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More Roads Lead to Rome. HR Configurations and Employee Sustainability Outcomes in Public Sector Organizations

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Abstract: In linking human resource management (HRM) to organizational sustainability, linear variance-based methods are not suited for addressing the complexity of how various HRM practices interact and have an impact on sustainability outcomes for multiple stakeholders. However, so far, empirical evidence for a configurational approach, acknowledging synergy and equifinality between various practices, is scant. Therefore, this study aims to provide empirical evidence for synergistic effects and equifinality in the link between sustainable HRM practices and employee sustainability outcomes. Building on the Ability Motivation Opportunity (AMO) model, this study adopts a configurational approach to unveil how sustainable HRM practices, in various combinations and in different ways, can impact employee sustainability outcomes (commitment and job satisfaction). The study applied a fuzzy set Qualitative Comparative Analysis (fsQCA) on a secondary data set consisting of employee surveys in 30 Dutch public sector organizations. The findings reveal that combinations of various AMO-enhancing practices are especially conducive to commitment and job satisfaction. Moreover, aligning these practices with work context factors (transformational leadership style and low work pressure) can lead to relatively high levels of commitment and job satisfaction. This study indicates that configuration matters and that there is not one best way to achieve employee sustainability outcomes. This leaves ample leeway for human resource managers to design a suitable and integrative HRM system for their own organization.

Keywords: synergistic effect; equifinality effect; HR configurations; employee outcomes; public sector organizations; fuzzy set Qualitative Comparative Analysis (fsQCA); Ability Motivation Opportunity (AMO) model

1. Introduction

As a new approach to Human Resource Management (HRM), sustainable HRM has evolved as an alternative to the more dominant Strategic HRM (SHRM) approach [1]. Whereas SHRM is mainly concerned with linking HRM activities to organizational outcomes, such as financial or market performance, sustainable HRM also emphasizes the relationship between HR practices and outcomes beyond the organizational financial outcomes, such as human and social outcomes and ecological/environmental outcomes [2,3]. This alternative is relevant in response to achieve the Club of Rome's Sustainable Development Goals (SDG; [4]). Although the field is still relatively young, in the sustainable HRM

literature, two important areas of discussion can be observed. First, the conceptualization of sustainable HRM is continuously developing. For instance, Aust et al. [2] and Gelencsér [5] distinguished four types of sustainable HRM approaches: Socially responsible HRM, Green HRM, Triple Bottom Line HRM and Common Good HRM. These approaches differ regarding the purpose, key concerns, the process, and the targeted outputs of sustainable HRM [2]. Second, HRM systems are argued to play a dual role in relation to sustainable organizational outcomes [6,7]. On the one hand, HRM and HR practices can be considered as means for reaching organizational goals, including sustainable performance. The research tradition of High Performance Work Systems, linking HRM to performance, is a clear example in this regard [8–10]. On the other hand, deploying socially responsible HR practices can both be an end in itself to promote employee well-being and an organization's social performance [11]. In this study, employee outcomes that are indicative of corporate social responsibility (Type 1 in Aust et al.'s typology [2]) are the focal point.

Employee outcomes, such as health and well-being [12], satisfaction [13]), happiness at work [14], and work-life balance [15], have been recognized as important indicators for the human and social outcomes of HR practices. In this study, we focus on commitment and job satisfaction being employee outcomes that reflect the responses of individuals to their organization's HR strategy [16]. Commitment reflects a worker's engagement to the goals of the organization, which is an important condition in achieving these goals [17], including organizational sustainability performance. Job satisfaction can be viewed as an indicator of 'congruence' between an organization's intention regarding satisfying its workers and how this is being perceived by the worker themselves [17]. Both outcomes have been consistently shown to enhance positive individual work behaviors, such as attendance, job performance and organizational citizenship behavior (e.g., [18,19]) that can result in sustainable organizations and long-term survival [20,21].

Similar to linking HRM and organizational performance from a strategic HRM approach [10,18], many questions on 'the how' and 'the why' of the relationship between HRM and employee outcomes remain. Scholars adopting a configurational perspective [22,23] argue that this gap in the field of HRM can be partly attributed to the lack of attention that has been paid to how individual HR practices are aligned in coherent clusters ('bundles') and how these shape HR systems that 'ideally' fit the intra-organizational context. That is to say, adopting such a configurational perspective is intended to tame paradoxical tensions that are inherently present in any HRM system in organizations that have to deal with pluralist workforces [24].

Moreover, a major limitation in research into the relationship between HRM and sustainability is that it fails to acknowledge the need for managing horizontal and vertical alignment between HR practices in an active way, in order to achieve sustainable outcomes for multiple stakeholders, including employees [9]. Although we acknowledge that an optimal fit can never be reached, we argue that it is still important to have an integral perspective on HRM by implementing mutually supportive HR practices [25], both in terms of aligning the distinguished HR practices (i.e., horizontal fit) and in terms of aligning the HR practices with the organizational strategy (i.e., vertical fit).

In addition, Hauff et al. [26] argued that the variance-based methods oftentimes applied in mainstream strategic HRM and performance research, focusing on linear relationships between independent and dependent variables, is not suited for addressing the complexity of how various HR practices interact and have an impact on outcomes, such as sustainability [27]. To move beyond the additive sufficiency logic of variance-based methods [26], case-based techniques, such as fuzzy-set Qualitative Comparative Analysis (fsQCA), can help to identify different configurations of conditions that result in the outcome of interest [28].

The configurational approach adopted in the present study acknowledges that various sets of HR practices may impact similar outcomes in different ways [18]. This is based on two key premises [29] that are related to the notion of causal complexity [30]. First, 'synergistic effects' can lead to outcomes that go beyond the mere sum of the effects of

each individual HR practice ('conjunctural causality'). The second key premise relates to the assumption of 'equifinality', which signifies that particular outcomes can be achieved via different paths. However, empirical evidence for such causal complexity is scant in sustainable HRM research, because most studies are based on variance-based methods [26]. As posited by Gerhart [31], most studies in this domain, explicitly employing configurational theorizing, either remained conceptual (e.g., [9,32]), overlooked the theory's basic assumptions and did not test for them empirically, or were unable to determine synergy and equifinality for methodological reasons (e.g., [33]). In addition, the few studies that did empirically examine the notions of synergy and equifinality of various HR configurations that could affect employee outcomes often focused on the 'internal fit' between HR practices only, without taking contextual factors into account. This while the latter is posited to be pivotal to the configurational approach to HRM [34–36].

Therefore, the aim of this study is to contribute to the conversation on the linkage between HRM and employee sustainability outcomes, that are central in the field sustainable HRM, by providing empirical evidence for the validity of the configuration theory's key premises regarding the presence of synergistic effects and equifinality [29]. To do so, we adopt a set-theoretic approach by conducting fsQCA using data from civil servant satisfaction surveys.

Our scholarly work adds to the literature in three ways. First, our study adopts a configurational approach to further our understanding of the relationship between HRM and employee sustainability outcomes, in our case, employee commitment and job satisfaction. Second, to establish possible (positive and negative) synergistic effects of HR configurations on employee outcomes, our study goes beyond the 'HR bundle approach' that focuses on HR practices only, by examining the effects of HR configurations viewed as combinations of both HR practices and specific intra-organizational contextual conditions [37]. Third, the QCA method used in this study allows us to empirically examine the validity of the equifinality claim underlying the configurational approach. Taking public sector organizations as the empirical context of our study, we are particularly interested in establishing whether different HR configurations can have similar effects on commitment and job satisfaction.

The remainder of the paper is organized as follows. The next section, building on the Ability Motivation Opportunity (AMO) framework and a contextual approach to HRM, presents an extended theoretical lens to study HR configurations, used to theorize and select HR practices that can together can form meaningful configurations fostering sustainability. Section 3 provides an explanation of the background of the secondary dataset and the steps that are needed to apply the fsQCA method. The main findings of the fsQCA analysis follow in Section 4. The paper concludes in Section 5 with a discussion of the findings, the conclusion, the study's limitations and implications for theory, practice, and future research.

2. An Extended Theoretical Lens to Study HR Configurations

2.1. The 'Traditional' HR Bundle Perspective

Traditionally, the 'HR bundle perspective' postulated that HR practices implemented in an organization should form coherent, integrated bundles, together shaping multiple HR systems. In particular, the combination of specific HR practices is argued to have positive synergistic effects, which, in turn, are believed to lead to excellent performance. Strikingly, however, there is a lack of consensus and consistency regarding which sets of HR practices constitute such HR systems [38] and how to identify and measure those bundles of HR practices [39]. Literature reviews by Boselie et al. [40] and Combs et al. [41] revealed that there is no single or fixed list of HR practices to measure HRM. To fill the gap with regard to a consistent overview of sound HR practices, Posthuma et al. [42] developed a taxonomy of high performance work practices (HPWP) based on the analysis of 181 articles published in peer-reviewed journals between 1992 and 2011. This taxonomy incorporates 61 different individual HR practices grouped into nine categories.

The extensiveness of Posthuma et al.'s taxonomy of HPWP revealed an inherent challenge in studying the effects of HR configurations on performance, including employee sustainability outcomes [42]. Specifically, due to the sheer number of available HR practices (and thus the huge number of possible HR configurations), the scope and complexity of empirical analyses studying the effects of bundles on employee outcomes can easily become unfeasible in terms of time, space, and data needed. The challenge of measuring the potential effects of HR configurations is aggravated, especially since these should ideally be studied in relation to other (intra- and/or extra-organizational) contextual conditions as well.

To maintain a manageable scope and to enable us to conduct a meaningful examination of the synergistic and equifinality claims, we use Appelbaum et al.'s [43] AMO model to distinguish between three HR policy domains [8]: ability-enhancing, motivation-enhancing and opportunity-enhancing HR practices. According to the AMO model, individual performance is a function of three essential (interrelated) components: ability, motivation, and opportunity to perform. HR practices can thus be conceptualized as enhancing one of these three primary components that are regarded as three distinguished dimensions of HR systems [18]. In view of the meta-analysis by Jiang and associates [18], all three AMO dimensions of HR systems can be related to financial outcomes, mediated by human capital, motivation, voluntary turnover, and operational outcomes (see also [26]). In a more recent study, Rayner and Morgan [44] showed that these dimensions are also relevant in explaining 'green' workplace behavior. Based on these insights, in the present study, we categorize the HR practices as exemplary HR practices of each of the three AMO dimensions [45] that can also foster human and social sustainability outcomes [27].

First, ability-enhancing HR practices can be implemented to ensure the availability of appropriately skilled and competent workers in the organization. Recruitment, selection and (formal and informal) training are among the core activities of such HR practices. In this study, we include 'training and development,' as these activities are most salient and visible to all workers and can contribute to employees' sustainable careers [46,47].

Second, motivation-enhancing HR practices are aimed at increasing workers' motivation to perform and contribute to the organization's (sustainability) targets [48]. Intrinsic and extrinsic rewards (compensation and benefits, and appraisal), development opportunities, job security and meaningful work are among the most important motivation-enhancing HR practices. The present study looks into the HR practices of 'compensation and benefits' and 'appraisal'.

Third, opportunity-enhancing HR practices, such as job autonomy, job design, team work and involvement enable individuals to actually use their abilities and motivation in order to achieve organizational goals. The present study included 'job autonomy', 'social support' and 'voice', which are all practices that can enhance employee vitality [48]. These HR practices represent three different levels at which workers are enabled to take decisions about their work: individual level (job autonomy), group level (social support) and department or organizational level (voice opportunities). Since (horizontal and vertical) fit can never fully be achieved in view of the multiple needs and values that are characterizing a pluralist workforce, voice opportunities are key to enable dialogue on how to achieve sustainable work [24].

Following the line of reasoning underlying the AMO model and building upon previous empirical research in this area (e.g., [18,26,49]), we expect that implemented bundles or combinations of ability-, motivation- and opportunity-enhancing HR practices that can support social sustainability, rather than individual HR practices, are related to commitment and job satisfaction. Whereas most empirical research has portrayed bundles of HR practices or HR systems as an additive index of individual HR practices [26,31,41], a configurational approach allows for studying differences in the impact of various combinations of HR practices within such bundles or systems [28]. We posit that a configuration containing the presence of ability-, motivation- and opportunity-enhancing HR practices produces the highest levels of commitment and job satisfaction (synergistic effects) in public sector organizations.

2.2. HR Configurations Going Beyond the HR Bundle Perspective

Although conceptually different, in the HRM literature, the concepts 'bundles of coherent HR practices' and 'HR configurations' are often used interchangeably. The first concept predominantly relates to the notion of 'internal' or 'horizontal fit' [9], and refers to the degree of consistency and coherence between implemented HR practices which can explain (the presence or lack of) synergistic effects [25,33,38,40]. However, regarding HR configurations, there is no such wide agreement [50]. In fact, this concept is usually defined rather loosely as coherent combinations of HR practices that fit the organizational (internal and/or external) context to improve performance (e.g., [33]). This definition clearly stresses the importance of fit between any set of conditions, either being HR practices or contextual factors, hence, integrating the contingency and configurational modes of HRM theorizing [34].

In view of the account above, to gain a better understanding of the merits of the configurational perspective, we extend the traditional bundle approach by taking into account the alignment between HR practices and intra-organizational contextual factors. This allows us to test whether the effects of HR practices can be aggravated or diminished by the presence of particular organizational (work) contexts in which they are being deployed [25,36]. Following empirical work on determinants of commitment and satisfaction, this empirical work focuses on transformational leadership [51–53] and work pressure [54] as important intra-organizational contextual factors that, possibly in combination with the selected HR practices representing AMO, might affect our two selected HR outcome indicators.

As regards the first contextual factor, in previous research, transformational leadership (which includes a focus on positive role modeling, creating vision, inspiring and intellectually stimulating followers) [55] is presented as an important factor in sustainable HRM [56]. It has been shown to positively correlate with commitment and job satisfaction [51,57]. More importantly, transformational leadership can also be perceived as organizational support [19,58] which motivates and enables employees to contribute to the organizational goals. As such, transformational leadership has the capability to strengthen the effects of the aforementioned ability-, motivation- and opportunity-enhancing HR practices on commitment and job satisfaction. For example, the intellectual stimulation characterizing transformational leadership can encourage workers to use the training and development opportunities offered, which enhances their abilities. Or, by sharing vision, transformational leaders can enhance individuals' motivation to achieve team and organizational goals, especially when this is rewarded by the 'compensation and benefits' practices.

The degree of work pressure that individuals experience is the second contextual factor that reflects (un)sustainable work practices. It comprises a highly prevalent job challenge or demand [54,59] which can deplete one's resources and, hence, can negatively impact employee outcomes [12]. Well-aligned HR practices (e.g., training and development opportunities [60] or compensation and benefits [61]) may compensate for a high workload. Obviously, a transformational leadership style may also buffer the negative effects of high workload and help employees thrive, even under high work pressures [62,63]. Conversely, the absence of high work pressure may allow synergistic effects of elements in a configuration to become more strongly manifested in HR outcomes.

Extending the more traditional bundle perspective with a contextual element [36], our second proposition is that a configuration containing the presence of ability-, motivation- and opportunity-enhancing HR practices in combination with the presence of high levels of transformational leadership and the presence of low levels of work pressure produces the highest levels of commitment and job satisfaction (synergistic effects).

In conclusion, both the HR practices potentially enhancing individuals' abilities, motivation, and opportunities (AMO) and the intra-organizational factors that are included in the study all concern issues for which individual organizations and managers in public organizations have leeway [36] to implement and employ. Following the equifinality claim associated with the configuration perspective, our third proposition is that different configurations

containing the presence of various combinations of HR practices and intra-organizational conditions can lead to equally high levels of commitment and job satisfaction.

3. Materials and Methods

3.1. Sample

We performed a secondary analysis using the existing data set from the 'Internetspiegel' Worker Satisfaction Survey that was conducted annually between 2011 and 2015 using a representative sample of 100 to 150 Dutch public sector organizations, such as municipalities, water boards, and provinces (see [64]). Based on an agreement with the 'Internetspiegel' organization, we were allowed to use the complete data set from 2011–2015. Although the first wave of the data was already collected some 10 years ago, the data set is still valuable for the purpose of uncovering the configurational mechanisms. After all, our aim is not to present the current incidence of HR practices' use, but to unveil the mechanisms that can explain how combinations of HR practices and intra-organizational conditions are related to employee sustainability outcomes, using an alternative research design that has been widely advocated by sustainable HRM scholars (e.g., [27]).

The survey was developed, tested, and thoroughly validated in commission of the Dutch Ministry of Internal Affairs and Kingdom Relations [64]. Data were derived from a total of 81 organizations. To run the QCA analyses, the individual data was aggregated at the organizational level. Due to missing values in the conditions and outcomes, the final QCA analyses included 30 cases: 18 municipalities (7.1% of all municipalities in the Netherlands), four provinces (33.3% of all provinces in the Netherlands), seven water boards (33.3% of all water boards in the Netherlands) and one 'other'.

3.2. Methods

The configurational nature of our propositions, looking into the effect of combinations of factors rather than of single factors, justifies a set-theoretic methods approach [29]. As a result, we applied a fsQCA [30,65], using Ragin's fsQCA software (version 3.0), that is uniquely suitable for investigating the validity of configurational theoretical frameworks [66]. Whereas linear models treat each of a number of factors as contributing independently and cumulatively to a certain dependent variable [26], the main premise of fsQCA is that there are multiple paths to an outcome, instead of the frequently assumed single path for all cases under examination (i.e., the assumption of equifinality [28]). Cluster analysis is also a case-based technique that is used to move beyond the linear variance-based techniques. However, whereas cluster analysis can answer questions about what cases are more similar to each other, fsQCA can identify configurations of conditions that can explain the prevalence of certain outcomes [28], which fits the aim of this paper.

The application of fsQCA requires four major steps. First, in order to determine what scores do or do not indicate set membership, the measures of the outcomes and conditions are calibrated into set membership scores. FsQCA allows fuzzy membership scores to range from 0 to 1; 0 denoting non-membership and 1 denoting full membership. The scores in between allow for the maintenance of each case's relative distance from each other [30]. Second, in an analysis of necessity, any conditions that are necessary for the outcome need to be identified. A condition is necessary if, whenever the outcome is present, the condition is also present. The identification of necessary conditions denotes important findings of the study; however, any necessary condition can be left out of the further analysis because it complicates the interpretation of sufficiency analyses. In the third step, the data matrix is converted into a truth table. In this truth table, each row denotes a qualitatively different combination of conditions. Each case can be assigned to one of these rows. To assign cases to the truth table rows, however, fuzzy membership scores have to be transformed into crisp membership scores: fuzzy scores below the 0.5 anchor (more out than in) are transformed to 0 while scores above the 0.5 anchor (more in than out) are transformed to 1. In the fourth and final step of the QCA analysis, the so-called analysis of sufficiency, the truth table rows are simplified by algorithms based on Boolean algebra [67] to find any

combinations of conditions that are sufficient for the particular outcome. The main result of this analysis comprises one or more causal paths ('solutions'), each consisting of one or more conditions that jointly explain the outcome [68].

3.2.1. Measures

All data was collected by means of a survey [64], using a five-point Likert scale (1 = fully disagree, 2 = disagree, 3 = disagree nor agree, 4 = agree, and 5 = fully agree). Construct validity was tested using measures of Cronbach's alpha, Average Variance Extracted (AVE) and Composite Reliability (CR) [28]. All validity indicators were well above the desired thresholds ($\alpha > 0.7$; AVE > 0.5 and CR > 0.8, respectively; see Table 1).

Table 1. Descriptive statistics at aggregated level.

Outcome	N	Mean	SD	α	AVE	CR
Commitment	54	3.75	0.164	0.964	0.909	0.968
Job satisfaction	80	3.98	0.195	0.918	0.857	0.947
Causal Conditions						
Training and development	54	3.42	0.154	0.884	0.675	0.910
Fair compensation	40	2.76	0.211	0.887	0.715	0.906
Appraisal management	44	3.73	0.184	0.935	0.763	0.941
Job autonomy	53	3.44	0.168	0.878	0.756	0.926
Social support from coworkers	75	3.90	0.072	0.868	0.546	0.847
Voice	53	3.53	0.117	0.930	0.750	0.936
Transformational leadership	52	3.48	0.148	0.980	0.808	0.980
Absence of high workload	57	3.11	0.138	0.818	0.519	0.836

Note: N = number of responding organizations; SD = standard deviation; α = Cronbach's alpha; AVE = Average Variance Extracted; CR = Composite Reliability.

3.2.2. Outcome Measures and their Calibration

Commitment was assessed by means of a three-item scale [64]. The items focused on little reasons to leave the organization; many reasons to stay with the organization; and that working for the organization was mainly positive in comparison to other organizations. We used the scores of the top 10 percent of organizations (>3.9 as the fully-in point) in our data to establish a standard for high levels of commitment. To allow for sufficient variance in the outcome, we set the cross-over point at the 50th percentile (3.77) and the fully-out point at the 25th percentile (3.57).

Job satisfaction was assessed using a three-item measure [64]: general satisfaction with the organization; general satisfaction with the job; and general satisfaction with the content of the job. To calibrate this outcome measure, we looked at the scores of the top 10 percent of organizations in our data (>4.19). Because we wanted to explore which clusters of conditions lead to high job satisfaction, we set this standard as the fully-in point. The cross-over point was set at the 50th percentile (4.07), and the fully-out point at the 25th percentile (3.88).

3.2.3. HR Practices and their Calibration

To maintain a feasible (due to methodological constraints) set of conditions, various items measuring individual perceptions of HR practices (see [16]) were combined in scale scores, therefore resulting in measures for perceived HR practices representing the AMO dimensions [8] rather than individual practices. For computing the scale scores, we used additive calculations.

Training and development (ability-enhancing HR practices) was measured using a five-item scale [64]. The items focused on possibilities to follow training, being supported in making future development-related plans, and the possibilities to grow within the organization.

Fair compensation (motivation-enhancing HR practices) was measured using four items from Vermeeren [64], focusing on the compensation being based upon performance,

the salary being at the right level in comparison to other organizations, the reward system being stimulating to meet targets, and the extent to which team performance influenced the compensation.

Appraisal management (motivation-enhancing HR practices) was measured with five items [64] focusing on the presence and content of formal procedures in which a civil servant's performance is appraised as a basis for further development.

Job autonomy (opportunity-enhancing HR practices) was measured with four items from Vermeeren [64]. The items focused on having autonomy to decide when, how, where, and with whom to perform their own work-related tasks.

Social support (opportunity-enhancing HR practices) by coworkers was measured using five items [64] which focused on: coworkers helping each other, having personal interest for each other, and addressing each other when something is wrong.

Voice (opportunity-enhancing HR practices) was assessed using a five-item scale [64]. The items focused on the possibilities to be involved in decisions being made in the organization, possibilities to give one's opinion on work-related matters, and possibilities to involve and discuss problems and tasks with co-workers.

Initially, the distinguished HR practices were calibrated using the five-point Likert scale anchors of the original survey as criteria. However, the data used in this study appeared to be rather skewed towards the positive side of the scales, and a qualitative interpretation of the scores for calibration yielded too little variance (some conditions were constant) for a meaningful analysis using fsQCA [30]. Alternatively, and doing justice to the variation in the data set, the fully-out, cross-over, and fully-in points were set at the 25th, 50th and 75th percentiles of the distributions per condition, respectively. This allows for the distinguishing between cases that perform poorer than the others (lowest 25%), cases that perform well (between 25 and 75%), and cases that perform exceedingly well (better than the others; top 25%). Table 2 shows the values of the fully-out, cross-over, and fully-in points per condition.

3.2.4. Intra-Organizational Contextual Factors and their Calibration

Transformational leadership was measured using twelve items based on the Multi-factor Leadership Questionnaire by Bass and Avolio [55]. The items focused on managers showing respect for personal feelings, stimulating team spirit, elucidating expectations, taking personal preferences into account, and leading by example.

Absence of high workload was assessed using a five-item scale [64]. The items focused on the degree to which the tasks are hard to combine, having more work than one can cope with, feeling time pressure, working overtime, and skipping lunch breaks.

Just like the procedure followed for the HR practices, the intra-organizational contextual factors were initially calibrated using a qualitative interpretation of the scale anchors. However, due to a lack of meaningful variance for fsQCA, these conditions were calibrated using the 25th, 50th and 75th percentiles of the distributions per condition, respectively (see Table 2).

Table 2. Calibration of Outcomes and Causal Conditions.

Outcome	**Fully-out Point**	**Cross-over Point**	**Fully-in Point**
Commitment	3.57	3.77	3.91
Job satisfaction	3.88	4.07	4.19
Causal Conditions			
Training and development	3.31	3.38	3.53
Fair compensation	2.56	2.73	2.96
Appraisal management	3.55	3.75	3.87
Job autonomy	3.28	3.39	3.56
Social support from coworkers	3.86	3.90	3.94
Voice	3.47	3.53	3.58
Transformational leadership	3.34	3.43	3.57
Absence of high workload	3.04	3.12	3.15

3.2.5. Analysis of Necessity

Before conducting the truth table and sufficiency analyses, it is important to test if any of the conditions is a 'necessary condition' for the outcome to be found at all. Ragin's guideline recommends using a consistency score of 0.90 as a threshold [67]. A particular condition is considered necessary for the outcome when that condition scores higher than 0.90 on consistency. Tables A1–A4 in Appendix A, presenting the analyses of necessity, indicate that none of the conditions are necessary conditions for the outcomes, because consistency scores appeared to be all below the threshold.

3.2.6. Truth Table Analysis

The truth tables (in Appendix B) are the basis for the analysis of sufficiency and show all possible combinations of conditions (or solutions) in the data regarding the outcome being present (1) versus non-present (0). A combination of conditions is sufficient for the outcome if all cases represented by that solution also show the presence of the outcome. In fsQCA, it is possible that a case that meets the conditions in a solution does not show the outcome. This will affect the goodness of fit. In fsQCA, goodness of fit of the solutions is indicated by the parameters of frequency (the number of times a solution is present in the data [66]) and consistency (the degree to which the cases in the solution also have a high score on the outcome [67]). Following Ragin [67], we consider a solution as sufficient if it meets a frequency threshold of 1 and a consistency threshold of 0.90.

3.2.7. Analysis of Sufficiency

In the analysis of sufficiency, the truth table rows are simplified using Boolean algebraic algorithms [67]. This results in one or more causal paths (solutions). Each analysis of sufficiency generates three types of solutions: complex, intermediate and parsimonious. Ragin [65] recommends presenting at least the intermediate solutions, as these incorporate our theoretical hunches (propositions). As recommended when many conditions are included and the expectations are directional [30], we add the parsimonious solutions (in which logical remainders are included in the logical minimization analyses), as these give a better indication of the importance of certain conditions in the solutions for the outcome and offer the opportunity to distinguish between core and contributory conditions (see Tables 3 and 4, and Appendix C).

Table 3. Fiss Configuration Chart of Sufficiency Solutions for High Commitment.

	Configurations				
	A	**B**	**C**	**D**	**E**
Training and development		●	●	●	●
Fair compensation			●	●	●
Appraisal management			●	●	●
Job Autonomy		•	•		•
Social support by coworkers	⊖	●			
Voice		●	●	●	
Transformational leadership	●				•
Absence of high workload				•	•
N cases in solution	3	4	5	7	5
Consistency	0.93	0.98	0.95	0.99	0.99
Raw coverage	0.31	0.44	0.52	0.40	0.36
Unique coverage	0.08	0.04	0.03	0.05	0.03

Solution consistency: 0.95
Solution coverage: 0.75

●/•—Core/Contributory condition present; ⊖/⊖—Core/Contributory condition absent.

Table 4. Fiss Configuration Chart of Sufficiency Solutions for High Job Satisfaction.

	Configurations				
	A	**B**	**C**	**D**	**E**
Training and development	•	●	●		●
Fair compensation		●	●	●	●
Appraisal management		●	●		●
Job autonomy	●	●		●	●
Social support by coworkers	●			●	●
Voice	●	•	●	●	
Transformational leadership				•	•
Absence of high workload			•		•
N cases in solution	5	5	7	6	5
Consistency	0.99	0.94	0.99	0.98	0.99
Raw coverage	0.43	0.51	0.40	0.45	0.33
Unique coverage	0.05	0.11	0.06	0.08	0.03

Solution consistency: 0.95
Solution coverage: 0.73

●/•—Core/Contributory condition present; ⊖/⊝—Core/Contributory condition absent.

4. Results

On average (see Table 1), the sample organizations reported quite high scores for the outcome variables: 3.75 for commitment and 3.98 for job satisfaction (on a five-point rating scale). The most prevalent HR practices are social support from coworkers (mean = 3.90) and appraisal management (mean = 3.73). The least frequently reported HR practice is fair compensation (mean = 2.76). The scores for the other HR practices range between 3.42 and 3.52, indicating that more than half of the respondents reported that they experience these practices in their organizations. Transformational leadership was also frequently reported (3.48). Absence of high workload scored 3.11, indicating that quite a number of respondents (almost half of them) experienced high levels of workload.

Tables 3 and 4 present, by means of Fiss Configuration Charts [69], the main findings of the sufficiency analyses by showing the solutions (causal paths) that are found to be sufficient explanations for the outcomes of commitment (Table 3) and job satisfaction (Table 4), respectively. Each column in Tables 3 and 4 describes a path consisting of a combination of causal conditions. Appendix B present additional results (i.e., the truth tables and solutions for the negation (i.c. low levels) of commitment and job satisfaction).

The presence of a causal condition in a path is denoted by ● (core condition) or • (contributory condition). The absence of a condition is denoted by ⊖(core condition) or ⊝(contributory condition). A condition is considered a core condition if it shows up in the intermediate and parsimonious solutions; it is considered a contributory condition if it only shows up in the intermediate solution. A blank denotes that, for that path, it is not relevant whether the condition is present or not to explain the outcome. For example, Path B in Table 3 can be interpreted as follows: A combination of the presence of the conditions 'training and development', 'job autonomy', 'social support by coworkers' and 'voice' is sufficient to explain high commitment. In this specific Path B, it is irrelevant whether the other causal conditions are present or not. Therefore, solution B contains cases with and without high levels of fair compensation, appraisal management, transformational leadership, and workload. The other paths in Tables 3 and 4 can be read in a similar way and will be elaborated on in the Discussion and Conclusion (see Section 5.1).

It is important to note that solution B in Table 3 is only a sufficient solution, but not a necessary solution for high commitment. Four other solutions evolved from the sufficiency analysis (equifinality). Similarly, for high job satisfaction, five solutions emerged from the analysis. All paths in Tables 3 and 4 show high levels of consistency, denoting that the specific cases represented by a single path portray the same specific combination of conditions in relation to the particular outcome. This means that these various paths do exist in practice. However, the unique coverage of each path is rather low (most being

< 0.1). This means that there is considerable overlap or similarity between the various paths; specifically, some cases (that have many conditions present), such as organizations 253 (province), 301 (water board), 313 (water board) and 315 (water board), are represented by more than one solution.

5. Discussion and Conclusions
5.1. Reflecting upon the Outcomes

Assessing the validity of configuration theory's key premises (i.e., the presence of synergistic effects and equifinality [29]), we used data from 30 public sector organizations to test three propositions. First, based on the AMO framework, which also forms a fruitful lens for studies focusing on sustainable HRM [24,44,48], we found empirical support for our proposition that a configuration containing the presence of ability-, motivation- and opportunity-enhancing HR practices can produce the highest levels of commitment and job satisfaction (synergistic effects) (see Tables 3 and 4), two important employee outcomes that can contribute to employee and organization sustainability outcomes. Only in some of the cases in our study were the highest levels of commitment or job satisfaction achieved without the presence of high levels of motivation-enhancing HR practices (see Path B in Table 3 and Path A in Table 4), or without the presence of high levels of ability-enhancing HR practices (see Path D in Table 4), respectively. Hence, although it may not be strictly necessary to combine all three distinguished types of HR practices, in most cases where civil servants reported the highest levels of commitment and job satisfaction, all three types of AMO HR practices were present. This result largely confirms the synergistic effects claim and the notion of horizontal fit, as stressed in the sustainable HRM literature [9,25] also underlying the AMO framework [70], and, more generally, extend existing empirical research that mainly showed evidence for additive indices of individual HR practices that are related to performance outcomes (see Hauff [71] for an overview). Empirical evidence stemming from such a configurational analysis in linking AMO to employee outcomes is scant, as most contributions in this field are still mainly conceptual (e.g., [72,73]) (an exception being a study by Meuer [74] into high-performance work systems).

Second, expanding the more traditional bundle perspective with contextual factors, we posited that a configuration containing the presence of ability-, motivation- and opportunity-enhancing HR practices in combination with the presence of high levels of transformational leadership and the presence of low levels of work pressure produces the highest levels of commitment and job satisfaction (synergistic effects). Our results (see Tables 3 and 4) indicate that the presence of high levels of transformational leadership and low levels of workload turned out to be important contributors for explaining commitment and job satisfaction. In at least three out of the five solutions for each outcome (Paths A, D and E in Table 3 and Paths C, D and E in Table 4), high levels of transformational leadership and/or the absence of high levels of workload appeared to be important elements in those solutions explaining the outcomes. These findings confirm the existence of synergistic effects between HR practices and intra-organizational context factors for explaining civil servants' commitment and job satisfaction. Importantly, however, the contextual factors mainly turned out to be contributory, rather than core conditions for HR outcomes. That is, in our study, the AMO HR practices were more important for civil servants' HR outcomes in comparison with the contextual factors. Nevertheless, the relevance of the contextual factors for explaining the outcomes in combination with the presence of HR practices provides configurational support for building a more contextually-based HRM theory [36] by more explicitly including the notions of *both* horizontal *and* vertical fit [9].

Third, building on the configuration perspective's equifinality claim [29], we posited that different configurations containing the presence of various combinations of HR practices and intra-organizational conditions can lead to equally high levels of commitment and job satisfaction. For both outcomes, the results show overall support for the equifinality claim, because there are several possible combinations (causal paths) that are sufficient to explain the outcomes of commitment and job satisfaction, respectively. This finding

indicates that there is no one best way to improve commitment and job satisfaction, and that different configurations of HR practices and intra-organizational conditions may lead to similar outcomes. This is a finding that variance-based methods cannot provide [26,71]. Additionally, our results indicate that having a number of (aligned) HR practices present, albeit in various combinations, is generally sufficient to explain highest levels of commitment and job satisfaction. In some cases (a municipality, a province, and a water board; see Path A in Table 3), however, the absence of social support by coworkers combined with the presence of high levels of transformational leadership appeared to be sufficient to explain the relatively high levels of commitment. This counter-intuitive finding may indicate that, supposedly, low levels of coworker support can be counterbalanced by high levels of transformational leadership to reach high levels of civil servants' commitment.

In addition, we also found evidence for the phenomenon of multifinality, the presence of high levels of social support by coworkers that can contribute, when combined with other conditions, to high levels of commitment (Path B in Table 3), but also to low levels of commitment (see Paths A and D in Table A9). Similarly, high levels of transformational leadership can contribute to high levels of job satisfaction (see Paths D and E in Table 4), but also to low levels of job satisfaction (see Path C in Table A10). This indicates that the way in which conditions (HR practices and/or contextual factors) are aligned, rather than their mere presence or absence, determine their combined effect on commitment and job satisfaction.

Finally, the robustness of our findings can be verified by comparing the sufficiency solutions for the presence of the outcomes (high levels of commitment and job satisfaction) to the sufficiency solutions for the absence of those outcomes (low levels of commitment and job satisfaction). This comparison shows that the findings for the presence and absence of the outcomes are more or less mirrored, albeit not perfectly so. This means that the solutions for high levels of commitment and job satisfaction are rather robust, but it also signifies that the occurrence of the outcome can be explained slightly differently than the absence of that outcome (the phenomenon of asymmetric causation [30]). Nevertheless, whereas the presence of the causal conditions, in various combinations, is sufficient to explain the highest levels of commitment and job satisfaction, the absence of these causal conditions, in various combinations, is sufficient to explain the lowest levels of commitment and job satisfaction. These findings regarding equifinality, multifinality, and robustness are rather new to the scholarly field of (sustainable) HRM, as empirical evidence for such configurational analysis is still scant [71]. As such, they can be considered exploratory and provide an interesting avenue for further research in the emerging field of sustainable HRM [27].

5.2. Conclusions

All in all, three main lessons can be derived from our findings. First, using a configurational approach [34], and in support of the AMO framework [18,43], the findings suggest that especially a combination of ability-, motivation- and opportunity-enhancing HR practices is conducive to commitment and job satisfaction, both being indicators for socially responsible HRM in the typology of Aust et al. [2]. Using fsQCA, a rather novel analysis technique in this field [71], the findings provide empirical evidence that organizations in the Dutch public sector, deploying a combination of ability-, motivation- and opportunity-enhancing HR practices, are successful in reaching the highest levels of commitment and job satisfaction among their employees. Moreover, combinations of the absence of such HR practices explain the lowest levels of commitment and job satisfaction.

Second, the findings of our scholarly work provide empirical evidence that work context matters; HR practices do not work in isolation but must fit the organizational context [36]. Aligning the HR practices with factors that are inherent to the organizational work context, in our study those being transformational leadership style and low levels of work pressure, can lead to high levels of commitment and job satisfaction. As a result, going beyond the HR bundle perspective (mainly focusing on internal fit [75]) by also

including contextual factors is a viable way forward in researching the link between HRM and employee outcomes. Although leadership style and work pressure are important determinants of commitment [51,53] and of job satisfaction [54], other contextual factors ought to be included in future research in this field as well.

Third, there is no one single best-practice type of configuration in our findings. Different combinations of sustainable HR practices and contextual conditions (causal paths) were shown to explain the highest levels of commitment and job satisfaction. This provides empirical evidence for the phenomenon of equifinality in linking sustainable HR practices and contextual conditions, on the one hand, to the sustainability outcomes in the study, on the other hand. However, the results also portray that there is quite some similarity between different causal paths to explain the outcomes (indicated by the rather low levels of unique coverage for each solution and some cases that appear in more than one solution). This means that there is quite some room for manoeuvre for HR representatives to design a well-working HR system aimed at increasing commitment and job satisfaction, particularly in aligning HR practices (internal fit) and fitting them with the organizational context [36].

For theory, the lessons learned from this study imply that explicitly including the notions of both horizontal and vertical fit into scholarly work, by linking HRM and (sustainability) outcomes [9,25], and testing these with a case-based method [26,28], will further our understanding of how and why what combinations of sustainable HR practices [48,76] are most beneficial for corporate sustainability. This applies to all research regarding the relationships between HRM and performance indicators, but even more so for linking (sustainable) HRM to corporate sustainability. When trying to incorporate sustainability into their management, organizations struggle to balance divergent organizational goals that address the needs of different stakeholders [2,25], such as financial, ecological, and social goals (triple bottom line [9]). A case-based method, such as fsQCA, is especially suited for answering questions regarding how to manage the accompanying contradictions and challenges.

5.3. Limitations of the Study and Recommendations for Future Research

Notwithstanding the main insights from our study that confirm some important notions regarding the configurational mode of theorizing in sustainable HRM, by providing empirical evidence for the synergistic and equifinality claims, we need to be careful in interpreting the results. First, many HR practices can potentially be part of an organization's sustainable HR system [2,8]. The same applies to the potential number of contextual factors to be included in a specific analysis. However, given the rather limited number of cases in our data set, only a limited number of conditions could be included in the fsQCA, and we already pushed the limits of the method by including eight conditions in the analysis. We have chosen to include a selection of HR practices that can be linked to sustainable HRM representing the AMO dimensions. Including other conditions in the analysis may result in different solutions. Additionally, the measures were calculated by averaging several underlying items. In this way, it is not possible to investigate the configurational relationships between the individual practices. Rather, we investigated configurations of bundles of HR practices [8]. Moreover, aggregating individual-level data to the organizational level can lead to a tendency towards the mean, resulting in rather limited differences between the organizations in the data set.

Second, and related to the previous point, due to limited variance in the data set we eventually chose a data-driven method to calibrate our data set, rather than one that is theory-driven or based on deep knowledge of the cases. We argue that this is the best approach given the fact that it is fairly arbitrary to develop a theoretical argument for anchor points on data derived from an employee satisfaction survey. Hence, we chose to focus mainly on the differences between the cases by distinguishing between the best and worst performers in the data set. As a result, we cannot conclude what causal paths lead to success (commitment and job satisfaction) as an objective measure, but we can conclude what causal paths apply to the most successful cases.

Third, in order to account for the contradictions and paradoxical tensions associated with sustainable HRM [2,24,25], including financial and ecological sustainability targets for the analysis will improve the added value of the kind of case-based analyses as presented in this study.

Finally, this study relies on (secondary) cross-sectional data from the Dutch public sector. The outcomes of this empirical work cannot be generalized to other contexts, because of differences in the institutional context [77] that influence organizations' and HR managers' leeway in deciding on the HR practices to deploy [36]. Moreover, the cross-sectional nature of the data prohibits real causal interpretations [31]. Extending this type of research into other (institutional) contexts and including more cases in a longitudinal approach is needed to gain more knowledge on the generalizability of our findings. Additionally, extra-organizational factors, such as labor market characteristics or collective labor agreements and/or other institutional factors, may also result in more fine-grained solutions or causal paths to explain socially responsible HRM outcomes and sustainable organizational performance. Future work can be aimed at examining other alternative paths to success, and to get a better notion of the extent to which the synergistic effects and equifinality claims hold up in different contexts or not.

5.4. Practical Implications of the Study

For practice, the findings imply that it is important to explicitly align the use and implementation of sustainable HR practices. Alignment is required between the various possible HR practices to both prevent paradoxical tensions and to create synergistic effects between the various HR practices (horizontal fit). But alignment is also necessary between the HR practices and the context in which these are applied and the targeted goals (vertical fit). Our findings also show that there is not one best way to achieve the targeted goals, meaning that there is leeway for HR managers to combine HR practices in different ways; more roads lead to Rome. In this study, among Dutch public sector organizations, the best way to achieve high commitment and high levels of job satisfaction, these being two important employee outcomes in the sustainable HRM literature, is by using a mix of properly aligned ability-, motivation-, and opportunity-enhancing HR practices in combination with a transformational leadership style and acceptable levels of workload.

Appendix A. Analysis of Necessity

Table A1. Analysis of Necessary Conditions for High Commitment.

Conditions Tested:	Consistency	Coverage
Training and development	0.797865	0.836949
Fair compensation	0.803869	0.824213
Appraisal management	0.786524	0.750955
Job autonomy	0.739827	0.748313
Social support by coworkers	0.711141	0.680281
Voice	0.766511	0.756419
Absence of high workload	0.654436	0.630463
Transformational leadership	0.772515	0.790984

Table A2. Analysis of Necessary Conditions for Low Levels of Commitment.

Conditions Tested:	Consistency	Coverage
~Training and Development	0.844770	0.807129
~Fair compensation	0.828781	0.808843
~Appraisal management	0.739507	0.776224
~Job autonomy	0.751499	0.743083
~Social support by coworkers	0.666223	0.697837
~Voice	0.753498	0.763673
~Absence of high workload	0.616922	0.641274
~Transformational leadership	0.796136	0.777995

~ = absence of that condition.

Table A3. Analysis of Necessary Conditions for Job Satisfaction.

Conditions Tested:	Consistency	Coverage
Training and development	0.772668	0.822953
Fair compensation	0.802234	0.835157
Appraisal management	0.743758	0.721019
Job autonomy	0.764126	0.784750
Social support by coworkers	0.731275	0.710274
Voice	0.816032	0.817643
Absence of high workload	0.657687	0.643316
Transformational leadership	0.723390	0.752049

Table A4. Analysis of Necessary Conditions for Low Levels of Job Satisfaction.

Conditions Tested:	Consistency	Coverage
~Training and Development	0.828823	0.779758
~Fair compensation	0.836942	0.804291
~Appraisal management	0.703654	0.727273
~Job autonomy	0.784168	0.763505
~Social support by coworkers	0.692828	0.714585
~Voice	0.812585	0.810938
~Absence of high workload	0.624493	0.639197
~Transformational leadership	0.754398	0.725912

~ = absence of that condition.

Appendix B. Truth Tables

Table A5. Truth Table for Commitment.

Training and Development	Fair Compensation	Appraisal Management	Job Autonomy	Social Support	Voice	Absence of High Workload	Transform. Leadership	Number of Cases	Commitment	Cases	Raw Consistency	PRI Consistency	SYM Consistency
1	1	1	1	1	1	1	1	3	1	301, 313, 315	0.987069	0.985075	0.992481
1	1	1	1	1	1	0	1	1	1	253	0.982143	0.964286	0.964286
1	1	1	1	1	0	1	1	1	1	249	0.980392	0.972973	0.972973
1	1	1	1	0	1	0	0	1	1	189	0.978723	0.953125	0.953125
1	1	1	0	0	1	1	0	1	1	116	0.977099	0.958904	0.958904
1	0	0	1	1	1	0	0	1	1	82	0.960938	0.931507	0.931507
1	1	1	1	0	1	0	1	2	1	248, 303	0.928839	0.880503	0.979021
0	0	0	0	0	0	0	1	1	1	110	0.923611	0.717949	0.717948
0	1	0	1	1	1	0	1	1	0	208	0.820513	0.222222	0.25
0	0	0	0	1	0	1	0	1	0	139	0.628572	0.0602411	0.060241
0	1	0	0	0	0	1	0	1	0	154	0.586667	0.015873	0.015873
0	0	0	0	1	0	1	1	1	0	183	0.58427	0.0632911	0.0632911
1	0	0	1	0	0	0	0	1	0	309	0.524823	0.014706	0.014706
0	0	0	0	0	0	1	0	1	0	88	0.443223	0.00653595	0.00653595
0	0	0	1	0	0	0	0	1	0	114	0.341584	0.00746268	0.00746269
0	0	0	0	0	0	0	0	2	0	124, 145	0.301408	0.00401613	0.00401613

Table A6. Truth Table for Low Levels of Commitment (~Commitment).

Training and Development	Fair Compensation	Appraisal Management	Job Autonomy	Social Support	Voice	Absence of High Workload	Transform. Leadership	Number of Cases	~Commitment	Cases	Raw Consistency	PRI Consistency	SYM Consistency
0	0	0	0	0	0	0	0	2	1	124, 145	0.997183	0.995984	0.995984
0	0	0	0	0	0	1	0	1	1	88	0.996337	0.993464	0.993464
0	0	0	1	0	0	0	0	1	1	114	0.995049	0.992537	0.992537
0	1	0	0	0	0	1	0	1	1	154	0.993333	0.984127	0.984127
1	0	0	1	0	0	0	0	1	1	309	0.992908	0.985294	0.985294
0	0	0	0	1	0	1	0	1	1	139	0.976191	0.939759	0.939759
0	0	0	0	1	0	1	1	1	1	183	0.97191	0.936709	0.936709
0	1	0	1	1	1	0	1	1	1	208	0.923077	0.666667	0.75
0	0	0	0	0	0	0	1	1	0	110	0.805556	0.282051	0.282051
1	1	1	1	0	1	0	0	1	0	189	0.567376	0.046875	0.046875
1	1	1	1	1	1	0	1	1	0	253	0.517857	0.0357143	0.0357143
1	0	0	1	1	1	0	0	1	0	82	0.46875	0.0684932	0.0684931
1	1	1	0	0	1	1	0	1	0	116	0.465649	0.0410959	0.0410959
1	1	1	1	0	1	0	1	2	0	248, 303	0.41573	0.0188679	0.020979
1	1	1	1	1	0	1	1	1	0	249	0.294118	0.0270271	0.0270271
1	1	1	1	1	1	1	1	3	0	301, 313, 315	0.140086	0.00746269	0.00751881

Table A7. Truth Table for Job Satisfaction.

Training and Development	Fair Compensation	Appraisal Management	Job Autonomy	Social Support	Voice	Absence of High Workload	Transform. Leadership	Number of Cases	Job Satisfaction	Cases	Raw Consistency	PRI Consistency	SYM Consistency
1	1	1	1	1	1	1	1	3	1	301, 313, 315	0.989224	0.986911	0.992105
1	1	1	1	1	1	0	1	1	1	253	0.982143	0.953125	0.953125
1	1	1	0	0	1	1	0	1	1	116	0.977099	0.955224	0.955224
1	1	1	1	1	0	1	1	1	1	249	0.973856	0.954023	0.954023
0	1	0	1	1	1	0	1	1	1	208	0.965812	0.925926	0.925926
1	1	1	1	0	1	0	0	1	1	189	0.964539	0.878049	0.923077
1	0	0	1	1	1	0	0	1	1	82	0.960938	0.931507	0.931507
1	1	1	1	0	1	0	1	2	1	248, 303	0.955056	0.913669	0.976923
0	1	0	0	0	0	1	0	1	0	154	0.713333	0	0
1	0	0	1	0	0	0	0	1	0	309	0.595745	0	0
0	0	0	0	1	0	1	0	1	0	139	0.566667	0.235294	0.235294
0	0	0	0	1	0	1	1	1	0	183	0.505618	0.0329671	0.0329671
0	0	0	0	0	0	1	0	1	0	88	0.483516	0	0
0	0	0	0	0	0	0	1	1	0	110	0.479167	0	0
0	0	0	1	0	0	0	0	1	0	114	0.445545	0	0
0	0	0	0	0	0	0	0	2	0	124, 145	0.250704	0	0

Table A8. Truth Table for Low Levels of Job Satisfaction (~Job Satisfaction).

Training and Development	Fair Compensation	Appraisal Management	Job Autonomy	Social Support	Voice	Absence of High Workload	Transform. Leadership	Number of Cases	~Job Satisfaction	Cases	Raw Consistency	PRI Consistency	SYM Consistency
0	0	0	0	0	0	0	0	2	1	124, 145	1	1	1
1	0	0	1	0	0	0	0	1	1	309	1	1	1
0	0	0	0	0	0	1	0	1	1	88	1	1	1
0	0	0	0	0	0	0	1	1	1	110	1	1	1
0	1	0	0	0	0	1	0	1	1	154	0.986667	0.953488	1
0	0	0	1	0	0	0	0	1	1	114	0.985148	0.973214	1
0	0	0	0	1	0	1	1	1	1	183	0.983146	0.967033	0.967033
0	0	0	0	1	0	1	0	1	0	139	0.866667	0.764706	0.764706
1	1	1	1	0	1	0	0	1	0	189	0.730497	0.0731707	0.0769231
1	1	1	1	1	1	0	1	1	0	253	0.636905	0.046875	0.046875
0	1	0	1	1	1	0	1	1	0	208	0.57265	0.0740741	0.0740741
1	1	1	0	0	1	1	0	1	0	116	0.51145	0.0447761	0.0447761
1	1	1	1	0	1	0	1	2	0	248, 303	0.490637	0.0215827	0.0230769
1	0	0	1	1	1	0	0	1	0	82	0.46875	0.0684932	0.0684931
1	1	1	1	1	0	1	1	1	0	249	0.457516	0.0459771	0.0459771
1	1	1	1	1	1	1	1	3	0	301, 313, 315	0.18319	0.00785339	0.00789473

Appendix C. Analysis of Sufficiency

Table A9. Fiss Configuration Chart of Sufficiency Solutions for Low Commitment.

	Configurations			
	A	**B**	**C**	**D**
Training and development	Θ		ɵ	Θ
Fair compensation		ɵ		ɵ
Appraisal management	ɵ	ɵ	ɵ	ɵ
Job autonomy			ɵ	ɵ
Social support by coworkers	●	ɵ	ɵ	●
Voice		Θ	Θ	ɵ
Transformational leadership		Θ	Θ	
Absence of high workload	ɵ	ɵ		
N cases in solution	2	4	5	3
Consistency	0.85	1.00	1.00	0.98
Raw coverage	0.24	0.32	0.34	0.24
Unique coverage	0.06	0.08	0.10	0.07

Solution consistency: 0.94
Solution coverage: 0.65

●/•—Core/Contributory condition present; Θ/ɵ—Core/Contributory condition absent.

Table A10. Fiss Configuration Chart of Sufficiency Solutions for Low Job Satisfaction.

	Configurations		
	A	**B**	**C**
Training and development		ɵ	Θ
Fair compensation	ɵ		Θ
Appraisal management	Θ	Θ	Θ
Job Autonomy		ɵ	Θ
Social support by coworkers	Θ	Θ	
Voice	Θ	Θ	Θ
Transformational leadership	ɵ	ɵ	●
Absence of high workload	ɵ		
N cases in solution	4	5	2
Consistency	0.99	0.98	0.99
Raw coverage	0.33	0.34	0.21
Unique coverage	0.09	0.08	0.12

Solution consistency: 0.98
Solution coverage: 0.54

●/•—Core/Contributory condition present; Θ/ɵ—Core/Contributory condition absent.

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