Configuring high-performance work systems in public administration: a set-theoretic approach to explain organizational performance in swiss municipalities

Stefano Assanti*

Swiss Graduate School of Public Administration, University of Lausanne, Lausanne, Switzerland

High-Performance Work Systems (HPWS) are combinations of human resource (HR) practices designed to enhance organizational performance. Although the configurational approach emphasizes aligning HR practices into coherent bundles (i.e., "best-fit" approach), empirical research has primarily focused on universalistic (i.e., "best-practices") approaches, especially in the public sector. This study aims to identify which configurations of HPWS practices and work environments better explain the organizational performance of Swiss municipal administrations. Using a set-theoretic approach, the study analyzes data from 119 Swiss municipalities through a revised two-step Qualitative Comparative Analysis (QCA) combined with formal theory evaluation. The results identify a climate of internal trust and a strong HR system as necessary conditions for high performance. Additionally, six distinct HPWS configurations were found to be sufficient for high performance, while three explained low performance. Thus, this study offers empirical support for the configurational perspective in HRM, emphasizing the causal complexity of HPWS and their impact on organizational performance. The findings also reveal that incentive pay and rewards are either consistently avoided or combined with other motivational practices. This underscore significant challenges related to the motivational dimension of the Ability, Motivation, Opportunity (AMO) framework in the public sector, highlighting the need for future research into how motivational HPWS practices can be effectively implemented in alignment with Public Service Motivation (PSM).

KEYWORDS

high-performance work systems, HRM, public administration, organizational performance, two-step QCA, configurational approach

1 Introduction

In the Strategic Human Resource Management (SHRM) literature, it is stressed that to be effective, individual human resource (HR) practices must be aligned to form consistent combinations or bundles (Boxall and Macky, 2009; Delery, 1998; Paauwe and Farndale, 2017). Particular attention has been paid to High-Performance Work Systems (HPWS), which are conceived as combinations of mutually reinforcing HR practices (Arthur, 1994; Becker and Huselid, 2010; Delery and Doty, 1996; Ichniowski et al., 1997; Macduffie, 1995),

whose implementation allows "to enhance organizational performance through improving the management of work and people" (Boxall, 2012, p. 170).

Although little consensus exists on the specific set of practices that should be included in these systems, scholars agree that HPWS encompasses a broad range of HR activities, including recruiting and selection, training and development, performance management, internal promotion, career development, information sharing or participation in the decision-making process (Boselie et al., 2005; Combs et al., 2006; Lepak et al., 2006; Posthuma et al., 2013).

The analysis of HPWS as varying configurations offers greater opportunities to explain the impact of human resource management (HRM) on individuals and organizations, as they are directly related to organizations' specific work contexts and strategic objectives (Lepak et al., 2006). However, empirical research to date has mainly adopted a universalistic (i.e., "best-practices") rather than a configurational (i.e., "best-fit") approach, favoring the analysis of individuals rather than the combination of practices (Borst and Blom, 2021; Delery and Doty, 1996; Hauff et al., 2014; Sheppeck and Militello, 2000). This is mainly due to the difficulty of capturing the complex nature of a configuration of HPWS practices through traditional linear model methodologies implying singular causation and linear relationships (Hauff, 2019; Hauff et al., 2021). Thus, except for a small number of studies, the validity of the configurational approach to analyzing the effectiveness of HPWS has yet to be proven (Chuang et al., 2012; Meuer, 2017; Schouteten et al., 2021).

The difficulty in grasping the complexity inherent in the systematic perspective of HPWS may partly explain the lack of research on their implementation in the public sector (Boselie et al., 2019; Gould-Williams and Mohammed, 2021; Kalleberg et al., 2006; Messersmith et al., 2011; Steijn, 2004; Vermeeren, 2014). Exploring the concept of "fit" in relation to HPWS in the public sector is particularly challenging due to the complex political, institutional, and societal contexts – both internal and external – in which public organizations operate (Boselie et al., 2021). Additionally, studies examining the effectiveness of HPWS in public administrations have produced mixed results (Gould-Williams and Mohammed, 2021; Guest, 2017).

Thus, this paper is motivated by the following research question: *which configurations of HPWS practices and internal work environments can better explain the organizational performance of Swiss municipal administrations?*

This study aims to produce two main contributions to the literature. The first is to deploy an innovative approach based on state-of-the-art tools and methodological advancements for conducting set-theoretic configurational research. To achieve this, original data collected from Swiss municipal administrations will be analyzed using a revisited protocol for a two-step Qualitative Comparative Analysis (QCA) combined with formal theory evaluation (Ragin, 2000; Schneider, 2019; Schneider and Wagemann, 2012). This will provide new empirical evidence to support the configurational perspective developed in the HRM literature, particularly regarding the relationship between HPWS and organizational performance, and delve into the underexplored contextual complexity of public administrations (Thomann and Ege, 2020). In this respect, municipal administrations represent an exceptional case, as they perform various functions across several departments and working bodies while navigating different external pressures and institutional logic. The second is to add to the theory by testing set-theoretic hypotheses that build on existing empirical knowledge and the main theories developed in the general SHRM and public administration literature. Therefore, the study will adopt a set-theoretic approach (Ragin, 1987) to assess whether and how the effective implementation of HPWS in Swiss municipal administrations varies across different organizational contexts and configurations of practices.

The following section briefly outlines the evidence from existing empirical research regarding implementing HPWS in public organizations. The third section introduces the theoretical foundation underpinning this study. The fourth section outlines the empirical analytical protocol and the dataset employed for the two-step QCA analysis, with the subsequent section presenting the results. Finally, the conclusion discusses the findings and their implications for public managers and future research.

2 High-performance work systems in public organizations

High-performance work systems gained prominence in the late 20th century among private sector companies seeking competitive advantage through innovative HRM approaches (Arthur, 1994; Huselid, 1995; Ichniowski et al., 1997; Macduffie, 1995). Indeed, a large body of research has shown that adopting practices associated with HPWS enables the attraction, selection, development, and retention of qualified and motivated employees, leading to higher organizational performance (Combs et al., 2006; Jiang and Messersmith, 2018).

Since the 1980s, the adoption of HPWS has spread to public organizations, driven by New Public Management (NPM) reforms aimed at improving efficiency and cost-effectiveness (Boyne et al., 1999). Although some evidence suggests that they are still less common in the public than in the private sector (Kalleberg et al., 2006; Leisink et al., 2021), the introduction of HPWS has contributed to instill a performance orientation in public organizations (Bach and Kessler, 2009; Bryson and White, 2021). Thus, public sector HRM scholars have increasingly drawn their attention to the implementation of HPWS and their impact on public organizations and employees (Borst and Blom, 2021). In their study of Welsh local governments, Messersmith et al. (2011) found that a more significant presence of HPWS practices was associated with higher levels of employee job satisfaction, organizational commitment, and psychological empowerment. Furthermore, the authors demonstrate that adopting HPWS was positively related to organizational performance, both directly and through the mediating effect of employees' organizational citizenship behavior. Similar results can be found in the study by Bonias et al. (2010), who show that by enhancing their psychological empowerment, the presence of HPWS was positively related to employees' perceptions of the quality of patient care in an Australian hospital. Several empirical studies indicate that HPWS can have a positive impact on other essential aspects of public

employees' work experience, for instance, by making them feel supported, increasing their satisfaction and affective attachment to the organization, and thus preventing absenteeism or their intention to leave (Ogbonnaya and Valizade, 2018). Luu (2018) shows that when HPWS aligns with the values of public employees and the specific objectives of the departments in which they work (i.e., service-oriented HPWS), their implementation leads to higher employee work engagement. The latter represents both indicators of desirable employee behaviors and critical strategic objectives for organizations (Steijn and Knies, 2021).

While there is considerable empirical evidence of a positive relationship between HPWS, employees' work-related attitudes or behaviors, and organizational performance, the results are more contradictory regarding their effects on public employees' wellbeing. Extensive use of HPWS practices has been positively associated with work intensification and higher levels of job stress and emotional exhaustion among employees in the public sector (Kroon et al., 2009; Van De Voorde and Beijer, 2015). Jensen et al. (2011) explored the potential "dark side" of HPWS on government employees from Wales. They found that employees' perceptions related to the presence of HPWS practices in their departments were positively associated with higher levels of anxiety, role overload, and stronger intentions to leave their organization.

It is also worth noting that research in public administration has focused more on the effects of individual practices than on HPWS as a whole, which may explain the ambiguous findings about the relationship between HPWS and employees' outcomes observed in previous empirical research (Borst and Blom, 2021; Gould-Williams and Mohammed, 2021).

In particular, public HRM scholars have focused on the effects of practices traditionally associated with the private sector, such as performance-related pay or performance evaluation, the implementation of which is likely to be more problematic or ineffective in the public sector. Indeed, such HR practices aim to improve transparency, control, and the achievement of higher levels of efficiency and are associated with "hard" models of HRM (Borst and Blom, 2021). The *hard* HRM models are guided by "utilitarian instrumentalism" and emphasize high control and low trust. Conversely, *soft* HRM models prioritize high trust and low control. These are centered on "developmental humanism", aiming to enhance performance by empowering, developing, and trusting employees to align with organizational goals (Boyne et al., 1999; Gould-Williams and Mohammed, 2021; Legge, 1995).

The hard models focus primarily on achieving strategic objectives, treating employees as a resource to be maximized while limiting costs. Being perceived as inspired by a logic of accountability and maximization of efforts, these practices may be at odds with the values of public employees, especially in those sectors where results are more challenging to measure and political and social pressures are more remarkable, such as education, health or social services (Gould-Williams and Mohammed, 2021).

The soft models, on the other hand, focus on the "human" element of HRM and aim to increase employee commitment, skills, and participation (Legge, 1995). Practices associated with soft HRM models align more closely with traditional characteristics of public sector HRM that have shaped its reputation as a "model employer", including job security, work-life balance opportunities, or direct participation. Soft HRM models are also expected to reflect the values of the public sector workforce and are, therefore, more likely to positively affect public organizations (Borst and Blom, 2021; Boyne et al., 1999; Kalleberg et al., 2006).

Existing empirical research regarding the impact of HPWS in Swiss public administrations has primarily centered on the impact of individual practices, aiming to assess their effect through the lens of the hard-soft HRM models duality. Anderfuhren-Biget et al. (2010) focus on the impact of HRM practices likely to activate the extrinsic motivational levers generally associated with hard components of HPWS (high wages, performance-related pay and rewards, career advancement) within Swiss municipal administrations. In particular, the authors seek to understand how these practices relate to the specific values held by public servant, known as Public Service Motivation (PSM). This negative relationship demonstrates the possible crowding-out effect of extrinsic motivators and highlights the risks associated with the potential adverse effects of hard practices in public contexts where PSM is relevant. However, the findings of Anderfuhren-Biget et al. (2010) are ambiguous, as they also indicate a positive relationship between extrinsic practices and general employee motivation. It is also important to note that this study does not provide evidence of the interaction between extrinsic and intrinsic HRM practices. The latter are generally related to the soft components of HPWS and are expected to leverage motivational factors that are more likely to be relevant in the public sector.

This limitation is somewhat overcome in the study by Giauque et al. (2013), which was conducted in the cantons of Switzerland. The authors are interested in the influence of extrinsic and intrinsic HRM practices on public employees' PSM and the performance outcomes of their organizations. The results show that intrinsic factors are all positively related to PSM and higher levels of organizational performance. However, only performance-related pay can be associated with hard HPWS practices among the extrinsic practices examined, while the rest, such as job security or career development, are typically seen as soft practices. It is also noteworthy that performance-related pay, while negatively and significantly related to PSM, turns out to be positively associated with higher organizational performance levels (Giauque et al., 2013). These results show that performance-oriented practices can lead to positive outcomes in Swiss public administrations, even if associated with hard practices.

These findings confirm the ambiguity regarding the impact of HPWS practices in the public sector and the lack of a configurational approach in related empirical research. The focus on individual HPWS practices rather than their combined effect is primarily due to empirical research's prevalent universalistic ("best-practices") approach. This approach suggests that implementing specific HR practices will always yield the best results, regardless of the organization's internal and external work context (Borst and Blom, 2021; Boselie et al., 2021). Instead, several authors argue that to properly assess the impact of HPWS practices on both organizational and employee outcomes, it is necessary to adopt a configurational ("best-fit") approach, which states that their effectiveness depends on the consistency and alignment between them (Sowa, 2021). The concept of internal (or horizontal) fit is inherent in the definition of HPWS, conceived as a set of

coherent and mutually reinforcing practices (Boxall and Macky, 2009; Paauwe and Farndale, 2017).

Adopting a universalistic approach limits the exploration of the implementation of HPWS practices and the assessment of whether and how the synergistic combination between them may be critical to their effectiveness. Indeed, the study by Schouteten et al. (2021) shows that different HPWS configurations can equally lead to positive employee outcomes (higher levels of commitment and job satisfaction) as long as the practices within these systems are strategically aligned. However, this is still one of the few studies that have adopted a configurational approach to analyzing HRM systems in public organizations.

One of the reasons why public HRM research has favored the universalist approach is the difficulty in capturing the complexity of the contexts in which public organizations operate. The latter are subject to constant political, societal, and institutional pressures that shape employment relationships, HR practices, and organizational goals, which are much more multidimensional than private organizations and subject to frequent change (Knies and Steijn, 2021; Thomann, 2020; Thomann and Ege, 2020). Based on the literature review outlined above, it is clear that a new research approach is necessary to account for the specific work environments of public organizations and analyze the effectiveness of HPWS from a configurational perspective.

3 Theoretical framework and hypotheses

The empirical literature points to two conditions inherent to organizations' internal context that are favorable for creating work environments that enable HPWS to produce high organizational performance: a climate of internal trust (TRUST) and a strong HR system (HRSS).

Internal trust (TRUST) is defined as "positive expectations that individuals have about the intent and behaviors of multiple organizational members based on organizational roles, relationships, experiences, and interdependencies" (Huff and Kelley, 2003, p. 82). The latter can be seen as social exchanges between the organization and its employees that affect the employment relationship. According to "Social Exchange Theory" (Blau, 1964), these relationships shape employees' perceptions of how the organization treats them and consequently determine their attitudes. Thus, a climate of trust within the organization appears to be a critical environmental condition for determining the social exchanges within the organization. Given the private sector's "high-control, low-trust" management orientation generally associated with HPWS practices, internal trust becomes even more significant in ensuring the effectiveness of these practices in public administrations.

A *strong HR system* (HRSS) is also an inherent feature of the organization's internal context closely related to HPWS. Bowen and Ostroff (2004) suggest that the strength of an HR system depends on the visibility of its practices and the extent to which they are understood by employees, applied consistently, and experienced uniformly throughout the organization. HPWS, which are conceived as a coherent and aligned set of practices, are likely to

be more effective when they exhibit these characteristics, namely distinctiveness, consistency, and consensus. Indeed, according to "Attribution Theory" (Kelley, 1967) and the configurational perspective developed in the SHRM literature, a well-combined set of individual HPWS practices is expected to positively affect both employee attitudes and organizational performance (Bowen and Ostroff, 2004). This is achieved by helping organizations communicate their strategic goals to employees and create the appropriate internal conditions to support their realization (Bowen and Ostroff, 2004).

There is considerable empirical support for the importance of a climate of trust and the strength of the HR system in the relationship between HR practices and positive employee and organizational outcomes. Trust (Alfes et al., 2012; Gould-Williams and Davies, 2005) and HR system strength (Dorenbosch et al., 2006; Li et al., 2011; Sanders et al., 2008) have both been found to be related to several desirable employees' attitudes, including commitment, motivation, job satisfaction, and the intention to stay in the organization. These conditions have also been shown to promote key employee behaviors that enhance organizational effectiveness, such as adaptability to change and individual task performance (Alfes et al., 2012), as well as overall organizational performance (Collins and Smith, 2006).

Empirical studies often indicate that a climate of internal trust and a strong HR system mediate or moderate the relationship between HR practices and enhanced organizational performance. These findings suggest that these environmental work conditions are necessary to enable HR practices to influence organizational outcomes effectively. In set-theoretic terms, this implies that municipal administrations exhibiting high organizational performance are a subset of those with a climate of internal trust or a strong HRM system. Accordingly, the first hypothesis states as follows:

> *H1: A climate of internal trust (TRUST) and a strong HR system (HRSS) are necessary for high organizational performance (OP) in Swiss municipal administrations.*

These conditions shape the organizational work environment in which HPWS are implemented, acting as a prerequisite for them to influence organizational performance. The impact of HPWS practices is primarily understood through the lens of the Ability, Motivation, and Opportunity (AMO) model (Appelbaum et al., 2000), which provides a comprehensive explanation of how HR practices drive organizational outcomes. According to the theoretical underpinnings of the AMO framework, when aligned in coherent configurations, the effect of each HPWS practice is mutually reinforced, resulting in the simultaneous improvement of individuals' abilities (A), motivations (M), and opportunities (O) to value their contribution (Boselie et al., 2005; Datta et al., 2005; Guest, 2017). These intermediate outcomes are crucial as they are expected to translate into enhanced overall organizational performance. Beyond being one of the most widely used frameworks in the literature for examining the effects of HR practices (Gerhart, 2007; Knies and Steijn, 2021), the AMO model aligns seamlessly with this study's configurational perspective and set-theoretical expectations. Indeed, regardless of the specific set of

practices included in an HPWS, they are likely to form effective combinations if they are strategically aligned to encompass all dimensions of the AMO model. This assumption is consistent with the principle of equifinality developed in the SHRM literature, according to which different combinations of HR practices can lead to the same outcome (Delery and Doty, 1996).

However, previous empirical research also highlights that certain HPWS practices, particularly those related to specific dimensions of the AMO framework, can be problematic when implemented in the public sector. Specifically, financial incentives—an integral part of HPWS alongside performance management practices (Ko et al., 2013; Selden et al., 2013)—have often been found to be less effective, or even detrimental, in activating the motivational levers unique to the public sector, particularly those associated with PSM (Llorens and Stazyk, 2010; Moynihan and Landuyt, 2009). These findings have led some public sector scholars to overlook research on HR practices related to the motivational ("M") dimension of the AMO framework (Borst and Blom, 2021). HPWS practices aimed at motivating employees tend to rely on extrinsic incentives, which are generally associated with hard HRM models and are more aligned with the private sector management orientation. Conversely, public sector organizations are more inclined to adopt HPWS practices that enhance employees' abilities and opportunities, such as information sharing, training and development programs, teamwork, participation in decision-making, and increased autonomy (Gould-Williams, 2007; Kalleberg et al., 2006; Knies and Leisink, 2018). As noted earlier, these practices are more closely associated with soft HRM models and the "model employer" concept typical of the public sector.

Therefore, this study will focus on HPWS practices that are not only identified as the most relevant in the literature (Boon et al., 2019; Boselie et al., 2018; Posthuma et al., 2013) but also enable the distinction between hard and soft HRM models. Each practice corresponds to a dimension of the AMO framework: *intensive recruitment and selection* (RS) and *support for training and development* (TR) reflect Ability-enhancing practices, *internal promotion opportunities* (IP), *incentive pay and reward* (PR), and *extensive work-life balance arrangements* (WLB) represent Motivation-enhancing practices; finally, *comprehensive information sharing* (IS) and *ample voice and participation opportunities* (VP) are included to capture Opportunity-enhancing practices. Based on existing empirical knowledge in public administration, the second hypothesis of this study is formulated as follows:

> H2: *The private-sector-driven HPWS practice of incentive pay and rewards (PR) is sufficient for high organizational performance (OP) in Swiss municipal administrations only when combined with other motivational practices, such as extensive work-life balance arrangements (WLB) or internal promotion opportunities (IP). Alternatively, the absence of incentive pay and rewards (PR) alone is also sufficient for high performance, regardless of other motivational practices.*

Finally, according to the principle of strategic fit within the AMO theoretical framework, combining ability, motivation, and opportunity-related HPWS practices contributes significantly to achieving positive organizational outcomes. Consequently, when one of the three dimensions of the AMO model is absent, high organizational performance is also unlikely to occur. In line with this assumption, the third hypothesis is formulated as follows:

> H3: *The absence of one of the dimensions of ability (RS, TR), motivational (IP, PR, WLB), and opportunity (IS, VP)-related HPWS practices is sufficient for low organizational performance (∼OP) in Swiss municipal administrations.*[1]

4 Methods

To test the set-theoretic hypotheses outlined above, this study builds on state-of-the-art tools and existing methodological advances in Qualitative Comparative Analysis (QCA), using the dedicated "QCA" and "SetMethods" packages developed within the R environment (Dușa, 2018; Oana et al., 2021).

Unlike linear models, which imply singular causation and linear relationships, QCA allows for addressing the causal complexity inherent in the configurational perspective of SHRM while accommodating key theoretical features of this study's framework (Berg-Schlosser et al., 2009; Ragin, 2008). Developed by Charles Ragin (1987), QCA is founded on conjunctural causality, which implies that the outcome under examination results from a combination of conditions (i.e., configurations) rather than the isolated effect of a single variable (Fiss, 2011; Rihoux and Ragin, 2008; Schneider and Wagemann, 2012). Therefore, using Boolean algebra, QCA enables the analysis of all possible configurations that the combination of individual conditions can generate, each being a potential explanatory cause (Ragin, 2000, 2014). Since the combinations of conditions that lead to the occurrence of an outcome may differ from those that lead to its non-occurrence, QCA accounts for the assumption of causal asymmetry. Additionally, QCA allows addressing equifinality by implying that the existence of multiple configurations (or causal pathways) is equally determinant of the outcome (Fiss, 2011; Schneider and Wagemann, 2012).

Based on the available empirical data about the conditions and the outcome, QCA assigns a set-membership score to each observed case (here, Swiss municipal administrations) through calibration. In fuzzy-set QCA analysis, the calibration transforms raw data into different degrees of membership in a set, assigning each case either full membership (1), full non-membership (0),

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1 In QCA, set-relations between conditions are articulated using specific symbols to denote logical operations. The sign "*" signifies the logical "AND", indicating that multiple conditions occur simultaneously. Conversely, the sign "+" represents the logical "OR", which refers to the presence of alternative or disjunctive causal paths. Conditions (or combinations of conditions) are connected to outcomes using directional arrows: a backward arrow "←" implies that a condition is necessary for the outcome, while a forward arrow "→" suggests that a condition is sufficient for the outcome. Additionally, the tilde sign "∼" denotes the absence of a condition or outcome. Accordingly, the three hypotheses of the study are formulated as follows: (H1) TRUST + HRSS ← OP; (H2) WLB*PR + IP*PR + WLB*IP*PR + ∼PR → OP; (H3) ∼RS*∼TR + ∼IS*∼VP + ∼WLB*∼IP*∼PR → ∼OP.

or a midpoint of 0.5 (i.e., cut-off point). The latter establishes the so-called "difference in kind": fuzzy-set values above 0.50 indicate the presence of the outcome or condition, while values below 0.50 signify their absence (Schneider and Wagemann, 2012).

4.1 Analytical strategy

The empirical analysis protocol for this study is based on an updated version of the "two-step" QCA approach, which involves separating the analysis of necessity and sufficiency in a stepwise manner, combined with other innovative tools that support the evaluation of set-theoretical expectations (Oana et al., 2021; Schneider, 2019; Schneider and Wagemann, 2012, 2013).

The first empirical step of the study will focus on H1 and assess a climate of internal trust and a strong HR System as necessary conditions for high organizational performance. Thus, the analysis of necessity will concentrate exclusively on environmental work conditions that are causally more distant from the outcome, referred to as "remote" conditions (Schneider, 2019). These are generally stable and less susceptible to change than "proximal" conditions, which are more volatile and directly influence the outcome. While remote conditions may not directly explain the presence of the outcome, they act as prerequisites by creating the broader context within which proximal conditions (here, HPWS practices) become effective (Schneider, 2019; Schneider and Wagemann, 2006). In addition to aligning closely with the study's theoretical expectations regarding explanatory mechanisms, the distinction between remote and proximal conditions - central to the two-step QCA approach—reinforces the explanatory power of the analysis. This distinction explicitly enables to sequentially model and interpret contextual influences, thereby reducing analytical complexity by limiting the number of logical remainders and constraining counterfactual assumptions. Consequently, this facilitates more robust and theoretically coherent interpretations and offers clearer insights into causal complexity (Schneider, 2019).

If both internal trust and HR system strength are proven to be necessary conditions for organizational performance, they will be included in the analysis of sufficiency in the second step to assess H2 and H3. The analysis of sufficiency will be based on the truth table algorithm (Ragin, 2008). The truth table shows all possible combinations of explanatory conditions, whether present or absent. Each observed case is then assigned to the configurations that best describe it according to the empirical information. The combinations of conditions for which no empirical evidence is at hand are logical reminders (Schneider and Wagemann, 2012). Finally, each row in the truth table is given a value depending on whether the corresponding combination of conditions is sufficient for the outcome (1) or not (0). Only results concerning configurations with at least 2 cases are considered to determine whether a row contains enough empirical evidence to assess its sufficiency for the outcome. Such a frequency threshold is recommended for large-N studies (more than 100 cases) to ensure better accuracy of the results, as a case may belong to a sufficient combination of conditions but still not show the outcome (Schneider and Wagemann, 2012).

The truth table analysis using Boolean algebraic algorithms generates three types of solutions: conservative, parsimonious, and intermediate (Ragin, 2008). The conservative solution is considered the most complex as it relies only on empirical information. The parsimonious solution offers a simplified version by including all the logical reminders that enable the identification of conditions essential to explain the results of the truth table.

As the name suggests, the intermediate solution is a simplified version of the conservative one. Still, it is more complex than the parsimonious solution, as it includes only those logical remainders that align with directional expectations based on theoretical and empirical knowledge. Since this study aims to determine the empirical relevance of organizational context and HPWS in explaining organizational performance, the interpretation of the QCA results will rely on the "enhanced intermediate solution" to support a more substantive interpretation of the findings (Fiss, 2011; Ragin, 2008; Thomann and Maggetti, 2020). The Enhanced Standard Analysis (ESA) tool will be used in Step 2 to produce the intermediate solution by excluding any logical remainders that contain the negation of the necessary conditions identified in Step 1 (Schneider, 2019; Schneider and Wagemann, 2013). Thus, besides including only logical remainders justified by counterfactual arguments, the enhanced intermediate solution will exclude untenable assumptions and enable the combination of necessity and sufficiency analyses, as proposed by the updated two-step QCA approach (Schneider, 2019).

Finally, formal theory evaluation will be applied to assess the extent to which the empirical data confirm, refute, or extend the theoretical expectations outlined in H2 and H3 (Oana et al., 2021; Ragin, 1987; Schneider and Wagemann, 2012). The formal theory evaluation involves systematically comparing theoretical expectations ("T"), expressed in set-theoretic terms (conditions necessary or sufficient for an outcome), with empirical QCA results ("S") through boolean intersections. A good theoretical fit is indicated by a concentration of cases in areas where theory and empirical evidence align (TS and ∼T∼S), whereas areas of non-alignment (T∼S and ∼TS) highlight potential theoretical problems or necessary revisions. By comparing the results of the sufficiency analysis with theoretical expectations, this structured approach provides clear guidance on whether the hypotheses are supported by the empirical findings generated through QCA and identifies which aspects of the theoretical propositions should be discarded or expanded (Thomann and Maggetti, 2020).

The accuracy of the results will be ensured by evaluating traditional QCA parameters of fit, namely consistency and coverage, which are essential for both sufficient and necessary analyses. Consistency quantifies the degree to which cases characterized by a condition or a combination of conditions also achieve the outcome, thus indicating the extent to which the empirical data are consistent with the statements of necessity and sufficiency. In sufficiency analysis, coverage reflects the degree to which the condition or combination of conditions explains the outcome across all cases. In contrast, in the analysis of necessity, coverage indicates to what extent the condition set and the outcome set differ in size, signaling a possible source of trivialness. Additionally, Proportional Reduction in Inconsistency (PRI), specific to sufficient analysis, helps avoid including configurations

that show a simultaneous subset relationship with both the outcome and its absence. For necessary analysis, Relevance of Necessity (RON) indicates if the condition and the outcomes sets are so large to be close to a constant, suggesting another possible source of trivialness. Although different thresholds are recommended for these fit indices to be considered robust, they all range from 0 to 1, with the highest value indicating a higher level of reliability (Fiss, 2011; Oana et al., 2021; Rubinson et al., 2019).

The empirical analysis will be supported by innovative strategies to enhance the substantive interpretability of the results and establish meaningful inferences, offering a more comprehensive theory-evaluating application of QCA (Thomann and Maggetti, 2020). Beyond traditional parameters of fit, frequency thresholds, and ESA, the QCA's measurement and internal validity will be addressed through an ex-ante diagnosis of data skewness to avoid simultaneous subset relations. Furthermore, the comprehensive robustness test protocol developed by Oana and Schneider (2021) will be applied to assess the sensitivity of the identified solutions to changes in fit parameters and the extent to which they diverge from alternative model specifications. This approach will help select the most explanatory model and ensure the highest external validity of the findings.[2]

4.2 Sample and data collection

The empirical analysis is based on original data collected from Swiss municipal administrations between April and August 2022 via a structured online questionnaire. The questionnaire was sent by email to all people in charge of HRM (mostly HR executives and City managers) across all 260 Swiss municipalities with populations exceeding 7,000 inhabitants. This threshold was established before data collection. It was chosen based on recommendations from Swiss HR experts during exploratory interviews about the presence of HPWS among Swiss municipal administrations, mainly because smaller municipalities generally lack dedicated HR departments.

The constructed dataset includes responses from 146 municipal administrations across Switzerland's French, Italian, and German-speaking regions, yielding a response rate of 56.2%. The main reasons cited for non-participation were personal constraints of the respondents (such as limited knowledge due to recent appointments, time constraints, maternity leave, etc.) or significant ongoing changes in the municipality's HR system during the data collection period.

After excluding all observations with missing information on explanatory conditions and the outcome, the final dataset comprises 119 municipalities. These administrations have an average of 572 full-time employees (FTEs) and collectively provide public services and implement policies for 32% of Switzerland's total population. Table 1 provides descriptive statistics of the Swiss municipal administrations included in the analysis. Despite a slight under-representation of German-speaking municipalities in

TABLE 1 Descriptive statistics of Swiss municipal administrations included in the analysis compared to the full population.

	Municipal administrations included in the analysis (N = 119)	Municipal administrations of Switzerland with more than 7,000 inhabitants (N = 260)
	% (N)	% (N)
Size		
7,000–9,999	34.5% (41)	37.7% (98)
10,000–19,999	42.0% (50)	43.5% (113)
20,000–49,999	16.8% (20)	15.0% (39)
50,000–99,999	2.5% (3)	1.5% (4)
More than 100,000	4.2% (5)	2.3% (6)
Geographical regions		
Lake Geneva region	27.7% (33)	19.6% (51)
Espace Mittelland	17.6% (21)	16.9% (44)
Northwestern Switzerland	7.6% (9)	15.0% (39)
Zurich	21% (25)	18.1% (47)
Eastern Switzerland	7.6% (9)	15.0% (39)
Central Switzerland	14.3% (17)	13.1% (34)
Ticino	4.2% (5)	2.3% (6)

favor of French-speaking ones, the distribution of municipalities across Switzerland's regions in the sample mirrors that of the target population. Moreover, the data accurately reflect other key characteristics, particularly municipality size in terms of inhabitants, making it a fairly representative sample of the population of interest.[3]

4.3 Measures

4.3.1 Outcome measure and calibration: organizational performance

The organizational performance of municipal administrations was measured using a seven-item scale adapted from Delaney and Huselid (1996), allowing participants to rate their administration's performance over the previous 3 years compared to similar organizations. While using perceptual data carries a risk of bias due to respondent subjectivity, it also offers notable advantages. Firstly, self-reported data is often necessary for evaluating public sector performance, given the frequent lack of objective measures. Moreover, several empirical studies have shown a positive

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2   All analyses and materials not presented in the main paper—including truth tables, directional expectations, conservative and parsimonious solutions, as well as skewness and robustness tests—are provided as Supplementary material.

3   A Chi-square goodness-of-fit test was conducted to compare the distribution of the sample with the known population distribution in terms of municipality size and region. The test results were not significant for both size ($\chi^2 = 3.35$, $p = 0.50$, $df = 4$, $N = 119$) and region ($\chi^2 = 1.76$, $p = 0.94$, $df = 6$, $N = 119$), indicating no significant difference between the sample and population distributions with respect to these characteristics.

correlation between perceived organizational performance and more objective indicators (Delaney and Huselid, 1996). Secondly, the perceptual measurement scale used in the survey captures multiple dimensions of organizational performance, including service quality and employee retention. The latter is particularly relevant for assessing the impact of HRM practices, as it reflects essential employee attitudes and behaviors (e.g., work engagement, affective commitment, job satisfaction), which are generally considered indicators of effective HPWS implementation and are associated with higher levels of performance (Andersen et al., 2021).

Furthermore, the perceptual measure of organizational performance (OP) used in the survey allows respondents to evaluate their administration on a five-point Likert scale, ranging from "far below average" (1) to "much better than average" (5). Therefore, this measurement scale integrates a conceptual midpoint to distinguish municipal administrations according to whether their performance is above or below average. Due to the construct's nature and the data's positive skewness, the outcome measure was calibrated using an "adjusted approach", as recommended by Meier (2017). The adjusted approach, while still based on the general framework of absolute calibration, involves fine-tuning the standard anchor points used for rescaling the Likert scale to more precisely capture significant variations in the sample distribution (Emmenegger et al., 2014). In contrast to the direct "absolute" approach, which applies fixed thresholds based on scale values (e.g., assigning fuzzy membership scores based on specific Likert points like "3" for crossover or "5" for full membership), the adjusted approach takes into account theoretical considerations or trends in the data. This allows for more precise calibration, with anchor points identified from clear thresholds or "gaps" in the data, reflecting the qualitative nuances of survey response (Meier, 2017; Ragin, 2008).[4]

4.3.2 Explanatory conditions measures and calibration: internal work environment and HPWS practices

The presence of a climate of internal trust (TRUST) in the municipalities and the strength of their HR systems (HRSS) were measured using five-point Likert scales, ranging from "Strongly disagree" (1) to "Strongly agree" (5), based on the validated scales by Huff and Kelley (2003) and Hauff et al. (2017) respectively. The categories of Likert scales reflect qualitative meanings that can be translated into set-membership scores through simple recoding

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4 Since the sample can be considered representative of the entire population of interest, adjusting the calibration thresholds based on the distribution is less problematic. However, to address potential response bias due to the perceptual nature of the measures and to establish an objective benchmark for calibration, the raw data of the outcome was standardized according to the urban character of each municipality, as classified by the Swiss Federal Statistical Office. This spatial typology categorizes structurally related geographical units (such as municipalities) based on specific criteria and characteristics. Although these units may not be geographically contiguous, they are as similar as possible within the same category, while remaining distinct from units in other categories.

TABLE 2 Analysis of necessity for high organizational performance (Hypothesis 1).

Conditions	High organizational performance (OP)		
	Consistency	Coverage	RoN
High internal trust (TRUST)	0.762	0.678	0.688
Strong HR system (HRSS)	0.780	0.714	0.725
TRUST + HRSS	0.904	0.677	0.575

Conditions qualify as necessary when they meet the following thresholds: consistency ≥ 0.9, coverage ≥ 0.6, and relevance of necessity (RoN) ≥ 0.55 (Schneider and Wagemann, 2012).

(Schneider and Wagemann, 2012). However, positively skewed responses and neutral answers (score of 3) posed a challenge for calibration, as they could indicate that respondents perceived neither the presence nor absence of, for example, internal trust in their municipality. Therefore, an adjusted approach was chosen to calibrate both contextual conditions after creating additive indices from the raw data.

The implementation of HPWS in Swiss municipal administrations was assessed using 13 items drawn from previously validated scales commonly applied in prior empirical public sector studies (Datta et al., 2005; Dorenbosch, 2009; Huselid, 1995; Jensen et al., 2011; Messersmith et al., 2011). These items were combined into additive scales to measure the seven HPWS practices considered in the study. Using a four-point Likert scale, each item measured the proportion of employees covered by the practices or the number of arrangements in place. Given the unipolar nature of these measures, the absence of a neutral score, and the lack of skewness in the data, set-membership scores were assigned using an "absolute approach" (Meier, 2017). Unlike the adjusted approach, the absolute approach is a theory-guided calibration method that allows fuzzy values (0, 0.33, 0.67, and 1) to be easily assigned to each of the verbal expressions on the four-point Likert scales (Emmenegger et al., 2014; Ragin, 2000; Schneider and Wagemann, 2012; Verkuilen, 2005). Thus, despite ongoing academic debate (Duşa, 2018; Rubinson et al., 2019), the absolute approach is favored for its effectiveness in capturing variations in underlying constructs and measurements. Supplementary Table A shows all survey items, descriptive statistics, and calibration for all variables.

5 Results

Table 2 presents the results of the necessity analysis. While neither internal trust nor a strong HR system alone are necessary for high organizational performance, their combination is found to be a significant superset of the outcome, as the consistency, coverage, and relevance of necessity meet the recommended thresholds. These findings strongly support Hypothesis 1.

In addition to its empirical relevance, the combination of internal trust and a strong HR system is conceptually meaningful as a disjunction of contextual conditions (Ragin, 2000; Schneider, 2019; Schneider and Wagemann, 2012). This combination functions as an equivalent to an "enabling work setting and climate" (ESC), a facilitating organizational context

TABLE 3 Configuration chart of sufficient solutions of HPWS for organizational performance (intermediate solution).

Configurations of HPWS	Hypothesis 2: high organizational performance (OP)						Hypothesis 3: low organizational performance (∼OP)		
	1	2	3	4	5	6	1	2	3
Enabling work setting and climate (ESC)	●	●	●	●	●	●	⊗	⊗	⊗
Ability-enhancing practices									
Intensive recruitment and selection (RS)	●	●	●	●	●		⊗		
Strong support for training and development (TR)	●			●			⊗	⊗	⊗
Motivation-enhancing practices									
High internal promotion opportunities (IP)			●	●	⊗	●			⊗
Extensive work-life balance arrangements (WLB)					⊗	●		⊗	
Incentive pay and reward (PR)		●	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Opportunity-enhancing practices									
Comprehensive information sharing (IS)	●	●		●	●	●			⊗
Ample voice and participation (VP)	●	●	●			●	⊗	⊗	⊗
Consistency	0.873	0.877	0.870	0.848	0.811	0.853	0.859	0.863	0.849
PRI	0.764	0.782	0.730	0.712	0.583	0.711	0.716	0.696	0.668
Raw coverage	0.332	0.268	0.358	0.326	0.411	0.342	0.424	0.401	0.360
Unique coverage	0.016	0.027	0.005	0.033	0.081	0.022	0.029	0.018	0.012
Overall solution consistency	0.822						0.871		
Overall solution coverage	0.644						0.472		
Overall solution PRI	0.710						0.747		

● = Presence of a condition; ⊗ = Absence of a condition; Blank space = Irrelevance of a condition (i.e., the condition may be either present or absent).

"where people feel supported, where they can perform, while also experiencing a sense of meaningfulness and a sufficient degree of wellbeing" (Paauwe, 2024, p. 28). Therefore, the disjunction of these necessary contextual conditions in Step 1 of the QCA is transferred into the sufficiency analysis as a higher-order construct to limit the number of conditions included in Step 2 (Schneider, 2019).

The main findings from the sufficiency analysis are summarized in Table 3 as a configuration chart (Rubinson, 2019).[5] The columns display the causal paths that were found sufficient to explain high organizational performance (Hypothesis 2) and low organizational performance (Hypothesis 3). Each causal path (or solution) is composed of a specific configuration of HPWS practices listed in the left-hand column. Regarding the informative quality of the findings, each HPWS configuration shows a consistency above 0.80 and coverage above 0.25, indicating that all configurations identified through the QCA analysis are empirically relevant (Ragin, 2008). Furthermore, the overall solution consistency for both high organizational performance (0.822) and low organizational performance (0.871) exceeds the recommended threshold of 0.80. The solutions' coverages suggest

that the identified configurations account for a more substantial portion of the presence of the outcome than the absence while still indicating overall solid explanatory power of the QCA results (Fiss, 2011; Schneider and Wagemann, 2012).

Table 3 presents six configurations sufficient for high organizational performance (H2), as identified by the QCA analysis. Being recognized as a necessary condition in Step 1, an enabling work setting and climate (ESC) is the only condition present in all configurations for high organizational performance. Additionally, the absence of a favorable work environment appears in all the paths explaining low organizational performance (H3), confirming its relevance and further strengthening the validity of previous findings.

Municipal administrations belonging to solution 1 employ the full range of HPWS practices aimed at enhancing employee abilities and opportunities, with none of the motivational practices being relevant to their organizational performance. In contrast, municipalities in solution 5 completely avoid motivational practices. Incentive pay and rewards are absent from three other sufficient configurations. However, municipalities in these paths implement high internal promotion opportunities either alone (solutions 3 and 4) or in combination with extensive work-life balance arrangements (solution 6). Conversely, in solution 2, financial incentives are present, while other motivational practices do not appear relevant for the outcome.

5 In addition, a separate analysis shows that none of the HPWS practices is necessary for either the presence or absence of the outcome (see Supplementary Tables B1, B2).

TABLE 4 Theory evaluation for high organizational performance (Hypothesis 2).

		Empirics	
		Detected in the solution	Not detected in the solution
Theory	Hypothesized	**PR***RS*IS*VP*ESC* **(IP + WLB)** + **∼PR***IS*VP*ESC *(IP*WLB + RS*TR) + **∼PR***RS*ESC *(IP*VP + IP*TR*IS + ∼IP*∼WLB*IS) 25.2% (OP): support theory 3.4% (∼OP): contradict theory & solution	**PR*IP***(∼RS + ∼IS + ∼VP) + **PR*WLB***(∼RS + ∼IS + ∼VP) + ∼ESC***PR*(IP + WLB)** + **∼PR***IP*∼TR*∼VP + **∼PR***∼IP*WLB*(∼TR + ∼VP) + **∼PR***∼IP*(∼RS + ∼IS) + **∼PR***∼WLB*∼RS + **∼PR***(∼RS*∼IS + ∼RS*∼VP + ∼IS*∼VP) + **∼PR***∼ESC 23.5% (OP): support theory 42% (∼OP): delimit theory
	Not hypothesized	PR*∼IP*∼WLB*RS* IS*VP*ESC 2.5% (OP): extend theory 0% (∼OP): empirical contradictions	PR*∼IP*∼WLB*(∼RS + ∼IS + ∼VP + ∼ESC) 0.8% (OP): point to overlooked explanations 2.5% (∼OP): support theory

Based on Schneider and Wagemann (2012) and Thomann et al. (2018).
The table presents the relationship between the results from the sufficiency analysis and Hypothesis 2: WLB*PR + IP*PR + WLB*IP*PR + ∼PR → OP. The bold text highlights the hypothesized combinations. Each section of the table shows the proportion of cases displaying the specified combinations at different levels of organizational performance. The shading helps interpret the results: white areas confirm the theory, light gray areas extend the theoretical framework, and dark gray areas mark its limitations.

TABLE 5 Theory evaluation for low organizational performance (Hypothesis 3).

		Empirics	
		Detected in the solution	Not detected in the solution
Theory	Hypothesized	**∼RS*∼TR** *∼PR*∼VP*∼ESC + **∼IS*∼VP***(∼WLB* ∼PR*∼TR*∼ESC + ∼IP*∼PR*∼TR* ∼ESC) + **∼PR*∼WLB*∼IP*** ∼TR*∼VP*∼ESC 11.8% (∼OP): support theory 0.8% (OP): contradict theory & solution	**∼RS*∼TR***VP + **∼PR*∼IP*∼WLB***(TR + VP) + **∼IS*∼VP***(TR + IP*WLB*RS) + PR*(**∼RS*∼TR** + **∼IS*∼VP**) + ESC*(**∼RS*∼TR** + **∼IS*∼VP** + **∼PR*∼IP*∼WLB**) 17.6% (∼OP): support theory 21% (OP): delimit theory
	Not hypothesized	RS*∼TR*IS*∼VP* ∼WLB*IP*∼PR*∼ESC 0.8% (∼OP): extend theory 0.0% (OP): empirical contradictions	RS*IS*(WLB + PR) + RS*VP*(WLB + IP + PR) + TR*IS*(WLB + IP + PR) + TR*VP*(WLB + IP + PR) + ESC*RS*IS*IP 17.6% (∼OP): point to overlooked explanations 30.3% (OP): support theory

Based on Schneider and Wagemann (2012) and Thomann et al. (2018).
The table presents the relationship between the results from the sufficiency analysis and Hypothesis 3: ∼RS*∼TR + ∼IS*∼VP + ∼WLB*∼IP*∼PR → ∼OP. The bold text highlights the hypothesized combinations. Each section of the table shows the proportion of cases displaying the specified combinations at different levels of organizational performance. The shading helps interpret the results: white areas confirm the theory, light gray areas extend the theoretical framework, and dark gray areas mark its limitations.

Although these results do not fully meet the expectations outlined in Hypothesis 2, they remain compatible. Formal theory evaluation provides a precise assessment of the extent to which expectations based on established knowledge and theoretical insights from public administration and HRM literature overlap with the empirical results generated by the QCA (Ragin, 1987; Schneider and Wagemann, 2012). Tables 4, 5 present the results of the theoretical evaluation by comparing expected patterns with observed empirical ones from the sufficiency analysis. The tables highlight areas where the theory is supported (white), where it may need to be expanded (light gray), or restricted (dark gray). Thus, these areas correspond to overlaps and gaps between theoretical expectations and empirical findings. Additionally, the tables display the proportions of cases falling into each area and allow assessing the strength of the alignment or misalignment between theory and empirical results by distinguishing between those presenting the outcome and those not. Fit parameters are also provided to determine the empirical relevance of the findings generated from the theory evaluation.

Hypothesis 2 proposes that high incentive pay and rewards are sufficient for high organizational performance when combined with other motivational practices or when absent. As shown on the left-hand side of Table 4, the results from the theory evaluation provide strong support for these expectations. In the

upper-left area, the contradictory cases are empirically marginal compared to the instances that confirm the hypothesis. Evidence suggests that financial incentives can lead to higher organizational performance in municipal administrations even in the absence of high internal promotion opportunities and extensive work-life balance arrangements (lower-left area in Table 4). Notably, no municipalities in this category exhibit low organizational performance, which could suggest the potential to expand current knowledge in public administration. However, the fit parameters do not support the empirical relevance of such an extension (see Supplementary Table C1). It is also important to note that municipalities represented by this path strongly implement practices aimed at enhancing employee abilities and opportunities. The upper-right area in Table 4 highlights several cases that point to a potential limitation in the explanatory power of the solution generated through the QCA. Municipalities in this area with high organizational performance implement combinations of HPWS practices that, according to the expectations in H2, should favor such outcomes. However, these combinations are not part of the configurations identified in the sufficiency analysis, which reduces the plausibility of the solution generated by the QCA. Conversely, municipalities with low organizational performance, which are not expected to exhibit such outcomes, further challenge the theory's predictive power. However, the fit parameters for this area indicate very low consistency and coverage, diminishing

the empirical significance of this theoretical limitation (see Supplementary Table C1). Moreover, the lower-right area in Table 4 indicates that very few cases are left unexplained.

In line with Hypothesis 3 and the theoretical underpinnings of the AMO framework, Table 3 reveals that the three HPWS configurations deterministic for low organizational performance in municipal administrations typically neglect one of the three dimensions of the framework. While solutions 1 and 3 exhibit the absence of all ability-related and opportunity-related HPWS practices, respectively, the absence of two out of three motivational practices is sufficient for low organizational performance in path 2, with internal promotion opportunities being irrelevant. Moreover, none of the configurations identified as deterministic of low organizational performance involve the presence of any HPWS practices. In addition to confirming the validity of the AMO framework, these findings highlight the importance of implementing effective HPWS configurations within municipalities. The left-hand side of Table 5 supports H3, as the number of cases contradicting the theory or the solutions is minimal. The upper-right area of Table 5 reveals cases that could weaken the explanatory power of the QCA results, as it highlights combinations expected by the theory but not identified by the solution. In addition, the lower-left section of Table 5 suggests that the non-adherence of the HPWS implemented in the municipalities to the AMO framework does not fully explain low organizational performance. While several combinations of HPWS practices (17.6%) are unexpected – neither aligning with the theory nor identified by the QCA solution—the majority of municipal administrations in this area exhibit high organizational performance (30.3%). This suggests that the empirical evidence does not contradict the theory or the QCA findings. Furthermore, the low consistency and coverage in both the upper-right and lower-right areas of Table 5 reduce the need to refine the theory or consider overlooked conditions (see Supplementary Table C2).

6 Discussion and concluding remarks

This study employs a set-theoretic approach to identify which configurations of HPWS practices and internal work environments best explain the organizational performance of Swiss municipal administrations, addressing existing research gaps in public administration and HRM literatures. It introduces an innovative approach that leverages state-of-the-art tools and methodological advancements to evaluate set-theoretic expectations based on empirical evidence and theoretical insights from both fields. The empirical findings, derived from a revised two-step QCA protocol combined with formal theory evaluation, confirm the causal complexity of the relationship between HPWS configurations and organizational performance across 119 Swiss municipal administrations.

As predicted in Hypothesis 1, a climate of internal trust and a strong HR system were identified in Step 1 of the study as necessary conditions for organizational performance in municipal administrations. The importance of these internal work contexts in enabling the effectiveness of HPWS was reinforced by the sufficiency analysis in Step 2. In each configuration identified

as sufficient for high or low organizational performance, both contextual conditions were respectively consistently present or absent. These findings align with previous studies in both the private and public sectors (Meuer, 2017; Schouteten et al., 2021), suggesting that HPWS must not only be internally aligned but also implemented within the right contextual conditions to be effective (Gerhart, 2007).

Hypothesis 2 aimed to elucidate the impact of motivational HPWS practices on organizational performance in public organizations. Specifically, this study addresses a gap in understanding how private sector-driven practices like incentive pay and rewards, characteristic of the *hard* HRM model, combine with softer motivational practices aligned with PSM. The findings corroborate the expectations derived from extant public sector research, indicating that financial incentives are typically either avoided or paired with other motivational practices, a scenario that is likely to reduce the risk of a crowding-out effect. However, the results also reproduce ambiguities found in previous empirical studies within the Swiss public sector (Anderfuhren-Biget et al., 2010; Giauque et al., 2013). Indeed, the analysis suggests that financial incentives can sometimes enhance organizational performance, regardless of the presence of other motivational practices.

Additionally, some high-performing municipalities do not use any motivational practices, suggesting they may rely on unexamined motivational strategies. This finding aligns to the one concerning Hypothesis 3, where the motivational dimension is the only one not entirely absent in configurations explaining low organizational performance. These observations resonate with the broader debates regarding the motivational ("M") dimension of the AMO framework, which poses distinct challenges in public sector contexts. Nevertheless, the combined assessment of Hypotheses 1, 2 and 3 reveals possible strategies to address these challenges. These strategies primarily concern the complexity of intrinsic motivators, the limited efficacy of financial incentives, and the constraints imposed by public organizational settings on employee motivation (Fernandes et al., 2022). Specifically, the minimal influence of financial incentives underscores the significance of alternative socio-relational factors, including recognition and managerial support, as critical motivational mechanisms in public organizations. Thus, a climate of internal trust and a strong HR system, found to be necessary conditions in all high-performing municipalities, may facilitate other implicit, intrinsic motivational strategies. These include recognition, supportive leadership, and a positive organizational culture, all of which directly respond to the motivational challenges distinctive to public sector environments (Anderfuhren-Biget et al., 2010; Fernandes et al., 2022). Overall, these combined findings emphasize that successful implementation of motivational HPWS practices in the public sector requires context-sensitive strategies. Future research could beneficially investigate the exemplary cases identified in this study to further explore the underlying mechanisms driving effective implementation of motivational HPWS practices and their alignment with PSM.

In addition to identifying the conditions that lead to the effective implementation of HPWS configurations, this study provides new empirical evidence supporting the configurational

perspective in HRM, which has often been overshadowed by the universalist approach (Delery and Doty, 1996; Hauff et al., 2021). Empirical research on the configurational approach is limited, particularly in public HRM, due to the complexity of public sector contexts (Meuer, 2017; Rupietta and Backes-Gellner, 2019; Schouteten et al., 2021). The results show that no single HPWS practice is sufficient to explain organizational performance, confirming the validity of the configurational perspective. Six distinct HPWS configurations were found to be equally sufficient for high organizational performance in Swiss municipal administrations, while three configurations explained low performance. These findings also support the principle of equifinality in SHRM, suggesting that multiple pathways can lead to similar outcomes (Delery and Doty, 1996). Thus, the study challenges the universalist "best-practice" approach, indicating that no "one-size-fits-all" solution exists for organizational performance.

This study has several limitations that must be considered. Firstly, while the data is considered fairly representative, the analysis is specific to the Swiss context of municipalities and cannot be generalized to other countries or public administration sectors. Additionally, the reliance on self-reported cross-sectional data introduces the possibility of response bias, a limitation proper to questionnaire-based research designs. However, the survey-based approach was deemed appropriate given the lack of alternative data sources on HPWS implementation in Swiss municipal administrations and the difficulty of accessing performance-related data. Since the study relies on participants' perceptions of organizational performance, future research should confirm these findings using more objective performance measures. Another limitation stems from the potential for common-method bias, as both causal conditions and outcomes were measured through the same source. To mitigate this, procedural remedies were applied during questionnaire development (Podsakoff et al., 2012). These included the use of pre-validated measurement scales, reducing item ambiguity through expert review and preliminary testing, and employing descriptive, non-evaluative items to minimize social desirability bias (Langevin-Heavey et al., 2013). Additionally, the survey ensured separation between the measurement of causal conditions and outcomes by placing them in different sections.

Secondly, this study employs a condition-oriented QCA approach on a large-N sample, focusing on cross-case patterns by analyzing well-defined sets of conditions and their relationships. The emphasis is on understanding conceptual links between sets rather than details of individual cases. In addition to QCA's limitation on the number of causal conditions that can be analyzed, the condition-oriented approach also restricts the depth of understanding of individual cases due to the large sample size (Thomann and Maggetti, 2020). While the study considers the most relevant HPWS practices within the AMO framework, other conditions may also be critical determinants of organizational performance. Nevertheless, the findings confirm the empirical importance of enabling work environments and the AMO framework to explain effective HPWS implementation in public administration. The findings also suggest further research avenues, such as exploring motivational HPWS practices aligned with PSM

and conducting qualitative case studies to better understand the mechanisms linking specific HPWS combinations to organizational performance. Leveraging other recent innovations in QCA, such as Set-Theoretic Multi-Method Research (SMMR), could enhance these findings by integrating process tracing and within-case analysis with broader cross-case inferences (Schneider, 2024). These advancements and the possibility of large-N studies allow for more rigorous hypothesis testing by combining QCA with traditional statistical methods. Additionally, large-N studies enable the examination of HPWS at the individual level and the analysis of their impact on employees. As a result, this approach can offer valuable recommendations for aligning HPWS strategies to benefit both organizational performance and public employees' wellbeing.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the [patients/participants OR patients/participants legal guardian/next of kin] was not required to participate in this study in accordance with the national legislation and the institutional requirements.

Author contributions

SA: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Visualization, Writing – original draft, Writing – review & editing.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpos.2025.1504394/full#supplementary-material

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