.336	13.808	13.345
Volatility	2215	11.404	10.116	2738	12.119	10.894	-9.900	-6.146
Ln Capx	2215	10.461	10.642	2738	9.987	10.127	7.000	3.694
Ownership (%)	2215	2.820	2.955	2738	3.010	3.238	-11.275	-10.635
Market liquidity (%)	2215	11.810	11.150	2738	13.650	13.740	-8.031	-5.734
Market hotness	2215	0.144	0.105	2738	0.117	0.105	-0.055	-3.329
Time to failure (years)	2215	5.311	4.000	2738	4.010	3.000	-5.722	-4.241

This table provides descriptive statistics for all variables by mean and median for the subsamples of high and low social capital (Panel A) and high and low employee welfare (Panel B). The t-test (z-test) value is based on the mean (median) differences test between the two subsamples of the IPO firms. All the variables are as defined in Appendix Tables 2A and 3A. ***, **, * indicate 1%, 5%, and 10% significance levels.

Table 3. Delisting reasons

Panel A	***High social capital***	***Low social capital***
Delisting Reason		
1=M&A	142	344
2= Regulations	1	3
3=Market exchange	3	3
4= Bankruptcy	15	18
6= Voluntarily	9	34
Panel B	***High Welfare***	***Low Welfare***
Delisting Reason		
1=M&A	251	227
2= Regulations	1	3
3=Market exchange	2	4
4= Bankruptcy	19	14
6= Voluntarily	10	33

This table presents the number of IPOs delisted due to various reasons across IPOs with high and low social capital (Panel A) and IPOs with high and low employee welfare (Panel B).

Table 4. The impact of employee welfare on survival times

	Model 1		Model 2		Model 3	
Variables	Coeff	p-value	Coeff	p-value	Coeff	p-value
Employee welfare	0.666***	(0.000)	0.304**	(0.044)	0.321**	(0.027)
Ln market value			0.122***	(0.000)	0.129***	(0.000)
Ln profit			0.094***	(0.000)	0.057***	(0.001)
Leverage			-0.093	(0.517)	0.018	(0.899)
MTB			-0.274***	(0.000)	-0.167***	(0.000)
Volatility			-0.003	(0.137)	-0.003	(0.187)
Ln Capx			0.155***	(0.000)	0.149***	(0.000)
Ownership			0.309***	(0.000)	0.260***	(0.000)
Market liquidity					-0.096***	(0.000)
Market hotness					-0.089	(0.237)
Industry&Year&						
County& Cons	Y		Y		Y	
No of obs	4953		4953		4953	
Pseudo R-sq	0.167		0.211		0.233	

This table shows the estimation results of Accelerated Failure Time (AFT) models on the effect of employee welfare on survival times. The dependent variable is the logarithm of time to delisting defined as the time that elapses between the IPO date and the date in which an IPO is delisted from the market for any reason. Models 1 only includes the employee welfare variable. Model 2 includes IPO firm characteristics variables. Model 3 further controls for market condition, which includes market liquidity and hotness of the IPO market. All variables are defined in Appendix Tables 2A and 3A. ***, **, * indicate 1%, 5%, and 10% significance levels.

Table 5. The impact of social capital on survival times

	Model 1		Model 2		Model 3	
Variables	Coeff	p-value	Coeff	p-value	Coeff	p-value
Social capital	1.068***	(0.000)	0.616***	(0.000)	0.576***	(0.000)
Ln market value			0.092***	(0.000)	0.121***	(0.000)
Ln profit			0.088***	(0.000)	0.056***	(0.000)
leverage			0.049	(0.711)	0.097	(0.458)
MTB			-0.183***	(0.000)	-0.124***	(0.000)
Volatility			-0.003*	(0.079)	-0.003*	(0.080)
Ln Capx			0.134***	(0.000)	0.120***	(0.000)
Ownership			0.268***	(0.000)	0.217***	(0.000)
Market liquidity					-0.082***	(0.000)
Market hotness					-0.020	(0.764)
Industry &Year& County& Cons	Y		Y		Y	
No of obs	4953		4953		4953	
Pseudo R-sq	0.171		0.188		0.211	

This table shows the estimation results of Accelerated Failure Time (AFT) models on the effect of social capital on survival times. The dependent variable is the logarithm of time to delisting defined as the time that elapses between the IPO date and the date in which an IPO is delisted from the market for any reason. Models 1 only includes the social capital variable. Model 2 includes IPO firm characteristics variables. Model 3 further controls for market condition, which includes market liquidity and hotness of the IPO market. All variables are defined in Appendix Tables 2A and 3A. ***, **, * indicate 1%, 5%, and 10% significance levels.

Table 6. The joint effect of employee welfare and social capital on survival times

	Model 1		Model 2		Model 3		Model 4	
Variables	Coeff	p-value	Coeff	p-value	Coeff	p-value	Coeff	p-value
Social capital	1.044***	(0.000)	0.631***	(0.000)	0.601***	(0.000)		
Employee welfare	0.278***	(0.001)	0.140	(0.351)	0.166	(0.246)	0.245	(0.378)
Employee welfare x High social capital							0.497**	(0.029)
High-Social capital Dum							0.334***	(0.000)
Ln market value			0.120***	(0.000)	0.131***	(0.000)	0.125***	(0.000)
Ln profit			0.088***	(0.000)	0.055***	(0.001)	0.056***	(0.001)
leverage			0.0137	(0.926)	0.148	(0.313)	0.033	(0.815)
MTB			-0.246***	(0.000)	-0.155***	(0.000)	-0.168***	(0.000)
Volatility			-0.003	(0.121)	-0.003	(0.218)	-0.002	(0.288)
Ln Capx			0.154***	(0.000)	0.145***	(0.000)	0.149***	(0.000)
Ownership			0.250***	(0.000)	0.200***	(0.000)	0.253***	(0.000)
Market liquidity					-0.086***	(0.000)	-0.0958***	(0.000)
Market hotness					-0.067	(0.366)	-0.077	(0.305)
Industry &Year& County& Cons	Y		Y		Y		Y	
No of obs	4953		4953		4953		4953	
Pseudo R-sq	0.188		0.196		0.221		0.211	

This table shows the estimation results of Accelerated Failure Time (AFT) models on the joint effect of employee welfare and social capital on survival times. The dependent variable is the logarithm of time to delisting defined as the time that elapses between the IPO date and the date in which an IPO is delisted from the market for any reason. Models 1 only includes social capital and employee welfare variables. Model 2 includes IPO firm characteristics variables in addition to social capital and employee welfare variables. Model 3 further controls for market condition, which includes market liquidity and hotness of the IPO market. Model 4 includes the high social capital dummy variable (High-Social capital Dum) and its interaction with employee welfare. All variables are defined in Appendix Tables 2A and 3A. ***, **, * indicate 1%, 5%, and 10% significance levels.

Table 7: The impact of different provisions related to employee welfare and social capital on survival times

	Model 1		Model 2	
Variables	Coeff	p-value	Coeff	p-value
Employee involvement	0.341**	(0.016)		
Diversity	0.473**	(0.035)		
NCCA			0.024***	(0.000)
Ln market value	0.238***	(0.000)	0.102***	(0.000)
Ln Profit	0.021	(0.389)	0.042***	(0.007)
leverage	0.314	(0.134)	0.055	(0.685)
MTB	-0.517***	(0.000)	-0.129***	(0.000)
Volatility	0.000	(0.970)	-0.004**	(0.042)
Ln Capx	0.083***	(0.002)	0.098***	(0.000)
Ownership	0.207***	(0.000)	0.262***	(0.000)
Market liquidity	-0.055**	(0.017)	-0.102***	(0.000)
Market hotness	-0.416***	(0.005)	-0.154**	(0.016)
Industry &Year& County& Cons	Y		Y	
No of obs	4953		4953	
Pseudo R-sq	0.209		0.211	

This table shows the impact of different provisions related to employee welfare and social capital on survival times. Model 1 reports the impact of employee involvement and diversity provisions on IPO survival times. Model 2 shows the impact of the number of charity organisations in the county (NCCA) on IPO survival times. All variables are defined in Appendix Tables 2A and 3A. ***, **, * indicate 1%, 5%, and 10% significance levels.

Table 8: Alternative statistical approach (Cox proportional hazard model)

	M&A censored				M&A Failure			
	Coeff	p-value	Coeff	p-value	Coeff	p-value	Coeff	p-value
Variables	Model 1		Model 2		Model 3		Model 4	
Social capital	-0.013**	(0.039)			-0.046**	(0.035)		
Employee welfare	-0.337***	(0.000)	-0.136*	(0.071)	-0.251**	(0.024)	-0.104**	(0.014)
Employee welfare x High social capital			-0.375***	(0.000)			-0.197**	(0.020)
High-Social capital Dum			-0.101**	(0.020)			-0.022*	(0.094)
Ln market value	-0.013***	(0.002)	-0.012***	(0.003)	-0.088***	(0.000)	-0.086***	(0.000)
Ln Profit	-0.005	(0.225)	-0.004	(0.330)	-0.010	(0.629)	-0.006	(0.755)
leverage	-0.058*	(0.088)	-0.053*	(0.089)	-0.001	(0.188)	-0.014	(0.210)
MTB	0.007	(0.424)	0.006	(0.494)	0.022	(0.346)	0.017	(0.488)
Volatility	0.001**	(0.024)	0.002**	(0.022)	0.002*	(0.066)	0.003*	(0.075)
Ln Capx	0.006*	(0.087)	0.008**	(0.041)	0.055***	(0.004)	0.051***	(0.006)
Ownership	-0.061***	(0.000)	-0.063***	(0.000)	-0.0176*	(0.061)	-0.014*	(0. 061)
Market liquidity	0.013***	(0.000)	0.013***	(0.001)	0.014**	(0.021)	0.012**	(0.037)
Market hotness	0.006	(0.770)	0.009	(0.694)	0.012	(0.121)	0.013	(0.192)
Industry &Year& County& Cons	Y		Y		Y		Y	
No of obs	4953		4953		4953		4953	
Pseudo R-sq	0.211		0.221		0.202		0.216	

This table shows the estimation results of the Cox Proportional Hazard model. The dependent variable is the inverse of *Time to delisting* (i.e., the hazard rate). In Model 3 and 4, we re-estimate Model 1 & 2 by treating M&A as failure instead of censored observations. All variables are defined in Appendix Tables 2A and 3A. ***, **, * indicate 1%, 5%, and 10% significance levels.

Table 9: Robustness checks including alternative measures of social capital

	Model 1		Model 2		Model 3		Model 4	
Variables	Coeff	p-value	Coeff	p-value	Coeff	p-value	Coeff	p-value
Employee welfare	0.399**	(0.031)			0.237***	(0.010)	0.245***	(0.010)
Social capital			0.576***	(0.000)				
Employee welfare x High social capital					0.883**	(0.010)	0.880**	(0.021)
High-Social capital Dum					0.691***	(0.000)	0.659***	(0.000)
Ln GDP (counties)							-0.079	(0.210)
Ln Percapita income (counties)							0.497*	(0.081)
Ln Populations (counties)							0.001	(0.550)
VC-dummy	0.231*	(0.092)	0.316*	(0.081)	0.309*	(0.090)	0.310*	(0.091)
CEO-gender	0.502	(0.134)	0.511	(0.220)	0.490	(0.240)	0.499	(0.251)
Auditors-Quality	0.537***	(0.000)	0.416***	(0.010)	0.405***	(0.010)	0.387**	(0.012)
Ln market value	0.158***	(0.000)	0.148***	(0.000)	0.139***	(0.000)	0.116***	(0.000)
Ln profit	0.033*	(0.090)	0.027	(0.242)	0.022	(0.330)	0.028	(0.240)
leverage	0.279	(0.151)	0.195	(0.341)	0.231	(0.260)	0.242	(0.281)
MTB	-0.220***	(0.000)	-0.246***	(0.000)	-0.250***	(0.000)	-0.219***	(0.000)
Volatility	0.001	(0.662)	0.002	(0.531)	0.002	(0.540)	0.003	(0.461)
Ln Capx	0.173***	(0.000)	0.208***	(0.000)	0.208***	(0.000)	0.190***	(0.000)
Ownership	0.227***	(0.000)	0.277***	(0.000)	0.270***	(0.000)	0.267***	(0.000)
Market liquidity	-0.071***	(0.000)	-0.079***	(0.000)	-0.081***	(0.000)	-0.092***	(0.000)
Market hotness	-0.112*	(0.059)	-0.068*	(0.084)	-0.045*	(0.061)	-0.042*	(0.096)
Industry & County & Cons	Y		Y		Y		Y	
Year Dummy	Y		Y		Y		Y	
No of obs	2964		2964		2964		2964	
Pseudo R-sq	0.189		0.194		0.191		0.192	

This Table controls for some related variables that are shown to affect IPO survivals to ensure that our results are not biased because of omitted variables. Model 1 (2) shows the impact of employee welfare (social capital) by including a dummy for VC presence, CEO gender, and auditors quality. %. Model 3 uses an alternative measure of employee welfare by constructing the index using only strength components of employee welfare. In Model 4 we control for additional counties characteristics such as GDP, per capita income, and population All variables are defined in Appendix Tables 2A and 3A. ***, **, * indicate 1%, 5%, and 10% significance levels.

Table 10. Entropy balancing method

	Model 1		Model 2		Model 3	
Panel A: Variables	Coeff	p-value	Coeff	p-value	Coeff	p-value
Social capital	0.471***	(0.000)				
Employee welfare			0.321**	(0.011)	0.264**	(0.039)
Employee welfare x High social capital					0.385***	(0.000)
High-Social capital Dum					0.254**	(0.020)
Ln market value	0.129*	(0.088)	0.112*	(0.077)	0.126*	(0.077)
Ln profit	0.057*	(0.092)	0.053*	(0.094)	0.053*	(0.081)
leverage	0.019	(0.350)	0.096	(0.442)	0.044	(0.76)
MTB	-0.167*	(0.066)	-0.103*	(0.078)	-0.168*	(0.075)
Volatility	-0.003	(0.191)	-0.003	(0.180)	-0.003	(0.23)
Ln Capx	0.149***	(0.000)	0.111***	(0.000)	0.151***	(0.00)
Ownership	-0.260*	(0.077)	-0.222*	(0.075)	-0.252*	(0.068)
Market liquidity	-0.096*	(0.088)	-0.075*	(0.077)	-0.096*	(0.086)
Market hotness	-0.090	(0.241)	-0.012	(0.861)	-0.081	(0.280)
Industry &Year& County & Cons	Y		Y		Y	
No of obs	4953		4953		4953	
Pseudo R-sq	0.171		0.188		0.202	

	Survived		***Failed***	
Panel B	Mean	Variance	Mean	Variance
Ln market value	5.982	2.944	5.883	2.944
Ln profit	10.780	2.275	9.980	2.283
leverage	0.154	0.03025	0.154	0.03025
MTB	1.299	0.5719	1.299	0.5719
Volatility	13.350	76.78	13.350	76.78
Ln Capx	11.000	3.307	8.000	3.315
Ownership	3.273	0.7509	3.112	0.7512
Market liquidity	-1.490	3.45	-1.490	3.453
Market hotness	0.115	0.03263	0.115	0.03264

Panel A of this table shows the estimation results of AFT models for the matched survived with non-survived (failed) IPO firms using the Entropy Balancing method. The dependent variable is the logarithm of *Time to delisting*. Model 1 examines the effect of social capital, Model 2 examines the effect of employee welfare, and Model 3 examines the joint effect of social capital and employee welfare. Panel B provides descriptive statistics for all variables by means and variance for the treatment (survived) and control (failure) groups post-entropy balancing. All variables are defined in Appendix Tables 2A and 3A. ***, **, * indicate 1%, 5%, and 10% significance levels.

Appendix Table 1A: Pearson Correlation Coefficients

	Employee welfare	Social capital	Ln market value	Ln profit	Leverage	MTB	Volatility	Ln Capx	Ownership	Market liquidity	Market Hotness
Employee welfare	1.00										
Social capital	0.035	1.00									
	(0.003)										
Ln market value	0.057	0.039	1.00								
	(<.000)	(0.000)									
Ln profit	0.042	-0.027	0.279	1.00							
	(0.005)	(0.052)	(<.000)								
Leverage	0.009	-0.034	0.139	0.259	1.00						
	(0.460)	(0.002)	(<.000)	(<.000)							
MTB	0.056	0.026	0.328	-0.013	-0.059	1.00					
	(<.000)	(0.015)	(<.000)	(0.334)	(<.000)						
Volatility	-0.030	-0.030	-0.370	-0.100	-0.064	-0.086	1.00				
	(0.011)	(0.005)	(<.000)	(<.000)	(<.000)	(<.000)					
Ln Capx	0.025	-0.023	0.325	0.613	0.273	-0.089	-0.234	1.00			
	(0.042)	(0.044)	(<.000)	(<.000)	(<.000)	(<.000)	(<.000)				
Ownership	-0.127	-0.063	-0.253	-0.046	-0.009	-0.093	0.103	-0.011	1.00		
	(<.000)	(<.000)	(<.000)	(0.001)	(0.370)	(<.000)	(<.000)	(0.330)			
Market liquidity	0.036	-0.003	-0.018	0.007	-0.002	0.036	-0.032	0.018	0.006	1.00	
	(0.003)	(0.724)	(0.091)	(0.579)	(0.845)	(0.001)	(0.003)	(0.098)	(0.530)		
Market hotness	0.001	0.000	0.002	0.017	-0.012	0.001	0.008	-0.020	-0.009	-0.000	1.00
	(0.921)	(0.987)	(0.833)	(0.213)	(0.268)	(0.912)	(0.420)	(0.073)	(0.400)	(0.995)	

This table shows the Pearson correlation coefficients for all the variables used in this study. P-values are reported in parentheses. All variables are defined in Appendix Tables 2A and 3A.

Appendix Table 2A: Variables definitions

Variables	Descriptions	Source
Panel A: Main control variables		
Ln market value	Natural log of share price multiplied by the number of ordinary shares in issue	DataStream/Compustat
Ln profit	Natural log of earnings before interest and taxes	DataStream/Compustat
Leverage	Total debt/total assets	DataStream/Compustat
MTB	Market capitalisations over book value of equity	DataStream/Compustat
Volatility	Stock returns' annual standard deviation	DataStream/Compustat
Ln Capx	Natural log of capital expenditure which represents the funds used to acquire fixed assets	DataStream/Compustat
Ownership	Directors' ownership/outstanding shares	DataStream/Compustat
Market liquidity	Volume/outstanding shares	DataStream/Compustat
Market hotness	Average initial returns of IPOs issued during the three months prior to the month of the IPO	
Panel B: Robustness control variables		
VC-dummy	Dummy variable taking 1 if the IPO is VC-backed and 0 otherwise	SDC Platinum
CEO-gender	Dummy variable taking 1 if the CEO is male and 0 if the CEO is female	US Securities and Exchange Commission's Edgar database
Auditors-Quality	Dummy variable taking 1 if the IPO auditors are one of the Big4 and 0 otherwise	SDC Platinum
GDP (counties)	Natural log of GDP in a county	The Bureau of Economic Analysis (BEA)
Percapita income (counties)	Natural log of income per capita in a county	The Bureau of Economic Analysis (BEA)
Populations (counties)	Natural log of populations in a county	The Bureau of Economic Analysis (BEA)

This table defines all control variables used in this study. Panel A shows the key control variables and Panel B shows the control variables for robustness checks.

Appendix 3A: construction of social capital and employee welfare

We construct social capital based on the data from the Northeast Regional Center for Rural Development (NRCRD) at the Pennsylvania State University. This social capital data captures the confluence of effects from two variants of social norms and two measures of networks (Rupasingha & Goetz, 2008). The two measures of norms are the census mail response rate (RESPN) and the votes cast in presidential elections (PVOTE). The two measures of networks are the number of associations (ASSN) and the number of non-profit organisations (NCC). Using these four indicators, we conducted a principal component analysis for each year (1997, 2005, 2009, and 2014) and used the first component for each year as the social capital index. We use NRCRD data to estimate the social capital index for four years in 1997, 2005, 2009, and 2014 for which NRCRS provides data for all US counties. Following prior studies (Hasan et al., 2017a; Jha and Chen, 2015; Jha and Cox, 2015), we use linearly interpolated social capital to fill the missing SC value in the years 2000 to 2004; and 2006 to 2008, 2010 to 2013, and 2015-2016).

To measure employee welfare we use the KLD STATS (Statistical Tool for Analyzing Trends in Social & Environmental Performance) database. Following corporate finance studies (Ghaly et al., 2015; Faleye and Trahan, 2011; Verwijmeren and Derwall, 2010) we calculate employee welfare considering identified strengths and identified concerns included in the "employee relations" dimension in a given year. More specifically, average of the identified concerns is subtracted from the average of identified strengths.[8] Below are the components of our index as described by the KLD.

Strengths:

1. Union relations strength: the company has taken exceptional steps to treat its unionised workforce fairly.

2. Cash profit sharing: the company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce.

[8] In the KLD database, each of the categories receives a rating of either 0 or 1. However, Retirement benefits strength and concern have been discontinued after 2009. Therefore, to arrive at our employee welfare index, we average the KLD components of the five "strength" categories and subtract the average of the five components of the "concern" categories, creating an index ranging from − 1 to 1. By construction, higher values of index indicate better employee welfare.

3. Employee involvement: the company strongly encourages worker involvement and/or ownership through stock options available to a majority of its employees; gain sharing, stock ownership, sharing of financial information, or participation in management decision making.

4. Retirement benefits strength: the company has a notably strong retirement benefits program.

5. Work/life benefits: the company has outstanding employee benefits or other programs addressing work/family concerns (e.g., childcare, elder care, or flextime).

Concerns:

1. Union relations concern: the company has a history of notably poor union relations.

2. Health and safety concern: the company recently has either paid substantial fines or civil penalties for willful violations of employee health and safety standards, or has been otherwise involved in major health and safety controversies.

3. Workforce reductions: the company has made significant reductions in its workforce in recent years.

4. Retirement benefits concern: the company has either a substantially underfunded defined benefit pension plan, or an inadequate retirement benefits program.

5. Other concern: the company is involved in an employee relations controversy that is not covered by other KLD ratings.