



Article

High Performance Sustainable Work Practices: Scale Development and Validation

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Abstract: The study attempts to develop a high-performance sustainable work practices (HPSWP) scale. The multi-dimensional HPSWP scale with sustainability characteristics was validated using four different samples (Total N = 509). Exploratory and confirmatory factor analyses supported that the four dimensions (pro-environment, stakeholder compassion, ethics of care for well-being, and social consciousness) reflect different factors of the HPSWP construct. In alignment with the integrationist perspective of high-performance work practices, each of the dimensions of the HPSWP scale includes bundles of human resource management practices with sustainability characteristics. The results from the construct validity revealed significant differences in the dimensions of HPSWP between companies that focus equally and those companies which focus individually on profit, human/social and environment sustainability outcomes. The validated HPSWP scale using sustainability characteristics is the earliest study in the sustainable HRM literature. The HPSWP scale will support sustainability professionals with metrics to facilitate employee attitudes and behaviour at work to help organizations implement and achieve integrated financial, social/human, and environment sustainability outcomes. Various contributions to the sustainable HRM field are discussed.

Keywords: sustainable work practices; sustainable HRM; sustainability characteristics; sustainable work system; scale development



Citation: Mariappanadar, S. High Performance Sustainable Work Practices: Scale Development and Validation. *Sustainability* **2022**, *14*, 12682. https://doi.org/10.3390/ su141912682

Academic Editor: João Reis and Nuno Melão

Received: 19 September 2022 Accepted: 1 October 2022 Published: 5 October 2022

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1. Introduction

Human resources management (HRM) practices as work-related institutional arrangements will facilitate required human capital for the effective implementation of a sustainability business strategy [1]. HRM practices act as a sense-creating device for employees to understand their role and the firm's expectations to enable achieving a competitive advantage for the business [2]. Furthermore, the meaning of HRM practices is understood based on the characteristics of HRM practices, which reflect the underlying motives of organizations in shaping employee work attitudes and behaviours to implement sustainability strategies aligned to the organizational purpose [3,4]. For example, motivation, skill, and opportunity enhancing are the different characteristics of high-performance work practices proposed by the ability, motivation, and opportunities (AMO) theory in the strategic HRM literature which organizations use to achieve a competitive advantage.

There is evidence in the literature that the bundle of HRM practices with motivation enhancing characteristics is more effective compared to skill (Ability) and opportunity enhancing characteristics in improving organizational financial performance [5]. However, the motivation enhancing characteristics of high-performance work practices was found to simultaneously impose employee harm of work, which reduced employee quality of life as the social/human sustainability outcome of corporate sustainability [6]. This evidence suggests that the motivation enhancing characteristics of high-performance work practices has limited capability to facilitate human capital to achieve the integrated sustainability outcomes (i.e., improved economic performance and simultaneous minimization of the harm of work imposed on employees and the natural environment). Hence, this

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exploratory study attempts to validate a high-performance sustainable work practices (HPSWP) scale with sustainability characteristics for bundles of work practices that are aligned to a company's sustainability vision to achieve integrated corporate sustainability economic, social/human, and environment outcomes.

This exploratory study attempts to bridge the following gaps in the sustainable HRM implementation literature. First, the motivation, skills, and opportunity enhancing characteristics of high-performance work practices have limited relevance to be used in sustainable HRM to implement corporate sustainability. Hence, HRM practices must evolve with sustainability characteristics that are relevant to facilitate corporate sustainability performance. In this context, Stankevičiūtė and Savanevičienė [7] proposed eleven generic sustainability characteristics of HRM practices based on the paradox theory [8], negative externality of work theory [9], and stakeholder theory [10] from the sustainable HRM literature.

Mariappanadar [11] extended the Stankevičiūtė and Savanevičienė's [7] eleven generic characteristics with an additional set of sustainability characteristics for HPSWP using the synthesis effect of the sustainable HRM theoretical framework. That is, the specific sustainability characteristics of HPSWP highlight the underlying organizational motivation shaping employee work behaviours to implement sustainability business strategy to achieve integrated economic, social/human, and environment sustainability outcomes. However, currently there is no evidence available in the sustainable HRM literature that a valid measure exists for HPSWP with sustainability characteristics.

Second, sustainable HRM as an emerging field focuses on the pluralist perspective to achieve sustainability goals for stakeholders from a moral concern for organizations to behave responsibly [12]. However, Van Buren [12] suggested that future research must transform value-laden HRM practices to characteristics based HRM practices to facilitate empirical research to help support managers in designing sustainable HRM practices to implement sustainability strategy. Hence, an attempt is made in this study to bridge this gap in the literature.

The current four-stage multi-sample study (Figure 1) aims to bridge the gaps in the sustainable HRM literature by initially developing three reflective sustainability characteristics dimensions of HPSWP drawing from previous studies by Stankevičiūtė and Savanevičienė's [7] and Mariappanadar [11]. Initially, content adequacy of the items developed was tested with sample 1 and followed by exploratory factor analysis (EFA) using sample 2 to establish the reflective sustainability characteristics dimensions of HPSWP. To test convergent validity of the HPSWP scale, sample 3 was used. To test construct validity of the proposed HPSWP scale, sample 4 was used to conduct a nomological net study by using known-groups comparison; that is, empirically exploring the differences in sustainability characteristics dimensions of HPSWP between companies that value equally, and those that do not focus equally, in achieving all three corporate sustainability outcomes (economic, social/human, and environment) as part of the company vision.

The study initially makes contribution to extend sustainable HRM, high performance work practices, and corporate sustainability implementation literatures by empirically establishing a valid scale for HPSWP based on the sense-creating perspective of HRM practices [2,4]. Secondly, the study findings will facilitate value-laden HRM practices to transform into evidence-based sustainability characteristics to effectively implement an organization's vision on integrated corporate sustainability outcomes to extend the theoretical framework of synthesis effect of sustainable HRM practices. Finally, findings from the study will aid managers to design evidence-based HPWSP using sustainability characteristics to facilitate the required human capital to operationalize holistic corporate sustainability business strategy.

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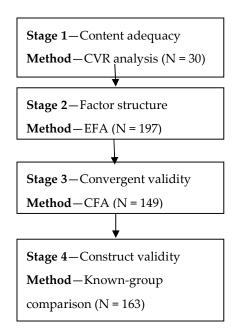


Figure 1. Graphic illustration of four-stage study and methods used to validate HPSWP questionnaire.

2. Literature Review

2.1. Sustainable HRM and Characteristics

There are different sustainable HRM definitions [8,13–17] in the literature which explains the role of HRM practices in achieving the individual aspects of sustainability outcomes. Hence, a holistic sustainable HRM definition was used in this article to engage human resources (HR) to achieve integrated sustainability outcomes. The holistic sustainable HRM definition explains that sustainable HRM focus on implementing systems, policies, and practices with work characteristics to engage employees to synthesize the seemingly diverse sustainability economic, environment, and human/social wellbeing out-comes [11].

In the 21st century, sustainability strategy has become a requirement for conducting business to gain social license [18]. To implement corporate business strategy, organizations need human capital with sustainability characteristics from the resource-based theoretical framework [19], engaging employees to achieve economic, social/human, and environment corporate sustainability outcomes. Stankevičiūtė and Savanevičienė's [7] eleven generic characteristics of sustainable HRM includes long-term orientation, care of employees, care of environment, profitability, employee participation and social dialogue, employee development, external partnership, flexibility, compliance beyond labor regulations, employee cooperation, fairness, and equality. These eleven generic characteristics of sustainable HRM are theoretically explained as an organizational level system for implementing corporate sustainability.

2.2. High Performance Sustainable Work Practices (HPSWP)

In the high-performance work practices, literature evidence exists based on the theory of configurational perspective that a set of aligned HRM practices has better potential in predicting organizational outcomes than an individual HRM practice [20]. Furthermore, compared to the silo HRM practice, the complementary effects of a set of aligned HRM practices have significantly higher predictability in organizational performance [5,21]. Hence, in this study, to validate sustainability characteristics of HPSWP, the complementary effects of HRM practices, such as employee selection, training and development, performance appraisal, job design, individual/group incentives, are identified from the literature and used in developing items for the scale.

The literature on strategic HRM, sustainable HRM and Green HRM have indicated evidence of work practices enhancing organizational and natural environment performances,

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and reducing employee harm of work [6,21–23]. Furthermore, work practices such as employee selection, training, and rewards contribute to improved organizational financial performance [21,22,24,25]. Workplace wellness [11] and job design [26] are the work practices identified to minimize the negative effects or employee harm of work imposed by organizational practices to enhance the social/human sustainability outcome. Empirical studies revealed that employee selection and training improved engagement in the environmental management system (EMS) for environment sustainability outcomes [22,27].

In the strategic HRM literature based on AMO theory, there is evidence for motivation, skills, and opportunity enhancing characteristics of a set of high-performance work practices to gain competitive advantage for businesses [25,28]. Similar to the characteristics of high-performance work practices, it is important to develop bundles of HPSWP with specific sustainability characteristics to motivate employees to simultaneously achieve integrated economic, social/human, and environment sustainability outcomes. Thus, this study aims to extend the generic sustainable HRM characteristics [7] with specific sustainability characteristics for bundles of HPSWP to implement corporate sustainability business strategy.

Mariappanadar [11] theoretically proposed an internally aligned bundles of work practices with specific sustainability characteristics for the sustainable HRM system to be used by organizations to implement a sustainability business strategy. Pro-financial, social, and environment characteristics are the sustainability characteristics suggested for bundles of work practices to enhance employee motivation and engagement to accomplish integrated sustainability outcomes. In this study, the HPSWP scale was developed using these three sets of sustainability characteristics for bundles of work practices that are relevant to implementing sustainability business strategy.

2.2.1. Pro-Financial Characteristics of HPSWP

Pro-financial characteristics of HPSWP include social consciousness as part of employee knowledge, skills, and abilities to enhance financial performance of organizations [29,30]. Social consciousness is an institutional social responsibility value of the organization that focuses on facilitating social wealth through HRM practices [31]. It is indicated in the social ethics literature that organizations are largely dependent upon HRM policies and practices to generate social wealth through establishing partnership with different stakeholders to achieve improved financial performance. Hence, the social consciousness characteristics of HPSWP highlights the organizational expectations of employees demonstrating compassion towards key stakeholders to enhance the long-term value of the organization.

Stakeholder compassion characteristics [31] of HPSWP reflects the behavioural expectations of organizations in employees exhibiting caring responsibility for stakeholders (i.e., customers and environment) to improve the economic value of the organization. The employee competency of compassion in the organizational decision making is effective in developing and maintaining relationships with stakeholders (i.e., shareholders, customers, supply chain, employees, etc.) to mutually benefit organizations as well as key stakeholders. Furthermore, research evidence suggests that employees with stakeholder compassion in management decisions enhance economic gains for organizations even in a hyper competitive market [32]. Hence, the social consciousness and stakeholder compassion are the relevant characteristics of sustainable work practices to be considered for incorporation to employee selection, job design, and performance management practices to shape employee sustainability behaviours facilitating improved organizational financial performance.

2.2.2. Prosocial Characteristic of HPSWP

The theory of negative externality of HRM indicates that the negative effects or the harm of work imposed by work practices on employees and their families which cannot be avoided in a free-market economy when an organization aims to pursue improved profitability [7,13]. Thus, a low level of employee harm of work is suggested for occupa-

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tional health and well-being practices in alignment with the human/social sustainability outcome [11]. Organizations have corporate social responsibilities to control and manage the simultaneous negative side effects or employee harm of work while pursuing economic gains for organizations. Hence, ethics of care as the sustainability characteristics for HPSWP will help organizations to maintain the low level of employee harm of work to improve social sustainability outcomes while pursuing increased profitability. The ethics of care in the sustainable HRM literature explains the ethical choices organizations encounter while simultaneously pursuing for profit and to reduce the harm of work on the stakeholders (e.g., employees, their families, and society) to have congruous relationships between the organization and key stakeholders [33].

The task-based job design, which currently dominates in workplaces, facilitates managers to enhance the organization's interest by ignoring employee harm of work imposed by organizational practices. In the literature, evidence suggests that time demand and workload focused job design increased benefits to organizations through efficiency but simultaneously imposed negative effects or employee health and social harm of work [34,35]. The relational job design framework [26] for prosocial characteristics highlights the expectation of organizations on managers to work with employees in good faith to re-design their jobs with the aim to reduce the harm of work and therefore to improve employee health and family well-being [36]. Hence, ethics of care based on the relational job design as the prosocial sustainability characteristics of a bundle of work practices will enhance the human/social sustainability outcome.

2.2.3. Pro-Environment Characteristics of HPSWP

In the environment management literature, the anthropocentric perspective highlights the role of corporate economic activities in the degradation of the natural ecosystem [37]. Anthropocentrism is about the belief that human beings have the moral right to use and exploit the natural environment for their benefits [38]. The ecocentric perspective, an alternative to the anthropocentric perspective of EMS, emphasises the need for organizations' social responsibility to preserve and regenerate the living and non-living facets of the natural ecosystem in EMS [33].

The pro-environment characteristics, such as preserving and regenerating the natural environment, incorporated in a set of work practices will facilitate individual employee level competencies and the organization level competencies on EMS to minimize the ecological footprint [11,39]. Use of pro-environment characteristics in the HRM practices to address an organization's natural environmental issues caused by the anthropocentric and/or ecocentric perspective-based EMS will facilitate organizations to gain social legitimacy to operate business in the society. Hence, the pro-environment characteristics of a bundle of HRM practices (i.e., selection, performance management, incentives, etc.) are included in the HPSWP scale to address corporate economic activities related to environmental degradation [39,40].

3. HPSWP Scale Validation

Four different stages were used in validating the proposed HPSWP scale using the theoretical framework of the deductive method of scale development [41]. The deductive method theoretical framework highlights several iterative processes that are used in facilitating good scale construction. That is, starting with identifying scale items relating to HRM practices (i.e., recruitment and selection, training and development, performance management, job design, individual/group incentives) with pro-financial, social, and environment sustainability characteristics in stage 1 of the study. Following the development of scale items, to establish the appropriateness of scale items with sustainability characteristics for the different HRM practices, the content adequacy technique was used. In stage 2 of the study, a new sample of data was collected to determine the underlying structure of sustainability characteristics factors of the retained HPSWP scale items using exploratory factor analysis (EFA).

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A new sample (stage 3) was used to test convergent validity of the HPSWP dimensions using confirmatory factor analysis. Finally, in stage 4, a nomological net study [42] was conducted for construct validity using sample 4. In the nomological net study, an attempt is made to predict the difference in likely use of HPSWP to implement corporate business strategy between companies that have a strategic focus on synthesizing economic, social/human, and environment outcomes and those companies that focus on siloed or individual sustainability outcome.

3.1. Stage 1—Item Generation

To develop items of work practices with sustainability characteristics, 23 items relating to HRM practices to achieve each of the economic, social/human, and environment sustainability outcomes were identified from the literature. That is, the scale items on work practices includes employee selection, training and development, performance management, job design, and individual/group incentives which were developed with the sustainability characteristics. Eleven items were developed on the pro-financial sustainability characteristics (social consciousness and stakeholder compassion) for a bundle of HRM practices (e.g., employee selection, training and development, performance management) that facilitate improved financial organizational performance. Six items were developed with the ethics of care and relational job design characteristics for a set of HRM practices. The ethics of care and relational job design are the prosocial sustainability characteristics that focus on reducing employees' harm of work caused by organizational practices to enhance positive health. Six items were developed with pro-environment characteristics (environmental altruism, conservation, maintaining, and preservation) for a bundle of HRM practices (e.g., training, job design, etc.) to improve an organization's natural environmental management performances.

3.1.1. Method—Sample 1

The proposed new HPSWP questionnaire was circulated to sample 1 of 20 out of each HR academic staff and HR manager in Australia. A total of 30 completed questionnaires were completed and returned (75%), of those returned it includes academics (57%), women (61%), and age group range between 35 and 45 years (61%). It is indicated by Schriesheim and colleagues that it is a requirement for the content adequacy stage participants to have the subject expertise to judge the relevance of the proposed items to the indicated sustainability characteristics for work practices [43]. Hence, the strategy used to identify participants who completed and returned the HPSWP questionnaire in stage 1 satisfied the requirement of subject expertise to check the appropriateness of the scale items relating to the provided definitions of sustainability characteristics for each of the HRM practices.

3.1.2. Procedure

As indicated by Schriesheim and colleagues for an effective conduct of content adequacy test [43], the sample of participants were instructed to indicate the relevance of each of the 23 items to the three sustainability characteristics of the HPSWP scale. The definition for each sustainability characteristics dimension of the HPSWP scale was included in the instruction section of the questionnaire. The sustainability characteristics factors of the HPSWP construct are pro-financial, prosocial, and pro-environment. Participants were instructed to indicate the appropriateness of each of the items to the three columns (i.e., three sustainability characteristics dimensions of the HPSWP construct) according to the definitions provided by using the three-point ratings (irrelevant, unsure, and relevant).

3.1.3. Analyses and Results

Lawshe's [44] content validity ratio (CVR) is commonly used to empirically test content validity of a new scale [45], and hence this approach was used in this study. The CVR is an item statistic used in the content validity to accept or reject items from the initial pool of item. According to Lawshe [44], to accept a scale item for a range of participants between

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26 and 30, the calculated CVR must be more than 0.33. Hence, two items were removed from the scale because the CVR for those items were below 0.33 (see Table 1).

Table 1. Items removed from the HPSWP scale.

ANDOMER CL. and all the Co. I. I. (P I)	EFA (N = 197)				
HPSWPs Characteristics Scale Items (Removed)	F1	F2	F3	F4	
1. ^ Employee voluntary job-related performance to preserve ecosystem are linked to incentives.	0.679	-0.023	0.057	0.529	
2. ^ Employee Assistance Program (EAP) is extended to employees to cope with the unintended negative effects of work on employee psychological health.	0.454	0.418	0.422	-0.137	
3. ^ Training employees to accept and manage tensions from competing financial, social/human, and environment outcome demands while performing in the job/roles.	0.207	0.584	0.430	0.231	
4. ^ Performance results of employees in developing and maintaining authentic relationships with internal and external stakeholders in their jobs/roles are evaluated.	0.074	0.540	0.155	0.476	
5. ^ Employee training focus on developing skills and attitudes to consider and manage stakeholder interests.	0.146	0.437	0.682	-0.037	
6. În employee recruitment and selection competencies in dealing with tensions from competing financial, social/human, and environment outcome demands to perform in the job/roles are examined.	0.282	0.429	0.662	0.116	
7. ^ Job design Jobs and roles enable employees to have positive impacts on stakeholders' benefits.	0.149	0.405	0.472	0.262	
Items removed after CVR analysis (N = 30)					
8. * Employee discretionary job related performance to preserve ecosystem are linked					
to incentives.					
9. * Supervisors discuss about work-family interference issues with employees during performance appraisal.					

^{*} CVR less than 0.33; ^ Factor loadings failed to discriminate.

3.2. *Stage* 2—*Structure of the HPSWP Construct*

Exploratory factor analysis (EFA) was used in this stage to reduce the scale items into factors for the HPSWP scale based on Conway and Huffcutt's [46] review of EFA usage in identifying valid factor structure.

3.2.1. Method—Sample 2

A total of 300 full-time employees from different businesses in Australia were contacted and sixty-six percent of those contacted accepted to participate in the study (Sample 2 N = 197). Sample 2 includes male (67%) and employee with more than 10 years of work experience (71%). Participants represent industries such as finance and professional services (37%), mining and resources (16%), manufacturing (12%), and the remaining from the "other" industries. Overall, 29 percent of respondents identified working with HRM department, 27 percent with marketing/sales, 15 percent each with corporate and production, and the remaining with "other" departments.

3.2.2. Measure and Procedure

The survey questionnaire includes two parts. Part 1 includes instruction to participants that participation in the study is voluntary and anonymous, and background information. Part 2 includes 21 items that were retained from the stage 1 of the study. Participants were instructed to respond to each of the items using a 7-point Likert rating scale (1-strongly disagree to 7-strongly agree). An explanatory letter from the management encouraging employees to voluntarily participate in the study was sent to all fulltime employees in the chosen companies.

3.2.3. Analysis and Results

EFA was used to analyse the data collected (IBM SPSS 27) to establish reduced factor structure of the HPSWP scale by applying the principal axis factoring model with oblique

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rotation. To achieve effective outcomes in developing a new scale using EFA, it is important that EFA includes common factor model, multiple number-of-criteria, and use of oblique rotation [46]. Hence, these EFA criteria were used to establish the relevant factor structure for the HPSWP scale. Factors with eigenvalues higher than 1.0 are retained using the Kaiser's criterion. After conducting the first EFA, seven items were removed from the HPSWP scale because these items failed to differentiate between the factors (see Table 1). The second EFA revealed four distinct factor structure with loadings of items above 0.60 (Table 2). The eigenvalue for the four identified factors were 5.0, 1.8, 1.3 and 1.0, respectively, and the total variance explained by these factors was 65.4 percent.

Table 2. High performance sustainable work practices (HPSWP) questionnaire validation.

	EFA (N = 197)							
Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 1	Factor 2	Factor 3	Factor 4
1. Green training focus on developing employee knowledge, skills, and abilities to preserve ecosystem.	0.809	-	-	0.333	0.769			
2. Green competencies to preserve ecosystem are considered in employee recruitment and selection.	0.802	0.255	-	-	0.855			
3. Green knowledge, skills and abilities used in their job tasks/roles to preserve ecosystem are evaluated.	0.776	0.136	0.126	-	0.966			
4. Organisational support is provided to promote employee voluntary job/role behaviours to preserve ecosystem.	0.680	0.125	0.382	-	0.611			
5. Employee training focus on developing skills and attitudes to consider and manage stakeholder interests.	0.117	0.780	-	0.145		0.698		
6. Employee's performance addressing tensions while working on tasks/roles relating to competing financial, social/human, and environment outcome demands are evaluated.	0.335	0.681	-	-		0.660		
7. Jobs and roles are designed to empower employees to make decisions to benefit both the organization and stakeholders.	-	0.635	0.382	0.154		0.480		
8. Creditable relationships with internal and external stakeholders in their jobs/roles are rewarded.	-	0.617	0.277	0.256		0.558		
9. Training to identify work related factors (i.e., work overload, time demand, etc.,) that negatively impact on employee occupational health.	0.316	0.264	0.602	0.166			0.648	
10. Non-work related activities (e.g., time for regular physical exercise, work-family balance, etc.) are discussed by supervisors during performance appraisal so as to improve employees' wellbeing.	0.191	0.192	0.831	-			0.522	

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Table 2. Cont.

·	EFA $(N = 197)$							
Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 1	Factor 2	Factor 3	Factor 4
11. Training to identify work related factors (i.e., work overload, time demand, etc.,) that increase work-family interferences among employees.	0.212	0.255	0.775	0.116			0.734	
12. Organisational support to re-design jobs and roles to provide opportunities for employees to regularly involve in non-work related activities to improve wellbeing.	0.193	-	0.228	0.797				0.802
13. In employee selection competencies to form relationships with internal (employees) and external stakeholders (customers, supply chain, environmental groups, etc.,) in business decision making are considered.	0.251	0.346	-	0.656				0.401
14. Jobs and roles are designed to provide opportunities for employees to interact with stakeholders.	-0.121	0.405	-	0.642				0.501

Factor 1—Pro-environment; Factor 2—Stakeholder compassion; Factor 3—Ethics of care for wellbeing; Factor 4—Social consciousness.

Conway and Huffcutt [46] have suggested that to achieve optimal factor extraction, it is important to conduct additional analyses after EFA. Hence, to substantiate the four-factor extractions based on the Kaiser's criterion on eigen values over and above 1, the Velicer's MAP and parallel analyses were conducted. Both these two additional analyses were conducted using O'Connor's [47] suggestions for IBM SPSS 27. The Velicer's MAP analysis revealed eigen values of 4.21, 2.16, 1.43 and 1.28 for the first four factors, respectively, using the actual data, and the total variance explained is 64.6 percent. The analysis of random data using parallel analysis revealed eigen values 1.49, 1.41, 1.32 and 1.29 for the first four factors, respectively. The additional two analyses revealed that the four eigen values from the Velicer's MAP analysis are higher compared to the corresponding first four 95th percentile (and mean) eigen values from the parallel analysis. These additional analyses findings support the four-factor structure for the HPSWP scale which was revealed by the principle axis factoring model of EFA (see Figure 2).

The HPSWP scale items for Factor 1 to Factor 4 reflect the definition of sustainability characteristics dimensions of the scale. The findings reveal that Factor 1 items reflect the sustainability characteristics of environment conservation, maintaining, and preservation for the bundle of employee selection, training, performance evaluation and organizational support practices. The identified HRM practices in Factor 1 are aligned with the study findings in the literature which show that to facilitate engagement of employees in EMS, it is important for organizations to focus on employee selection and training work practices [22,27]. Furthermore, the HPSWP items in this factor extends the literature by highlighting the pro-environment characteristics of these HRM practices. Hence, this dimension of the HPSWP construct is named as the 'pro-environment' sustainability characteristics for the set of HRM practices.

The items for Factor-2 indicate the 'stakeholder compassion' sustainability characteristics for employee training, performance management, job design, and rewards as part of the bundle of work practices. The identified items in Factor 2 are aligned to a previous study where it was indicated that training of new employees must focus on acknowledging and considering sustainability-related mutual interests of the organization's value (i.e., profit) and key stakeholders' materiality expectations in management decision-making [32]. Furthermore, rewarding employee competency of stakeholder compassion in organiza-

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tional decision making based on performance management found to facilitate forming transparent and reciprocal relationships with relevant civil societies for the mutual benefit of organisations and key stakeholders.

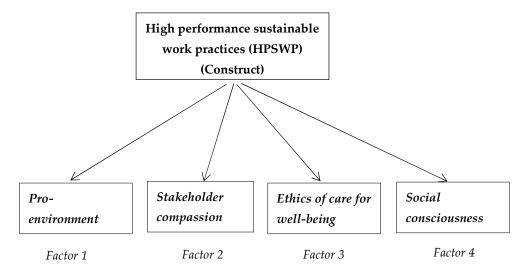


Figure 2. A multidimensional reflective high performance sustainable work practices (HPSWP) scale based on the sustainability characteristics of HRM practices perspective.

The Factor 3 items explain the 'ethics of care for wellbeing' sustainability characteristics for employee training, relational job design, and performance management as HRM practices to minimize the employee harm of work imposed by organizational practices on employees and their families. The ethics of care for wellbeing and the relational job design are the sustainability characteristics that are aligned to the theory of synthesis effects of sustainable HRM practices [48,49] which highlights the ethical choices organizations face when seeking to maximize organizational value (i.e., profit) and simultaneously minimize employee harm of work fostered by organizational practices. Hence, the items for Factor 3 reflect ethics of care for wellbeing based on the relational job design as sustainability characteristics of a bundle of HRM practices to help managers and employees to jointly work together in re-designing employees' job to maintain low levels of employee harm of work to enhance social/human sustainability outcome [50].

Finally, the items for Factor 4 reflect the 'social consciousness' sustainability characteristics for the set of job design and employee selection work practices. The identified HRM practices in Factor 4 are aligned with the study findings in the literature to improve an organization's financial performance. For example, Pandey and Gupta [31] have indicated that employee selection based on a high level of social consciousness as employee competencies (KSA) enhance organizational financial performance. Furthermore, Pedersen [51] explains that the social consciousness is an important employee competency which are facilitate by work practices for the successful implementation of a corporate sustainability business strategy to mitigate financial risks. Furthermore, organizations should empower employees with social consciousness through appropriate job design to have structured dialogue with stakeholders to identify material sustainability issues to avoid CSR blind spots and to capture the changing societal sustainability expectations.

3.3. Stage 3—Convergent Validity of the HPSWP Construct

The stage 3 of the study attempts to test multiple model fits using confirmatory factor analysis (CFA) based on the suggestions provided by MacCallum et al., [52] to establish the first-order reflective factors fit for the HPSWP construct.

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3.3.1. Method—Sample 3

HPSWP questionnaire (14 items) which was validated in stage 2 was used in stage 3. A total of 200 full-time employees from various companies in Australia were contacted for stage 3 of the study, and 149 completed surveys were returned (60%). The new stage 3 sample includes male (69%), less than 50 years of age (54%), representing health care (22%), service (17%), manufacturing (54%), and other (17%) industries.

3.3.2. Results

CFA was conducted using AMOS 27 to test the four models fit indices for the new set of data (N = 149) from stage 3 of the study. CFA-based factor loadings for scale items reflecting four factors are shown in Table 2. The four factors of the HPSWP scale loaded well on their respective dimensions of the four first-order model. The results for the single underlying model (M1), (χ^2 (72, N = 149) = 174.57, p > 0.10, CFI = 0.83; RMSEA = 0.12, and the four-factor orthogonal modal (M2) (χ^2 (77, N = 149) = 202.74, p > 0.11, CFI = 0.81; RMSEA = 0.26) failed to fit well with the data from stage 3 of the study. The oblique four-factor model (M3) for the scale (χ^2 (65, N = 149) = 93.09, p < 0.01, CFI = 0.96; RMSEA = 0.06), and the second-order model (M4) of the four first-order reflective dimensions of the scale (χ^2 (68, N = 149) = 97.97, p < 0.01, CFI = 0.95; RMSEA = 0.06) suggested a significant fit for the data. MacCallum et al. [52] suggested that for a good model fit, the RMSEA value must range between 0.05 and 0.06.

3.4. Stage-4—Nomological Net Study

3.4.1. Method—Sample 4

The HPSWP scale with 14 items was used in stage 4, which is similar to the questionnaire used in stage 2 and stage 3 of the study. In stage 4 of the study, 250 full-time employees from various companies in Australia were contacted, and 163 completed surveys were returned (60%). The new sample includes respondents from publicly listed companies (68%), the finance and professional services industry (41%), currently operating in a strategic leadership role (46%), and respondents' companies that publish an annual sustainability report (48%). Forty-nine percent of the sample have indicated that their companies focus equally on profit and environment as part of corporate sustainability business strategy, and fifty-two percent of companies focus equally on profit and environment in their business strategy. Finally, forty-nine per-cent of companies focus equally on profit/economic, social/human, and environment as part of corporate sustainability business strategy.

3.4.2. Reliability

The reliability coefficient alpha for the four HPSWP factors was tested using a new sample (N = 163). The coefficient alpha for the pro-environment characteristics was 0.81; the stakeholder compassion characteristics was 0.71; ethics of care for well-being was 0.72; and the social consciousness characteristics was 0.74. Nunnally [53] indicated that while developing a new scale, the coefficient alpha of above 0.70 is acceptable. Hence, the coefficient alpha for the four factors of the HPSWP scale were above the acceptance level of 0.70 indicating good internal consistency.

3.4.3. Construct Validity

The known-groups comparisons were performed to examine the HPSWP questionnaire construct validity with a nomological net study based on MacKenzie, Podsakoff, and Podsakoff [54] suggestion. That is, in the management field, the nomological net study is often used to establish construct validity of questionnaires [54]. The known-groups for comparisons in this study is proposed based on the corporate sustainability and sustainable HRM literature. Corporate sustainability as a business strategy known as the triple bottom concept [55] is used by organizations to achieve integrated sustainability outcomes (economic, social/human, and environment). The Global Reporting Initiative (GRI) for Sustainability 2022, 14, 12682 12 of 16

> sustainability [56] has provided standards and guidelines for organizations to develop and implement a sustainability business strategy to achieve integrated rather than individualized sustainability outcomes for stakeholders. However, organizations tend to focus on the business case by attempting to achieve either environment or social/human outcome along with the economic outcome, but not integrate all the three corporate sustainability outcomes [57].

> In the literature, the theoretical synthesis effects framework explains the role of sustainable work practices to motivate employees to consider synthesizing seemingly incompatible corporate sustainability outcomes in their sustainability related management decision making [11]. In the paradox literature, synthesis is a strategy used in management decision making to handle the tension or dilemma created by a paradox situation in the sustainability-related organizational contexts [8,58]. An example of a paradox situation in the sustainable HRM literature is the use of work intensification to improve financial performance for organizations although work intensification simultaneously compromises employee wellbeing [59].

> The theoretical synthesis effects of sustainable HRM framework used in this article to highlight the importance of reducing the employee harm of work imposed by organizational practices, and also reducing an organization's ecological footprint while simultaneously attempting to improve financial performance. Furthermore, the synthesis effects of sustainable HRM framework highlights that the three economic, social/human, and environment sustainability outcomes are not incompatible, but augment each other, in achieving holistic sustainability outcomes. Hence, in this study to establish construct validity of the questionnaire, an attempt is made to test the differences on the four HP-SWP dimensions between the two known groups of companies that value 'equally', and those that 'does not focus equally', in achieving all three corporate sustainability outcomes (profit/economic, social/human, and environment) as part of business strategy.

> Table 3 shows the results of MANOVA as part of the nomological net study (N = 163). The findings indicate a significant difference in the dimensions of HPSWP between companies that focus equally and those companies that do not focus equally on sustainability outcomes of profit/economic, human/social and environment as part of corporate business strategy (Pillai's Trace = 0.14; F (4, 118) = 4.60; p < 0.001). Furthermore, the findings revealed significant differences between the two known groups in all the dimensions of HPSWP (pro-environment, stakeholder compassion, ethics of care for well-being, and social consciousness).

> **Table 3.** Mean, Standard Deviation, F Value of High-Performance Sustainable Work Practices (HPSWP).

		<u> </u>		
		HPSWP Cl	naracteristics	
Company's Strategic Focus of Corporate Sustainability Business Strategy	Pro-Environment	Stakeholder Compassion	Ethics of Care for Well-Being	Social Consciousness

		HF5WF Characteristics								
Company's Strategic Focus of Corporate Sustainability Business Strategy		Pro-Envi	Stakeholder Compassion		Ethics of Care for Well-Being		Social Consciousness			
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Focus equally on profit, human/social and natural environment outcomes	80	1.62	0.62	2.20	0.44	2.18	0.50	2.34	0.54	
Focus individually on profit, human/social and natural environment outcomes	83	1.37	0.79	2.09	0.54	1.93	0.45	2.11	0.55	
F(1, 161)		3.57 *		3.16 *		3.08 *		5.58 **		

^{*} p < 0.05; ** p < 0.01; N = 163.

The means of study variables in Table 3 highlight that companies that focus equally on profit, human/social, and environment outcomes as part of business strategy are more often likely to indicate the relevance of the four sustainability characteristics of HPSWP in implementing corporate sustainability business strategy. The findings reveal that between the two known groups, the most significant difference (F = 5.57; p < 0.01) is in the social Sustainability **2022**, 14, 12682

consciousness dimension of the HPSWP scale. This is followed by the HPSWP scale dimension of pro-environment (F = 3.57; p < 0.05), ethics of care for well-being (F = 3.08; p < 0.05), and stakeholder compassion (F = 1.17; p < 0.05). The findings reveal that the HPSWP scale is a useful questionnaire to measure internally congruent bundles of work practices with sustainability characteristics in alignment with the pro- financial, social, and environmental theoretical perspectives [6,11].

4. Discussion and Conclusions

The aim of the study is to validate a new high performance sustainable work practices (HPSWP) scale with relevant characteristics for sustainable HRM that can help organizations implement corporate sustainability business strategy for the common good. The four sustainability characteristics dimensions for the HPSWP scale was proposed using profinancial, social, and environmental theoretical perspectives [11]. Exploratory and confirmatory factor analyses supported the structure of the HPSWP with four dimensions.

CFA supported the four factor solutions for the HPSWP scale indicating that these factors simultaneously tap different pro-environment, stakeholder compassion, ethics of care for well-being, and social consciousness characteristics of bundle of HRM practices or HRM system. This empirically validated HPSWP measure is aligned with the sense-creating perspective of HRM practices [2,4], which highlights the underlying organizational motives for using work practices to shape employee behaviour and attitudes at work to implement sustainability as a business strategy. Furthermore, the dimensions of HPSWP scale are supported by the integrationist perspective [60], which highlights that the internally consistent bundles of practices identified in the scale have mutually reinforcing characteristics which organizations will benefit by incorporating these practices to implement corporate sustainability business strategy. Hence, organizations focusing on corporate sustainability business strategy must consider incorporating the sustainability characteristics of HPSWP system of practices, such as recruitment and selection, training and development, performance management, job design, individual/group incentives, to achieve integrated sustainability outcomes.

The nomological net study findings revealed that the HPSWP scale as an observable fact reveals itself in internally consistent bundle of work practices with sustainability characteristics. The study also revealed that the four bundles of sustainability characteristics of HPSWP will be able to support organizations to achieve integrated corporate sustainability outcomes. This finding extends the synthesis effect theoretical perspective [33,61] to enhance our understanding of the role of HPSWP system with sustainability characteristics to facilitate employee attitudes and behaviour at work to help businesses to achieve integrated sustainability outcomes. Furthermore, the study achieved to transform the value-laden characteristics of sustainable HRM from the literature [7,11,12] with empirical evidence for a HPSWP measure.

Discussing about implications for future research, firstly, the new HPSWP measure will extend the sustainable HRM literature by encouraging future research to explore the sense-making perspective of HRM practices [2,4] on the relationship between HPSWP and organizational sustainability outcomes. For example, future research can explore the relationship between HPSWP and environment management [22], employee health and harm of work [62], family well-being [63], entity value [64].

Secondly, future studies should attempt to explore cross-cultural understanding of HPSWP based on Bae and Rowley's framework [65] on universal and culturally divergent practices to facilitate multi-national enterprises to achieve integrated sustainability outcomes in their business operations across national borders. Finally, discussing about practical relevance, HPSWP scale based metrics will facilitate sustainability related professionals to change/develop appropriately the existing work systems and policies to implement corporate sustainability business strategy.

The study findings presented have some limitations. Firstly, although organizations from different industries attempt to align their organization sustainability values based on

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Global Reporting Initiatives (GRI) for sustainability, Sustainability Accounting Standards Board (SASB) and other international standards, the organizational motivation to adopt the standards may vary significantly. Hence, future studies should explore the differences in HPSWP between organizations operating across different industries. Secondly, the HPSWP scale is developed using the theoretical notion of characteristics of sustainable HRM [7,11] and the theory of synthesis effect [33,61] to implement business strategy to achieve holistic sustainability outcomes. However, using different theoretical perspectives of sustainability characteristics would have led to having varied scale items and factor structure. This study reveals that the HPSWP scale has a multi-dimensional structure with one underlying phenomenon to reflect the structure of factors in accordance with the synthesis effect of sustainable HRM theoretical perspective.

Thirdly, this study is conducted in Australia and hence to improve the validity of the HPSWP scale in other geographical regions, future studies can explore cross-cultural understanding of these factors. Finally, a self-report measure was used in this study, suggesting that the common method variance may have contributed to increased bias in the correlations among variables. However, not using a self-report measure would have created an enormous challenge for this study to use alternate valid non-subjective measure to establish the factor structure for the HPSWPs scale.

In conclusion, to extend the sustainable HRM literature in this study, a new measure on HPSWP was developed based on the value-laden theoretical perspective for HRM practices with sustainability characteristics. The currently validated HPSWP scale can provide support to the theoretical perspectives of integrationist and the synthesis effects of sustainable HRM [60], with for the first time, an empirically developed measure of internally consistent bundle of work practices with sustainability characteristics. Thus, research in future can consider establishing empirical evidence on the relationship between pro-environment, stakeholder compassion, ethics of care for well-being, and social consciousness characteristics dimensions of HPSWP and corporate sustainability performance for integrated economic, social/human, and environment outcomes. Empirical evidence on the link between HPSWP and organization sustainability performance will facilitate sustainable HRM as an emerging field to gain traction to help organizations implement corporate sustainability business strategy for shared value.

Funding: This research received no external funding.

Institutional Review Board Statement: This project has been approved by Australian Catholic University Ethics committee: 2102-143V.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study. The information letter to participants indicated that "participants acceptance to complete the questionnaire is treated as informed consent".

Data Availability Statement: Data for the study will be provided on request.

Conflicts of Interest: The author declares no conflict of interest.

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