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Enablers of workforce agility, firm performance, and corporate reputation

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ABSTRACT

This study investigates whether workforce agility via financial and non-financial performance influences corporate reputation and whether transformational leadership of top management and talent management via workforce agility impact financial and non-financial performance of IT firms. Data were collected from 225 IT firms and a middle-level executive from each firm responded to the questionnaire. Standard inventories were used to measure the constructs and only an inventory was developed to assess talent management. Data on financial performance, stock-listing status, firm size, and location of the firm were taken from secondary sources. When the effect of stock-listing status was controlled, firm performance improved corporate reputation. High (low) workforce agility via increased (decreased) firm performance was associated with high (low) corporate reputation. Furthermore, transformational leadership of top management and talent management via workforce agility were positively related to firm performance. The indirect effects suggested full mediation except the impact of workforce agility via financial performance on corporate reputation. Conclusively, transformational leadership of the top management and talent management of the firm develop the workforce agility, and the workforce agility furthers the firm performance that begets corporate reputation.

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1. Introduction

Business environment has been changed following globalization in early 1990s. Technological disruption, abrupt changes, and turbulence have become the characteristics of the business world. Artificial intelligence, machine learning, internet of things, virtual reality, and big data have taken the prime spot both in industry and academia. The market has been changing and evolving with frequent upheavals (Strohmaier & Rollett, 2005). Organizations are striving to face the dynamic, unpredictable, and changing business environment (Sherehiy et al., 2007) and constantly struggling to frame survival and competitive business strategy.

Firms, under intense competition and volatile market condition, struggle to sustain their market share, performance, and reputation. The positive perception held by stakeholders toward the firm is, termed as corporate reputation (CR) (Gotsi & Wilson, 2001). It

cannot be exactly substituted by competitors. CR augments the intrinsic value of a firm (Dowling, 2006) and plays a central role in a firm's competitive advantage (Deephouse, 2000; Schwaiger & Raithel, 2014). Along with CR, firms exhibiting a consistent performance, win the confidence of all stakeholders. The financial performance (FP) and non-financial performance (NFP) of firms can uphold the CR. Like, CR another rare, valuable, and intangible asset of a firm is the human resource. Employees are the key players for most firms (Yang & Driffield, 2012). They can raise the competitiveness of the firm through their loyalty and productivity. To have a competitive advantage, firms prioritized on human resources because a firm's human resources and its invisible assets of knowledge, skills, and attitudes cannot be exactly copied by another firm (Barney, 2001). Firm agility is the ability of the firm to cope with turbulent environments with efficiency (Nafei, 2016). The main component of firm agility is the workforce agility (Glinska et al., 2012). It is the quick adaptability of employees of a firm to changes in technologies, customer demands, and regulatory norms of the government. It has become a dire necessity for firms because an agile workforce upshoots the dynamic capabilities of a firm (Teece et al., 2016), accomplishes strategic objectives, leverages new technology, and engages its expertise to sustain in the market.

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Top management leadership and talent management practices of a firm shape and nurture workforce agility. Due to the agile workforce, firms can perform better, get a competitive advantage in the market, and show higher performance that can further their reputation. In a dynamic environment, leadership and talent management can enhance firm performance and CR in integration with workforce agility. Accordingly, this study intends to investigate the antecedents of workforce agility, firm performance, and CR in Indian IT firms.

2. Literature review and hypothesis development

2.1. CR

CR is a strategic intangible asset of a firm (Shamma, 2012), and it is built over time by continuous positive perception of multiple stakeholders. CR of the firm motivates the stakeholders (Pfarrer et al., 2008) to support it in times of crises and hardships. CR can emerge from firm behaviors, performance outcomes, quality of products and services (Parker et al., 2019). Corporate social responsibility (CSR) activities build up CR among all stakeholders. CR remains as a source of competitive advantage of the firm (Olmedo-Cifuentes & Martinez-León, 2014).

2.1.1. Exploring the relationship between FP, NFP, and CR

High-quality products, CSR practices, and strong FP can become sources of CR of firms (Jensen et al., 2012). Due to higher FP, firms can develop their infrastructure, adapt latest technologies, hire more talented employees, go for market expansion, diversify products, and take up more employee welfare activities. Organizational capabilities influence FP through intellectual capital (Huang & Huang, 2020) and those also promote learning and growth of firms (Chi et al., 2016).

The NFP of firms includes the market share, workplace relations, new product development, research and development, cost reduction programs, and personnel development (Govindarajan, 1984; Hoque, 2004). Allocating resources to diversity, training, health, and worker safety leads to a firm's value creation (Lin et al., 2019). Open innovation, intellectual capital, and tacit knowledge management (Castro et al., 2021; Moradi et al., 2021; Muthuveloo et al., 2017) have a positive effect on firm performance. FP and NFP can enhance the CR and accordingly.

Hypothesis 1. (a) FP and (b) NFP of firms will positively relate to their CR.

2.2. Firm agility

Firms, capable of responding to the changing business situations with speed and flexibility, can increase their FP and NFP. Agility is the capability of a firm to sense the threats and opportunities in the business environment and cope with the changing environment through flexibility and adaptability for its advantage (Lee et al., 2015).

Firm agility from human resource perspectives includes: (1) responsiveness to changes, (2) competency, (3) flexibility, and (4) speed. Firm agility can be attained through leadership, reward system, organization culture, suppliers, customers, IT applications, and employees (Crocitto & Youssef, 2003). Firm agility framework has three determinants (Nijssen & Paauwe, 2012): (1) scalable workforce, (2) fast organizational learning, and (3) highly adaptable organizational infrastructure. An agile workforce is critical for creating an agile firm (Ragin-Skorecka, 2016). Workforce agility depends on how employees handle and respond to changes in unpredictable market conditions. Workforce agility includes

proactivity, adaptability, and resilience (Sherehiy, 2008). Human resource activities like job autonomy, job enrichment, employee participation, employee training, multi-skilling, and multi-tasking contribute to workforce agility (Gunasekaran, 1999) and, therefore, an agile workforce can improve firm performance.

An agile workforce can adapt to the changes in the business environment quickly and efficiently (Cai et al., 2018), and can also improve firm performance. There exists a positive relationship between workforce agility and firm excellence. Firm excellence reflects innovation capacity, larger market share, FP, and NFP (Cegarra-Navarro, Soto-Acosta, & Wensley, 2016). An agile workforce accelerates competitiveness and profits of the firm (Ravichandran, 2018). Accordingly.

Hypothesis 2. Workforce agility will positively relate to (a) FP and (b) NFP of firms.

Employees support the firm to achieve better FP and sustainable competitive advantage (Cravens & Oliver, 2006) influencing CR. Workforce agility empowers employees, promotes freedom and opportunity in decision making, and nurtures creativity related to employees' work and firm objectives. An agile workforce delivers new products, services, and solutions to the market through their innovative and creative ventures. Even during turbulent market conditions, an agile workforce takes necessary steps to sustain the firm performance and competitive advantage. Such initiatives develop higher CR in the minds of the stakeholders. Accordingly.

Hypothesis 3. Workforce agility will positively relate to CR of firms.

Agile employees increase profit of firms in dynamic environments and contribute to quality improvement, better customer service, and economy of scope (Sohrabi et al., 2014). They adapt to new opportunities and market conditions quickly (Muduli, 2013) and boost firm performance. They attain more tasks in less time because of their efficiency and flexibility. They enhance the quality of tasks resulting in reduced cost (Hosein & Yousefi, 2012) and higher FP. They even increase market share in highly volatile business environments (Katayama & Bennett, 1999). They also achieve strategic objectives of the firm in terms of cost, quality, and variety, thus, positively influence FP and NFP (Hopp & Oyen, 2004).

The above observations suggest a positive influence of workforce agility on firm performance. Similarly, there exists a positive relationship between firm performance and CR. A firm's high innovation capacity, better customer service (Foroudi et al., 2016; Toplu et al., 2014), and good financial position (Dowling, 2006), generate better CR. Some researchers have argued that the relationship between firm performance and CR is bi-directional (Park et al., 2014). These pieces of evidence suggest that workforce agility positively influences firm performance and firm performance improves CR.

Also, the first Hypothesis states that (a) FP and (b) NFP will positively relate to CR of firms and according to the second hypothesis, workforce agility will positively relate to (a) FP and (b) NFP of firms. Hence, workforce agility will positively relate to CR via FP and NFP of firms. Accordingly.

Hypothesis 4. Workforce agility via (a) FP and (b) NFP of firms will positively relate to CR.

2.3. Transformational leadership

Change oriented leaders at the top-level can adapt to the dynamic business environment, concentrate on the change process, and create a new vision for the firm. Change-oriented leaders cultivate idealized influence, inspirational motivation, intellectual

stimulation, and individualized consideration (Bass, 1985). The idealized behaviors and attitudes of the leader foster integrity and tolerance among subordinates. Such leaders continuously strive to change the attitude of subordinates toward change management and convince them about the new vision and associated reward for all. The readiness of employees toward change management makes them more agile. Leaders encourage critical thinking and innovative practices (Mainemelis et al., 2015; Shafi et al., 2020) among employees to face challenges in an unpredictable business environment. Transformational leaders create an environment for participation and empowerment of employees. Empowered employees become more agile (Muduli, 2017). Transformational leadership influences employees' trust (Islam et al., 2021), and civic virtue behavior (Khan et al., 2020). Intrinsic motivation moderates the relationship between transformational leadership and employee creativity (Shafi et al., 2020). Knowledge-oriented leadership and human resource development via organizational innovation promote firms' sustainable competitive advantage (Banmairuoy et al., 2021). Transformational leaders promote innovation, training and development, participative decision-making, open communication, and their subordinates become productive (Barrick et al., 2015; Bass et al., 2003). Therefore,

Hypothesis 5(a). Transformational leadership of top management will positively relate to workforce agility of firms.

2.4. Talent management

A group of McKinsey consultants coined the term 'war for talent' in 1997 (Michaels et al., 2001). Talent management is about placing the right number of people at the right place with the right skills and knowledge at the right time (Stephenson & Pandit, 2008). Talent management refers to the attraction, selection, retention, development, and management of employees for the achievement of firm objectives like strategic sustainable success (Scullion & Collings, 2011). Talent management is a dynamic capability fostering agility (Collings et al., 2019). It inculcates proactivity, adaptability, and resilience among employees to make them more agile.

Talent management policy creates a talent pool in firms and talented employees can face the business situation successfully by using it. Skilled and knowledgeable employees can make the firm agile through their flexible and innovative approach. Firms, who can attract and retain more talent, are more likely to be agile and more successful in changing business situations. Employee's openness to learning stimulates workforce agility. Uncertain and competitive market conditions generate challenges for firms to retain talent. Keeping the talent pool for a longer period enhances agility in dynamic business conditions. Thus,

Hypothesis 5(b). Talent management of firms will positively relate to their workforce agility.

2.5. Transformational leadership, talent management, and firm performance

Transformational leaders can influence and inspire subordinates to boost firm productivity (Gignac & Palmer, 2011). Though a negative relationship is observed between transformational leadership and firm performance (Ensley et al., 2006), transformational leaders encourage organizational learning, critical thinking, nurture innovation, and inspire employees to explore new approaches to doing jobs (Aragón-Correa et al., 2007; Dong et al., 2017). Such interventions by top management improve FP and NFP. Innovative products (Hirunyawipada et al., 2010), processes, and services improve firm performance. Transformational leaders,

being cooperative, flexible, and adaptive, contribute to high FP of the firm (Yukl, 2008) and motivate employees to perform beyond expected levels (Holten et al., 2018; Pan & Lin, 2015; Patiar & Wang, 2016).

High potential talents are quick learners, enterprising, result-oriented, and risk-takers. Highly intelligent and motivated employees can help the firm to sustain a leading position in the market (Michaels et al., 2001; Tafti et al., 2017). Talented employees put more efforts to achieve higher performance and ensure better FP and NFP.

Talent management fulfils human capital needs of the firm and enhances its performance in terms of profit and sustainability (Beechler & Woodward, 2009; Latukha, 2018). Talent attraction raises the competitive advantage of the firm in a volatile market (Albrecht et al., 2015). Talent development and retention in a competitive business environment improve firm productivity. Talent management practices extract higher commitment and motivation from talent pool to support organizational effectiveness and increase firm performance (Lee & Bruvold, 2003). Innovative capability (Lin & Liu, 2012) and elevated performance of talented employees uplift the firm performance. Thus,

Hypothesis 6. (a) Transformational leadership of top management and (b) talent management will positively relate to (c) FP and (d) NFP of firms.

According to the second Hypothesis, workforce agility will positively relate to FP and NFP of firms. As per the fifth hypothesis, transformational leadership of top management and talent management will positively relate to workforce agility of firms. Accordingly,

Hypothesis 7. (a) Transformational leadership of top management and (b) talent management via workforce agility will positively relate to firms' (c) FP and (d) NFP.

2.6. Control variable

2.6.1. Stock-listing status

Firms listed in stock exchanges can gain access to capital. Due to the flow of capital, firms can take steps for growth and expansion. When workforce agility is influencing FP and NFP of firms, the effects of stock-listing status needs to be controlled statistically which is likely to influence the FP and NFP.

2.7. Confounding variables

2.7.1. Firm-size

Bigger firms possess sizeable number of employees with diversified skills, knowledge, and experience. Such employees contribute to workforce agility. So, big firms better respond to changes in a dynamic business environment. They can attract and retain talented employees through better human resource practices. Firm-size also affects the leadership style of top management. In bigger firms, top leadership sets the vision for the firm in changing business environment. Thus, firm-size acts as a confounding variable influencing independent variables of transformational leadership of top management and talent management and the outcome variable of workforce agility that needs to be partialled out in testing the hypotheses.

2.7.2. Location of the firm

Firms located in IT hubs face fierce competition. IT firms in IT hubs can sustain and survive with an agile workforce. Presence of change-oriented leaders can elevate firm performance. IT hubs attract large number of talented employees as seen in Indian IT

cities of Bangalore, Pune, Hyderabad, and Chennai. So, the location of the firm in IT hub, being a confounding variable, influences the precursors of transformational leadership of top management and talent management and the consequence of workforce agility. Hence, the effects of firm location (IT vs. non-IT hub) need to be patialled out in testing the hypotheses.

The above hypothesized relationships will be examined in a study in Indian IT and IT enabled firms. The model with hypothesized relations, mediators, control, and confounding variables are shown in Fig. 1.

3. Method

3.1. Participant

Two criteria were set for inclusion of the IT and IT-enabled firms in the sample: (a) a minimum number of 15 employees in the firm, and (b) a minimum of 5 years of operations. Small, medium, and large firms participated in the survey. The firms were located in IT hubs of India at Bengaluru, Pune, Chennai, and Hyderabad and in non-IT hubs of India at Noida, Delhi, Gurugaon, Kolkata, Mumbai, Bhubaneswar, Ahmedabad, Indore, Kochi, and Nagpur. A firm was the unit of sample and was randomly chosen from the available list of firms at a specific location. One middle-level manager from each firm participated as she or he was in direct contact with, reporting to the top-management, leading a team, and had knowledge about the firm's projects, policies, and practices. Two hundred twenty-five middle-level managers responded to the questionnaire. Along with the primary data from middle-level managers, secondary data on FP and stock-listing status were collected from the Centre for Monitoring of Indian Economy (CMIE) database. The FP of non-stock-listed firms was estimated from the available annual reports of firms. The firm-size and location of the firm in the IT hub were procured from the websites of firms and internet sources. Firm attributes and socio-demographics of respondents are shown in Table 1.

3.2. Measures

Data were taken from primary and secondary sources and clubbed together for each firm. IBM SPSS AMOS 22 was used to analyze the data. For a multi-item construct, the total score of items

was divided by number of items to keep the value within the range of the response scale.

3.2.1. CR

CR was assessed using a four-item scale of Ponzi et al. (2011). The items were: (1) "I have a good feeling about this organization," (2) "I admire and respect this organization," (3) "I trust this organization," and (4) "This organization has a good overall reputation." The response descriptions against each item were on a seven-point Likert scale ranging from 1 (= Strongly disagree) to 7 (= Strongly agree). The higher score indicated higher CR. When the respondents' scores on items were factor analyzed using confirmatory factor analysis (CFA), all items loaded on a single factor. The scale had acceptable convergent validity (Sum of squared standardized loadings of all items/Number of items ≥ 0.50), Cronbach's alpha reliability (>0.70), and fit indices (Table 3).

3.2.2. Return on assets (ROA)

The ROA indicated how profitable a firm was relative to its total assets and was used to assess FP of a firm. The ROA was estimated for 214 firms from the data available in the CMIE-Prowess database for 3 years from 2014 to 2015 to 2016–2017. ROA of 11 non-stock-listed firms was calculated from the balance sheets and profit and loss accounts of firms available in annual reports for the above 3 years as the ratio of profit after tax to total assets [ROA = {Net operating income (1 - tax rate)}/Average operating assets] (Copeland et al., 2000). A three-year average of ROA was obtained to eliminate possible biases that may result from a single-year figure. Firm-adjusted ROA was obtained by subtracting the average ROA of firms from ROA of each firm (Agle et al., 1999; Fowler & Schmidt, 1988). The standardized ROA data of two firms which were outliers (>6), were replaced with mean.

3.2.3. NFP

A 12-item scale developed by Govindarajan (1984) and modified by Hoque (2004), and Mishra and Suar (2010) was used to assess the NFP of the firm. A sample item includes, "sales growth rate." Response descriptions against each item were given on a five-point scale from 1 (= well below average) to 5 (= well above average). For each of the 12 items, annual average value of NFP was calculated for 3 years as the FP: (NFP2014–2015 + NFP2015–2016 + NFP2016–2017)/3. When

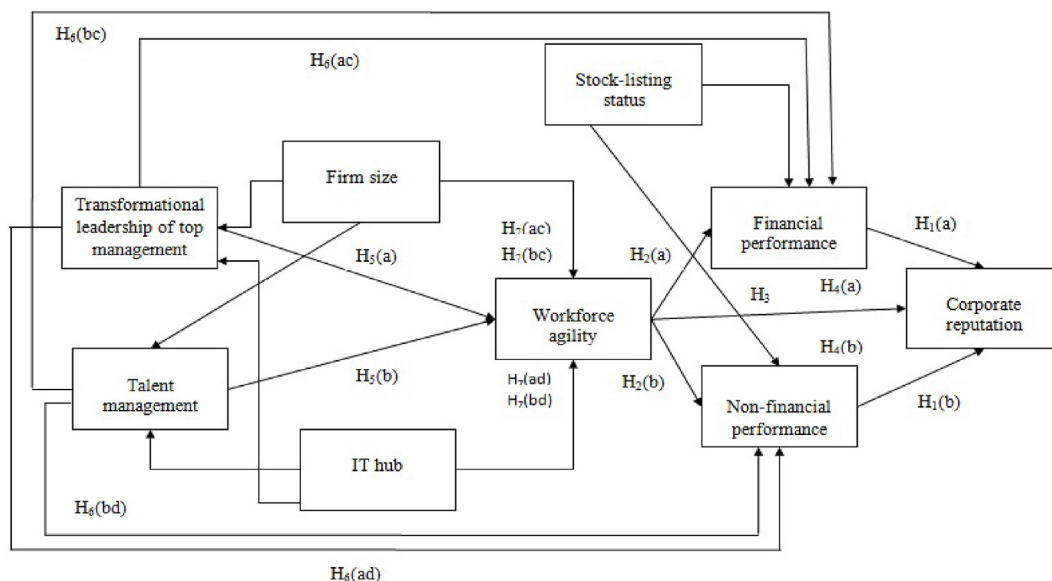


Fig. 1. Hypothesized model for investigation.

Table 1
Firm attributes and socio-demographics of respondents.

Attributes	Descriptive statistics	Value
Stock-listing status	Listed, <i>n</i> (%)	214 (95.1)
	Non-listed, <i>n</i> (%)	11 (4.9)
Firm-size	Range, <i>M</i> (<i>SD</i>)	15–390000, 8598.97 (33599.65)
Location	IT-hub, <i>n</i> (%)	109 (48.4)
	Non-IT hub, <i>n</i> (%)	116 (51.6)
Average total income (Indian rupees in crore)	Range, <i>M</i> (<i>SD</i>)	.12–78748.11, 1621.21 (7621.50)
Average ROA	Range, <i>M</i> (<i>SD</i>)	-.91-.37, .07 (.15)
Age of the respondent	Range, <i>M</i> (<i>SD</i>)	27–52, 37.08 (5.02)
Gender	Male, <i>n</i> (%)	193 (85.80)
	Female, <i>n</i> (%)	32 (14.20)
Year of service in the present firm	Range, <i>M</i> (<i>SD</i>)	1–20, 4.60 (2.95)
Year of association with the current supervisor	Range, <i>M</i> (<i>SD</i>)	1–18, 3.00 (1.70)

Table 2
Item contents, descriptive statistics, and item loadings of talent management scale.

Item description	<i>M</i>	<i>SD</i>	<i>B</i>	<i>SE</i>	β	<i>CR</i>
Talent management	3.23	.78				
1. Our firm has a talent management policy.	3.31	.97	1.00	.08	.85***	14.79
2. Our firm creates awareness among employees regarding its talent management policy.	3.34	.94	.90	.06	.79***	14.79
3. Our firm uses talent effectively.	3.28	.93	.88	.06	.78***	14.58
4. Our firm has regularity of talent management programmes.	3.29	.96	.92	.06	.79***	14.77
5. Our firm has an effective recruitment and selection process.	3.25	1.02	.99	.07	.80***	15.03
6. Our firm has close relationships with leading educational institutes, job portals, and social media to select talent.	3.27	1.00	.96	.07	.78***	14.58
7. Our firm has good physical and social environment to attract talents.	3.25	.97	.90	.07	.76***	13.94
8. Our firm provides competitive pay and perks to attract talents.	3.16	.97	.88	.07	.75***	13.50
9. Our firm gives emphasis on “employee value proposition” and employer branding.	3.25	.99	.89	.07	.74***	13.22
10. Our firm has robust employee performance management systems.	3.22	.96	.89	.06	.76***	13.86
11. Our firm does continuous assessment of performance and potential, using multiple inputs.	3.20	1.01	.97	.07	.79***	14.65
12. Our firm does grading against competency profile of successful employees.	3.20	.99	.94	.07	.78***	14.43
13. Our firm provides reward and recognition to employees based on their job performance.	3.26	.93	.80	.06	.71***	12.51
14. Our firm does training need analysis to find gaps and to devise training and development activities.	3.26	1.00	.92	.07	.75***	13.64
15. Our firm provides periodic training and development activities.	3.13	1.04	1.00	.07	.79***	14.85
16. Our firm continuously moulds skills, knowledge, and attitudes of talents to meet job demands.	3.24	1.01	.99	.07	.81***	15.24
17. Our firm gives top priority to leadership development activity.	3.17	1.00	.89	.07	.74***	13.22
18. Our firm aligns training and development plans with its strategic goals.	3.20	1.03	1.01	.07	.81***	15.37
19. Our firm gives emphasis on multi-skilling and job rotation.	3.16	1.08	1.01	.07	.78***	14.29
20. Our firm encourages coaching and mentoring activities for employee development	3.21	.99	.90	.07	.75***	13.56
21. Our firm seeks involvement of employees in goal-setting, problem-solving and decision-making for their development.	3.18	1.04	.99	.07	.78***	14.43
22. Our employees periodically receive career guidance and counseling.	3.18	1.00	.91	.07	.75***	13.47
23. Our employees are satisfied with the firm’s retention strategy.	3.12	1.02	.96	.07	.77***	14.26
24. Our firm provides flexible working arrangements and scope for work-life integration.	3.24	1.06	.99	.07	.77***	14.14
25. Our firm provides opportunity to the employees to do their best in the job.	3.28	.97	.85	.07	.72***	12.82
26. Our firm encourages developmental activities of employees	3.33	.95	.89	.06	.77***	14.18

Note: *B* = Unstandardized path coefficient; *SE* = Standard error; β = Standardized path coefficient; *CR* = Critical ratio. ****p* ≤ .001.

three-year average score of the respondents on 12 items were factor analyzed using CFA, all items loaded on a single factor. The scale had acceptable convergent validity, alpha reliability, and the 12-item model had acceptable fit indices (Table 3). High average score indexed high NFP.

3.2.4. Workforce agility

It was assessed using 39-item three dimensional (proactivity, adaptability, and resilience) scale (Sherehiy, 2008). A sample item of ‘proactivity’ includes: (a) “Our employees are able to predict the problems that might occur in their work,” (b) ‘adaptability’ includes, “Our employees adapt their behavior to show respect for others’ customs and values,” (c) ‘resilience’ includes, “Our employees like to change old way of doing things.” The response categories against each item were on a five-point Likert scale, from 1(= never) to 5(= always). When the respondents’ scores on 39 items of three dimensions were factor analyzed using CFA, the items loaded significantly on the respective dimension but one item on proactivity dimension (“Our employees let time take care of things that they have to do.” negatively keyed) had standardized

loading of 0.36 and three items of resilience (“Our employees are reluctant to accommodate and incorporate changes into their work;” “Our employees are frustrated by the changes at work;” “Our employees complain when a difficult situation occurs”) had standardized loading of –0.02, 0.15, and 0.15 respectively. These items were eliminated, explaining low variance of data. The inter-factor correlations were high and ranged from 0.92 to 0.99. When the 35 items were re-entered for a single dimension CFA, the scale had acceptable convergent validity and alpha reliability. The model had acceptable fit indices. The higher average score of 35 items indexed higher workforce agility.

3.2.5. Transformational leadership

Transformational leadership of the top management was measured by using 20-item, five dimensional Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 1995). A sample item of ‘idealized influence-attitude’ includes, (a) “My supervisor instills pride in others for being associated with him or her;” (b) ‘idealized influence-behavior’ includes, “My supervisor talks about his or her most important values and beliefs;” (c) ‘Inspirational motivation’

Table 3
Descriptive statistics, scale validity, and reliability of studied variables.

Variable	No. of original items	No. of items retained	M	SD	Factor loading range	Correlation range	AVE	α	χ^2/df	RMSEA	GFI	CFI	NFI	PGFI
									≤ 5	$\leq .08$	$\geq .90$	$\geq .90$	$\geq .90$	$\geq .5$
1. Corporate reputation	4	4	5.25	1.44	.82–.97	–	.82	.95	2.80	.09	.99	.99	.99	.10
2. Financial performance	1	1	.06	.79	–	–	–	–	–	–	–	–	–	–
3. Non-financial performance	12	12	3.01	.96	.90–.95	–	.88	.99	2.70	.09	.91	.98	.97	.60
4.1 Proactively	11	10	3.24	.77	.68–.88	.92–.99	.60	.95	1.91	.06	.77	.90	.81	.69
4.2 Adaptability	16	16	3.21	.74	.66–.79	–	.55	.95	–	–	–	–	–	–
4.3 Resilience	12	9	3.20	.74	.67–.79	–	.42	.92	–	–	–	–	–	–
4. Workforce agility	39	35	3.22	.73	.66–.87	–	.56	.98	1.59	.05	.81	.94	.86	.72
5.1 Idealized influence(attribute)	4	4	3.44	.90	.83–.89	.94–1.00	.76	.93	1.42	.04	.91	.98	.94	.69
5.2 Idealized influence(behavior)	4	4	3.31	.92	.80–.86	–	.69	.90	–	–	–	–	–	–
5.3 Inspirational motivation	4	4	3.31	.85	.75–.82	–	.62	.87	–	–	–	–	–	–
5.4 Intellectual stimulation	4	4	3.33	.83	.71–.82	–	.58	.84	–	–	–	–	–	–
5.5 Individualized consideration	4	4	3.32	.83	.71–.75	–	.53	.82	–	–	–	–	–	–
5 Transformational leadership	20	20	3.35	.81	.71–.87	–	.61	.97	1.60	.05	.90	.97	.93	.72
6.1 Talent management policy	4	4	3.20	.83	.80–.89	.92–.98	.70	.90	1.22	.03	.90	.99	.93	.74
6.2 Talent attraction	5	5	3.24	.83	.75–.82	–	.62	.89	–	–	–	–	–	–
6.3 Talent assessment	4	4	3.22	.81	.72–.81	–	.60	.86	–	–	–	–	–	–
6.4 Learning and development	6	6	3.19	.85	.74–.82	–	.62	.91	–	–	–	–	–	–
6.5 Talent Retention	7	7	3.22	.81	.74–.79	–	.60	.91	–	–	–	–	–	–
6 Talent Management	26	26	3.23	.78	.71–.85	–	.60	.98	1.45	.05	.87	.97	.91	.74

Note: AVE = Average variance extracted; α = Cronbach’s alpha; χ^2/df = Relative chi-square; RMSEA = Root mean square error of approximation; GFI = Goodness of fit index; CFI = Comparative fit index; NFI = Normed fit index; PGFI = Parsimony goodness of fit index.

includes, “My supervisor talks optimistically about the future;” (d) ‘Intellectual stimulation’ includes, “My supervisor seeks differing perspectives when solving problems;” (e) ‘Individualized consideration’ includes, “My supervisor spends time teaching and coaching.” The response categories against each item were on a five-point Likert scale, from 1 (= not at all) to 5 (=frequently, if not always). When the respondents’ scores on 20 items of five dimensions were factor analyzed using CFA, the items loaded significantly on the respective dimension. The inter-factor correlations ranged from 0.94 to 0.99 and the dimensions were difficult to discriminate from one another. When the 20 items were re-entered for a single dimension CFA, the scale had high convergent validity, alpha reliability, and acceptable fit indices (Table 3). Higher score indicated higher transformational leadership of top management in the firm.

3.2.6. Talent management

A scale was developed to assess talent management. Scale items were developed after reviewing available literature, consulting human resource management practitioners in IT industries, and subject experts in academia. Talent management construct had five dimensions: (a) existence of talent management policy, (b) talent attraction, (3) talent assessment, (4) learning and development, and (5) talent retention. A sample item of first dimension includes, (a) “Our firm has a talent management policy;” (b) second dimension includes, “Our firm has an effective recruitment and selection process;” (c) third dimension includes, “Our firm has robust employee performance appraisal system;” (d) fourth dimension includes, “Our firm provides periodic training and development activities;” (e) fifth dimension includes, “Our firm encourages coaching and mentoring activities for employee development.” The response categories against each item were on a five-point Likert scale, from 1 (= not at all) to 5 (= fully). Since the five dimensions of the talent management scale are pre-conceptualized, we did not opt for exploratory factor analysis. We directly performed CFA. When the respondents’ scores on 26 items of five dimensions were factor analyzed using CFA, the items loaded significantly on the respective dimension. The inter-factor

correlations were ranged from 0.92 to 0.98 and the dimensions were non-discriminative. When the 26 items were re-entered for a single dimension CFA, the scale had acceptable convergent validity, alpha reliability, and acceptable fit indices (Table 3). The contents of 26 items, descriptive statistics, and factor loadings are shown in Table 2.

Stock-listing status coded dichotomously (stock-listed firm = 1, non-stock-listing firm = 0), was a control variable. Firm-size (Number of employees in the firm) and location of the firm in IT-hub (firm in IT-hub = 1, firm not in IT-hub = 0) were confounding variables. Because the firm-size varied widely, the data on firm-size was mean centred (Each firm size - average firm-size) to reduce its variability.

3.3. Procedure

The researcher directly contacted 400 firms at their respective branches or corporate head offices in different locations. Following the telephonic appointment, the Head of the Human Resource (HR) Department of each firm was approached in the day of visit, briefed about the purpose of the study, collection of data, significance of the study, and confidentiality of information. With the consent of the Head, HR, a middle-level manager was randomly selected from each firm, approached, briefed, and handed over the hard copy of the questionnaire. He or she was asked to respond to the questionnaire as freely as possible, on socio-demographics, CR, NFP of the firm, leadership of the top-management, workforce agility, and talent management of the firm. They were requested to return the filled-in questionnaire after a week. On personal contact, 243 respondents returned the filled-in questionnaire, and they were thanked for their time and effort. Of the returned questionnaires, 225 were complete in all respects; 18 were incomplete and rejected. Thus, the effective response rate was 56.25%.

3.4. Data analysis

Descriptive statistics, correlation, factor analysis, and structural regression were used to analyze the data using SPSS 22. The latent

dimensions had high correlation among themselves, >0.91, suggesting the unidimensionality of constructs and those were converted to single indicator variable.

In order to mitigate the issue of omitted variables, measurement error, and common method bias, the instrumental variable estimation method was followed. An instrumental variable should correlate to endogenous variable but uncorrelated to error terms of dependent variable. The control and confounding variables were included to address the issue of omitted variables. To address the issue of measurement error and to correct for accentuation, measurement model was modelled by constraining the residual term associated with top management leadership, workforce agility, talent management, NFP, and CR to $(1-r_i)Vr_i$ in which r_i is the estimation of Cronbach's alpha reliability of the variable and Vr_i is the observed variance (Bollen, 1989). Other variables were constrained to one. To procedurally arrest the common method bias, the financial data, firm size, location in IT hub, and stock-listing status were obtained from secondary sources and to statistically arrest the bias, constructs were used as single indicator variable.

4. Results

The maximum likelihood method was adopted. The data on FP was widely dispersed and were mean centred ($ROA-M_{ROA}$) to reduce the variability and so also the firm-size. The skewness of all the variables was below 2 except stock-listing status (skewness = -4.21), firm-size (skewness = 8.05), and FP (skewness = -3.34). Of the stated 225 IT firms, 214 were listed in national stock exchange and/or Bombay stock exchange, Mumbai (code = 1) and only 11 were non-stock listed (code = 0), therefore, the data was negatively skewed. The firm-size and FP data were transferred to the Z-scores. Only one firm had the Z-value on firm-size above 11 and only two firms had z-values on FP above 6. Those were outliers and substituted with mean (= 0) and the skewness of the firm-size was reduced to 5.55 and FP to -2.16 to examine the hypothesized relations.

The descriptive statistics and the Pearson correlation among the studied variable are reported in Table 4. Bigger firms had better talent management, transformational leadership of top management, and workforce agility; firms located in IT hubs had both talent management and workforce agility; and stock-listed firms had more FP. The transformational leadership of the top management and talent management were positively correlated ($r = .87$). Workforce agility was related to FP and NFP of firms, and firm performance was positively related to CR of firms. Though the relations were in hypothesized directions, correlations revealed bidirectional relations. Therefore, structural regressions were used

to test the impact of leadership and talent management on FP and NFP via workforce agility, and the workforce agility on CR via firm performance.

Because there was a high correlation between exogenous variables of leadership and talent management ($0.87, p < .001$) and with an endogenous mediator of workforce agility ($\geq 0.90, p < .001$), single independent variable with the mediator and outcomes were analyzed to avoid multicollinearity. The mediator variables of workforce agility and firm performance were exogenous or independent as well as endogenous or dependent variables in the sequence of relationships. Five structural models were run to test the proposed hypotheses. Two full models were run to test indirect or mediator effects and three direct models were run to test the total effects.

The indirect model with single independent, control, and confounding variables, and the mediator, was run to predict CR and then the direct relations were examined and indirect effects were estimated (Table 5). Stock-listing status only influenced the FP. In accordance with the first Hypothesis (H1), when the effect of stock-listing status was controlled, firms having high FP and NFP had more CR. These findings supported the multipart first hypothesis. Supporting the multipart second hypothesis, workforce agility furthered FP and NFP of the firm. Because the degrees of freedom of chi-square is sensitive to sample-size, the relative chi-square of the indirect model was above 5 and so also the RMSEA was at 0.20; the GFI, CFI, and NFI were near the marker of 0.90 and PGFI was around 0.50. In the direct model, supporting the third hypothesis, workforce agility positively related to CR of the firm. The direct model had acceptable fit indices.

The indirect standardized path values from workforce agility to firm performance and from firm performance to CR were multiplied to find out the effect-size of indirect effect. The effect-size was high, moderate, and low, if the value of the effect-size was 0.25 (0.5×0.5), 0.09 (0.3×0.3), and 0.01 (0.10×0.10) respectively (Baron & Kenny, 1986). The percentage of mediation was estimated by taking the ratio of indirect to direct effect, and multiplying that ratio by 100. In accordance with the fourth Hypothesis, the path from workforce agility to FP was positive and highly significant and the path from FP to CR was significant at .05 level. The effect-size of the indirect path was .06 and low. The indirect path accounted for 7.29% variance of the direct path and there was no mediation (Hair et al., 2014, p. 224). The findings refuted H4 (a). In case of the relationships of workforce agility with NFP and NFP with CR, both paths were highly significant, effect-size of the indirect path was .70, and high. The indirect path accounted for 82.35% of the variance of the direct path, and there was full mediation. NFP was the vehicle through which the effect of workforce agility was fully carried over

Table 4
Descriptive statistics and Pearson correlations among studied variables.

		1	2	3	4	5	6	7	8	9
1	STOLI	1.00								
2	FS	.07	1.00							
3	ITHUB	.22***	.11	1.00						
4	CR	.13*	.16*	.14*	1.00					
5	FP	.14*	.16*	.06	.62***	1.00				
6	NFP	.07	.19**	.13	.83***	.68***	1.00			
7	TLTOP	.10	.14*	.11	.89***	.66***	.89***	1.00		
8	TM	.10	.20**	.13*	.80***	.62***	.90***	.87***	1.00	
9	WA	.07	.18**	.14*	.85***	.63***	.92***	.90***	.94***	1.00
	M	.95	-.05	.48	5.25	.06	3.01	3.35	3.23	3.22
	SD	.22	.65	.50	1.44	.79	.96	.81	.78	.73

Note: STOLI = Stock-listing status; FS = Standardized mean-centred firm-size; ITHUB = Location of firm in IT vs non-IT hub; CR = Corporate reputation; FP = Standardized mean-centred financial performance; NFP = Non-financial performance; TLTOP = Transformational leadership of top management; TM = Talent management; WA = Workforce agility.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 5
Firm performance predicting CR and transformational leadership of top management predicting workforce agility.

Path		B	SE	β	CR	Inference	χ^2/df	RMSEA	GFI	CFI	NFI	PGFI
							<.5	≤.08	≥.90	≥.90	≥.90	.50
Indirect model							10.18	.20	.89	.89	.88	.40
STOLI	→	FP	.37	.19	.10*	1.94						
STOLI	→	NFP	.03	.12	.01	.24						
FP	→	CR	.18	.09	.10*	2.01						
NFP	→	CR	1.15	.08	.76***	15.16						
FS	→	WA	.05	.03	.05	1.64						
FS	→	TLTOP	.16	.08	.13*	1.94						
ITHUB	→	WA	.05	.04	.03	1.17						
ITHUB	→	TLTOP	.16	.11	.10	1.51						
WA	→	FP	.68	.06	.62***	12.02						
WA	→	NFP	1.21	.04	.92***	35.03						
TLTOP	→	WA	.80	.03	.89***	30.18						
Direct model							0	0	1.00	1.00	1.00	0
Path												
WA	→	CR	1.69	.07	.85***	24.20						
Estimation of indirect effect												
WA→FP→CR			.62x.10		.06							
WA→NFP→CR			.92x.76		.70							

Note: B = Unstandardized path coefficient; SE = Standard error; β = Standardized path coefficient; CR= Critical ratio; STOLI = Stock-listing status; FS = Standardized mean-centred firm-size; ITHUB = Location of the firm in IT hub; CR = Corporate reputation; FP = Standardized mean-centred financial performance; NFP = Non-financial performance; WA = Workforce agility; TLTOP = Transformational leadership of top management.

* $p < .05$, ** $p < .01$, *** $p < .001$.

to CR. These findings supported H4 (b). Only the confounding variables of firm-size positively related to transformational leadership of top management. When the effects of confounding variables were partialled out, transformational leadership of top management positively influenced workforce agility. These findings supported the first part of fifth hypothesis, H5 (a).

The confounding variable of firm-size positively related to talent management and the control variable of stock-listing status positively related to FP (Table 6). When the confounding effects of firm-size and location of the firm in IT hub were partialled out, talent management positively influenced workforce agility. These findings supported the second part of fifth Hypothesis, H5 (b). The indirect model had acceptable fit indices except relative chi-square and RMSEA. Supporting the sixth hypothesis, in the direct model, transformational leadership of top management and talent management of firms positively related to FP and NFP of firms. The two direct models had perfect fit.

In testing the last hypothesis, the indirect standardized paths of transformational leadership of top management to workforce agility and workforce agility to FP were multiplied to find out the effect-size and that was divided by the direct path coefficient or total effect and multiplied by 100 to estimate the variance accounted for the indirect effect. In accordance with the hypothesis H7 (ac), the paths from transformational leadership of top management to workforce agility and from workforce agility to FP were highly significant and effect-size of the indirect path was .55, and high. The indirect path accounted for 83.33% variance of the direct path and there was full mediation (Hair et al., 2014, p. 224). In case of the relationships of transformational leadership of top management to workforce agility and from workforce agility to NFP, both paths were highly significant, effect-size of the indirect path was .82, and high. The indirect path accounted for 92.13% of the variance of the direct path, and there was full mediation, supporting the hypothesis H7 (ad). Similarly, the indirect standardized path values from talent management to workforce agility and from workforce agility to FP were highly significant, effect-size of the indirect path was .58, and high. The indirect path accounted for 95.08% of the variance of the direct path, and there was full mediation, supporting the hypothesis H7 (bc). The standardized path values from talent management to workforce agility and from

workforce agility to NFP were highly significant, the effect size was 0.86, and the indirect path accounted for 94.50% of the variance of the direct path, and there was full mediation. Thus, the hypothesis H7 (bd) was supported. The effects of transformational leadership of top management and talent management were fully accounted for FP and NFP of firms through workforce agility.

5. Discussion

Workforce agility of firms via NFP positively and fully relates to CR, whereas workforce agility via FP to CR, though significant, does not unfold a robust effect. Transformational leadership of top management and talent management of firms via workforce agility positively relate to FP and NFP. All indirect effects indicate full mediation except the indirect effect of workforce agility on CR via FP.

5.1. FP, NFP, and CR

The findings are in line with the previous research that FP influences CR (Jensen et al., 2012). Consistent FP of a firm may be one of the factors that develop a positive perception among the stakeholders and shareholders. Clients believe that high performing firms can invest in niche technologies, hire talented resources, and complete projects in time. In the IT sector, firms, that develop highly customized and niche products, attract a large number of customers. Confidence and trust of customers in the firm shape the CR of the firm. Quality of research and development activities of IT firms creates a positive perception among stakeholders. Apple company has built up its CR by providing innovative products like i-pod and i-phone. Apple has focused on breakthrough research and development to build its CR. Personnel development activities like coaching, mentoring, and skill development training in IT firms also contribute to CR. Firms in the US and Europe fund most of the IT projects in India. They have different time-zones. To adjust the time differences and address client requirements, top management, as well as IT employees in India work in flexible work schedules, enjoy cab facilities, health benefits, crèche facilities, and other benefits.

Small, medium, and big IT firms are in the race of innovation. At least, they try to adapt the latest technologies for their survival.

Table 6
Workforce agility predicting firm performance and talent management predicting workforce agility.

Path		B	SE	β	CR	Inference	χ^2/df	RMSEA	GFI	CFI	NFI	PGFI
							<.5	≤.08	≥.90	≥.90	≥.90	.5
Indirect Model							5.23	.14	.91	.95	.94	.41
STOLI	→	FP	.37	.19	.10*	1.94						
STOLI	→	NFP	.03	.12	.01	.24						
FP	→	CR	.18	.09	.10*	2.01						
NFP	→	CR	1.15	.08	.76***	15.16						
FS	→	WA	.01	.03	-.01	-.45						
FS	→	TM	.22	.08	.19**	2.83						
ITHUB	→	WA	.02	.03	.02	.68						
ITHUB	→	TM	.18	.10	.12	1.75						
WA	→	FP	.68	.06	.62***	12.02						
WA	→	NFP	1.21	.04	.92***	35.03						
TM	→	WA	.88	.02	.94***	39.22						
Direct model							0	0	1.00	1.00	1.00	0
TLTOP	→	FP	.65	.05	.66***	13.19						
TLTOP	→	NFP	1.06	.04	.89***	28.96						
Direct model							0	0	1.00	1.00	1.00	0
TM	→	FP	.63	.05	.62***	11.66						
TM	→	NFP	1.12	.04	.90***	31.69						
Estimation of indirect effect												
TLTOP→WA→FP			.89x.62		.55							
TLTOP→WA→NFP			.89x.92		.82							
TM→WA→FP			.94x.62		.58							
TM→WA→NFP			.94x.92		.86							

Note: B = Unstandardized path coefficient; SE = Standard error; β = Standardized path coefficient; CR= Critical ratio; STOLI = Stock-listing status; FP = Standardized mean-centred financial performance; NFP = Non-financial performance; FS = Standardized mean-centred firm-size; ITHUB = Location of the firm in IT hub; WA = Workforce agility; TLTOP = Transformational leadership of top management; TM = Talent management.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Such qualities of a firm enhance the positive perception of customers toward the firm. Agile workforce helps the firm to survive in adverse market conditions and create a positive impact on stakeholders resulting in higher CR.

5.2. Workforce agility, FP, NFP, and CR

IT firms are knowledge-intensive industries, where the role of knowledge workers is crucial. Agile knowledge workers can solve the new and complex issues faced by firms. Such action leads to better FP. Agile employees always try for process improvement and product innovation. The agile workforce also concentrates on R&D activities to meet the market demands. While the workforce agility increases the market share, develops new market, and innovates new products and services, IT firms garner higher reputation among the stakeholders. That is why, workforce agility through NFP enhances fully the CR.

5.3. Transformational leadership, workforce agility, and firm performance

A transformational leader's attitudes and values attract subordinates toward him or her. Such leaders encourage subordinates to develop attitude for innovation, risk taking, and coping with adversity. Subordinates, identifying and emulating the top leaders, keep them agile. Thus, transformational leaders in IT firms positively influence the workforce agility. Transformational leaders entuse the employees to attain the new vision for IT firms. The vision often includes higher growth, larger market share, new product and service development, improved efficiency, and productivity. Such initiatives of the top-level leaders promote

workforce agility that translates into the higher performance of IT firms.

Leaders at the top-level inspire employees' innovation and critical problem-solving. Transformational leaders also stress on rethinking and re-examination of problems. Thus, they boost workforce agility. Transformational leaders create a supportive work environment and show concern for employees' needs and feelings. They compensate the deficiency and evolve the efficiency of team members through teaching, training, coaching, and counseling, and seeking their participation in goal-setting, problem-solving, and decision-making. Transformational leaders impart coping skills, cross-cultural sensitivity and thus, foster agility. With empowerment, agile employees feel energetic to accomplish higher firm performance. Therefore, the influence of transformational leadership of top management on firm performance fully passes through workforce agility.

5.4. Talent management, workforce agility, and firm performance

Presence of a talent management policy gives a competitive advantage to the firm. Firms, possessing talent pool, lead the competition during the adverse conditions. On the other hand, IT firms having no talent management policy drag into chaotic situations and suffer in turbulent market conditions. So, talent management policy develops an agile workforce that augments firm performance. Talent assessment gives an insight into employees' skills, knowledge, potential, and channelizes them to achieve higher firm performance. Latest technologies like machine learning, artificial intelligence, data analytics, blockchain, and internet of things have increased the demand for domain experts. So, talent development enhances the workforce agility of IT firms in

the changing technological environment, and an agile workforce contributes to better firm performance. Learning, unlearning, and relearning are practiced in IT firms considering the advent of new technologies and redundancy of existing technologies. Continuous learning and development, enhances employees' agility and leads to higher firm performance. IT firms strive to retain talented employees for a longer period. IT firms face difficulty in finding a replacement of talented employees in terms of cost and time. Talent retention contributes to workforce agility vis-a-vis better firm performance. Therefore, the positive impact of talent management on firm performance fully moves through workforce agility.

5.5. Theoretical and practical implications

First, the impact of workforce agility is fully carried over to CR via NFP. Second, transformational leadership of top management and talent management through workforce agility positively and fully influence firm performance. To our knowledge, hardly these relationships are examined in prior research, particularly in IT industries. We have concluded that workforce agility positively influences CR through NFP. Disruptive technologies have created challenges for IT firms. Increasing competition, changing customer needs, and short product life cycle have compelled IT firms to adapt agility. Agile employees can collaborate and cooperate with other departments to find better solutions for organizational problems.

Employees' potential can be channelized for more productive and innovative works because repetitious and monotonous tasks in IT firms have proven to be demotivating for employees. Flexibility needs to be given to employees to make them more agile because it has improved productivity, happiness, and overall wellbeing of employees. Even during Covid-19, agile employees have increased profit margin of firms by reducing office expenses and maintenance costs. Many IT firms have already laid out agile workspace to promote agility resulting in reduced maintenance cost, utility cost, office space cost, and cleaning cost. Flat organizational structure needs to be designed to support workforce agility.

Many IT firms have already vanished from the market considering their inability to cope with the change. IT firms thrive on knowledge workers and without change-oriented employees, IT firms cannot survive in a dynamic environment. Hence, firms should focus on developing an agile workforce on continuous basis. Employees need to be involved in multi-skilled and multi-tasked activities to get wider exposure in different work areas. Exposure to emerging technologies and new work modules will develop the change orientation and coping abilities among the employees. In a crisis like Covid-19, such employees would be more productive. Continuous learning and change management practices can be integrated into human resource strategy of the firm. Firms can motivate employees to explore creativity and innovation in every aspect of business like product development, service quality, work processes, and production practices. Higher workforce agility will result in better NFP in terms of market share, sales growth rate, operating profit, research and development, and new product development. Besides, top management can promote better workforce relations, employee welfare, health and safety, and personal development of employees. All these steps would enhance the CR of the IT firms.

Transformational leadership positively influences firm performance through workforce agility. In IT sector, top management needs to focus on developing proactive, adaptability, and resilience behaviors among employees to make them agile. Additionally, top-level managers can focus on making the workforce agile through teaching, training, and coaching. Top management can augment the research skills of employees through in-house training and development and external training to accelerate innovation.

Different stakeholders demand consistent performance of the firm even during turbulent market conditions. So, top leadership needs to focus on developing an agile workforce on continuous basis. Managers at the top can share their experiences periodically about work-related issues and success stories to augment their change-oriented or transformational style. Top management needs to raise employee awareness about the importance and values of organizational goals and objectives and motivate them to achieve those goals.

Top leadership needs to develop a culture of trust, transparency, open communication, and continuous learning to boost agility among employees and change the mindset of employees toward change processes. This would result in changes in thinking, learning, and behavior of employees. Changed mindset of employees would enhance their learning, innovation, development, and growth. Top leadership needs to promote brainstorming to generate new ideas for organizational growth. They can act as mentors and effective listeners and focus on individual employee needs. Employees would feel motivated due to such initiatives. Top leadership can work enthusiastically and optimistically to inspire employees. They need to prioritize the spirit of teamwork and commitment in different work areas. In IT sector, employees are the most valuable asset; therefore, leaders need to focus on developing an agile workforce to face any market challenges. Such preparedness would increase the firm performance.

IT firms represent knowledge-based industries. Presence or absence of talent pool would decide their success or failure in a dynamic market. Development and existence of talent management policy will support IT firms in a volatile environment. Due to such policy, IT firms would focus on talent management practices on continuous basis. IT firms would create a rich repository of knowledge, skills, and attitudes to face any adverse market conditions.

IT firms can attract talented candidates through innovative recruitment and selection practices. Steps need to be taken to look for agile characteristics among the prospective employees during selection. IT firm can establish itself in the market as the best organization to work for by providing challenging and meaningful assignments, growth opportunities, financial benefits, and autonomy to prospective employees. Talent assessment as well as learning and development should be given importance in congruence with the firms' strategic objectives. Training need analysis identifies new attitudes, skills, and knowledge for development of employees. Change management training modules can be incorporated into training programs to make the employees agile. Presence of talent pool would give creative solutions to various problems of firms. Talented employees prepare themselves for any type of challenging situation. They become agile as per the market demands.

Better talent management practices like meaningful work, goal setting, transparency, open communication, and appropriate reward and recognition will lead to talent retention for longer period and boost workforce agility. Firms can give priority to talent retention in their strategy. Talent retention gives long-term benefits in terms of FP and NFP. In IT firms, millennials and younger employees are in majority and they can be provided with varied tasks, challenging assignments, and growth opportunities to make a difference at the firm level. Such initiatives can enhance workforce agility vis-a-vis firm performance.

5.6. Limitations and direction for future research

First, the study followed a cross-sectional design. Caution must be exercised in drawing inferences about cause-effect relationships. Interrelationships among transformational leadership, talent

management, workforce agility, FP, NFP, and CR may be examined in a longitudinal study to ensure cause-effect relationships. Second, the firm was the unit of analysis, and the response of one middle-level manager represented each firm. Multiple participants from a firm can assess the variable, and those responses can be averaged for each firm to be more representative and valid. Third, small, medium, and large IT firms in India are aggregately studied here. Further studies can be conducted segregately for small, medium, and large IT firms to examine the similarities and differences. Lastly, future studies may test other mediators like individual and group innovation and organizational learning in the relationships of transformational leadership of top management and talent management with FP and NFP.

6. Conclusion

This study empirically examined the mediating roles of FP and NFP in the relationship of workforce agility with CR and also that of workforce agility in the relationship of transformational leadership of top management and talent management with FP and NFP of firms. The results of the study confirmed the above relationships except FP did not mediate in the relationship of workforce agility with CR. Higher performing firms garner higher reputation. An agile workforce can take the CR of the firm to new heights beyond the FP in unfavorable market conditions. Change-oriented top leaders and talent management practices of the firm create an agile workforce that improves firm performance. This study provides new empirical evidence conforming the full mediation effects of NFP in the relationship of workplace agility with CR, and that of workforce agility in the relationships of transformational leadership of top management and talent management with firm performance. Future research can consider the influence of organizational citizenship behavior, psychological contract, and employee engagement on CR via firm performance. Further, the impact of other leadership styles, organizational culture, and organizational learning, on firm performance can be investigated via workforce agility. Besides, the current study focuses on IT sector, so future studies can consider retail, healthcare, hospitality, education, and other manufacturing sectors to compare the similarities and differences of findings.

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