Adoption of high-performance work systems in small and medium-sized enterprises

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This paper investigates the factors influencing the adoption of high-performance work systems (HPWS) in Chinese small and medium-sized enterprises (SMEs). The paper is based on a sample of 207 SMEs, which covers many of the ownership types and business sectors. The results of the correlation and regression analyses indicate that organizational factors have stronger explanatory power in predicting the adoption of HPWS than institutional factors. Specifically, top management support, perceived impact of HPWS, and organizational size are the three main predictors. The findings suggest that using management innovation theories to understand the underlying reasons associated with the adoption of HPWS is promising. The paper argues for the use of management innovation theories to explore the efficacy of institutional factors more fully.

Keywords: high-performance work systems, human resource management in China, management innovation, small and medium-sized enterprises

Key points
1. We investigated the factors influencing the adoption of HPWS in Chinese SMEs.
2. We questioned the conventional assumptions that SMEs will adopt HPWS in order to fill performance gaps.
3. We argued that management innovation literature will provide better explanation to why SMEs in China will adopt HPWS.
4. Our findings revealed that indeed management innovation theories can reveal a variety of reasons why SMEs will adopt HPWS.
5. Our study found that top management support, perceived impact and organizational size are the main predictors of the adoption.

Introduction

In the last two decades, high-performance work systems (HPWS) have been considered as an innovative approach to configure human resource management (HRM) practices in...
order to achieve key organizational objectives (Bayo-Moriones and Galdon-Sanchez 2010; Delery and Doty 1996; Foley, Ngo and Loi 2012; Huselid and Becker 1997; Pfeffer 1994, 1998; Posthuma et al. 2013; Rabl et al. 2014). Over the years, HPWS have been adopted across the globe and across industries and organizations of all shapes and sizes. In an investigation of workplace transformation in the USA, Osterman (1994) reported on how small firms adopted elements of HPWS. The research also reported the correlates of the adoption, which include the nature of the product market, technology of production, business strategy, organizational culture and existing HR practices. The adoption of HPWS has stimulated significant research and theorizations (Bayo-Moriones and Galdon-Sanchez 2010; Delery and Doty 1996).

Themes prevalent in HPWS literature include the organizational-level outcomes of HPWS (Appelbaum et al. 2000; Huselid and Becker 1997; Zacharatos, Barling and Iverson 2005), and the relationships between HPWS and endogenous and exogenous factors such as national and organizational culture (Den Hartog and Verburg 2004; Rabl et al. 2014). Similarly, other researchers have explored the impact of HPWS on employee-level outcomes such as employee resilience, turnover intention, loyalty and commitment, employee effectiveness and increased productivity (Bartram et al. 2014; Chang and Chen 2011; Cooke et al. 2019; Fan et al. 2014; Gong et al. 2010; Heffernan and Dundon 2016; Jensen, Patel and Messersmith 2013; Qiao, Khilji and Wang 2009; Van De Voorde and Beijer 2015; Zhang, Di Fan and Zhu 2014). Other researchers focus on how HPWS works (Boxall and Macky 2007). There is also a body of work that either investigated the interface between HPWS and other organizational systems (e.g. Huselid and Becker 1997) or questioned whether such a bundle of practices (HPWS) really exist (e.g. Boxall and Macky 2007).

From the perspective of small and medium-sized enterprises (SMEs), there have been investigations of HPWS and labour productivity (Chadwick et al. 2013), comparative impact of HPWS in large and small firms (Wu et al. 2015), and the influence of external and internal factors in the adoption of specific HR practices (Bacon and Hoque 2005). A number of researchers also highlighted internal and external factors that influence the outcomes of the adoption of HPWS in SMEs (e.g. Bacon and Hoque 2005; Chadwick et al. 2013; McClean and Collins 2019; Sels et al. 2006). These studies found that internal and external factors such as leadership, managerial attention, industry dynamism, business strategy and cost influence HPWS outcomes in SMEs. There is also a theoretical argument which suggests that HPWS will not be suitable for SMEs because of the characteristics of their internal and external boundaries (Chadwick et al. 2013; Storey et al. 2010; Wright and Snell 1998). Although some experts argue that SMEs will benefit from the adoption of HPWS (Way 2002), others argued that the bureaucratic nature of HPWS might not be suitable for SMEs because of their high degree of informality (Chadwick et al. 2013). This raises the question of the extent to which SMEs can adopt the whole bundle of HPWS. In an extensive review of literature on HRM in small firms over the last 25 years, Harney and Alkhalaf (2020) identified a series of research gaps and research questions pertaining to HRM in small firms. In their review, Harney and Alkhalaf argued that HR practices in
SMEs are not in coherent bundles but rather reactive, emergent and opportunistic. This assertion calls for investigation into whether and how HPWS (which is a bundle of practices) are actually bundled by SMEs in emerging and developing economies such as China. Harney and Alkhalaf also call for research to understand how HR practices are enacted and experienced. They call for research on the nature, pattern of diffusion and implementation of HR practices in SMEs. Harney and Alkhalaf also call for investigations on the formal adoption of HR practices and their relevance in SMEs. This study is a partial response to these calls.

In spite of the volume and contributions of research on HPWS, surprisingly the reasons why organizations adopt HPWS as innovative management practices have not been adequately and systematically examined in emerging economies. Moreover, issues related to which organizations adopted which bundles of HPWS and the factors that influence the adoption of each bundle have received limited empirical investigation.Perhaps the reasons for this taken-for-granted approach to the study of HPWS are based on the assumption of the widely held belief that organizations adopt HPWS because it benefits the organizations (Ansari, Fiss and Zajac 2010; Huselid and Becker 1997). It can be argued that such an assumption is simplistic given that literature on the adoption of management innovation indicates that organizations can adopt management innovation even though it is not beneficial to do so (Abrahamson 1991), and the motives for the adoption of management innovation can vary from one organization to the other (Damanpour 1991; Mamman 2002, 2007). Similarly, literature suggests that what influences the adoption are wide-ranging (Damanpour 1991; Wu, Bacon and Hoque 2014; Zhang and Morris 2013; Zhang, Di Fan and Zhu 2014). For example, Sturdy (2004) argues that the issue of adoption of management innovations cannot be ‘based on a systematic assessment of solutions to organizational problems but impulse, persuasion, power, cultural resonance and legitimation, or is subsumed within them’ (Sturdy 2004, 169). In fact, the ‘problem’ with the assumed benefits of HPWS was raised by Cooke et al. (2019, 1241) when they argued that ‘However, the positive relationship between HPWS and employee outcomes cannot be automatically assumed’. Therefore, a key research gap that this paper hopes to fill is to address the question of why do Chinese SMEs adopt HPWS. Is it a rational decision based on the assumed benefits? Or as management innovation researchers have argued, it could be based on impulse, mimicry or coercion (Abrahamson 1991; Huczynki 1993; Sturdy 2004).

According to management innovation literature, irrespective of the motives for the adoption of management practices, several factors moderate, mitigate or influence the adoption (Abrahamson 1991; Damanpour 1991; Huczynki 1993; Mamman 2002, 2007). Also, contingency reasons such as natural trajectory of the growth of business enterprises (i.e. size) or cultural reasons at organizational or national levels can also influence the adoption of management innovation (Seong 2011). For example, on the issue of the impact of national culture on management innovation, Rabl et al. (2014) found that the HPWS–business performance relationship was significantly influenced by national culture. Literature on HPWS, especially in emerging economies such as China, is relatively
silent on the factors that influence the adoption of HPWS. Although in the last decade there has been tremendous growth in literature on HPWS in Chinese organizations, most of the literature focuses on the impact of HPWS on organizational outcomes such as productivity (e.g. Zhang and Li 2009), employee outcomes such as engagement, commitment, job satisfaction, resilience and emotional exhaustion (e.g. Cooke et al. 2019; Qiao, Khilji and Wang 2009; Zheng 2013), and the interconnections between HPWS, employee outcomes and organizational outcomes (e.g. Zhang and Morris 2013). Put simply, the bulk of studies on HPWS in China have focused on process and outcomes (e.g. Li, Frenkel and Sanders 2011; Wang et al. 2011; Zhang and Morris 2013), and in some cases investigation of the mediating and moderating factors such as demography and culture on the processes and outcomes (e.g. Fu et al. 2015; Qiao, Khilji and Wang 2009; Xian, Atkinson and Meng-Lewis 2019). The investigations do not focus on why HPWS were adopted in the first place nor what bundles of HPWS are adopted and why. Therefore, this paper attempts to address part of this important research question.

Another strand of management innovation literature relevant to HPWS also points to what happens to the innovation when it is adopted. For example, there is literature that highlights the deliberate modification of management innovation by the organizations that adopted them (Westphal and Zajac 2001) while another strand of literature points to the social construction of the innovation by the members of the organization (Jarzabkowski 2004; Lewis and Seibold 1993). Previous management innovations of yesteryears such as quality circles, total quality management, just-in-time and business process reengineering, as well as the contemporaries of HPWS like high involvement work system and high commitment management, were subjected to a variety of modifications (Black 1999; Mamman 2002, 2007; Newman and Nollen 1996). Therefore, HPWS will not be an exception. Yet, investigation of whether bundles of HPWS in emerging economies like China are the same or different from the bundles of HPWS in the West have not received the attention it deserves. This is another gap in the literature that the present study helps to shed light on.

The issue of the factors influencing the adoption of HPWS is even more important within the context of SMEs, given that much of what has been written about the adoption of management innovation is based on studies that focused on large-scale enterprises from developed countries. Therefore, there are still gaps not only in our knowledge of the factors that influence the adoption of HPWS in SMEs, but also the relevance and veracity of management innovation theories across enterprises of different sizes and across national and institutional contexts. Thus, the study attempts to fill the gaps and shed light on the validity of management innovation theories across organizational, national and institutional contexts, as well as the transferability of management innovation across contexts (Cagliano et al. 2011; Cunningham and Rowley 2010; Della Torre and Solari 2013; Gilman and Raby 2013; Gong et al. 2010; Rabl et al. 2014).

Research aim and objectives
The purpose of this study is to investigate the adoption of HPWS by Chinese SMEs through the lens of management innovation literature. Since organizations might adopt
HPWS for a number of reasons beyond the assumed performance benefits, it is important to better understand the extent to which other factors might influence the adoption. In their recent research on HWPS and employee resilience, Cooke et al. (2019) call for research on moderators of the outcomes of HPWS. We believe the use of management innovation literature to investigate motives for the adoption of HPWS will shed light and unearth potential moderators of the outcomes of HPWS. This is because management innovation literature has argued that the motives behind the adoption of innovation can influence its implementation and outcomes (Huczynki 1993; Mamman 2002, 2007; Westphal and Zajac 2001). Specifically, the paper sought to achieve the following objectives: to determine the degree of adoption of HPWS; to understand the degree of similarities and differences in the adoption of HPWS in China compared to the western context; to explore the factors influencing the adoption and their relative significance; to determine the utility of management innovation theory in understanding the adoption of HPWS as HRM innovation across contexts.

**Background literature**

**High-performance work systems in Chinese context**

High-performance work systems advocates the configuring of value-adding bundles that can contribute to organizational performance and competitiveness (Gittell, Seidner and Wimbush 2010; Huselid and Becker 1997; Messersmith and Guthrie 2010). The most dominated elements that constitute HPWS in the Western literature are sophisticated selection, extensive training and development, employee participation, communication, incentive pay based on performance and employment security (Bayo-Moriones and Galdon-Sanchez 2010; Delery and Doty 1996; Foley, Ngo and Loi 2012; Guthrie et al. 2011; Huselid and Becker 1997; Pfeffer 1994, 1998; Posthuma et al. 2013). Some researchers have argued that the extent and nature of implementation of HPWS in SMEs is a ‘bleak house’ (Bacon et al. 1996). However, other researchers pointed out that SMEs implement HPWS as a scaled-down version from the original true version (Cunningham and Rowley 2010).

In the last decade or so, Chinese enterprises have been adopting HPWS as innovative HRM practice. Some of the elements of HPWS such as strategic recruitment and selection were adopted during the reform era (Zheng, O’Neill and Morrison 2009). Similarly, selection has now become more market-oriented instead of the use of lifetime employment (Akhtar, Ding and Ge 2008). Although job rotation has been a feature of training in enterprises (Kalleberg et al. 2006), in line with HPWS, training in Chinese enterprises is now more focused on job-related skills and technical knowledge (Liu, Chao and Hau-siu 2007; Qiao, Khilji and Wang 2009; Zhu and Dowling 2002). Similarly, in line with HPWS, performance appraisal associated with organizational performance is increasingly adopted by Chinese enterprises (Deng, Menguc and Benson 2003). Although a bonus system and commission exist in many Chinese enterprises that have connections with foreign investment, profit sharing is rare and only in relatively new companies (Chow 2004). HPWS encourages employee participation; however, this element of HPWS is rarely adopted in
Chinese enterprises (Cagliano et al. 2011) in preference for the top-down approach (Gong et al. 2010). Employment security is familiar to Chinese enterprises. This is achieved through long-term employment contracts (Qiao, Khilji and Wang 2009).

However, there is a dearth of systematic investigation of the underlying reasons why Chinese enterprises adopt HPWS. Although HPWS have been investigated in non-western countries such as China (Gong and Chang 2008; Ngo, Lau and Foley 2008; Qiao, Khilji and Wang 2009; Shih, Chiang and Hsu 2012; Wang, Bruning and Peng 2007; Wang et al. 2011 Zhang and Li 2009; Zhang and Morris 2013; Zheng, O’Neill and Morrison 2009), there is a dearth of empirical evidence regarding the motivation underpinning the adoption of HPWS in non-western countries. Given that the motivation can influence the nature of the adoption and different types of adoption can have varying impacts on the outcome, there is a need to fill this gap in the literature. Moreover, in the existing literature there is no systematic study on the factors that influence the adoption (Ciavarella 2003; Prince, Katz and Kabst 2011). Furthermore, there is no commonly agreed definition of HPWS. Therefore, an investigation of HPWS in a non-western country can provide an opportunity to understand the degree of similarities and variation of this type of HRM innovation. Given the socio-economic and institutional context of China, it is reasonable to expect that what constitutes HPWS in China will differ from the constituents of HPWS in the western literature. This study will shed light on this speculation.

Hypotheses

Drawing from various sources of literature, Damanpour (1991, 556) views management innovation as the ‘adoption of an internally generated or purchased device, system, policy, program, process, product or service that is new to the adopting organization’. Similarly, Dewar and Dutton (1986, 1422) view innovation in organization as ‘an idea, practice, or material artifact perceived to be new by the relevant unit of adoption’. Birkinshaw, Hamel and Mol (2008) argue that management innovation must satisfy the following set of criteria: 1) involve some implementation; 2) be new to the organization adopting it; 3) be new management practice, process or structure; and 4) be intended to achieve organizational goals. Therefore, based on this definition, HPWS qualifies as management innovation that can be examined using the literature and theories on management innovation.

A number of investigations and theorizations have been undertaken to explain the adoption of innovation in organizations. For example, researchers have explored the influence of resource constraints (Kroon, Van De Voorde and Timmers 2013), economic and cultural factors (Della Torre and Solari 2013). Others simply test the practical implementations factors without specific theoretical underpinning (Wiesner, McDonald and Banham 2007; Wu, Bacon and Hoque 2014; Zheng, O’Neill and Morrison 2009). In this paper, we focus on the following perspectives on the adoption of management innovation: efficiency perspective, forced-selection perspective, fashion perspective, fad perspective, life-cycle theory and contingency perspective (see Abrahamson 1991, 1996, 1997; Gibson and Tesone 2001; Huczynski 1993; Lillrank 1995; Wood and Caldas 2002). We shall use each perspective to develop the hypotheses for the study.
The efficiency perspective on management innovation has argued that the consumption of management innovation such as HPWS is influenced by the desire to achieve ‘organizational’ objectives (Abrahamson 1991, 1996, 1997; Gibson and Tesone 2001; Huczynki 1993; Wood and Caldas 2002). Similarly, the adoption of human resource management innovation such as HPWS is viewed as a voluntary and rational behavior to fill the ‘performance gap’. Central to the efficiency perspective is the assumption of rationality or objectivity, which casts innovation in a positive light (Abrahamson 1991, 1996; Damanpour 1991). For example, Damanpour (1991, 556) writes: ‘The adoption of innovation is generally intended to contribute to the performance of effectiveness of the adopting organization. Innovation is a means of changing an organization, whether as a response to changes in its internal or external environment or as a preemptive action taken to influence an environment.’

The relevance of efficiency thesis to HR practices in the SME sector has been demonstrated by research indicating that SMEs that have adopted sophisticated HR practices have superior performance (Way 2002). Similarly, it has been argued that good HR practices can give SMEs competitive advantage (Bacon and Hoque 2005). Bacon and Hoque (2005) also found that customers can influence SMEs to adopt certain HR practices. This suggests that customer satisfaction and competitive strategy can influence the adoption of HPWS. Similarly, Chadwick et al. (2013) have pointed out that SME strategy can influence HR practice. They argue that because SMEs tend to serve niche markets, they are more likely to use differentiation strategy. Therefore, the nature of the adoption of HPWS might be influenced by the type of strategy SMEs pursue. Indeed, a study by Osterman (1994) reported a significant correlation between business strategy and HR practices. Similarly, Sels et al. (2006) reported a link between HPWS and SMEs’ profitability and productivity. The same study also reported that the adoption of HPWS can lead to higher costs. This suggests that SMEs pursuing a cost reduction strategy might be reluctant to adopt the whole package of HPWS. Therefore, based on the efficiency school of thought, we advanced the following hypotheses:

Hypothesis 1: Business strategy will be a significant predictor of the adoption of HPWS in Chinese SMEs. This is because researchers have argued that organizations adopt all kinds of innovation as a means to fill the performance gap and achieve strategic objectives (Frambach and Schillewaert 2002; Ritter and Gemünden 2004). More so, research evidence indicates that HPWS has a positive and significant relationship with business outcomes (Chow et al. 2008; Demirbag et al. 2014; MacDuffie 1995).

Hypothesis 2: Perceived business impact of HPWS will be a significant predictor of the adoption of HPWS in Chinese SMEs. This is because researchers have argued that the adoption of management innovation is a rational decision to fill the business performance gap (Abrahamson 1991, 1996; Ansari, Fiss and Zajac 2010; Mamman 2007).

The efficiency perspective on the adoption of management innovation has been strongly criticized (Abrahamson 1991; Gill and Whittle 1992; Huczynki 1993). Yet the efficiency school of organizational innovation continues to dominate the literature, although
it does not adequately accommodate the political processes and personal interests in organizational innovation. Forced selection, on the other hand, takes the view that the adoption of management innovation such as HPWS is sometimes ‘forced’ on the organizations adopting them. This is based on the contagion and institutional theory, which argues that organizations do not always willingly adopt technically inefficient innovation or reject efficient innovation but are ‘forced’ to do so by forces which the organizations are associated with (Abrahamson 1991; Arias and Guillen 1998; DiMaggio and Powell 1983; Rogers 2010). For example, it was reported that ‘several administrations in Brazil, coming from diverse political and ideological backgrounds, have supported, with laws, policies and fiscal incentives, the tendency to adopt foreign management models and practices’ (Wood and Caldas 2002, 23). It is possible in a managed economy such as China, HPWS could be influenced by government policy as it was reported in Brazil in the early 1990s (Arias and Guillen 1998). The fashion perspective argues that it is not beyond the realm of possibility that innovation could be adopted by organizations just because it is in vogue. This means peer or customer pressure will force organizations to adopt innovation that is fashionable even though it has no relevance to organizational objectives. Indeed, the fashion school of management innovation has argued that high uncertainty in the environment and ambiguity of organizational goals provides a fertile ground for imitation (Abrahamson 1991; Huczynki 1993). Fad and fashion are similar because it is argued that organizations imitate others due to fear of uncertainty and the ambiguity in organizational goals (Abrahamson 1991; Huczynki 1993). However, unlike the fashion perspective, organizations influenced by fad imitate other organizations who are within the group they belong to (Abrahamson 1991; Huczynki 1993). The imitation takes place when the organization obtains information from the early adopters that reduce ambiguity about the innovation (Rogers 2010). Abrahamson (1991, 599) argues ‘the propensity of organizations in a group to imitate each other’s decisions to adopt a technically inefficient innovation will vary with the nature of pressure impelling imitation.’ However, the organizations’ motives are more likely to be rational and seek efficient innovations. Enterprises from emerging economies like China could fall into the trap of fad and fashion by adopting HPWS without careful analyses. This is why the investigation of the factors that influence the adoption of HPWS is important in order to understand its outcomes rather than studying the outcomes alone.

According to life-cycle theorists, management innovations are consultant-driven packages (Abrahamson and Fairchild 1999; Gill and Whittle 1992). For example, Gill and Whittle (1992) argue that the life cycle is characterized by enthusiasm, disillusionment and decline, and followed by another panacea. Similarly, Gibson and Tesone (2001) argued that each management idea has a life cycle characterized by discovery, wild acceptance, digestion, disillusionment and hardcore. The life-cycle school has encapsulated elements of fad and fashion. However, it does not discriminate the source of imitation. It is perhaps worth investigating the stage of life cycle of management innovation that HPWS is at. This is an area of research that is beyond the scope of this paper. However, in an emerging economy like China, it is perhaps safe to say HPWS has not yet reached its peak.
The *fad* and *fashion* as well as the *life-cycle* schools fall within the institutional theory that tries to explain why organizations behave the way they do. Thus, institutional factor is a key organizational environment that influences or regulates the behaviour of organizations and their members (DiMaggio and Powell 1983). Prominent early advocates of the relationships between institutional factors and HRM practices are Wright and McMahan (1992) Oliver (1997), Paauwe and Boselie (2003) and Purcell (1999). In the process of applying institutional theory to HRM, Paauwe and Boselie (2003) used the concept of isomorphism to link institutional theory with HRM. According to DiMaggio and Powell (1983) isomorphism is ‘a constraining process that forces one unit in a population to resemble other units that face the same set of institutional conditions or institutional isomorphism’. For example, coercive isomorphism emerges as a result of a combination of formally and informally applied pressure placed on the organization by external entities, and which is reliant on and reflects socio-cultural expectations contained in the organization’s context (DiMaggio and Powell 1983). Coercive pressure can lead the organization to adopt specific HRM practices (Tsai 2010). Thus, Paauwe and Boselie (2003, 59) are of the view that ‘organizational practices are either a direct reflection of, or response to, rules and structures built into their larger environment’. For example, Gooderham, Nordhaug and Ringdal (1999) studied the impact of formal institutions on HRM practice when they are underpinned by legislative support. The authors concluded that institutional factors have a significant impact on how far collaborative and calculative-based practices of HRM are adopted by an organization. In a similar research project by Brookes et al. (2011), which used the Cranet database, they reported that in comparison with cultural factors, institutional factors have a greater ability to explain the adoption of calculative HRM practices. In other words, formal institutional requirements from the state can influence the adoption of HPWS.

Self-regulated behaviour by organizations in the absence of formal regulatory enforcement is also considered by the institutionalists as part of institutional influence on the behaviour of organizations and their members (Bartley 2003). Indeed, organizational institutionalism is a distinct approach within organizational analysis framework (Greenwood et al. 2008). For example, Currie and Kerrin (2003) pointed out that organizational institutionalism has a focus on factors related to the process, history and context surrounding the activities of the organization, and is a useful lens to analyze organizational behaviour. The adoption of HPWS either through formal requirement in order to be a member of business association, or acceding to government guidelines (coercive isomorphism) or because SMEs felt that there are performance benefits if they mimic others (efficiency-seeking), or because HPWS is fashionable (fad and fashion); can be described as forces brought about as a result of isomorphism – coercion or mimicry.

Researchers on HR practice in the SME sector have described how institutional forces can influence the adoption of HR practice (Bacon and Hoque 2005; Leung 2003; Erickson and Jacoby 2003; Rainnie 1989; Ram et al. 2001; Kinnie et al. 1999). These researchers reported and argued that corporate governance, business community, and relationships between SMEs and large firms are some of the institutional elements that can integrate
SMEs with the external environment which in turn acts as an institutional force for the adoption of sophisticated HR practices. In fact, in their investigation of external factors that influence SMEs to adopt sophisticated HR practices, Bacon and Hoque (2005, 1977) found that SMEs ‘are more likely to adopt such practices if they networked’. Similarly, they reported that customer base correlates significantly with the adoption of HR practice. It is worth pointing out that the influence of business association on SMEs might also depend on the dynamism of the industry (Chadwick et al. 2013). In a highly dynamic industry, mechanistic HR practice such as HPWS might not be adopted in full. It is worth noting that previous research did not find strong support for the influence institutional theory (Rabl et al. 2014). Nonetheless, given that SMEs tend to operate in a dynamic industry (Wilkinson 1999), we expect customized adoption of HPWS.

Hypothesis 3: In line with the institutional theory, perceived influence of national legislative pressures/ national policy will be a significant predictor of the adoption of HPWS in Chinese SMEs. This is because it has been argued that national and institutional contexts have a strong relationship with the adoption of innovation (Aldrich and Fiol 1994; Crossan and Apaydin 2010; Etzkowitz and Leydesdorff 2000).

Hypothesis 4: In line with the concept of isomorphism, perceived pressures from the business community will be a significant predictor of adoption of HPWS in Chinese SMEs. This is because research has demonstrated that the industry sector has a strong influence on organizational innovativeness (Damanpour 1991; Etzkowitz and Leydesdorff 2000).

Contingency factors: Pendulum theory attempts to explain the appearance and disappearance of management innovations. This theory views production and consumption of particular types of management innovation as influenced by the economic cycle (Abrahamson 1996; Barley and Kunda 1992). Pendulum theory posits that organizations adopt similar management innovation in each economic cycle because only one type of management innovation is produced in each cycle (i.e. normative innovation or rational innovation). Abrahamson (1996) empirically tested the effect of the economic cycle on the adoption of the employee management approach. The analysis of his data supports the pendulum theory, indicating that rational and normative ideas tend to emerge consecutively during upswing and downswing of macroeconomic activity. The study reported that there is a frequency of rational employee management rhetoric during upswings of macroeconomic activity. Conversely, there is a prevalence of normative HRM innovation during downswings of macroeconomic activity. HPWS is a rational management innovation because of its emphasis on organizational performance. However, the impact of major environmental uncertainties or economic jolts such as COVID-19 can turn HPWS into normative innovation in some organizations, while others might see it as extra luxury they cannot afford.

It is worth highlighting further that literature also points to the contingent organizational and individual factors associated with the adoption of management innovation (Abrahamson 1996; Damanpour 1991; Mamman 2002). The specific characteristics of organizations that have been reported to influence organizational innovativeness include
centralization, specialization, culture, functional differentiation, size, age, internal and external communication, managerial attitudes towards change, slack resources, and external integration (Damanpour 1991; Mamman 2002).

Specifically, Wu et al. (2015) have found a significant relationship between size and HPWS outcomes. The researchers reported that larger firms and smaller firms rather than medium-sized firms tend to benefit more from HPWS. However, our argument for the relevance of size in the adoption of HPWS pertains to the availability of resources as well as managerial attention required for the implementation and outcomes (Sels et al. 2006). This is because SMEs are more likely to be resource-scarce (Patel and Conklin, 2012). In fact, best-fit theory of strategic HRM suggests that HPWS will be more suitable for larger firms (Wu et al. 2015). Several researchers have argued that size is a significant predictor of formalization of process and systems (Jennings and Beaver 1997; Mintzberg 1993). The bigger the size, the more likely formalized HR practices like HPWS will be adopted.

SMEs are characterized by informality and relying on owner-manager to make strategic decisions partly because SMEs largely operate under a unitary framework of employment relations (Wilkinson 1999). These characteristics amplify the role of top management. The lack of adequate resources also leads to low prioritization of HR practice. This leads to reliance on top management to make HR decisions especially regarding what and when to adopt innovative HR practices. In fact, Storey (1995) argues that the impact of top management in the success of adoption of innovative HR practices is much greater in small firms than in large firms. Indeed, in their explanation of the internal factors that can influence the adoption of sophisticated HR practices in SMEs, Bacon and Hoque (2005) identified professionalism of managers as a positive factor in the adoption. Similarly, some researchers have argued that, because small firms are identified with their owner-managers, and the managers exercise high influence in the operation and strategy of the firm, the adoption of HPWS by SMEs will be influenced by top management (Chadwick et al. 2013). Another factor related to top management influence in SMEs is leadership type. Research by McClean and Collins (2019) has reported a positive relationship between charismatic leadership and HR practice outcomes. Therefore, it can be argued that SMEs can benefit from leadership when they adopt HPWS.

Therefore, it is reasonable to argue that the adoption of HPWS as HRM innovation will be influenced by the characteristic of the SME. Specifically, based on contingent factors, SMEs that have slack resources are more likely to adopt HPWS. Also, slack resources have been associated with the size of an organization. Similarly, because innovation comes to organizations through individual members, the influence of certain members cannot be discounted when explaining why SMEs adopt HPWS. Therefore, we advance the following hypotheses:

Hypothesis 5: Organizational size will be a significant predictor of adoption of HPWS by SMEs in China. This is because research evidence has associated organizational size with resources availability (Bakuwa and Mamman 2012; Damanpour 1991; Hurley and Hult 1998) and ability for boundary spanning (Bartel 2001).
Hypothesis 6: Top management support will be a significant predictor of the adoption of HPWS in Chinese SMEs. This is because top management has been reported to be key in the adoption of management innovation and organizational performance (Collins and Clark 2003; Finkelstein and Hambrick 1990; Wooldridge and Floyd 1990).

Method
Sample
This study is based on a sample of managers from 207 Chinese SMEs. Under ideal conditions, a probability sampling method would have been used. However, as already acknowledged in the literature and by social science researchers in the Chinese context, probability sampling in China is not always possible due to absence of databases or lack of easy access to a database of businesses and attitude to social science research (Cooke 2004; Cunningham and Rowley 2008; Zheng, Morrison and O’Neill 2006; Zheng, O’Neill and Morrison 2009). Therefore, we used the snowballing method to collect the data. This is because experts have suggested, when probability sampling is not possible, the snowballing method is acceptable (Saunders, Lewis and Thornhill 2012). The data were collected from Beijing, which represents the north of China, and the most famous economic zone, ‘Jiangzhehu’, which represents the south of China. Initially, the sample was generated through personal contacts and then it escalated to more contacts as the number of willing participants snowballed. The sample covers the main sectors dominated by SMEs in China. Similarly, the size cuts across small, medium and large SMEs as defined by the standard definition of Chinese SMEs’ law launched by the Chinese government in 2011. Out of 207 valid questionnaires, 28.5% of the respondents are from the manufacturing industry, followed by 22.2% from the wholesale and retail sector. The remaining respondents are from the software and information services sector (20.8%), the business services sector (6.8%), the construction sector (6.3%), the transport and postal sector (5.8%), the hotel and restaurant sector (5.3%) and other sectors (4.3%). Further, 58.5% are domestic privately owned, 21.7% are state-owned SMEs, 6.8% are collectively owned, foreign-owned SMEs accounted for 6.8%, Chinese-Western joint venture SMEs accounted for 3.4% and, Hong Kong and Taiwan owned SMEs accounted for 2.9%. The sample also includes all types of the employee sizes. The breakdown of our sample according to the standard definition of SMEs by Chinese law is as follows: micro-sized SMEs (–19; 10.6%), small-sized SMEs (20–100; 35.3%), and medium-sized (101–500; 54.1%). The mean and standard deviation of the responses of the sample of the three categories of SMEs are illustrated in Table 1. Further, 15 interviews from 15 SMEs were conducted with general managers (2) owner managers (1), HR issues managers (3) and HR managers (9) in order to complement and corroborate the information gathered from the survey. The 15 SMEs are of different sizes, ownership types and industries. The characteristics of the 15 SMEs were consistent with the survey sample. It includes micro, small and medium-sized SMEs in the main industries, namely, manufacturing, wholesale and retail, business services, transport, and software services. It is also consistent with the survey sample in terms of SMEs under different ownerships.
Researchers have advocated the elimination of common method variance/bias (CMV/B) from data. This can be done through the questionnaire design and selection of the sources of information (Doty and Glick 1998; Jakobsen and Jensen 2015; Podsakoff et al. 2003; Podsakoff 2012). Researchers such as Podsakoff et al. (2003) and Podsakoff (2012) suggested that some of the ways to address CMV/B during research design is to select multiple informants (mixed method) to reduce variance when self-reporting, and avoid the use of ambiguous and idiosyncratic terms and phrases in the questionnaire. We have also used a mixed method by undertaking interviews with a sample of informants. We believe, in line with research convention as advocated by these researchers, that we have mitigated CMV/B by using a relatively large sample of SMEs as informants (207), multiple industries, and across different sizes. We believe this diversity of informants has mitigated CMV/B and is in line with the mitigating approaches adopted in previous studies conducted on this subject matter, especially in the Chinese context (e.g. Cooke et al 2019; Zhang et al. 2013).

Measures
Given that there are no commonly agreed constructs of HPWS (Ngo, Lau and Foley 2008; Zhang et al. 2013) and because of the research setting (China), we selected constructs of HPWS from the dominant elements in the literature from western and Chinese studies that overlap when used to study HPWS in the SME Chinese context (e.g. Zheng, Morrison and O’Neill 2006; Zhang and Morris 2013). By taking this approach, we have ensured content and construct validity of the instruments. In other words, these are pre-validated constructs widely accepted as the dominant elements that constitute HPWS constructs. In fact, experts have advocated that content and construct validity of an instrument can be achieved using either previous constructs or using experts’ opinions on the content and construct (Grant and Davis 1997; Polit and Beck 2006; Sangoseni, Hellman and Hill 2013). The face validity of our instrument is also ensured through pilot study to make sure that the final instrument does not include ambiguous and idiosyncratic terms in the questionnaire. To achieve this, 10 SMEs located in Hebei province, China, were selected as

| Table 1 | Descriptive statistics on the extent and nature of the adoption of HPWS |
|---------|---------------------------------------------------------------------|
| Variable | Low adoption % | Medium adoption % | High adoption % | Mean  | SD   |
| HPWS    | 11.6           | 43.0              | 45.4           | 3.70  | .60  |
| SS      | 32.9           | 47.3              | 19.8           | 3.50  | .72  |
| ETD     | 11.6           | 38.2              | 50.2           | 3.83  | .73  |
| PC      | 13.5           | 46.4              | 40.1           | 3.45  | .79  |
| PRP     | 9.70           | 31.4              | 58.9           | 3.86  | .91  |
| ES      | 11.10          | 27.1              | 61.8           | 3.85  | .94  |

HPWS = High-performance work systems; SS = sophisticated selection; ETD = extensive training and development; PC = participation and communication; PPR = performance-related pay; ES = employment security.
target participants for the pilot study with the purpose of phrasing each question, and to evaluate how respondents would interpret the meanings of questions. The overlap across western and Chinese studies produced our five main constructs and their reliability as follows: sophisticated selection \((\alpha = 0.62)\) (Delery and Doty 1996; Pfeffer 1994, 1998), extensive training and development \((\alpha = 0.80)\) (Ngo, Lau and Foley 2008; Pfeffer 1998; Xiao and Björkman 2006), employee participation and communication \((\alpha = 0.90)\) (Akhbar, Ding and Ge 2008; Gong et al. 2010; Zhang and Morris 2013), performance-related pay system \((\alpha = 0.80)\) (Bayo-Moriones and Galdon-Sanchez 2010; Wu, Bacon and Hoque 2014; Zhang and Li 2009) and employment security \((\alpha = 0.81)\) (Delaney and Huselid 1996; Delery and Doty 1996; Pfeffer 1998; Zhang and Li 2009). Twenty-one items were used to measure the five constructs.

The extent of adoption of HPWS as a dependent variable was measured by a 5-point Likert scale as follows: 1 = this practice has never been used in my company; 2 = This practice is rarely used in my company; 3 = This practice is sometimes used in my company; 4 = This practice is often used in my company; 5 = This practice has always been used in my company. The independent variables (internal and external factors influencing the adoption) were measured using six constructs: perceived impacts of the adoption of HPWS on performance (seven items), business strategic orientations (three items), top management support (one item), perceived pressures from government legislation (one item) and perceived pressures from business community (one item). Based on the review of literature on the outcomes of HPWS we developed the measure of perceived impact of each of the seven elements of HPWS. Similarly, we used literature on the outcomes of HPWS and Porter’s (2004) competitive strategy to develop the elements of the construct to measure business strategy. These elements include quality, innovation and managing cost. The respondents were to indicate the extent of their agreement or disagreement on a 5-point Likert scale (1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree).

Previous studies have found that HR practices vary across ownership and business sector (Fields, Chan and Akhtar 2000; Zhang and Morris 2013). Therefore, we used the two variables as control variables. Ownership is represented as follows: domestic privately owned; state-owned SMEs, collectively owned, foreign-owned, Chinese-western joint venture, and Hong Kong and Taiwan owned. The business sector is represented as follows: manufacturing industry, wholesale and retail sector, software and information services, business services sector, construction, transport and postal, hotel and restaurant.

**Results**

**The extent and the nature of the adoption of HPWS in Chinese SMEs**

Management innovation literature pointed to at least six relevant factors that can influence the adoption of Management innovation such as HPWS. Therefore, one of the main objectives of this study is to shed light on the utility of management innovation theories
in the understanding of the relative significance of the factors that are associated with the adoption of HPWS. The paper has advanced six hypotheses related to the adoption of HPWS in Chinese SMEs. The findings suggest that HPWS is being adopted by Chinese SMEs. However, the extent of adoption of the elements of HPWS is at various degrees. For example, 11.6% indicated that they either never adopted or rarely adopted any of the elements of HPWS (see Table 1). Regarding the adoption of the elements of HPWS, extensive training and development (3.83), performance-related pay (3.86), and employment security (3.85) are the most widely adopted elements.

Predictors of the adoption of HPWS in SMEs

One of the main objectives of this study is to investigate the factors that influence the adoption of HPWS in SMEs. The two external factors in this study are the role of business community and government legislation. These factors form the construct for institutional influence (‘forced selection’). The internal factors are perceived impact of HPWS and business strategy (‘efficiency-seeking’), top management support and organizational size (contingency perspective). As can be seen from Table 3, institutional factor has no significant relationship with the adoption of HPWS (government legislation, \( r = 0.09, p < 0.30 \); business community \( r = 0.06, p < 0.41 \)). However, organizational size \( (r = 0.20, p < 0.001) \), perceived HPWS impacts on organizational performance \( (r = 0.440, p < 0.001) \), managing cost \( (r = 0.29, p < 0.001) \) quality management \( (r = 0.25, p < 0.001) \), developing new products \( (r = 0.27, p < 0.001) \) and top management support \( (r = 0.44, p < 0.001) \) are all significantly related to the degree of adoption of HPWS. Perhaps it is worth noting that there are significant relationships between the hypothesized predictors and the five elements of HPWS. In fact, even the roles of business community and government legislation have a significant relationship with selection (government legislation, \( r = 0.22, p < 0.001 \); business community \( r = 0.17, p < 0.001 \) (Table 2).

In order to test the extent to which our hypothesized predictors explain the adoption of HPWS in the SMEs sampled, we carried out a linear regression analysis (Table 3). The model as a whole is effective in predicting the degree of adoption of HPWS. The regression \( F \) is significant \( (F = 11,173; df = 7.866, p < 0.001) \), and the variance accounted for is substantial \( (R^2 = 33.3; \text{adjusted } R^2 = 29.1) \).

The standardized beta coefficient of the factors influencing the adoption of HPWS suggests that top management support \( (t = 2.858; p < 0.001) \), organizational size \( (t = 2.473; p < 0.016) \), and perceived impact of HPWS \( (t = 3.783; p < 0.001) \) are the significant predictors of the adoption of HPWS in SMEs. The analysis confirmed three of the six hypotheses. In other words, hypotheses 1, 3 and 4 are rejected. This means that business strategies \( (\text{cost, quality, new product}) \) and institutional factors \( (\text{government legislation and business community}) \) are not good predictors of the adoption of HPWS in the Chinese SMEs sampled. The results also indicate that perceived impact of HPWS accounts for 37.8% of the model, while top management support and organizational size account for 28.5% and 13.7% of the model respectively. The contributions of the remaining factors are in single digits.
Factors associated with the extent of adoption of HPWS
As pointed out earlier, a sample of 15 informants from 15 separate SMEs were interviewed to investigate the adoption of HPWS. The qualitative data revealed that the factors associated with the adoption of HPWS are as follows: development needs; top management; cost; goal of gaining benefits; competitive environment; nature of the state-owned enterprises; perception of the executive; nature of the industry; organizational culture;

Table 2  Correlations between hypothesized predictors of the adoption and HPWS and elements

| Hypothesized predictors                        | HPWS  | SS   | ETD  | PC   | PRP  | ES   |
|------------------------------------------------|-------|------|------|------|------|------|
| Organizational size                            | .20** | .19**| .39**| -.01 | .13  | .14**|
| Managing cost and efficiency as strategy       | .29** | .05  | .27**| .21**| .25**| .23**|
| Managing quality as strategy                   | .25** | .04  | .26**| .16**| .21**| .20**|
| Developing new products as strategy            | .27** | .19**| .11  | .27**| .24**| .19**|
| Top management support                         | .44** | .20**| .43**| .22**| .33**| .31**|
| Government legislation                         | .09   | .22**| .12  | .05  | .01  | .02  |
| Pressure from business community               | .06   | .17**| .03  | .10  | .01  | -.05 |
| Perceived impact of HPWS on organizational    | .44** | .15**| .39**| .36**| .30**| .35**|

** is at significance of $p \leq 0.001$.

$N = 207$. Correlations = All the variables at the 0.01 level or above. HPWS = High-performance work systems; SS = sophisticated selection; ETD = extensive training and development; PC = participation and communication; PPR = performance-related pay; ES = employment security.

Table 3  Multiple regression analysis of factors predicting the adoption of HPWS

| Model                                      | Unstandardized coefficients | Standardized coefficients | t     | Sig. |
|--------------------------------------------|-----------------------------|---------------------------|-------|------|
|                                            | B                           | Std error                 | Beta  |      |
| Company size                               | .133                        | .055                      | .166  | 2.473|.016 |
| Top management support                      | .160                        | .056                      | .217  | 2.858|.005 |
| Perceived impacts of the adoption of HPWS  | .409                        | .108                      | .320  | 3.783|.000 |
| Managing cost as strategy                  | .044                        | .050                      | .063  | .866 | .388 |
| Managing quality as business strategy      | .001                        | .058                      | .001  | .010 | .992 |
| Developing new products as business strategy| .037                        | .043                      | .059  | .850 | .396 |
| Pressure from business community           | .024                        | .045                      | .037  | .529 | .598 |
| Pressures from national legislation        | .005                        | .044                      | .009  | .119 | .905 |

$R^2 = 33.30\%$; adjusted $R^2 = 29.10\%$; regression $F (df = 11,173) 7.866; p = 0.000$; dependent variable: the adoption of HPWS.

Qualitative results

Factors associated with the extent of adoption of HPWS
As pointed out earlier, a sample of 15 informants from 15 separate SMEs were interviewed to investigate the adoption of HPWS. The qualitative data revealed that the factors associated with the adoption of HPWS are as follows: development needs; top management; cost; goal of gaining benefits; competitive environment; nature of the state-owned enterprises; perception of the executive; nature of the industry; organizational culture;
competition; perceived efficiency; perceived outcomes; business strategy. The findings from interviews corroborated the results of the survey of 207 SMEs regarding the dominant factors explaining why the SMEs adopt HPWS. For example, the interviews revealed that the variation in the adoption of HPWS is significantly influenced by managers’ perception of the impacts of using HPWS. Apart from that, the interviews revealed that different types of adoption of HPWS are based on the belief that the adoption of HPWS hook, line and sinker will not bring the desired benefits to their company. Instead, the informants reported that adopting some elements in the construct of HPWS will bring positive outcomes to their company while other respondents pointed out that some elements in the construct are either unnecessary or unsuitable for their business (C4, C6, C7, C8, C10, C11, C13 and C15).

The interview with a manager from C10 indicated that using sophisticated selection is extremely important for them to identify the most suitable candidates at the beginning. Also, providing extensive training is regarded as key to developing the abilities of employees, their communication and their involvement. Performance appraisal is perceived as an effective motivation tool instead of job security. In this case, C10 adopted almost all essential parts of HPWS except for job security, because the company believes that the selected elements of HPWS can guarantee efficiency and growth.

In contrast, a manager from C6 pointed out that they believed that the impacts of using sophisticated selection tests are useless, but the extensive training is important not only for employees, but also for middle-level managers, information sharing and employee involvement. The manager argues that extensive training can bring direct cost saving and creativity. He also said that extensive training ensures job security for employees when they acquire skills. It can be concluded that the choice for the adoption of HPWS is highly influenced by perceived impacts of the adoption of HPWS in their enterprises. What the interviews further revealed is that some Chinese SMEs appear to choose specific elements of the bundle of HPWS rather than adopt and implement all elements widely reported in the literature. Based on the interviews, the choice of the elements is largely influenced by the perceived impact of the elements and top management support. We will elaborate on this further in the following paragraphs and sections.

The findings shows that top management support is another reason for adopting HPWS (C1, C6, C12, C14 and C15). Specifically, the support from the top management can guarantee the smooth implementation of HPWS, or directly hinder the adoption of it. For example, an HR manager from C12 pointed out that: ‘I must admit that our owner manager gave strong support to our management practices, he gets involved in information sharing, and encourages me to find necessary training from outside for employees, and promises employees long-term job security even if we encounter economic difficulties.’ In contrast, information from an owner manager from C1 suggests that lack of support from top management can also hinder the adoption of HPWS. As the manager puts it: ‘why we are using these practices is largely given by the preference of myself. I prefer to use employees who can work immediately rather than pay more attention to train them.
or retain them’. In a nutshell, the qualitative data indicate that the factors associated with the types of adoption of sophisticated selection as part of HPWS are: management of cost; perceived as the most effective way; employment needs; business strategy; innovation; perceived as useless; employer needs to identify different employees.

The data from the interviews also revealed that organization size plays an important role in the adoption of HPWS. This is reflected in the responses which suggests that economy of scale (C1, C2 and C4) and financial cost (C6, C10 and C13) are the serious considerations in the adoption. For example, C10 pointed out that:

I believe that we don’t need to use a complicated management system as we are only a small company. If the system is too complicated to implement or manage then it is not suitable for us. Even if it is effective, but the cost of using these practices is considerable. For example, we used complicated tests to select candidates during recruitment. However, it turns out that it costs us more money with no significant returns. Off the job training is not necessary as we never intend to train all our employees to be experts. We pay them to work rather than learn. We almost share all information to employees as they have to know it and also it is hard to withhold information from them. We don’t use complicated method to measure their performance as it will not only lead to additional work but also bring negative impact amongst employees.

**Perceived impact**

From the interviews, the following factors have been found to be associated with the impacts of the adoption of HPWS: improvement in reputation; higher productivity; better financial performance; lower employee turnover; harmonious work environment; rapid development; ability of employees; higher quality; higher commitment; efficiency; better employee involvement. The findings from the interviews validated the results from the survey that adoption of HPWS is associated with certain desirable outcomes such as an increase in employee productivity (C2, C3, C8, C13, C14 and C15), lower employee turnover rate (C5, C12) and increased financial performance (C2, C4, C6, C7, C9, C11, C12, C13, C14 and C15). Also, adoption of HPWS contributes to employee’s ability (C6, C14 and C15), and increases employees’ commitment and involvement (C9, C10, C12 and C15). For instance, a respondent from C14 pointed out that: ‘By using a system of practice such as training for technical employees, specific skills of employees have been improved, and that led to better quality of products’. Similarly, C15 pointed out that: ‘we believe that using a series of HR practices have significantly enhanced employee productivity, and increased the ability and skills of employees’. Improved abilities of employees can lead to SME productivity generally. This is pointed out by an informant from C8: ‘After the application of these practices, it can be seen that the productivity in my company increased’. In terms of organizational performance, to a large extent, it was reported that using HPWS enhances the reputation of the company (C1 and C8), and speeds up the development of the company (C6 and C7). From the qualitative data, the influence of top management support, organizational size, and perceived impacts of HPWS are revealed from the interviews.
Characteristics of HPWS

Interviews with line managers and HR managers further revealed that the practice of HPWS in Chinese SMEs has its unique characteristics. For example, the 15 SMEs in our sample use multiple interviews conducted by HR specialists, department directors and general managers rather than using sophisticated selection methods. Although Job-related training is provided to a large number of employees, training for professionals is outsourced. Also, we found that training opportunities for development is offered more to middle-level managers. In line with previous studies by Zheng, Morrison and O’Neill (2006), we found that incentive pay and promotion based on performance is emphasized by some SMEs. We also found that top-down communication is the dominant method of communication. Also, the interviews revealed that only general information rather than specific information is shared with employees. For example, financial information is not shared with employees. Our investigation also found that opportunities are provided to enable employees to participate in suggesting particular work programs. However, they are not involved in decision-making that affects their jobs. Commitment to job security but with voluntary turnover is another characteristic of the implementation of HPWS in the Chinese SMEs interviewed. In a nutshell, both the survey and the interviews revealed that the adoption of HPWS can be characterized as low, moderate and high adoptions. However, all believe that they are operating with HPWS.

Discussion and conclusion

What does the study tell us about the adoption of HPWS in Chinese SMEs?

Regarding the extent of adoption of HPWS, this study is consistent with previous HPWS studies on SMEs’ adoption of HPWS (Gilman and Raby 2013; Kroon, Van De Voorde and Timmers 2013). This suggests that full adoption of HPWS in Chinese SMEs is not ubiquitous. Instead of full adoption, the adoption of HPWS in Chinese SMEs remains at an intermediate phase. This helps to shed light on the life-cycle theory of the adoption of management innovation we reviewed earlier. As we speculated, the adoption of HPWS in China might not have peaked in line with life-cycle theory, which suggests that the life cycle is characterized by enthusiasm, disillusionment and decline.

Our findings are in line with the study of the adoption of HPWS in Italian medium-sized enterprises by Della Torre and Solari (2013), where they found that the adoption pattern lies between the traditional and innovative. Furthermore, the characteristics of the implementation of HPWS in Chinese SMEs share something in common with the adoption in western SMEs, although it retains some Chinese characteristics. For example, this study reveals that Chinese SMEs, like UK SMEs, are more likely to adopt discrete practices regarding recruitment and selection, induction, performance appraisal, downward communication and training (Gilman and Raby 2013). Similarly, the adoption pattern in the Chinese SMEs resembles the Italian pattern where Della Torre and Solari (2013) reported that performance assessment was adopted by more than half of the sample of Italian SMEs.
When viewed from a broader perspective, the adoption of HPWS by the SMEs in China is influenced by internal factors rather than external factors. This is in contrast to the research by Chadwick et al. (2013) where they found that external factors (industry dynamism and industry growth) influence the outcomes of HPWS. Although their study is not directly related to the reasons for the adoption of HPWS, it however highlights the possibility that external factors can have different influence across countries and across sectors. Specifically, company size, top management support and perceived impact are the most significant predictors. It is of course likely that company size encapsulates other factors such as slack resources and the degree of external relationships which might lead to coercive adoption. However, we did not investigate this aspect. Nevertheless, we investigated whether national legislation and business community pressure influence the adoption of HPWS. These were found to be insignificant. These institutional factors correlated only with the adoption of sophisticated selection rather than other elements of the constructs of HPWS. Therefore, we argue that size on its own is one of the most important predictors of the adoption of HPWS in this case. It is worth noting, however, that the adoption has its unique characteristics. First, there is a degree of adoption instead of full adoption. This finding is not unusual as Rabl et al. (2014, 31) pointed out: ‘it is possible that organizations adapt HPWS to some degree to reduce friction with (local) national culture norms. It seems likely that most management practices will be tailored by firms, whether in different countries or in the same country.’ This also supports Ansari, Fiss and Zajac’s (2010) theorization that there can be various degrees of adoption of management innovation.

It is worth noting that we did not investigate the factors responsible for the degrees of adoption of HPWS in detail; however, the qualitative data presented earlier have shown some glimpses of some of the reasons for the partial adoption. For example, cost is considered as an obstacle to the adoption of employment security as a component of HPWS. Nonetheless, more research is needed to unearth the reasons for the partial adoption of HPWS by SMEs in China. Second, the result suggests that the adoption of each element of the HPWS construct can be influenced by different factor(s). Again, this opens up further avenues for research. For example, it will be of theoretical and practical value to understand how the factors enable and constrain the adoption of specific elements of HPWS. Such understanding can help explain the diversity of outcomes of the implementation of HPWS. Perhaps this will lead to the theoretical development of versions of HPWS with Asian or Chinese characteristics. In fact, several researchers have pointed out that institutional and cultural factors can lead to the development of versions of HRM practices (Aycan et al. 2013; Rabl et al. 2014; Tarique, Briscoe, and Schuler 2015).

**How do management innovation theories explain the adoption of HPWS in SMEs?**

From the SMEs’ perspective, it appears that the perceived impact of HPWS as an innovation provides a better explanation of the adoption of HPWS. This is in line with the rational/efficiency theory which argues that desire for efficiency or bridging the...
performance gap can be a significant predictor of organizational innovativeness (Abrahamson 1991). Although top management and organizational size are also predictors of the adoption of HPWS by SMEs, these two factors, arguably, are related to the perceived impact of HPWS. For example, it is top management that are accountable and responsible for bridging the performance gap (Brown, Mohan and Boyd 2017). Therefore, they are more likely to seek the means to bridge the gap through the adoption of innovative practices. Similarly, larger SMEs are more likely to have the means for boundary scanning to identify the impact of innovation by earlier adopters, which will lead to the adoption (Chen, Hsiao and Chu 2014). This lends support to the utility of rational/efficiency theory of management innovation across SMEs and large organizations. Also, this finding further indicates that SMEs have bought into the idea that HPWS can improve their performance and competitiveness.

However, HPWS literature does not adequately explain other aspects of our findings. For example, we found that the degree of adoption of HPWS by Chinese SMEs range from low, moderate to high. Management innovation literature does not adequately explain this phenomenon. Decoupling literature on management innovation explains the symbolic adoption of innovation, especially when organizations are coerced into adopting innovation (e.g. Edelman 1990; Westphal and Zajac 2001). Similarly, literature on customization, hybridization and contingent implementation alluded to the fact that off-the-shelf management innovations are rarely implemented in full (Ansari, Fiss and Zajac 2010; Becker and Gerhart 1996; Pfeffer 1994; Rabl et al. 2014; Tollday et al. 1998). We acknowledge that customization, hybridization and contingency literature has a fully developed theoretical framework that explains degree of adoption. We are also familiar with the social construction theory of adoption of innovation, where social actors in the workplace develop their meanings of innovation, which ultimately leads to the modification of the innovation (Jarzabkowski 2004; Sturdy, 2004). Nonetheless, both decoupling and social construction literature take a subjective interpretation and explanation of the adoption, while our findings of the degree of adoptions from low, moderate to high appears to be objective/rational, given that we did not find coercive influence in the adoption. In other words, there is rational choice/efficiency perspective to the adoption. Therefore, this finding opens up fruitful avenues for further theoretical development of the adoption of management innovation generally, and adoption of HPWS specifically. For example, there should be a theoretical framework that explains the adoption of management innovation that has no commonly agreed definition, and are neither symbolically adopted or socially constructed. However, it is worth acknowledging that Ansari, Fiss and Zajac (2010) have made a significant contribution in advancing theoretical framework on how management innovation is adapted as it diffuses. They advanced different versions of adaptations ranging from ‘low dosage’ to ‘full and true’. We argue that the framework is insufficient to accommodate management innovation such as HPWS that is yet to acquire a true version due to the multiplicity of its definitions and interpretations (Ngo, Lau and Foley 2008; Zhang et al. 2013).
What does management innovation theories and literature tell us about the adoption of HPWS in SMEs?

The theories and literature indicate that adoption of innovation is influenced by many factors. Some are internal (Abrahamson 1991; Birkinshaw, Hamel and Mol 2008; Gill and Whittle 1992; Giotopoulos et al. 2017), others are external (Abrahamson 1991; Damanpour 1991; DiMaggio and Powell 1983; Roy and Sivakumar 2010). The findings from this study have confirmed the utility of management innovation theories in understanding the adoption of HPWS generally and the adoption of HPWS as an innovation by SMEs in particular. The results also indicate that the theory has relevance not only in the SME sector but also in a non-western setting such as China. Therefore, these findings have contributed to the extension of management innovation theory across sectors and across socio-cultural business environments. The lack of strong support for institutional theory confirmed a previous study by Rabl et al. (2014). However, it raises important research questions. For example, does the institutional factor only impact on non-HRM innovation? Are institutional factors in China less relevant in the adoption of management innovation generally or HRM specifically? Or is the efficacy of institutional factors weaker in the SME sector? What is the efficacy of management innovation theory in a setting where formal institutions are very weak or totally absent? Conversely, what is the efficacy of management innovation theory in a setting where formal institutions are too strong, thereby limiting managerial discretion in making rationale choices? Similarly, what is the efficacy of management innovation theory in a setting where there is a high degree of imperfect information limiting or blurring knowledge of the impact of innovation that can lead to imitation? We believe the answer to these questions will provide further understanding of the utility of management innovation generally and SMEs’ adoption of management innovation in particular.

Are there further theoretical implications?

This study expands the descriptive and analytical understanding of HPWS in SMEs. Instead of simply generalizing and concluding that the extent and nature of implementation of HPWS in SMEs is a ‘bleak house’ (Bacon et al. 1996), or scaled-down versions from the original true version (Cunningham and Rowley 2010), this study reveals that HPWS in SMEs could have its own characteristics, even while sharing some common characteristics with western SMEs. In addition, this study demonstrates that deploying management innovation as a theoretical lens to explain factors associated with the adoption of HPWS is promising. It provides one solid theoretical underpinning rather than diverse theoretical perspectives to explain the HPWS adoption. Unlike previous studies, which largely rely on strategic reasons (Kroon, Van De Voorde and Timmers 2013), economic and culture reasons (Della Torre and Solari 2013) or merely examining the influential factors without adequate theoretical underpinning (Wiesner, McDonald and Banham 2007; Wu, Bacon and Hoque 2014; Zheng, O’Neill and Morrison 2009), this study suggests that providing a theoretical foundation to the study of the adoption of HPWS can generate avenues for future research which we have already highlighted in the previous
sections. We hope researchers will pursue these lines of inquiry across sectors and countries with the aim of advancing the theoretical development of management and HRM innovation.

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