



## Sustainable Human Resource Management (HRM) Practices for Boosting the Worker Productivity in Tea Plantations in Sri Lanka: Validation of a New HRM Model

**Anuruddha Gamage**

Kelani Valley Plantations PLC - Hayleys Plantations Sector, Sri Lanka | e-mail: [anuruddha.gamage@kvpl.com](mailto:anuruddha.gamage@kvpl.com)

**Widana Pathirana Richard Wickramaratne**

Faculty of Management., University of Peradeniya, Sri Lanka | e-mail: [richard@mgt.pdn.ac.lk](mailto:richard@mgt.pdn.ac.lk)

Volume 12 No 1 (2022) | ISSN 2158-8708 (online) | DOI 10.5195/emaj.2022.253 | <http://emaj.pitt.edu>

### Abstract

The purpose of this research was to identify Sustainable Human Resource Management Practices (SHRMPs) which enhance worker productivity and to validate a Human Resource Management (HRM) model, derived by the authors in previous qualitative studies. The study surveyed 850 randomly selected employees from sixty tea estates in Sri Lanka. Data analyzed with Structural Equation Modeling derived a sustainable HRM model which includes knowledge management and human care practices as the determinants of worker productivity, while Quality of life and Work-life practices mediated the relationship. As a unique finding, knowledge sustainability (KS) identified as a new construct impacted positively on worker productivity. Theoretical and policy implications are also discussed.

**Keywords:** Human Care Practices, Knowledge Management Practices, Quality of Life, Quality of Work-Life, Productivity



*New articles in this journal are licensed under a Creative Commons Attribution 3.0 United States License.*



This journal is published by the [University Library System](#) of the [University of Pittsburgh](#) as part of its [D-Scribe Digital Publishing Program](#), and is cosponsored by the [University of Pittsburgh Press](#).

# Sustainable Human Resource Management (HRM) Practices for Boosting the Worker Productivity in Tea Plantations in Sri Lanka: Validation of a New HRM Model

Anuruddha Gamage  
Widana Pathirana Richard  
Wickramaratne

## I. Introduction

The tea industry in Sri Lanka, replete with a rich 150-year history, plays a prominent role in the country's economic performance, specifically ensuring substantial contributions to foreign exchange earnings, employment, and GDP. Moreover, Sri Lanka has established its niche position in the global market with the renowned "Ceylon Tea" brand, endowed with its hallmark quality enriching the brand's unique aroma and flavor. Despite the earlier global market positions, the Sri Lankan tea industry is now faced with several challenges, inter alia, the rising cost of production, decreasing worker productivity, and price competition. With a comparatively higher cost of labor, combined with low productivity levels, the Sri Lankan tea plantations have lost their earlier leadership rankings in the global tea market, which has thus negated its competitive advantage over the last few decades.

Moreover, the conventional wage model based on non-productivity parameters considerably affected the cost of production which adversely disrupting the global competitiveness of Ceylon tea (Oxford Business Group 2016; Moonasinghe, 2016; Hilal, 2020). In overall productivity, with particular emphasis on profitability, the industry is mainly dependent on the harvester's productivity, since the cost of labor alone accounts for 65-70% of the total cost of production per kilogram of made tea (Rajadurai, 2015; Thasfiha et al., 2020). Consequently, higher productivity and cost reduction are prerequisites for enhancing the competitiveness of 'Ceylon Teas' in the global tea market.

Previous studies have underscored that critical attention must be paid to improving human care facilities of the employees as a motivational factor and thereby increase productivity. Semeijn et al. 2015, have argued that in terms of productivity, human care practices in workplaces will stimulate sustainable employability or employee participation in organizational development. The application of best HR practices will enhance the quality of work-life. In return, the willingness of employees to remain engaged in working at present and in the future will further increase, whilst contributing more

towards improving organizational performances (Van der Heijden, Gorgievski, and De Lang, 2016). Several other studies also further perceived that the provision of training and development opportunities as knowledge management initiatives, stimulation of capacity development, information-sharing, employment security, health facilities, amenities for the working and living environment, support for higher education, skills development policies, were associated with employee well-being (Bal, Kooij, and De Jong, 2013; Kroon, van de Voorde and van Veldhoven, 2009; Peccei, 2004). Increasing employee well-being has a more significant impact on their quality of life and work-life and these motivated employees will contribute to higher levels of performance (Herrbach et al., 2009).

The overarching problem of this study is to determine whether an HRM model with human care and knowledge management practices would be a sustainable solution for alleviating the decline in worker productivity. Consequently, this study aims at advocating the productivity-enhancing bundles of sustainable HR practices. Moreover, the analysis also further makes a theoretical contribution by broadening the knowledge of HR practices supported by theories such as psychological contract and the social exchange. Finally, this study validates the scales of human care practices, knowledge management practices, knowledge sustainability practices, quality of work-life practices, and quality-of-life practices in methodological contributions.

## II. Literature Review

Organizational changes due to internal and external factors, place new demands on organizations. Stone and Deadrick (2015) emphasized that these new demands will generate new ways of working, the requirement of new employees to have immediate and fast adaptability to ensure the company's survival. With the present challenges, there is a need for empirical research on HRM to test a different model on inculcating intermediate variables that have a more significant impact on organizational performances or a proper combination of all the approaches to maximize employee performance (Sanders, Shipton and Gomes, 2014). The conventional systems of HRM serve only as a functional set of activities in day-to-day agendas within the organization rather than merely adding value to the organizational performance (Mendy, 2018; Ulrich and Dulebohn, 2015). For example, scholars, leaning on their research studies, have supported the argument that in achieving the necessary employee skills through knowledge management initiatives is expected to enhance employee commitment and engagement towards achieving organizational objectives, save on employment costs and boost productivity (Wright, Gardner, Moynihan and Allen, 2004). Consequently, knowledge management practices develop employees' critical skills for an organization's future productivity and create value (Bowen and Ostroff, 2004; Mendy, 2018).

Today, the Tea plantation sector contributes to the Sri Lankan economy by generating employment opportunities for 1.5 million people (Central Bank of Sri Lanka, 2019). However, the Tea plantation sector is one

of the most labor-intensive industries, which accounts for 65% of labor cost in the total Cost of Production (Shyamalie et al., 2020). One of the main challenges at present is the labor scarcity on tea estates. The available skillful labor is lesser than the requisite demand for the industry to have a smooth and continuous operation (Gupta, 2010). Shyamalie et al. (2020) elaborated that this problem is further aggravated by irregular attendance or higher absenteeism rates, mainly because of searching for higher dignity alternative employment opportunities, migration to urban areas, self-employment and diversification of farming towards other (Rymbai et al., 2012).

Managing the productive work time of existing employees is yet another critical challenge. The studies of Ranasinghe (2020) emphasize that the quality time utilized for actual harvesting, is around 50%-60% of the total time. To engage workers more effectively during their working time, HRM initiatives such as employee motivation, learning & development initiatives, performance-based employee recognition schemes and employee engagement activities will play a significant role (Muchinsky, 2003; Ranasinghe, 2020).

The tea plantation industry, as a high labor-intensive sector, needs an effective human resource development strategy for its long-term success and sustainability. Mishra, Sarma and Upadhyay (2011) explained the significant implications of labor relations in the context of globalization and how best plantation management should change HRM to enhance the industry's productivity. Furthermore, prior studies have argued that factors such as productivity, the initiatives for uplifting facilities for employees, enhancing the skills, knowledge, and learning and innovative capabilities of the employees have strong correlations with the fulfilment of an organization's vision (Dishanka and Ikemoto, 2014; Gupta and Sangeetha, 2017; Indiparambil, 2019).

Earlier studies reiterate that sustainable HRM approaches focus on reaching positive organizational goals as outcomes while facilitating employees' quality of work-life & quality of life without compromising organizational performance (Deloitte, 2015; Gupta 2018). Organizations have to re-think a different framework to improve employee satisfaction and engagement by introducing human care best practices (Penny & Joanne, 2013). In the meantime, opportunities for enhancing their knowledge (Kyle et al., 2010) which contributes positively to improving their quality of work-life exist.

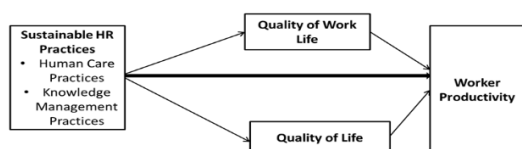
Employee workplace performance is related to human care factors affecting workers' health, habits, environment, and well-being (Leitão et al., 2019). They further posit that improving employees' quality of work-life (QWL) will positively impact the organization's productivity, while augmented productivity will strengthen QWL. Such a reciprocity impact is present with the other factors in a scenario where the workers are satisfied with the human care practices and organizational knowledge management initiatives. Hence they will produce more, and productivity will increase substantially (Sattar et al., 2018; Bhende et al., 2020). The research-based evidence emphasized that the need for a new model of HRM is a vital requirement in the industry to provide practical solutions for the issue of declining worker productivity in the industry. Therefore, researchers have sought a framework that will explain the relationship between worker productivity and human care and knowledge management practices.

### III. Conceptual Framework

Sound human resources management practices significantly impact worker productivity in organizational performance. Therefore, any business organization seeks a competitive predominance by creating a dynamic and committed workforce that can produce quality goods and services at a comparatively lower cost. In terms of the tea industry in Sri Lanka, applying a more conventional approach to managing human resources on the estates, which uses more disciplinary and punitive methods on the estate worker, no longer adds value to worker productivity (Gamage and Wickramaratne, 2019). In response to this situation, in 1992, soon after the privatization of tea estates, all the Regional Plantation Companies (RPCs) were compelled to change their management strategies to be oriented to the competitive market. As a result, companies focused more on empowering human resources within tea estates to generate strength and develop competencies and efficiencies to survive, develop and meet challenges. Therefore, the tea plantation industry also demands human resources with competencies, positive values and attitudes to accept challenges.

Research studies of the industry have stressed that applying best human care practices to employees in the tea industry would increase employee satisfaction. Satisfied employees will generate more output efficiently and they will increase productivity (Gamage and Wickramaratne, 2020). Human care practices and knowledge management practices have direct relationships with human behavior in workplaces, resulting in effective resource utilization and higher productivity (Barr and Serneels, 2008). Besides, the positive impact of sustainable HR practices on workers' quality of life and quality of work-life will lead to reciprocate with their enhanced motivation. (Dufwenberg and Kirchsteiger, 2004; Dishanka and Ikemoto, 2013; Swamy et al., 2015). This idea is supported by the fact that employee satisfaction is paramount in every employment, which directly affects productivity since employee satisfaction acts as a strong motivator in interactive contexts in organizations (Lodha and Pathak, 2017; Järlström et al., 2018).

All such evidence supported that the best HR practices, such as human care practices (HCPs) and knowledge management practices (KMPs), will enhance the employees' quality of work-life and quality of life, whereas, this motivational factor results in enhancing the worker productivity as an ultimate result. Based on these empirical arguments, authors have conducted a series of qualitative studies with the participation of Senior Management (Anon, 2018; Anon, 2019), middle and supervisory management (Anon, 2020), and the workers (Anon, 2020<sup>a</sup>; Anon, 2020<sup>b</sup>) and derived the following model of the sustainable human resource management.



**Figure 1. Conceptual Framework**

**Source:** Gamage and Wickramaratne, 2018; Gamage and Wickramaratne, 2019; Gamage and Wickramaratne, 2020.

For guiding the study, the following hypotheses were developed based on the review of extant literature:

**H1:** Human care practices positively impact quality of work-life of workers.

**H2:** Knowledge management practices positively impact quality of work-life of workers.

**H3:** Human care practices positively impact quality of life of workers.

**H4:** Knowledge management practices positively impact quality of life of workers.

**H5:** Quality of work-life practices positively impact worker productivity.

**H6:** Quality of life practices positively impact worker productivity.

**H7:** Quality of work-life practices mediate the relationship between human care practices and worker productivity.

**H8:** Quality of life practices mediate the relationship between human care practices and worker productivity.

**H9:** Quality of work-life practices mediate the relationship between knowledge management practices and worker productivity.

**H10:** Quality of life practices mediate the relationship between knowledge management practices and worker productivity.

#### IV. Research Methodology

This study was based on the quantitative method to examine the proposed hypotheses, test the model fit's validity and reliability and determine the mediator effect on the relationship between sustainable HRM practices and worker productivity. This was a survey-based study conducted with a cross-sectional research design. Primary data were gathered from the employees who are working in well-performing tea estates belonging to the three best ranking Regional Plantations Companies (RPCs) according to the Ceylon Tea Traders' Association (CTTA) rankings (CTTA Report, 2018). It included employee categories such as management and executives, including all the managerial positions, all staff categories, which included administrative (office), supervisory (field), production (factory), human development (medical, child development and welfare officers) and supportive (drivers, mechanics and electricians), as well as the operational workforce.

The study's specific population category comprised employees in 60 tea estates under reputed and sound-performing three plantation companies in the country, representing 21,000 total employees. Of this figure, 13,954 are employees working in the tea sector.

Therefore, the sample size selected for this study was 850 and out of which, 818 responded that they had worked in the same tea estate for more than a year and on the permanent employee cadre.

A structured questionnaire was used to collect the data, divided into two main sections. Part one of the questionnaire was designed to capture participants' demographic information to identify age, employee category, years of experience in plantations and total experience in the present designation. Part two of the questionnaire included the questions developed based on the feedback from qualitative studies conducted by authors of the same research area. Participants included other employee categories such as senior-level managers, supervisory level managers including middle and junior level categories and operational level employees, including harvesters. The second part of the questionnaire included questions no. 1 to 15 to test the feedback of participants on the critical productivity indicators in tea plantations, the relationship between productivity indicators with HCPs and KMPs as sustainable HRM practices, the impact of quality of life and quality of work-life on the relationship between productivity and sustainable HRM practices. Questions no. 16 to 38 checked the feedback on previously identified human-care practices under pre-defined categories developed by the authors with their practical exposure and experience in the industry. Questions ranging from no. 39 to 73 are related to checking the feedback on previously identified knowledge management practices, categorized under different stages of the knowledge management cycle.

All items are measured using the five-point Likert scale, ranging from 1 = strongly disagreed to 5 = strongly agreed. The study took the confirmatory approach to validate the research constructs. All the scores for each item were analyzed to obtain an overall measure for each of the variables.

A representative sample of 850 employees was selected at the initial stage based on the random sampling technique from the companies' digital Human Resource (HR) database, which included employees belonging to all human capital segments. Eight hundred and fifty questionnaires were distributed to selected employees by multiple personal visits to respective tea estates. In addition, participants were requested to hand over duly completed questionnaires to the interviewer and multiple personal visits made to the estates in order to gather completed questionnaires. Finally, 823 completed questionnaires were received, of which 818 were usable.

#### V. Analysis and Findings

This section presents the analysis and findings of data collected from the survey, which comprised 818 observations out of 850 participants. Data were analyzed using the quantitative approach following the combination of Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) techniques. The study first sought to ascertain the adequacy of the sample, its suitability and determine how many factors should be retained. Exploratory Factor Analysis (EFA) was used for this purpose. Further, reliability testing was done using the dimension reduction method in the Exploratory Factor Analysis (EFA) technique. In order to validate the constructs, Confirmatory Factor Analysis (CFA) was utilized. Further, the study endeavored to test the research



hypotheses, which were achieved using Structural Equation Modeling (SEM).

PLS-SEM analysis was used, which includes the assessment of the Measurement and Structural Model. The measurement model establishes the reliability and validity of the constructs. The structural model ascertains the significance of hypothesised relationships. Different hypotheses were proposed to evaluate the association of predictors with the outcome. Based on the literature and hypotheses constructed, the type of the structural equation model selected for the study is a second-order reflective model. A repeated measure approach was performed to validate the model.

*Adequacy of Sample Size*

The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO-test) was undertaken to check whether the sample was large enough. Kaiser recommends a bare minimum of 0.5, and values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are greater, and values above 0.9 are superb (Hutcheson & Sofroniou, 1999). The size of the sample was adequate to carry out an exploratory factor analysis, as the KMO value of 0.89 falls under the superb category for Worker Productivity (WP), the value of 0.705 falls under the excellent type for Quality of Work-life (QWL), the value of 0.565 falls under the mediocre category for Quality of Life (QL), the value of 0.929 falls under the superb category for Human Care Practices (HCPs), and value of 0.874 falls under the great category for Knowledge Management Practices (KMPs).

*Suitability of Data for Factor Analysis*

Bartlett’s measure tests the null hypothesis that the original correlation matrix is an identity matrix. A significant test tells us that the R-matrix is not an identity matrix; therefore, some relationships exist between the variables expected to be included in the analysis. A significant p-value (0.000) of the Bartlett test regarding all five variables rejects the null hypothesis of the identity correlation matrix and indicates some correlation between variables.

*Factor Extraction and Number of Factors to be Retained*

The principal component method of factor extraction is used in the study and based on rules of thumb suggested by Guttman-Kaiser for determining how many factors should be retained (Field, 2000; Rietveld and Van Hout, 1993), only those factors with a value larger than 1 are to be retained. One component is included for WP and QWL, and two components are retained for QL. Further, four components are retained for HCPs and seven components are retained for KMPs.

*Factor Loadings*

Factor loading refers to how each item in the correlation matrix correlates with the principal component. Factor loadings can range from -1.0 to +1.0. Higher absolute values indicate a higher correlation of items with underlying factors (Pett et al., 2003). Items with factor loading less than the recommended value of 0.5 (Hair et al., 2016) were removed from the model.

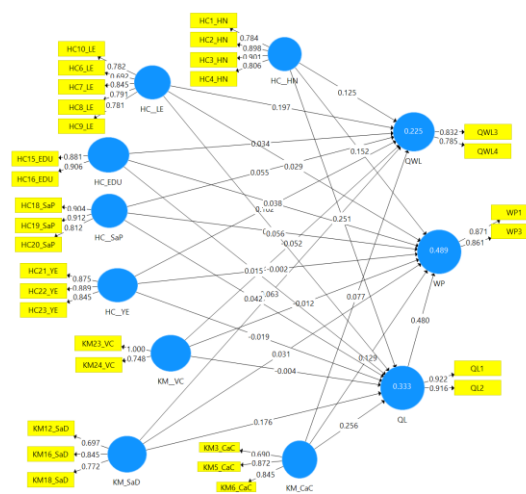
*Indicator Multi Co-Linearity*

The Variance Inflation Factor is used to assess the multi co-linearity of indicators (Fornell and Bookstein, 1982). There are no multi co-linearity issues as all the values are less than 5 (Hair et al., 2016). The assessment of first-order constructs is provided in Figure 2 and the quality of the first-order constructs is assessed based on the evaluation of the measurement model as explained in the Table 1. Multi- Collinearity is explained in Table 2.

**Table 1: Quality of the First-Order Constructs-Factor Loadings**

	HC_EDU	HC_HN	HC_LE	HC_SaP	HC_YE	KM_CaC	KM_SaD	KM_VC	QL	QWL	WP
HC15_EDU	0.880										
HC16_EDU	0.907										
HC2_HN		0.900									
HC3_HN		0.904									
HC4_HN		0.801									
HC1_HN		0.784									
HC6_LE			0.690								
HC7_LE			0.845								
HC8_LE			0.792								
HC9_LE			0.782								
HC10_LE			0.780								
HC18_SaP				0.904							
HC19_SaP				0.912							
HC20_SaP				0.812							
HC21_YE					0.875						
HC22_YE					0.889						
HC23_YE					0.846						
KM5_CaC						0.688					
KM5_CaC						0.873					
KM6_CaC						0.846					
KM12_SaD							0.698				
KM16_SaD							0.845				
KM18_SaD							0.771				
KM23_VC								1.000			
KM24_VC								0.745			
QL1									0.922		
QL2									0.916		
QWL3										0.884	
QWL4										0.718	
WP1											0.870
WP2											0.863

Source: Authors’ own compilation



**Figure 2. Assessment of First-Order Constructs**

Source: Authors’ own compilation

**Table 2: VIF for Multi-Collinearity**

Item	VIF
HC10_LE	1.783
HC15_EDU	1.557
HC16_EDU	1.557
HC18_SaP	2.595
HC19_SaP	2.704
HC1_HN	1.914
HC20_SaP	1.663
HC21_YE	1.982
HC22_YE	2.242
HC23_YE	1.838
HC2_HN	3.125
HC3_HN	3.134
HC4_HN	1.651
HC6_LE	1.531
HC7_LE	2.023
HC8_LE	1.920
HC9_LE	1.987
KM12_SaD	1.136
KM16_SaD	1.610
KM18_SaD	1.531
KM23_VC	2.297
KM24_VC	2.297
KM3_CaC	1.250
KM5_CaC	1.830
KM6_CaC	1.671
QL1	1.903
QL2	1.903
QWL3	1.107
QWL4	1.107
WP1	1.336
WP3	1.336

**Source:** Authors' own compilation

*Construct Reliability*

According to Mark 1996, Reliability indicates the degree of measurement instrument to be stable and consistent. If the measurement instrument is administered repeatedly, the same results need to be yielded. Therefore, composite reliability was used to assess the reliability of the measurement instrument. Reliability statistics of indicators are provided in Table 3 and values are greater than the threshold value of 0.7 (Hair et al., 2011). Cronbach alpha values for all the constructs except for QWL are greater than the threshold value of 0.5. However, as composite reliability for the QWL construct is greater than 0.7, it is evident that reliability is established.

**Table 3: Composite Reliability and Cronbach's Alpha**

	Composite Reliability	Cronbach's Alpha
HC_EDU	0.888	0.749
HC_HN	0.911	0.871
HC_LE	0.885	0.84
HC_SaP	0.909	0.849
HC_YE	0.903	0.839
KM_CaC	0.847	0.727
KM_SaD	0.816	0.661
KM_VC	0.874	0.858
QL	0.916	0.816
QWL	0.791	0.474
WP	0.858	0.668

**Source:** Authors' own compilation

*Convergent Validity*

Convergent validity means that, two or more measures of the same construct should co-vary highly if they are valid measures of the concept (Bagozzi et al., 1991). Convergent validity is assessed by the Average Variance Extracted (AVE) and the recommended threshold value for the AVE is 0.5. Average Variance Extracted (AVE) is provided in Table 4 and all the considered constructs have AVE values greater than 0.5. Hence, convergent validity is established.

**Table 4: Average Variance Extracted (AVE)**

Construct	Average Variance Extracted (AVE)
HC_EDU	0.799
HC_HN	0.721
HC_LE	0.608
HC_SaP	0.769
HC_YE	0.757
KM_CaC	0.65
KM_SaD	0.599
KM_VC	0.78
QL	0.844
QWL	0.655
WP	0.751

**Source:** Authors' own compilation

*Discriminant Validity*

Discriminant validity is the degree to which the measures of different concepts are distinct. The concepts should be a unique and valid measure of concepts that should not correlate highly (Bagozzi et al., 1991).

*Fornell and Locket Criterion*

According to Fornell and Locket Criterion, Discriminant Validity is established when the square root of AVE for a construct is greater than its correlations with other constructs. As per Table 5, the calculated square root of AVE values for all the constructs are greater than correlations of the same with other constructs. Hence, it is that evident discriminant validity is established for the measurement model.

**Table 5: Fornell and Locket Criterion**

	HC_EDU	HC_HN	HC_LE	HC_SaP	HC_YE	KM_CaC	KM_SaD	KM_VC	QL	QWL	WP
HC_EDU	0.894										
HC_HN	0.422	0.849									
HC_LE	0.48	0.545	0.78								
HC_SaP	0.583	0.496	0.519	0.877							
HC_YE	0.666	0.442	0.472	0.624	0.87						
KM_CaC	0.274	0.251	0.298	0.288	0.299	0.806					
KM_SaD	0.332	0.364	0.316	0.407	0.406	0.586	0.774				
KM_VC	0.115	0.137	0.091	0.133	0.101	0.089	0.161	0.883			
QL	0.288	0.428	0.344	0.338	0.302	0.449	0.449	0.092	0.919		
QWL	0.318	0.355	0.397	0.344	0.351	0.255	0.283	0.021	0.473	0.809	
WP	0.325	0.454	0.366	0.369	0.329	0.432	0.416	0.082	0.652	0.391	0.866

Source: Authors' own compilation

*Cross Loadings*

Cross loading helps assess if the items that belong to a particular construct load firmly on its parent construct instead of other constructs in the study. The results show that factor loadings of all the items are more substantial on the underlying construct to which they belong instead of other constructs in the study (Wasko and Faraj, 2005). Hence, based on cross-loadings evaluation, discriminant validity is attained as per Table 6.

**Table 6: Cross Loadings**

	HC_EDU	HC_SaP	HC_YE	HC_HN	HC_LE	KM_CaC	KM_SaD	KM_VC	QL	QWL	WP
HC15_EDU	0.881	0.499	0.617	0.382	0.445	0.331	0.123	0.281	0.261	0.255	0.272
HC16_EDU	0.906	0.541	0.576	0.374	0.416	0.266	0.084	0.214	0.255	0.31	0.368
HC18_SaP	0.494	0.904	0.546	0.452	0.443	0.406	0.147	0.279	0.321	0.316	0.328
HC19_SaP	0.541	0.912	0.594	0.475	0.467	0.405	0.166	0.282	0.34	0.266	0.367
HC20_SaP	0.5	0.812	0.499	0.371	0.46	0.245	0.021	0.188	0.217	0.33	0.27
HC21_YE	0.581	0.597	0.875	0.444	0.413	0.39	0.141	0.28	0.302	0.271	0.337
HC22_YE	0.595	0.514	0.889	0.394	0.391	0.339	0.074	0.237	0.242	0.336	0.264
HC23_YE	0.563	0.548	0.845	0.308	0.429	0.326	0.044	0.263	0.243	0.311	0.254
HC2_HN	0.4	0.457	0.408	0.898	0.499	0.281	0.129	0.158	0.365	0.33	0.407
HC3_HN	0.385	0.433	0.409	0.901	0.434	0.267	0.14	0.156	0.375	0.339	0.423
HC4_HN	0.348	0.461	0.383	0.906	0.508	0.447	0.127	0.375	0.429	0.307	0.409
HC1_HN	0.281	0.296	0.268	0.784	0.393	0.206	0.042	0.134	0.249	0.194	0.265
HC6_LE	0.207	0.269	0.255	0.28	0.692	0.085	0.028	0.082	0.172	0.254	0.133
HC7_LE	0.416	0.522	0.443	0.547	0.845	0.334	0.118	0.288	0.349	0.324	0.377
HC8_LE	0.42	0.369	0.36	0.385	0.791	0.221	0.003	0.237	0.274	0.358	0.313
HC9_LE	0.397	0.364	0.37	0.4	0.781	0.237	0.041	0.264	0.215	0.232	0.246
HC10_LE	0.383	0.44	0.375	0.454	0.782	0.29	0.144	0.241	0.283	0.349	0.289
KM12_SaD	0.188	0.25	0.229	0.279	0.165	0.697	0.196	0.48	0.357	0.192	0.337
KM16_SaD	0.307	0.374	0.381	0.322	0.303	0.845	0.138	0.451	0.37	0.223	0.373
KM18_SaD	0.272	0.316	0.327	0.233	0.263	0.772	0.024	0.425	0.307	0.245	0.239
KM23_VC	0.115	0.133	0.102	0.137	0.091	0.161	1	0.088	0.091	0.021	0.082
KM24_VC	0.101	0.179	0.104	0.156	0.07	0.107	0.748	0.045	0.005	0.002	0.004
KM3_CaC	0.125	0.166	0.209	0.175	0.153	0.398	0.139	0.69	0.315	0.127	0.3
KM5_CaC	0.228	0.253	0.252	0.202	0.268	0.515	0.037	0.872	0.369	0.252	0.358
KM6_CaC	0.292	0.265	0.26	0.226	0.283	0.497	0.056	0.845	0.398	0.225	0.381
QL1	0.271	0.333	0.284	0.404	0.313	0.403	0.099	0.414	0.922	0.438	0.615
QL2	0.258	0.287	0.272	0.384	0.32	0.422	0.07	0.412	0.916	0.432	0.583
QWL3	0.25	0.27	0.266	0.277	0.327	0.287	0.011	0.313	0.459	0.832	0.428

Source: Authors' own compilation

*Heterotrait-Monotrait (HTMT) Ratio*

HTMT is based on the correlation between constructs. According to Teo et al. (2015), the threshold for HTMT is 0.9 or less. Hence based on the HTMT ratio, discriminant validity is established for the study and values for HTMT are provided in Table 7.

**Table 7: Heterotrait-Monotrait (HTMT) Ratio**

	HC_EDU	HC_HN	HC_LE	HC_SaP	HC_YE	KM_CaC	KM_SaD	KM_VC	QL	QWL	WP
HC_EDU											
HC_HN	0.515										
HC_LE	0.591	0.614									
HC_SaP	0.731	0.561	0.599								
HC_YE	0.842	0.502	0.551	0.738							
KM_CaC	0.365	0.303	0.364	0.357	0.382						
KM_SaD	0.474	0.462	0.405	0.534	0.542	0.842					
KM_VC	0.145	0.173	0.105	0.189	0.128	0.105	0.182				
QL	0.369	0.495	0.4	0.401	0.364	0.582	0.608	0.062			
QWL	0.532	0.538	0.616	0.548	0.56	0.414	0.502	0.041	0.753		
WP	0.459	0.58	0.465	0.488	0.438	0.617	0.615	0.099	0.883	0.684	

Source: Authors' own compilation

*Validating Higher-Order Constructs*

Two higher-order constructs, Human Care Practices and Knowledge Management Practices, were validated as the measurement model assessment. These higher-order constructs were assessed for reliability and convergent validity. Moreover, higher-order constructs and other lower-order constructs were evaluated for discriminant validity as recommended by Sarstedt et al. (2019). Results are provided in Table 10.

Results for reliability and convergent validity are provided in Table 8. Again, results show that reliability and convergent validity are established, as the value for reliability is >0.7 and AVE is greater than 0.5. According to Fornell and Larcker Criterion (1981) results, the square root of AVE of the considered higher-order constructs is greater than its correlation with other constructs, while HTMT is lower than 0.9. Results are expressed in Table 9.

**Table 8: Higher-Order Reliability and Convergent Validity**

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
HC	0.847	0.89	0.619
KM	0.537	0.746	0.542

Source: Authors' own compilation

**Table 9: Fornell and Larker Criterion for Higher-Order Constructs**

	HC	KM	QL	QWL	WP
HC	0.787				
KM	0.467	0.736			
QL	0.439	0.504	0.919		
QWL	0.445	0.313	0.483	0.805	
WP	0.475	0.474	0.652	0.409	0.866

Source: Authors' own compilation

**Table 10: Heterotrait-Monotrait Ratio for Higher-Order Constructs**

	HC	KM	QL	QWL	WP
HC					
KM	0.664				
QL	0.52	0.692			
QWL	0.709	0.503	0.753		
WP	0.623	0.717	0.883	0.684	

Source: Authors' own compilation

*Assessment of the Structural Model*

*H1: Human care practices have an impact on the quality of work-life of workers*

H1 evaluates whether there is a significant impact of Human Care Practices on Quality of Life. According to the results of the bootstrapping test, there is a significant effect of Human Care practices on Quality of Life ( $\beta=0.383$ ,  $t=10.790$ ,  $p=0.000$ ). Hence, H1 is accepted.

*H2: Knowledge management practices have an impact on the quality of work-life of workers*

H2 evaluates whether there is a significant impact of Knowledge Management Practices on the Quality of Work-Life of Workers. According to the results of the bootstrapping test, there is a significant effect of Knowledge Management Practices on the Quality of Life of Workers ( $\beta= -0.133$ ,  $t=3.953$ ,  $p=0.00$ ). Hence, H2 is accepted.

*H3: Human care practices have an impact on the quality of life of workers*

H3 evaluates whether there is a significant impact of Human Care Practices on the Quality of Work-Life of Workers. According to the results of the bootstrapping test, there is a significant effect of Human Care Practices on Workers' Quality of Life ( $\beta=0.261$ ,  $t=7.677$ ,  $p=0.000$ ). Hence, H3 is accepted.

*H4: Knowledge management practices have an impact on the quality of life of workers*

H4 evaluates whether there is a significant impact of Knowledge Management Practices on Workers' Quality of Life. According to the results of the bootstrapping test, there is a significant effect of Knowledge Management Practices on the Quality of Life of Workers ( $\beta=0.382$ ,  $t=11.766$ ,  $p=0.000$ ). Hence H4 is accepted.

*H5: Quality of work-life practices has an impact on worker productivity*

H5 evaluates whether there is a significant impact of Quality of Work-Life Practices on Worker Productivity. According to the results of the bootstrapping test, there is a substantial effect of Quality of Work-Life Practices on Worker Productivity ( $\beta=0.356$ ,  $t=7.648$ ,  $p>0.00$ ). Hence, H5 is accepted.

*H6: Quality of life practices have an impact on worker productivity*

H6 evaluates whether there is a significant impact of Quality of Life Practices on Worker Productivity. According to the results of the bootstrapping test, there is a significant effect of Quality of Life Practices on Worker Productivity ( $\beta=0.48$ ,  $t=14.241$ ,  $p>0.000$ ). Hence, H6 is accepted.

A summary of the structural model assessment results is provided in Table 11.

**Table 11: Path Coefficients**

		Coefficient	Standard Deviation (SIDEV)	T Statistics ((O/SIDEV))	P Values
H1	HC -> QWL	0.383	0.036	10.79	0
H2	KM -> QWL	0.133	0.034	3.953	0
H3	HC -> QL	0.261	0.034	7.677	0
H4	KM -> QL	0.382	0.032	11.766	0
H5	QWL -> WP	0.056	0.034	1.648	0.099
H6	QL -> WP	0.481	0.034	14.241	0

Source: Authors' own compilation

*Mediation Analysis*

To assess the mediation, Preacher & Hayes Method / Bootstrapping Method (2004) was used and the analysis results are provided in Table 12, 13 and 14.

*H7: Quality of work-life practices mediate the relationship between human care practices and worker productivity*

Mediation analysis was performed to assess the mediating role of quality of Work-Life. The results reveal (Table 12) a significant median role of Quality of Work-Life Practices in the effect of Human Care Practices on Worker Productivity ( $\beta=0.122$ ,  $t=5.611$ ,  $p=0.00$ ).

*H8: Quality of life practices mediate the relationship between human care practices and worker productivity*

According to the mediation analysis results, there is a significant mediation role of Quality of Life Practices in the effect of Human Care Practices on Worker



Productivity ( $\beta=0.125, t=6.899, p=0.000$ ). As a result, the total impact of Human Care Practices and Worker Productivity is significant ( $\beta=0.325, t=9.535, p=0.00$ ). Furthermore, with the inclusion of the mediator, the direct effect is significant ( $\beta=0.178, t=5.526, p=0.00$ ). Therefore, it is evident that the Quality of Work Life Practices mediates the relationship between Human Care Practices and Worker Productivity.

*H<sub>9</sub>: Quality of work life practices mediate the relationship between knowledge management practices and worker productivity*

Mediation analysis was performed to assess the mediating role of Quality of Work Life. The results reveal (Table 12) a significant median role of Quality of Work Life Practices in the effect of Knowledge Management Practices on Worker Productivity ( $\beta=0.107, t=6.464, p=0.00$ ).

*H<sub>10</sub>: Quality of life practices mediate the relationship between knowledge management practices and worker productivity*

According to the mediation analysis results, there is a significant mediation role of Quality of Life Practices for the effect of Knowledge Management Practices on Worker Productivity ( $\beta=0.184, t=8.849, p=0.000$ ). As a result, the total impact of Knowledge Management Practices and Worker Productivity is significant ( $\beta=0.322, t=9.229, p=0.00$ ). Furthermore, with the inclusion of the mediator, the direct effect is significant ( $\beta=0.131, t=3.939, p=0.00$ ). Therefore, it is evident that the quality of Work-Life Practices partially mediates the relationship between Knowledge Management Practices and Worker Productivity.

**Table 12: Specific Indirect Effects**

	Coefficient	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
HC -> QWL -> WP	0.122	0.013	5.611	0.007
HC -> QL -> WP	0.125	0.018	6.899	0
KM -> QL -> WP	0.184	0.021	8.849	0
KM -> QWL -> WP	0.107	0.005	6.464	0.001

Source: Authors' own compilation

**Table 13: Total Effect**

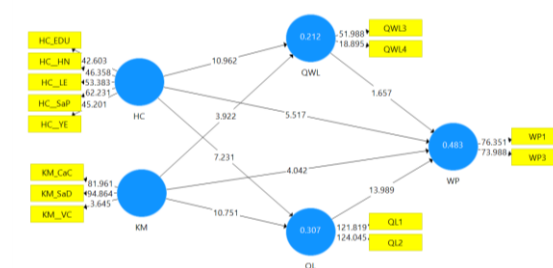
	Coefficient	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
HC -> QL	0.261	0.035	7.518	0
HC -> QWL	0.383	0.036	10.748	0
HC -> WP	0.325	0.034	9.535	0
KM -> QL	0.382	0.033	11.531	0
KM -> QWL	0.133	0.034	3.886	0
KM -> WP	0.322	0.035	9.229	0
QL -> WP	0.481	0.033	14.634	0
QWL -> WP	0.056	0.033	1.686	0.092

Source: Authors' own compilation

**Table 14: Path Coefficients**

	Coefficient	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
HC -> QL	0.261	0.035	7.518	0
HC -> QWL	0.383	0.036	10.748	0
HC -> WP	0.178	0.032	5.526	0
KM -> QL	0.382	0.033	11.531	0
KM -> QWL	0.133	0.034	3.886	0
KM -> WP	0.131	0.033	3.939	0
QL -> WP	0.481	0.033	14.634	0
QWL -> WP	0.156	0.033	6.686	0.002

Source: Authors' own compilation



Source: Authors' own compilation

**VI. Discussion and Implications**

The model derived from the research indicates that human care practices and knowledge management practices lead to the enhancement of the quality of life and the quality of work-life of the workers of the tea plantation sector, who in turn, increases their productivity. Referring to the model derived by researchers, five constructs were used in this research study, namely Worker Productivity (WP), Quality of Work-Life (QWL), Quality of Life (QL), and Human Care Practices (HCP), and Knowledge Management Practices (KMP). The model further expressed that the research study consisted of two independent variables, namely Human Care Practices (HCPs) and Knowledge Management Practices (KMPs) and the dependent variable was Worker Productivity (WP).

The results further explained that the convergent validity and discriminant validity were not violated and the truth of all five constructs is therefore statistically confirmed. Furthermore, since the alpha statistics values were above the minimum acceptable threshold level, results clearly defined that all five constructs considered in this study were internally consistent and that all five constructs used in this study were reliable. Further, Structural Equation Modeling (SEM) was used to test the research hypotheses. Therefore, it was with statistical evidence to support the views that the impact of Human Care Practices, Knowledge Management Practices, Quality of Work Life and Quality of Life on the Worker Productivity is statistically significant, and QL and QWL were important mediating factors for the relationship between HCP, KMP and WP. It is with statistical evidence that, knowledge sustainability is also recognized as an independent construct in addition to the HCPs and KMPs, which has direct impact on the worker productivity.

With solid evidence, studies have proposed that HCPs such as safety, satisfaction, growth & development related practices have a more significant impact on worker

productivity (Ahmad, 2013). It is also substantial evidence that more engaged and motivated workers, due to increasing their quality of life and work-life, will produce comparatively higher outputs with high quality, which means productivity will be increased (Dishanka and Ikemoto, 2014; Sauermaun, 2016). Findings of Gopaldas and Gujral (2002), Sharpe (2004) and Jalal (2016) elaborated that investment in new technology and innovation, education, health and social facilities are also determinants of productivity. Further studies by scholars confirm that developing employees' skills through promoting training as well as educational programs, and human care initiatives are essential to enhance their satisfaction level with work-life qualities and create a productive workforce (Warr and West, 2004; Sharma and Sharma, 2014; Dishanka and Ikemoto, 2014; Gamage and Wickramaratne, 2020). Leitão, Pereira and Gonçalves (2019) stressed the importance of improving employees' quality of life, which strongly influences an organization's productivity. As per the findings of Suri and Baber (2019), both QL and QWL together act as a factor in motivating employees, enhancing their commitment toward employee productivity improvements, and the organization's overall performance. Recent studies elaborated that workers' productivity increases with the increase of their QL and QWL (Gamage and Wickramaratne, 2019).

The comprehensive literature review implies that, human care practices and knowledge management practices applied extensively in an organization lead to enhanced worker productivity. This relationship was further stimulated by QWL and QL practices in the system. In addition, the study significantly contributed to the following areas.

Sustainable HR Practices (HRMPs) are the practices utilized to achieve a company's business goals and increase long-term shareholder value by integrating economic, environmental, and social opportunities into its business strategies. The study proposed a new model of sustainable Human Resource Management, aimed at enhancing worker productivity, which is a significant contribution to the existing theories of HRM. The current study further establishes three sustainable HR practices: Knowledge management practices, human care practices and knowledge sustainability practices. Knowledge sustainability practices are distinct from knowledge management practices and is mainly based on the long-term retaining factor of knowledge enhancing initiatives to achieve long-term objectives, rather than concentrating on fulfilling short-term benefits. In the plantation industry, knowledge sustainability practices are derived from knowledge management practices that focus on long-term goals by applying such initiatives.

Moreover, the proposed new model is statistically validated and elucidates the relationship between Sustainable Human Resources Management Practices (SHRMPs) and Worker Productivity (WP). In contrast, the variables of Quality of Life (QL) and Quality of Work-Life (QWL) are depicted as potent mediators of this relationship. Also, the findings from this study provides implications to the psychological contract and social exchange theories since employees reciprocate by building positive perceptions about their quality of life and quality of work-life as they experience knowledge management and human care practices. Such reciprocity leads to enhancing their productivity levels.

In terms of methodological contributions, the model proposed by this study can be replicated in future studies. Further, the study validated scales for measuring knowledge management practices, human care practices, quality of life practices, work-life practices and worker productivity. Policymakers can use the best SHRMPs identified from the research to develop a framework for employee well-being, including their living and social status, whilst enhancing employee welfare in the tea plantations. This will assist policymakers in viewing appropriate employee benefits packages based on the actual needs to uplift their quality of life and quality of work-life. Therefore, decision-makers in the industry, including the senior management and the HR professionals, should critically consider the significant role of human care practices in enhancing worker productivity, through the uplifting quality of work-life and quality of life.

Hence, senior management should ensure policy decisions and grant the authority to implement these practices whilst allocating the necessary funds for their successful implementation. Based on the research outputs, it is critically important for policymakers, especially senior management, to develop a practical roadmap for Knowledge Sustainability (KS), which is also identified as the central construct of SHRMP for worker productivity in the industry. In terms of Knowledge Management and Knowledge Sustainability, decision-makers should critically focus on investing in high-tech based knowledge management techniques for the employees for the competitive decision-making process. Moreover, top management should facilitate a conducive organizational culture through leadership and encouragement to successfully implement the proposed model.

The proposed model will impact not only the internal clientele, such as employees, plantation community and other indirect dependents but also the entire society at a macro-level, which has strategic connectivity with the performance of the organizational environment of the tea plantations. As proposed by the model, the impact of human care, knowledge management and knowledge sustainability initiatives as sustainable HRM practices on worker productivity is influenced by quality of life and quality of work-life as potent mediators. Therefore, a highly motivated and engaged tea plantation workforce, with an enhanced quality of life as a direct impact of SHRMPs, will help uplift the living status levels and well-being of the entire plantation community, including society at the macro level.

The research study validates the best human care, knowledge management and knowledge sustainability practices as sustainable human resource management practices (SHRMPs), which help enhance employee engagement and commitment towards achieving the organizational vision by increasing the level of quality of life and quality of work-life of employees. Identified Sustainable HRM Practices from the research study can be used to achieve organizational strategic business goals. This will help fulfil long-term shareholder value by integrating social & people, environmental and economic factors into the business strategies of the tea industry.

## VII. Conclusion and Recommendations

The study statistically established the positive relationship between Human Care Practices and Knowledge Management Practices on worker productivity. Furthermore, it also provided an addition to the proposed model. Apart from the above two constructs, knowledge sustainability is identified as well and statistically validated as a central construct, which has a positive relationship with worker productivity. It further explains the impact of Quality of Work Life and Quality Life practices for enhancing worker productivity and the significant mediator role of quality of work-life and quality of life practices in the relationship between sustainable human resource management practices and worker productivity. Thus, the sustainable HRM model proposed by this study can be implemented in the tea plantation industry to achieve better output and enhance worker productivity.

As per previous studies on the global tea industry, declining worker productivity is a common phenomenon. Therefore, the research has to be replicated in other tea manufacturing countries, even beyond the Asian region, to determine the strength or validity of these findings. The research study under reference is based on the evidence from randomly selected large scale regional plantation companies in Sri Lanka. However, the overall performance of the tea industry is based on the contribution of other key players in the industry, such as small-scale tea growers. Therefore, a similar research project is essential to be undertaken in these industrial segments to generalize the research outcomes. Furthermore, it is worth repeating this study in estates with other plantation crops as well.

## References

- Bal, P. M., Kooij, Dorian T.A.M., De Jong, S. B. (2013). How does developmental and accommodative HRM enhance employee engagement and commitment? The role of psychological contract and SOC strategies. *Journal of management studies*, 50(4), 545-572. <https://doi.org/10.1111/joms.12028>.
- Barr, A., Serneels, P. (2008). *Reciprocity in the workplace*. England: University of Oxford.
- Bhende, P., Mekoth, N. Ingallhalli, V., Reddy, Y. V. (2020). Quality of Work Life and Work-Life Balance. *Journal of Human Values*, 26(3), 256-265. <https://doi.org/10.1177/0971685820939380>
- Bowen, D., Ostroff, C. (2004). Understanding HRM-Firm Performance Linkages: The Role of the "Strength" of the HRM System. *Academy of Management Review*, 29, 203-221. <https://doi.org/10.5465/AMR.2004.12736076>.
- Dishanka, S., Ikemoto, Y. (2014). Social Development and Labour Productivity: The Problem and a Solution for the Tea Plantation Sector of Sri Lanka. *International Journal of Theory & Practice*, Vol. 05 No. 01.
- Deloitte. (2015). *Global Human Capital Trends 2015. Leading in the new world of work*. Retrieved from: <http://www2.deloitte.com/us/en/pages/human-capital/articles/introduction-human-capital-trends.html>.
- Dufwenberg, M., Kirchsteiger, G. (2004). A theory of sequential reciprocity, *Games and Economic Behavior*, 47(2), 268-298. <https://doi.org/10.1016/j.geb.2003.06.003>.
- Eisenhardt, K M., Martin, J.A. (2000). Dynamic Capabilities: What Are They?. *Strategic Management Journal*, 21, 1105-1121. [10.1002/1097-0266\(200010/11\)21:10/113.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10<1130::CO;2-E).
- Gamage, A., Wickramaratne, W.P.R. (2018). Towards a Sustainable HRM Model for Human Productivity in Tea Industry: An Empirical Study of Tea Plantation Sector in Sri Lanka. *13th International Research Conference on Management and Finance*, 2018(1), 127-144.
- Gamage, A., Wickramaratne, W.P.R. (2019). Productivity enhancing sustainable human care and knowledge management practices in Sri Lankan tea industry. *International Journal of Business and Social Science*, 10(8), 74-82.
- Gamage, A., Wickramaratne, W.P.R. (2020). Do Human Care and Knowledge Management Practices Really Matter in Determining Worker Productivity? Perceptions of Supervisory Level Employees in Tea Plantation Sector in Sri Lanka. *Kelaniya Journal of Human Resource Management*, 15(1), 16-36.
- Gupta, A. (2010). Offshoring is Employment, and the Discipline: Additional Considerations. *Journal of Information Technology*, 25(4), 378-379. <https://doi.org/10.1057/jit.2010.37>.
- Gupta, A. D., Sangeetha, M. (2017). Improving Labour Productivity through Human Resource Development: A Case Study on Assam Tea Plantation Workers *Journal of Supply Chain Management Systems*, 6 (1).
- Herrbach, O., Mignonac, K., Vandenberghe, C., Negrini, A. (2009). Perceived HRM practices, organisational commitment, and voluntary early retirement among late-career managers. *Human Resource Management*, 48(6), 895-915. <https://doi.org/10.1002/hrm.20321>
- Hilal, M.I.M. (2020). Sri Lanka's Tea Economy: Issues and Strategies, *Journal of Politics and Law*, Vol. 13 No. 1, <https://doi.org/10.5539/jpl.v13n1p1>.

- Indiparambil, J. J. (2019). Strategic to Sustainable Human Resource Management: Shifting Paradigms of Personal Managerial Trends. *International Journal of Business and Management Invention (IJBMI)*, 8(3), 65-70.
- Kroon, B., K. van de Voorde, M. van Veldhoven. (2009). Cross-level effects of high-performance work practices on burnout: Two counteracting mediating mechanisms compared. *Personnel Review*, 38(5), 509-525. <https://doi.org/10.1108/00483480910978027>
- Kyle, S. D., Morgan, K, Espie, C.A. (2010). Insomnia and health-related quality of life. *Sleep medicine reviews*, 14(1), 69–82. <https://doi.org/10.1016/j.smrv.2009.07.004>.
- Leitão, J., Pereira, D., Gonçalves. A. (2019). Quality of Work Life and Organizational Performance: Workers' Feelings of Contributing, or Not, to the Organization's Productivity, *Int. J. Environ. Res. Public Health*. 16(20), 3803. doi:10.3390/ijerph16203803.
- Lodha, D., Pathak, K. (2017). Effect of psychological contract on employee engagement. *Journal of Researches*, 1(1) 6-9.
- Mendy, J. (2018). Key HRM Challenges and Benefits: The Contributions of the HR Scaffolding.
- Mishraa, D. K., Sarma, A, Upadhyay, V. (2011). Invisible chains? Crisis in the tea industry and the 'unfreedom' of labour in Assam's tea plantations, *Contemporary South Asia*, 19(1), 75-90.
- Moonasinghe, V. (2016). The Bad Taste in Your Cup of Tea. <https://roar.media/english/life/economy/bad-taste-cup-tea>
- Muchinsky, P. M. (2003). *Psychology Applied to Work* (7th ed.), Belmont, CA: Wadsworth.
- Munasinghe, M., Deraniyagala, Y., Dassanayake, N., Karunarathna, H. (2017). Economic, social and environmental impacts and overall sustainability of the tea sector in Sri Lanka. *Sustainable Production and Consumption*, 12, 155-169.
- Peccei, R. (2004). *Human resource management and the search for a happy workplace*. Unknown Publisher.
- Penny, Y.K., Joanne, C.S.H. (2013). Casino employees perceptions of their quality of work life. *International Journal of Hospitality Management*, 34, 348-358.
- Rajadurai, R. (2015). Determinants of Annual Productivity of Female Tea Harvesters in the Mid Country Regional Plantation Company Estates in Sri Lanka, Post Graduate Institute of Agriculture, University of Peradeniya.
- Ranasinghe, H. K.Sriyani. G. (2020). The Impact of Management Factors on Labor Productivity in the Tea Small Holding in Sri Lanka, *International Journal of Multidisciplinary and Current Educational Research (IJM CER)*, 2(5), 227-245.
- Ray, L. J., Smith, D., Wastell, L. (2004). Shame, Rage and Racist Violence. *British Journal of Criminology*. 44. 10.1093/bjc/azh022.
- Rymbai, D., Singh, R., Sheikh, F.M., Debbarma, B. (2012). Factors Associated with Labour Supply for Tea Plantation and Productivity: A Case Study of Tea Growers in Meghalaya. *Indian Journal of Hill Farming*. 25(2), 6-9.
- Sanders, K., Shipton, H., Gomes, J.F.S. (2014). Is the HRM process necessary? Past, current, and future challenges. *Human Resource Management*, 53, 489-503. <http://doi.org/vcx>.
- Sattar, H., Tasweer, H. (2020). Exploring Relationships of Positive and Negative Organisational Behaviors (OB) with the Productivity of Engineering Students, *Global Social Sciences Review (GSSR)*, 5(1), 269-282.
- Semeijn, J. H., K. Van Dam, T., Van Vuuren, Van der Heijden, B.I.J.M. (2015). Sustainable labour participation and sustainable careers. In *Handbook of Research on Sustainable Careers*. Cheltenham, UK: Edward Elgar Publishing. DOI: <https://doi.org/10.4337/9781782547037.00015>.
- Shyamalie, H.W., Karunarathne, B.M.N.C., Pilapitiya, H.M.C.G., Lakshani, P.T.P. Chaturanga, T.H.I., Nadeeshani, K.W.N. (2020). An Analysis of the impacts of Labour Scarcity on Land Productivity in Sri Lankan Tea Plantations. *Tropical Agricultural Research*, 31(4): 54-64.
- Swamy, D. R., Nanjundeswaraswamy, T.S., Rashmi, S. (2015). Quality of Work Life: Scale Development and Validation, *International Journal of Caring Sciences*, May-August 2015, 8(2), 281-301.
- Thasfiha, J., Arachchige, U., Dissanayaka, D. K. (2020). Sri Lankan Tea Industry, *Journal of Research Technology and Engineering*, 1(1), January 2020. 47-53.



- Thenuwara, H.N. (2018). *The Role of the Public Sector in Promoting Economic Growth in Sri Lanka. Talking Economies*, Institute of Policy Studies of Sri Lanka (IPS), Sri Lanka.
- Ulrich, D., Dulebohn, J. H. (2015). Are we there yet? What's next for HR?. *Human Resource Management Review*, 25. 10.1016/j.hrmr.2015.01.004
- Van der Heijden, Beatrice, I.J.M., Gorgievski, M.J., De Lange, A H. (2016). Learning at the workplace and sustainable employability: a multi-source model moderated by age. *European Journal of Work and Organizational Psychology*, 25(1), 13-30 DOI: 10.1080/1359432X.2015.1007130.
- Vancheswar, V. (2010). Ananda Das Gupta (ed), *Ethics, Business and Society: Managing Responsibly*. New Delhi: Response Books, 2010, 212, Rs 395 (ISBN:978-81-321-0402-5) (PB). *Global Business Review*, 11(3), 469–472. <https://doi.org/10.1177/097215091001100313>
- Wright, P., Gardner, T., Moynihan, L. M., Allen, M. R., Gardner, P. M., Moynihan, T. M. (2004). The relationship between HR practices and firm performance: Examining causal order. *CAHRS Working Paper Series*. Paper. 13.