The correlation of human capital sustainability leadership style and resilience of the managers in airline operations group of an AIRLINE Company

Kimon Irvin E. Co
Graduate School of Business
San Beda University, Manila, Philippines
db-170201@sanbeda.edu.ph

Abstract
This study aimed to analyze the correlation between Human Capital Sustainability Leadership style and manager resilience through a pragmatic worldview. Using explanatory sequential mixed methods research design (QUAN→qual), respondents covered were managers from the Airline Operations Group of an AIRLINE Company with at least one year of managerial experience within the organization. In the quantitative phase, Human Capital Sustainability Leadership Scale by Di Fabio and Peiro (2018) and Domain-Specific Resilient Systems Scales (DRSS-Work) by Maltby, Day, Hall, and Chivers (2019) were used for the online survey. Forty-five (45) eligible respondents have participated. Mean, standard deviation, and Spearman rank correlation coefficient were employed. To further explain the quantitative results, one-on-one qualitative interviews were done with eight (8) key informants, face-to-face and online. Themes were identified. Results showed that Human Capital Sustainability Leadership style was exhibited by the Airline Operations Group managers to a very high degree while resilience was exhibited to a high degree. There was a linear, positive, and highly significant correlation between Human Capital Sustainability Leadership style and resilience. Each aspect of the Human Capital Sustainability Leadership style was positively, highly, and significantly correlated with manager resilience. Through triangulation, a model of leadership styles and manager resiliency was built. To implement the model, implications for a management development program were identified.

Keywords: adaptive capacity, ecological resilience, engineering resilience, ethical leadership, human capital sustainability leadership, manager resilience, mindful leadership, sustainable leadership, servant leadership
Sustainability leadership was an emerging field. It caught much attention due to its aim to improve business and management practice through triple bottom line achievement (Heizman & Liu, 2018) contributing to long-term organizational viability (Mascarenhas & Barbosa, 2019). This leadership style could not be explained solely by traditional leadership theories (Bendell & Little, 2015). As sustainability issues were hard to be understood, psychology was integrated into sustainability science (Di Fabio & Rosen, 2018; Tokarz & Malinowska, 2019). A new leadership constructs called "human capital sustainability leadership" warrants further investigation and research as it went beyond the traditional sustainable leadership style, blending the approaches of sustainability, positive organizational psychology, and multiple leadership styles (Di Fabio & Peiro, 2018). The authors acknowledged the limitations of their study and suggested "include various industries and organizations… replicate the study in international contexts… consider issues relative to social desirability and the impression of management effects" (Di Fabio & Peiro, 2018, p. 8).

The knowledge of resilience in the aspect of business and management studies laid a considerable gap, as conceptualizations have not been uniformed and have been fragmented across several research streams (Linnenluecke, 2017; Malik & Garg, 2017; Winwood, Colon, McEwen, 2013; Xu & Kajikawa, 2018). There was a limited understanding of individual and contextual factors that promote, enhance, and affect resilient behaviors in organizations (Kossek & Perrigino, 2016; Linnenluecke, 2017). In the occupational context, resilience was not yet fully explored (Kossek & Perrigino, 2016; Linnenluecke, 2017; Paul, Bamel, & Garg, 2016).

Resilience thinking also dealt with sustainability challenges (Folke, 2016; Xu & Kajikawa, 2018) as its shifting spheres intersected with sustainability principles (Espiner, Orchiston, & Higham, 2017), but only a few studies – leader-member exchange (Caniels & Hatak, 2019), empowering and contingent rewards leadership (Nguyen, Kuntz, Naswall, & Malinen, 2016), mindfulness (Pillay, 2020), and holistic leadership (Rangachari & Woods, 2020) – investigated the interactions between leadership style and resilience.
Xu, Marinova, and Guo (2015) suggested that concentration must be done on identifying and managing the dynamics occurring on key drivers and elements of the social-ecological systems. Kossek and Perrigino (2016) suggested identifying the triggers and outcomes of resilience, exploring the managerial context for they link upper management and employees, examine occupational work-life norms, resilience demands, and well-being. Paul et al. (2016) recognized that only a few studies explored resilience at work. Linnenluecke (2017) elaborated that type of resources, capabilities, and organizational structures have not been fully explored as to the extent they promote resilience on different levels of organizations. Liu, Cooper, and Tarba (2019) suggested taking a comparative context, facilitating theoretical advancement through a multidisciplinary perspective, embracing pluralism and inclusiveness, and examining human resource management (HRM) practices that can enhance resilience. Duchek (2020) recognized the need to explore how resilience works and how it can be developed, complementing their antecedents and drivers of resilience.

It was interesting to analyze the constructs of human capital sustainability leadership and resiliency in the managerial context of an AIRLINE Company as the Company has started integrating sustainability agendas into its value chain. Aside from the Airline Company's compliance with Security and Exchange Commission's mandate to increase the focus on non-financial reporting and sustainability reporting (Securities and Exchange Commission, November 22, 2016), the AIRLINE Company formulated new strategies that highlighted the AIRLINE Company's commitment to sustainability which brought about a sustainability blueprint, a sustainability strategy, and a sustainability process framework to achieve sustainable growth for the employees, customers, and environment. This study is significant to the AIRLINE Company as they would have a deeper grasp on how leadership styles and resilience interact in the managerial context. Critical reflection on the results of this study would encourage the adoption of behaviors and practices that would enhance well-being and business management practices (Acosta, Cruz-Ortiz, Salanova, & Llorens, 2015; Di Fabio, 2017; Salanova, Llorens, & Martinez, 2016) for the human capital and the organization to flourish, resulting to healthier employees, healthy organizational practices, and excellent organizational results (Acosta et al., 2015; Salanova et al., 2016).
Statement of Research Problem and Specific Objectives

Guest (2017) argued a strong case to shift away from the dominant HRM paradigms which focused largely on performance that eroded well-being and “support the case for a greater focus on employee well-being” (p. 22). Through HRM, leaders have a vital role in achieving sustainability and positive organizational outcomes (Guest, 2017) as they were the “central element in internal and external efforts of dealing with people as a central resource” (Heoppe, 2014, p. 280). Hence, leaders may facilitate the creation of new values and behaviors focused on strengths, well-being, and the common good (Aust, Matthews, & Muller-Camen, 2020; Di Fabio, 2017; Xu et al., 2015) to turn the tide of unsustainability (Bendell & Little, 2015). The complexity of managerial tasks and relationships produces various tensions that should be managed strategically (Ehnert, 2009; Hahn, Pinkse, & Higge, 2015), calling for capabilities in leadership and resiliency. Describing these capabilities would provide insights on areas of strengths and areas of improvement. This was important as the strengths and improvements of managers spill over to the employees and the organization (Kossel & Perrigino, 2016).

Scholars linked the constructs of sustainability and resilience (Di Fabio, 2017; Di Fabio & Rosen, 2018; Duchek, 2020; Espiner et al., 2017; Liu et al., 2019; Xu & Kajikawa, 2018; Xu et al., 2015) but research on leadership styles and manager resilience is still developing as only a few studies have investigated its interactions (Caniels & Hatak, 2019; Nguyen et al., 2016; Pillay, 2020; Rangachari & Woods, 2020). To fill this literature gap, this study answered the research question: what is the degree of correlation of Human Capital Sustainability Leadership style on the resilience of the managers in the Airline Operations Group of an AIRLINE Company? More specifically, this study aimed to:

1. Describe the degree of Human Capital Sustainability Leadership style of the managers in the Airline Operations Group of an AIRLINE Company using the following dimensions:
   1.1 Ethical Leadership
   1.2 Sustainable Leadership
   1.3 Mindful Leadership
   1.4 Servant Leadership
2. Describe the degree of manager resilience in the Airline Operations Group of an AIRLINE Company using the following dimensions:
   2.1 Engineering Resilience
   2.2 Ecological Resilience
   2.3 Adaptive Capacity

3. Determine which dimension of Human Capital Sustainability Leadership style is significantly correlated with manager resilience.

4. Propose a model of leadership style and resiliency to an AIRLINE Company and provide some implications to managerial practice.

Research Hypotheses

The status quo was that there would be no relationship between the constructs investigated, so, the hypotheses in this study would be stated and enumerated in the null form ($H_0$). However, in the literature review, alternatively ($H_1$), a relationship between the constructs investigated seemingly exists.

$H_{01}$: There is no significant correlation between Human Capital Sustainability Leadership style and resilience of managers in the Airline Operations Group of an AIRLINE Company.

$H_{02}$: There is no significant correlation between ethical leadership and resilience of managers in the Airline Operations Group of an AIRLINE Company.

$H_{03}$: There is no significant correlation between sustainable leadership and resilience of managers in the Airline Operations Group of an AIRLINE Company.

$H_{04}$: There is no significant correlation between mindful leadership and resilience of managers in the Airline Operations Group of an AIRLINE Company.
There is no significant correlation between servant leadership and resilience of managers in the Airline Operations Group of an AIRLINE Company.

Conceptual Framework

The constructs of Human Capital Sustainability Leadership style and resilience originated from the ideas of sustainability and positive psychology. Positive psychology provided the notion that HRM practices could enhance resilience, producing positive outcomes for employees and organizations (Di Fabio & Peiro, 2018; Mistakis, 2019; Pereira, Temouri. & Patel, 2020). The integration of sustainability and psychology contributed to a better understanding of sustainability issues as behavioral and decisional processes were substantiated by internal psychological processes (Di Fabio, 2017; Di Fabio & Rosen, 2018; Tokarz & Malinowska, 2019). Leadership anchored on the psychology of sustainability was very vital in achieving organizational sustainability (Molino, Cortese, & Ghislieri, 2019) and promoting and improving the quality of life of every human being (Di Fabio & Rosen, 2018; Tokarz & Malinowska, 2019).

Di Fabio and Peiro (2018) posited that the promotion of sustainability in organizations calls for a new style of leadership rooted in the strands of sustainability and positive organizational psychology (p. 1, 2). Di Fabio and Peiro (2018) introduced a new integrated leadership style called human capital sustainability leadership which is a “higher-order construct composed of four specific types of leadership” (p. 3) that focuses on “people as flourishing and resilient workers… organizations as thriving and successful environments characterized by the positive circle of long-term wellbeing and performance” (p. 3). Di Fabio and Peiro (2018, p. 3) integrated sustainability leadership with different functions and dimensions of ethical leadership, mindful leadership, and servant leadership to recompose and broaden the traditional sustainability leadership construct which is essential for the “prosperity, development, and optimal functioning of human capital from a long-term, psychological, sustainable perspective” (p. 3).
Through ecological systems theory (Holling, 1973, 1996), our environment must be seen as a complex adaptive social-ecological system. Links and interactions happening on various levels demand leadership and resilience capacities which were vital to adaptation and/or transformation when environmental disturbances were being encountered (Folke, 2016; Holling, 1973, 1996; Luthans, 2002). This resilience capacity from the individual level could spill over to other people and other facets of life (Kossek & Perrigino, 2016).

Maltby, Day, and Hall (2015) elaborated that within human behavior, there were domains to trait resilience based on Holling’s (1973, 1996) ecological systems theory. Their new measure was tested with the five most cited scales of resilience traits (Ego Resiliency Scale, Hardiness Scale, Psychological Resilience Scale, Connor-Davidson Resilience Scale, and Brief Resilience Scale) and three facets emerged: engineering resilience, ecological resilience, and adaptive capacity, termed as “EEA systems” or “EEA resilience model” (Maltby et al., 2015, p. 3). Maltby, Day, Hall, and Chivers (2019) advanced this model’s applicability to domain-specific contexts of work, health, marriage, friendships, and education. Maltby, Day, Hall, and Chivers (2019) defined engineering resilience as the “ability, in terms of the ease and speed, of the resilient system to recover to a stable or optimal equilibrium during or following disturbance” (p. 2), ecological resilience as the "ability to absorb or prevent disturbance, demonstrating a capability for supporting a stable state while making necessary changes to its functions" (p. 2), and adaptive capacity as the "ability to incorporate new, and to vary existing, processes continually, and to naturally adapt to disturbance" (p. 2).

Operational Framework

With the recognition that an organization is a complex adaptive social-ecological system (Folke, 2016; Holling, 1973, 1996), new approaches and practices are needed to help address contemporary challenges brought about by the dynamism of the business environment. It was interesting to analyze how Human Capital Sustainability Leadership style correlates to manager resilience. In a correlation study, there is no independent variable (Nesselroade & Grimm, 2019, p. 24) and no dependent variable, as the variables being investigated are treated symmetrically (Schindler, 2019, p. 396). Intervening, mediating, and moderating variables (e.g., demographic data) were not considered in this
study as these were not part of the study’s objectives. Furthermore, through the systematic review of literature, it was found that demographic data (e.g., age, gender, etc.) were not used as independent, dependent, intervening, mediating, and/or moderating variables (Caniels & Hatak, 2019; Nguyen et al., 2016; Pillay 2020; Rangachari & Woods, 2020). This study followed the operational framework shown in Figure 1.

Figure 1.

Operational Framework

On the left side, the construct of Human Capital Sustainability Leadership adopted the measures of the Human Capital Sustainability Leadership Scale by Di Fabio and Peiro (2018) comprising four aspects: ethical leadership, sustainable leadership, mindful leadership, and servant leadership. On the right side, the construct of manager resilience adopted the measures of Domain-Specific Resilient Systems Scales (DRSS-Work) by Maltby, Day, Hall, and Chivers (2019) comprising three aspects: engineering resilience, ecological resilience, and adaptive capacity. These two constructs were connected by a line to illustrate their correlational relationship.
Methodology

Research Design and Approach

This study adhered to the pragmatic worldview which allowed me to switch between postpositivist and constructivist worldviews when appropriate, utilizing multiple data collection techniques (Creswell & Creswell, 2018, p. 10; Creswell & Plano Clark, 2018, p. 37, 39; Saunders, Lewis, & Thornhill, 2019, p. 181) to best answer the research problem and present practical solution that would fill the literature gap and improve managerial and management practice.

I utilized explanatory sequential mixed methods research design (QUAN→qual), as I conducted quantitative research first followed by qualitative research (Creswell & Creswell, 2018, p. 15; Creswell & Plano Clark, 2018, p. 65, 77). This was cross-sectional as it was a "snapshot" of a particular time (Creswell & Creswell, 2018, p. 149; Hair, Page, & Brunsfeld, 2020, p. 165; Saunders et al., 2019, p. 212; Schindler, 2019, p. 80). Survey through the use of online self-administered questionnaires (Callegaro, Lozar Manfreda, & Vehovar, 2015; Hair et al., 2020; Saunders et al., 2019; Schindler, 2019) allowed the data to be analyzed quantitatively using descriptive and inferential statistics. The highest scores and statistically significant quantitative results were explained, which led to the development of the qualitative phase (Creswell & Creswell, 2018, p. 222; Creswell & Plano Clark, 2018, p. 191, 234). One-on-one, qualitative, semi-structured interviews were conducted face-to-face and online to elicit views from participants on how constructs were related to each other (Creswell & Creswell, 2018, p. 187; Creswell & Poth, 2018, p. 163-164; Saunders et al., 2019, p. 437). The audio was recorded, and notes were taken during the interview. Reflection and transcription were done the soonest possible time after the interview session to control bias and produce reliable data (Saunders et al., 2019, p. 463).

Sampling Design and Research Participants

This study focused on the managers of the Airline Operations Group of an AIRLINE Company. For the quantitative phase, respondents were selected through purposive sampling. All managers in the Airline Operations Group with at least one year of managerial experience within the AIRLINE Company were selected regardless of gender and educational attainment. As illustrated in Figure 2, the Airline Operations Group consisted of four departments, namely, Aircraft Engineering, Airport Operations, Flight Operations, and Inflight Services.
Figure 2.

Airline Operations Group

Human Capital Department made a list of eligible respondents. 65 respondents met the set criteria. The minimum acceptable sample size for a correlational study was at least 30 (Creswell, 2015, p. 358; Fraenkel, Wallen, & Hyun, 2012, p. 338). To determine the sample size \(n\) for this study, Slovin’s formula was used, where \(N\) is the population size, and \(e\) is the margin of error (Malaya, 2018, p. 5; Tejada & Punzalan, 2012, p. 129). This formula was mathematically derived from Cochran’s (1977, p. 75-76) formula which assumes a 95% degree of confidence and an estimate of 0.5 population proportion (Tejada & Punzalan, 2012, p. 130-131). Applying Slovin’s formula in this study, with a population size \((N)\) of 65 and error margin \((e)\) of 0.10, the computed sample size \((n)\) for this study is 40.

\[
n = \frac{N}{1 + (Ne^2)} = \frac{65}{1 + ((65)(0.10^2))} = 39.39 \approx 40
\]

For the qualitative phase, I used a much smaller sample size to collect in-depth information (Creswell & Plano Clark, 2018) from the quantitative phase sample frame. I started with the identification of key informants, as these people have "great knowledge and/or influence (by reputation) who can shed light on the inquiry issues" (Patton, 2015, p. 268). I chose persons with the highest position within the Airline Operations Group. To reach and recruit additional eligible key informants, this approach was combined with snowball sampling, as it "starts with one or few relevant and information-rich interviewees and then ask them for additional relevant contacts, others who can provide differently and/or confirming perspectives… it is an approach for locating information-rich key informants… by asking people who else to talk with" (Patton, 2015, p. 270, 298). At first, I selected and invited the Vice President (VP) of Inflight Services for a qualitative interview. Through subsequent referrals, I went
on with the other departments of the Airline Operations Group. I selected two key informants per department – one at VP or Assistant Vice President (AVP) level, and the other one at the Manager level. This approach allowed me to interview a wide cross-section of participants (Saunders et al., 2019) that represented each department of the Airline Operations Group. Eight (8) key informants participated in the qualitative phase: VP of Inflight Services, Manager in Inflight Services, VP of Airport Operations, Manager in Airport Operations, AVP of Integrated Operations and Control Center (IOCC), Chief Pilot, AVP of Aircraft Engineering, and Manager in Aircraft Engineering.

**Measurement and Instrumentation**

To measure the constructs mentioned in the framework of this study, I utilized Human Capital Sustainability Leadership Scale by Di Fabio and Peiro (2018) for Human Capital Sustainability Leadership style and Domain-Specific Resilient Systems Scales (DRSS-Work) by Maltby, Day, Hall, and Chivers (2019) for manager resilience. Items were scored on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The instruments' Cronbach Alpha (α) was higher than the minimum acceptable level of 0.70 (Hair et al., 2020, p. 261-262; Malaya, 2018, p. 9; Saunders et al., 2019, p. 518; Schindler, 2019, p. 240).

Aside from the validity and reliability of these instruments, these instruments were selected as each item reflected observable traits exhibited by the managers of the AIRLINE Company. The items per aspect were alternately listed in the online form’s second and third segments respectively to lessen the respondents' prediction of aspects measured, decreasing potential bias on ratings given. Items would be regrouped back before statistical analysis.

Human Capital Sustainability Leadership Scale measures the key aspects of ethical leadership (α = 0.80), sustainable leadership (α = 0.86), mindful leadership (α = 0.83), and servant leadership (α = 0.86). Each aspect of the scale consisted of four items – a total of sixteen items. The total Cronbach Alpha of this instrument was 0.94 (Di Fabio & Peiro, 2018, p. 7). This instrument has recomposed and broadened the traditional sustainability leadership model as it focused on flourishing, the psychology of sustainability, and sustainable development (Di Fabio & Peiro, 2018, p. 3). It was very economical to use as Human Capital Sustainability Leadership was a single second-order factor and higher-
order construct. Using this instrument enables one to measure four leadership styles all at the same time.

Domain-Specific Resilient Systems Scales measures the key aspects of engineering resilience ($\alpha = 0.93$), ecological resilience ($\alpha = 0.81$), and adaptive capacity ($\alpha = 0.86$). Each aspect of the scale consisted of four items – a total of twelve items. The total Cronbach Alpha of this instrument was 0.86 (Maltby, Day, Hall, & Chivers, 2019, p. 8). This instrument was direct to Holling’s descriptions and it avoided colloquialisms (Maltby, Day, Flowe, Vostanis, & Chivers, 2019, p. 45). It was a short assessment but competitive to use as it could be employed alongside other measures of resilience. It was distinct from general trait assessment as it was context-specific. This reduces the ubiquitous and ambiguous way of framing resilience (Maltby, Day, Hall, & Chivers, 2019, p. 3).

**Research Ethics Approaches**

The corresponding authors of the instruments utilized in this study were contacted through e-mail to obtain permission before their usage, and they agreed for me to use them in this study. Confidentiality and non-disclosure agreements were made with the statistician before data gathering which he agreed to abide by.

A letter was written to the VP of Human Capital (HC) and VP of Inflight Services of an AIRLINE Company last December 21, 2020, to ask for permission and clearance for the research to commence. Informed consent was given. The research request was declined last March 19, 2021. I asked for reconsideration and the request was approved last May 17, 2021, with the following conditions: 1) the company and respondents would be anonymized, 2) no list of managers and no detailed manpower count would be given, 3) in the quantitative phase, HC Business Partners would e-mail the survey link to eligible respondents. By clicking the survey link, respondents were directed through the online form which had three segments: 1) cover letter, 2) Human Capital Sustainability Leadership Scale, and 3) Domain-Specific Resilient Systems Scales (DRSS-Work). The cover letter elaborated on the purpose of the study and the informed consent (voluntary participation; no incentives; anonymity and confidentiality). If the respondent agreed to participate in the study, they would click the survey link, click “Next”, accomplish the online form, and click “Submit”. If the respondent disagreed to participate in the study, they don’t have to click the survey link. It was also explained that the
The correlation of human capital sustainability leadership style.

respondents cannot withdraw from the study once the form through the link was submitted as data were anonymized. Before a qualitative interview, consent in audio recording was obtained from each key informant. They were informed that they could give me a signal anytime during the interview if there’s any need to stop the recording – when they would disclose sensitive information that they don’t like to be recorded.

Research Procedures for Data Collection

For the quantitative phase, I obtained primary data using an online self-administered questionnaire (Hair et al., 2020; Saunders et al., 2019; Schindler, 2019). Before the online survey, adapted instruments were encoded and converted into Microsoft Forms. A survey link was generated to enable the respondents to access and respond to the online form. The online form was set in such a way that the only people who could access and respond through the online form were solely from the AIRLINE Company. The online survey was accessible through desktops, laptops, and mobile devices. All the items in the online form were set as "Required" so that the respondents would not leave any item unanswered. This setting gives an immediate prompt to the respondent and the form could not be submitted if an item was left unanswered. Respondents could only submit their responses once. After the respondent clicked "Submit", their responses would be automatically stored and transmitted and could be manually downloaded anytime.

After Human Capital Department’s review, the online survey commenced last June 1, 2021. All eligible respondents were invited through e-mail by HC Business Partners to participate in the study. As suggested by Saunders et al. (2019, p. 544), three follow-up e-mails were sent to increase the survey response rate (June 15 & 26, & July 16, 2021). Forty-five (45) out of sixty-five (65) eligible respondents have participated in the online survey. This was higher than the minimum acceptable size of at least thirty (30) for a correlational study (Creswell, 2015, p. 358; Fraenkel et al., 2012, p. 338) and higher than the study’s computed sample size of forty (40).

After analyzing the quantitative data, the qualitative phase commenced. There were eight (8) respondents for this phase. One-on-one, qualitative, semi-structured interviews (Creswell & Creswell, 2018; Creswell & Poth, 2018; Saunders et al., 2019) were conducted face-to-face and online last October 18, 2021, to November 3, 2021. Online interviews
were conducted synchronously via Microsoft Teams. Interviews were transcribed immediately.

**Data Analysis**

For the quantitative phase, the instruments' items were regrouped back per aspect before statistical analysis as items have been alternated separately in the second and third segments of the online form. Results were analyzed with the aid of MedCalc Statistical Software version 20.01. Mean scores were interpreted using Table 1. The verbal interpretation in Table 1 was adapted from Saunders et al. (2019, p. 527).

**Table 1.**

*Verbal Interpretation of the Mean Score*

<table>
<thead>
<tr>
<th>Mean Score Range</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.21 – 5.00</td>
<td>Very High or All the time/Always</td>
</tr>
<tr>
<td>3.41 – 4.20</td>
<td>High or Frequently/Very Often</td>
</tr>
<tr>
<td>2.61 – 3.40</td>
<td>Neither High nor Low or Sometimes</td>
</tr>
<tr>
<td>1.81 – 2.60</td>
<td>Low or Rarely/Seldom</td>
</tr>
<tr>
<td>1.00 – 1.80</td>
<td>Very Low or Never</td>
</tr>
</tbody>
</table>

Hypotheses were tested at a 0.05 level of significance ($\alpha$). The probability value ($p$ value) approach was used. To identify which type of correlation treatment would be employed, the Shapiro-Wilk test was used to examine the sample's normality (Hahs-Vaughn & Lomax, 2020, p. 197-198; Saunders et al., 2019, p. 604-607). The result of the Shapiro-Wilk test in Table 2 showed that the sample's distribution was not normal. At a 0.05 level of significance, the $p$ values of the variables were less than the $\alpha$ of 0.05. Statistical evidence suggested that the sample’s distribution was statistically and significantly different than a normal distribution, therefore, it was not normally distributed.
The correlation of human capital sustainability leadership style...

Table 2.

Distribution of Human Capital Sustainability Leadership Style and Manager Resilience

<table>
<thead>
<tr>
<th></th>
<th>Shapiro-Wilk</th>
<th>p value</th>
<th>Decision</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Capital Sustainability Leadership (HCSL)</td>
<td>0.8065</td>
<td>0.0001</td>
<td>Reject Null</td>
<td>Not Normally Distributed</td>
</tr>
<tr>
<td>Ethical Leadership</td>
<td>0.7828</td>
<td>0.0001</td>
<td>Reject Null</td>
<td>Not Normally Distributed</td>
</tr>
<tr>
<td>Sustainable Leadership</td>
<td>0.8565</td>
<td>0.0001</td>
<td>Reject Null</td>
<td>Not Normally Distributed</td>
</tr>
<tr>
<td>Mindful Leadership</td>
<td>0.8892</td>
<td>0.0004</td>
<td>Reject Null</td>
<td>Not Normally Distributed</td>
</tr>
<tr>
<td>Servant Leadership</td>
<td>0.7772</td>
<td>0.0001</td>
<td>Reject Null</td>
<td>Not Normally Distributed</td>
</tr>
<tr>
<td>Manager Resilience (DRSS-Work)</td>
<td>0.9369</td>
<td>0.0165</td>
<td>Reject Null</td>
<td>Not Normally Distributed</td>
</tr>
<tr>
<td>Engineering Resilience</td>
<td>0.9277</td>
<td>0.0078</td>
<td>Reject Null</td>
<td>Not Normally Distributed</td>
</tr>
<tr>
<td>Ecological Resilience</td>
<td>0.8642</td>
<td>0.0001</td>
<td>Reject Null</td>
<td>Not Normally Distributed</td>
</tr>
<tr>
<td>Adaptive Capacity</td>
<td>0.9628</td>
<td>0.1558</td>
<td>Do Not Reject Null</td>
<td>Normally Distributed</td>
</tr>
</tbody>
</table>

\(a = 0.05, n = 45\)

Since the assumptions of the parametric test were not met, the standard parametric tests were invalid and nonparametric tests were used as a substitute (Hahs-Vaughn & Lomax, 2020, p. 375; Nesselroade & Grimm, 2019, p. 727) as nonparametric tests do not make assumptions about population parameters (Nesselroade & Grimm, 2019, p. 677). When assumptions for Pearson correlation were not met, the Spearman rank correlation coefficient was an appropriate option (Hahs-Vaughn & Lomax, 2020, p. 375; Nesselroade & Grimm, 2019, p. 679).

In this study, Spearman \(\rho\) was employed (denoted as \(\rho_s\) or \(r_s\)). It “measures the strength of association between two variables when at least one variable is measured on an ordinal scale” (Nesselroade & Grimm, 2019, p. 677). Conventions used for interpreting Pearson correlation could be applied to Spearman \(\rho\) correlation (Hahs-Vaughn & Lomax, 2020, p. 376; Nesselroade & Grimm, 2019, p. 681).

For the qualitative phase, interviews were audio-recorded. The verbatim principle (Spradley, 1979, p. 73) was applied in transcribing interviews as exact words and phrases were captured. In this way, the morphologic naturalness and structure of the qualitative raw data were
preserved to provide "exact" insights into the meaning of interviewees' thoughts rather than my inferred meaning (Mergenthaler & Stinson, 1992, p. 129; Yin, 2016, p. 166). Nothing can substitute for the actual and exact data said by the respondents (Patton, 2015). This is the norm when doing a rigorous and systematic thematic analysis (Guest, MacQueen, & Namey, 2012, p. 96). Reflection and transcription were done the soonest possible time after the interview session to control bias and produce reliable data (Saunders et al., 2019, p. 463).

After transcription, themes were identified through Ryan and Bernard’s (2003, p. 94) “cutting and sorting” which involved “identifying quotes or expressions that seem somehow important (exemplars) and then arranging the quotes/expressions into piles of things that go together” (Bernard, Wutich, & Ryan, 2017, p. 112). This was built on Lincoln and Guba's (1985, p. 347) approach of "categorizing" wherein one brings together the same content into categories. Guest et al. (2012, p. 50) explained this as “text segmentation”, a technique that could “facilitate the analyst’s ability to identify, map, and succinctly display the context and multidimensionality of data” (p. 51). Yin (2016, p. 199-201) elaborated that disassembling the data was possible without coding, and the database could be segmented and then organized thematically.

To better understand some words in the quotes segmented from the verbatim transcription, explanations were provided and placed within square brackets following the word within the segmented text (Guest et al., 2012, p. 97) instead of making any changes to the dialect spoken by the respondents to minimize any distortion to meaning (King, Harrocks, & Brooks, 2019, p. 200). As a procedural check, quotes were cross-walked backward into the original database to ensure fairness in coverage and analysis (Yin, 2016, p. 201).

Triangulation was done to test for consistency and enhance accuracies in yielding results from a variety of data sources and inquiry approaches (Creswell, 2015; Patton, 2015). In this study, both the data and the methods (Denzin, 1978; Hair et al., 2020; Patton, 2015) were triangulated to build a model from the convergence of quantitative and qualitative data.
Results and Discussion

Degree in Human Capital Sustainability Leadership Style

Table 3.

Mean Scores and Standard Deviation of Human Capital Sustainability Leadership Scale (HCSL)

<table>
<thead>
<tr>
<th>Items of HCSL Scale (n = 45)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethical Leadership (ET)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Being correct is important when we perform a task or a job.</td>
<td>4.27</td>
<td>0.74</td>
</tr>
<tr>
<td>2. I act by giving an example of doing tasks in an ethically correct manner.</td>
<td>4.58</td>
<td>0.91</td>
</tr>
<tr>
<td>3. I keep my promise to my collaborators.</td>
<td>4.58</td>
<td>0.50</td>
</tr>
<tr>
<td>4. I make decisions in an ethical manner.</td>
<td>4.38</td>
<td>0.74</td>
</tr>
<tr>
<td>Sustainable Leadership (SU)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I create sustainable learning conditions that I take care to preserve.</td>
<td>4.38</td>
<td>0.69</td>
</tr>
<tr>
<td>6. I develop, rather than exhaust, the human resources that work with me.</td>
<td>4.47</td>
<td>0.76</td>
</tr>
<tr>
<td>7. I support my collaborators in their personal/career growth.</td>
<td>4.40</td>
<td>0.67</td>
</tr>
<tr>
<td>8. I leave out the superfluous by focusing the resources on the crucial aspects of work.</td>
<td>4.44</td>
<td>0.49</td>
</tr>
<tr>
<td>Mindful Leadership (MI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I put myself in the shoes of my collaborators when they are doing tasks.</td>
<td>4.37</td>
<td>0.68</td>
</tr>
<tr>
<td>10. I anticipate the requests of my collaborators.</td>
<td>4.20</td>
<td>0.76</td>
</tr>
<tr>
<td>11. I am aware of the strengths and the limitations of my collaborators.</td>
<td>4.42</td>
<td>0.67</td>
</tr>
<tr>
<td>12. I recognize the value of my self-control to my employees, even in stressful situations.</td>
<td>4.38</td>
<td>0.49</td>
</tr>
<tr>
<td>Servant Leadership (SE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. In general, I show interest in the professional and personal lives of my collaborators.</td>
<td>4.37</td>
<td>0.71</td>
</tr>
<tr>
<td>14. I encourage my collaborators when I realize that they encounter difficulties.</td>
<td>4.20</td>
<td>0.81</td>
</tr>
<tr>
<td>15. I commit myself so my collaborators have all the information to work to the best.</td>
<td>4.42</td>
<td>0.72</td>
</tr>
<tr>
<td>16. I actively promote a positive group climate at work.</td>
<td>4.38</td>
<td>0.49</td>
</tr>
<tr>
<td>Overall HCSL</td>
<td>4.38</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Table 3 shows the mean score of the 45 Airline Operations Group managers of an AIRLINE Company on each of the 16 items that measured the degree how which the Human Capital Sustainability Leadership style was demonstrated based on a five-point Likert scale. Overall, Human Capital Sustainability Leadership style and its aspects were always
exhibited by the managers to a very high degree and were demonstrated all the time.

Ethical leadership got the highest mean score of 4.42 (SD = 0.74). Managers act ethically and correctly in such a way that they could be seen as an example to others (M = 4.58, SD = 0.50). A Manager in Inflight Services assertively shared her observation of the higher management’s behavior: “Nakikita namin sila... they do it at their level, and then down the line, always open, always gives us information and numbers. Me basis, di lang chismis yung assessment or evaluation. Kaya the way they operate up there, nakukuha namin”. This demonstrated leaders’ moral atmosphere creation and role modeling (Zhu, Zheng, Wang, & Zhang, 2019) that positively influence employee and organizational outcomes resulting to trust, sustainability, and profit (Mea & Sims, 2019; Zhu et al., 2019).

The second aspect was sustainable leadership, which had a mean score of 4.38 (SD = 0.69). Managers create and preserve sustainable learning conditions (M = 4.47, SD = 0.55). The AVP of Aircraft Engineering elaborated on how they have established a process for this through a buddy system:

*If we have new personnel or yung bago pa sa kanya yung mga ginagawa nya, we always have a buddy system muna. Kung baga same level colleague, na mag overshadow, making sure that it will be successful. In a way, meron nang initial check and balance na ginagawa. Aside dito, of course, yun namang side ng supervisors, managers, and up, just checking up on what is the product, or while the product is being made, as it needs to be regularly checked. Guided pa rin. Me mga layers din kaming nilagay, yung mga layers na yun, collaborative and overlapping naman.*

This was one of the major factors that contributed to corporate sustainability as continuous organizational learning and development is needed by the organization to create value through its human resource (Xu & Kajikawa, 2018; Xu et al., 2015).

The third aspect was servant leadership, which had a mean score of 4.37 (SD = 0.71). Managers promote positive group climate at work (M = 4.47, SD = 0.76). The AVP of IOCC earnestly shared their practice within their division:

*Pag napapansin mo na yung medyo bago bago nating kasamahan, ‘Eh, sandali, medyo me kulang ng konti’, tutulungan naman natin or tuturuan natin. The mantra is we are working as a team, and when we notice someone that is a bit lagging or lacking, yan ang automatic response.*
It coincides with the competency of the leaders to empower and build relationships (Chinyere & Sandada, 2018; Coetzer, Bussin, & Geldenhuys, 2017).

Lastly, the fourth aspect was mindful leadership, which got the lowest mean score of 4.33 (SD = 0.68). While this aspect was the lowest, it was still always exhibited by the managers to a very high degree and was demonstrated all the time. Managers put themselves in the shoes of their collaborators when doing their tasks (M = 4.44, SD = 0.76). A Manager in Inflight Services acknowledged this and avidly said: "We collaborate with a lot of departments... scheduling, safety, airport, security, quality, etc. We try to understand how they operate so that we know how can we work better with them". This highlights the leaders’ awareness, attention, and acceptance of the situation (King & Badham, 2018) enables them to align with their collaborators and strengthen the group's processes (Ritchie-Dunham, 2014), seeing the bigger picture (Vreeling, Kersemaekers, Cillessen, van Dierendonck, & Speckens, 2019).

**Degree of Manager Resilience**

**Table 4.**

*Mean Scores and Standard Deviation of Domain-Specific Resilient Systems Scales (DRSS-Work)*

<table>
<thead>
<tr>
<th>Items of DRSS-Work (n = 45)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engineering Resilience (EN)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I recover from different situations at work with ease.</td>
<td>4.00</td>
<td>0.65</td>
</tr>
<tr>
<td>2. I recover from a stressful time at work quickly.</td>
<td>3.91</td>
<td>0.67</td>
</tr>
<tr>
<td>3. I quickly get back to my normal self at work following problems at work.</td>
<td>4.11</td>
<td>0.65</td>
</tr>
<tr>
<td>4. I easily get back to my normal self at work after tough experiences at work.</td>
<td>4.04</td>
<td>0.67</td>
</tr>
<tr>
<td><strong>Ecological Resilience (EC)</strong></td>
<td>4.22</td>
<td>0.62</td>
</tr>
<tr>
<td>5. I am always able to give all I can at work, regardless of what may happen at work.</td>
<td>4.29</td>
<td>0.55</td>
</tr>
<tr>
<td>6. I remain strong-willed at work, no matter what problems occur at work.</td>
<td>4.11</td>
<td>0.86</td>
</tr>
<tr>
<td>7. Even with problems at work, I am able to function to achieve my goals at work.</td>
<td>4.18</td>
<td>0.53</td>
</tr>
<tr>
<td>8. No matter what happens at work, I find ways to get things done at work.</td>
<td>4.31</td>
<td>0.47</td>
</tr>
<tr>
<td><strong>Adaptive Capacity (AD)</strong></td>
<td>3.89</td>
<td>0.75</td>
</tr>
<tr>
<td>9. I like it when my work life changes.</td>
<td>3.76</td>
<td>0.74</td>
</tr>
<tr>
<td>10. I like coping with unpredictable situations at work.</td>
<td>4.09</td>
<td>0.76</td>
</tr>
<tr>
<td>11. Uncertain situations at work interest me.</td>
<td>3.87</td>
<td>0.76</td>
</tr>
<tr>
<td>12. I enjoy it when there are changes to my routine at work.</td>
<td>3.84</td>
<td>0.74</td>
</tr>
<tr>
<td><strong>Overall DRSS-Work</strong></td>
<td>4.04</td>
<td>0.69</td>
</tr>
</tbody>
</table>
Table 4 shows the mean score of the 45 Airline Operations Group managers of an AIRLINE Company on each of the 12 items that measured the degree to how workplace resilience was demonstrated based on a five-point Likert scale. Overall, workplace resilience was always exhibited by the managers to a high degree and was demonstrated very often. Ecological resilience was always exhibited by the managers to a very high degree and was demonstrated all the time. While engineering resilience and adaptive capacity were frequently exhibited by the managers to a high degree and were demonstrated very often.

Ecological resilience got the highest mean score of 4.22 (SD = 0.62). Managers find ways to get things done no matter what happens (M = 4.31, SD = 0.47). The AVP of IOCC passionately shared: "Resilience is one of the very underlying concepts in our unit because we are tasked to handle disruptions... be back on track in the best possible way the soonest possible time... what’s important is we know how to absorb it, recover from it, and get on with it". This highlighted their ability to maintain and alter function while withstanding disturbance which was important when “systems need to be sustainable and… present and future goals is under threat” (Maltby, Day, Hall, & Chivers, 2019).

The second aspect was engineering resilience, which had a mean score of 4.00 (SD = 0.65). This was frequently exhibited by the managers to a high degree and was demonstrated very often. Managers quickly get back to their normal selves after problems (M = 4.11, SD = 0.65). The VP of Inflight Services meticulously shared how they get back after work problems:

*Engagement with the environment, understanding what is happening, understanding how to react. It is awareness. The need to survive. Kasi pwedeng you do not recover, ma threaten ang operations. Usually, when things happen, there are expectations from stakeholders, and in many cases, we have to react and act fast. Sometimes developing pa yan, so you make adjustments. Mabilis eh, not really enough time to not move, or not act.*

This aspect assessed the “swiftmess” (Maltby et al., 2015, p. 20), “speed and ease” (Maltby, Day, Flowe, et al., 2019, p. 46) of recovery which was important in the "maintenance of an established system… in… unknown and unexpected threats" (Maltby, Day, Hall, & Chivers, 2019, p. 14). Preparedness and planning were one of the resilience contributors as some organizations prepare for crises through scenario exercises (Barasa, Mbau, & Gilson, 2018, p. 497).
Lastly, the third aspect was adaptive capacity, which got the lowest mean score of 3.89 (SD = 0.75). While this aspect was the lowest, it was still frequently exhibited by the managers to a high degree and was demonstrated very often. Managers like coping with unpredictable situations (M = 4.09, SD = 0.76). The VP of Airport Operations gladly shared how they cope:

*What I do, is we talk about it one at a time, we try to solve it. Huwag ka magpanic, me solusyon lahat yan. Ako rin yung responsible person, kasi at the end of the day, ako haharap sa management. I try to manage the stress. It is a matter of being open, I listen to them, lahat ng suggestions, and inputs, I get. Lahat ng feedback, out of the box, I let them explain. Decide as a team which works best.*

This highlighted their willingness to adapt and vary their key functions (Maltby et al., 2015, p. 20) which was important when “retention of the system is under threat” (Maltby, Day, Hall, & Chivers, 2019, p. 14).

**Correlation of Human Capital Sustainability Leadership Style and Manager Resilience**

Nesselroade and Grimm (2019, p. 539-540) suggested always inspecting data through a scatter diagram (or scatter plot or scattergram) before interpreting the correlation coefficients as this helped detect the correlation’s nature (linear or nonlinear), direction (positive or negative), and strength (strong or weak). Through visual inspection of the scatter diagram, the strength of correlation could be identified in two ways: 1) "The narrower the width of the oval enveloping the data, the stronger the correlation. The more the data take the shape of a circle, the weaker the correlation" (Nesselroade & Grimm, 2019, p. 538). 2) “If the scatter of the points tends to fall close to the line that cuts the bivariate distribution in half, the stronger the relationship. The more it is widely scattered around the line, the weaker the relationship” (Hahs-Vaughn & Lomax, 2020, p. 366).

The overall mean scores of Human Capital Sustainability Leadership were assigned as values on the x-axis while the overall mean scores of manager resilience were assigned as values on the y-axis. These scores were paired and plotted in the diagram. Figure 3 illustrated the scatter diagram of this study.
Figure 3.

Scatter Diagram of Human Capital Sustainability Leadership Style and manager Resilience

Through visual inspection of the scatter diagram, Human Capital Sustainability Leadership, and manager resilience showed a linear, positive, and strong correlation. To further explain this correlation, correlation coefficients were computed and the results were shown in Table 5. The color-highlighted where the correlation coefficient falls in the spectrum of values between +1 to -1.

Table 5.

Correlation of Human Capital Sustainability Leadership Style and Manager Resilience

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Human Capital Sustainability Leadership (HCSL)</td>
<td>0.853**</td>
<td>0.857**</td>
<td>0.913**</td>
<td>0.883**</td>
<td>0.603**</td>
<td></td>
</tr>
<tr>
<td>2. Ethical Leadership</td>
<td>0.853**</td>
<td>0.573**</td>
<td>0.785**</td>
<td>0.708**</td>
<td>0.883**</td>
<td></td>
</tr>
<tr>
<td>3. Sustainable Leadership</td>
<td>0.857**</td>
<td>0.573**</td>
<td>0.729**</td>
<td>0.705**</td>
<td>0.436**</td>
<td></td>
</tr>
<tr>
<td>4. Mindful Leadership</td>
<td>0.913**</td>
<td>0.785**</td>
<td>0.729**</td>
<td>0.767**</td>
<td>0.664**</td>
<td></td>
</tr>
<tr>
<td>5. Servant Leadership</td>
<td>0.883**</td>
<td>0.708**</td>
<td>0.705**</td>
<td>0.767**</td>
<td>0.5**</td>
<td></td>
</tr>
<tr>
<td>6. Manager Resilience (DRSS-Work)</td>
<td>0.603**</td>
<td>0.683**</td>
<td>0.436**</td>
<td>0.664**</td>
<td>0.5**</td>
<td></td>
</tr>
</tbody>
</table>

Spearman Rank Correlation Coefficient

$n = 45$

**$p < .01$
The correlation of human capital sustainability leadership style.

For inferential testing, the statistic $r$ could be used to make inferences about $\rho$ (Hahs-Vaughn & Lomax, 2020, p. 371, 376; Nesselroade & Grimm, 2019, p. 550, 686). $r$ was tested to determine if population correlation ($\rho_s$) was different from zero. The results of the hypotheses test were summarized in Table 6.

Table 6.

Results of Hypotheses Testing: Human Capital Sustainability Leadership Style vis-à-vis Manager Resilience

<table>
<thead>
<tr>
<th></th>
<th>Spearman $r$</th>
<th>$p$ value</th>
<th>Decision</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Capital Sustainability Leadership (HCSL)</td>
<td>0.603</td>
<td>0.0001</td>
<td>Reject Null</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Ethical Leadership</td>
<td>0.683</td>
<td>0.0001</td>
<td>Reject Null</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Sustainable Leadership</td>
<td>0.436</td>
<td>0.0028</td>
<td>Reject Null</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Mindful Leadership</td>
<td>0.664</td>
<td>0.0001</td>
<td>Reject Null</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Servant Leadership</td>
<td>0.500</td>
<td>0.0005</td>
<td>Reject Null</td>
<td>Highly Significant</td>
</tr>
</tbody>
</table>

$a = 0.05, n = 45$

As shown in Table 6, statistical evidence indicated that there was a positive and highly significant correlation between Human Capital Sustainability Leadership and manager resilience. Each aspect of Human Capital Sustainability Leadership – ethical leadership, sustainable leadership, mindful leadership, and servant leadership – was positively, highly, and significantly correlated with manager resilience.

Since Human Capital Sustainability Leadership is a new construct (Di Fabio & Peiro, 2018), there were no studies available that directly linked it to resilience. However, the nearest related literature would be studies that found the significance of other types of leadership styles relating to resilience, such as leader-member exchange (Caniels & Hatak, 2019), empowering and contingent rewards leadership (Nguyen et al., 2016), mindfulness (Pillay, 2020), and holistic leadership (Rangachari & Woods, 2020).
The highly significant correlation between ethical leadership and resilience was in line with Mea and Sims’s (2019) Human-dignity Centered Framework which elaborated that humanistic management produces trust, human flourishing, and endurance over the long term. Kimura and Nishikawa (2018) found that "accountability, consideration, and respect for others, fairness and non-discriminatory treatment, openness, and flexibility, cool judgment, and logicality" (p. 714) were ethical leadership qualities that foster resilience. The VP of Airport Operations assertively highlighted that they should not only be ethical but also flexible and accountable: “There is a standard, but sometimes there are decisions that have to be done na medyo iba, but always for the good of the passengers and the company. I give my managers freedom, but when you decide, you have to be accountable”. Yousaf, Abid, Butt, Ilyas, and Ahmed (2019) found that when employees thrive under ethical leadership, it encouraged voice behavior and facilitated well-being. A Chief Pilot passionately shared his mindset that encouraged his colleagues to share feedback: "Be approachable first of all, let them speak... comment... criticize... not because they criticize you, meaning they are putting you down, maybe they are helping you to improve. Kainin mo yung pride mo as a leader.”

The highly significant correlation between sustainable leadership and resilience was in line with Suriyankiekaew and Petison’s (2019) Strategic Management for Sustainability Business Model and Rodriguez-Olalla and Aviles-Palacios’s (2017) Activity-Based Sustainability Integration Model, as they implied the leadership’s importance in strategically embracing and embedding sustainability strategies to achieve resilience. A Manager in Aircraft Engineering gladly shared how they adopted an agile sigma practice: “Every day is iba iba eh... minsan di mo rin nakukuha sa training. We have this meeting every morning called scrum... we discuss ano ba learnings natin dito, bakit naging ganito, so that it won’t happen again”. Furthermore, Kira and Lifvergren (2014) found that work systems sustainability leads to adaptive capacities. The AVP of Aircraft Engineering meticulously shared regarding how their established work systems were associated with resilience: “Basta any change, the process is still done. Although of course, yung mga processes na yun, maybe a generic process, it is flexible enough to provide you with the basics to have an initial action towards the unknown, nabubuild up yung resiliency”.
The highly significant correlation between mindful leadership and resilience was in line with Ashegi and Hashemi's (2019) study which found that mindfulness affects resilience through awareness that lowers reactivity to adopt rightly in stressful situations. The VP of Inflight Services readily shared his strategy for facing work challenges: "Understanding the situation first, what is happening? Who’s affected? What are the implications of the event? Then craft the response for the situation". This was also supported by Vreeling et al. (2019) as mindfulness resulted in "self-regulation, letting go of unhelpful behaviors, and developing new helpful behaviors" (p. 5) while Pillay (2020) highlighted that positive affect and mindfulness predicted resilience.

The highly significant correlation between servant leadership and resilience was in line with Rai and Prakash's (2016) study as servant leadership was positively correlated with absorptive capacity through perceived organizational support. Tang, Kwan, Zhang, and Zhu (2016) found that servant leadership facilitated work-family balance through emotional healing by reducing emotional exhaustion and enhancing personal learning while Dooley, Alizadeh, Qiu, and Wu (2020) highlighted that this acted as a buffer between hindrance stress and well-being. A Manager in Airport Operations passionately shared how he help achieve work-life balance: “Looking after work na meron syang pupuntahan, at hindi ko guguluhin ang off nya, at bibigyan ko sya ng sufficient rest, magiging happy yung tao. Tas pag nag VL [Vacation Leave] sila, I see to it na mabigay ko.”

Pieces of evidence were corroborated to build a model through the triangulation of statistically significant findings (QUAN), themes (qual), and consistent confirmation from related literature and studies (Creswell & Poth, 2018, p. 260; Denzin, 1978; Hair et al., 2020, p. 321; Patton, 2015, p. 316, 661; Saunders et al., 2019, p. 218). The model illustrated in Figure 4 clustered the mechanisms on how each aspect of the Human Capital Sustainability Leadership style relates to resilience.
Conclusion

The statistical evidence of the study indicated that there was a linear, positive, and highly significant correlation between Human Capital Sustainability Leadership style on the resilience of managers in the Airline Operations Group of an AIRLINE Company ($r_s = 0.603, p = 0.0001$; reject $H_{01}$). This was consistent with the findings of Caniels and Hatak (2019), Nguyen et al. (2016), Pillay (2020), and Rangachari and Woods (2020). Each aspect of Human Capital Sustainability Leadership style – ethical leadership ($r_s = 0.683, p = 0.0001$; reject $H_{02}$), sustainable leadership ($r_s = 0.436, p = 0.0028$; reject $H_{03}$), mindful leadership ($r_s = 0.664, p = 0.0001$; reject $H_{04}$), and servant leadership ($r_s = 0.5, p = 0.0005$; reject $H_{05}$) – was positively, highly and significantly correlated with manager resilience.

Human Capital Sustainability Leadership style along with its aspects were always exhibited by the managers on a very high degree and
was demonstrated all the time (M = 4.38, SD = 0.7). Ethical leadership got the highest score (M = 4.42, SD = 0.74). This was followed by sustainable leadership (M = 4.38, SD = 0.69), servant leadership (M = 4.37, SD = 0.71), and mindful leadership (M = 4.33, SD = 0.68).

Manager resilience was always exhibited by the managers to a high degree and was demonstrated very often (M = 4.04, SD = 0.69). Ecological resilience got the highest score (M = 4.22, SD = 0.62) and this was always exhibited by the managers to a very high degree and was demonstrated all the time. This was followed by engineering resilience (M = 4.00, SD = 0.65) and adaptive capacity (M = 3.89, SD = 0.75) which were frequently exhibited by the managers to a high degree and was demonstrated very often.

The quantitative results were validated by the qualitative results as themes of leadership, resilience, and the relationship between these constructs have emerged and their relationships were highly apparent. In addition, the related literature was able to support both the quantitative and qualitative data. The triangulation resulted in a model on leadership styles and resiliency which was illustrated in Figure 4. This model could be implemented in the AIRLINE Company through the suggested topics in the management development program.

**Implications to Theory**

This study was able to fill the literature gap on the constructs of Human Capital Sustainability Leadership anchored on sustainability and positive organizational psychology (Di Fabio & Peiro, 2018) and manager resilience anchored on Holling’s (1973, 1996) ecological systems theory (Maltby et al., 2015; Maltby, Day, Flowe, et al., 2019; Maltby, Day, Hall, & Chivers, 2019) as no studies have analyzed Human Capital Sustainability Leadership as it is a new construct (Di Fabio & Peiro, 2018). The understanding of manager resilience was broadened through Maltby, Day, Hall, and Chivers’s (2019, p. 14) new resilience model that linked Holling’s (1973, 1996) ecological systems theory in the work domain, addressing the limited (Linnenluecke, 2017; Nguyen et al., 2016), fragmented (Linnenluecke, 2017; Malik & Garg, 2017; Winwood et al., 2013; Xu & Kajikawa, 2018), and not yet fully explored construct (Kossek & Perrigino, 2016; Linnenluecke, 2017; Nguyen et al., 2016; Paul et al., 2016).
Explaining the relationship and correlation of Human Capital Sustainability Leadership style and manager resilience in the context of an AIRLINE Company addressed: 1) Di Fabio and Peiro’s (2018, p. 8) recommendation to replicate their study in another industry, organization, and context, and 2) Maltby, Day, Hall, and Chivers’s (2019, p. 14) proposition to test their domain-specific model with other processes and outcomes of systems as the correlation of their domain-specific resilient systems model were examined with leadership styles in a managerial and organizational context.

This study contributed to the literature as there were only a few studies that have investigated the interactions of other leadership styles relating to employee resilience (Caniels & Hatak, 2019; Nguyen et al., 2016; Pillay, 2020; Rangachari & Woods, 2020) and there is no single study that analyzed the relationship of Human Capital Sustainability Leadership style and manager resilience, detecting various leadership styles (ethical, sustainable, mindful, and servant) all at the same time in a single study relating to manager resilience.

Kossek and Perrigino (2016), and Paul et al.’s (2016) suggestion to explore resilience contextualized at work including specific population groups were done in this study. Using Maltby, Day, Hall, and Chivers’s (2019) Domain-Specific Resilient Systems Scales in a work setting and relating it to leadership styles addressed Xu et al.’s (2015) concern on understanding how to manage the dynamics occurring on key drivers and elements of social-ecological systems.

The model (refer to Figure 4) built from the corroborated evidence through triangulation addressed Duchek (2020), Linnenluecke (2017), and Liu et al.’s (2019) proposition to provide theoretical advancements on how resilience works and how resources, capabilities, organizational structures, and HRM practices could promote, enhance, and develop resilience.

**Recommendations**

**Implications to Practice**

**For an AIRLINE Company.** Since the findings of this study indicated that Human Capital Sustainability Leadership style was positively, highly, and significantly correlated with manager resilience, the dimensions under these constructs along with the corresponding practices in Figure 4, could be included and incorporated into the AIRLINE
Company’s leaders’ core competencies. Adoption of the practices under each aspect of the Human Capital Sustainability Leadership style could be encouraged to enhance the current business management practices for the organization to be more agile and sustainable.

**For Managers of Airline Operations Group.** Leadership and resilience competencies could be honed and enhanced through pieces of training, seminars, mentoring, coaching, and formal schooling. The model in Figure 4 would be suggested to be included in the AIRLINE Company's leaders' core competencies as the model clustered the mechanisms on how each leadership styles relate to resilience. This would give insights into which areas could be included in the competency improvement. To adopt and implement this model, a management development program was tailored and the following topics would be suggested:

*Title: “Leading Towards Sustainability”*

**Objectives:**
1. To maximize organizational capacities to achieve organizational sustainability.
2. To address organizational challenges strategically through appropriate ethical frameworks and decision-making models.

**Suggested Topics:**
- Humanistic management – centering on human dignity, common good, and order.
- Frameworks on management ethics and decision-making models.
- Creating direction, alignment, and commitment.
- Integrating sustainability in strategy, management, and control.
- Mentoring and coaching techniques.
- Engaging stakeholders.
- Managing, dealing, and coping with change.

*Title: “Resilient People: Resilient Organization”*

**Objectives:**
1. To discover the resilience capacities of leaders.
2. To enhance the resilience capacities of leaders.
3. To mobilize resilience capacities to achieve employee and organizational well-being.
Suggested Topics:
✓ Self-awareness towards self-management.
✓ Focusing and building on strengths.
✓ Breaking irrational beliefs and encouraging new thinking.
✓ Doing regular psychological workouts.
✓ Mindfulness training.
✓ Stress management.
✓ Revisiting past adversities to uncover useful lessons to help cope better with current events.
✓ Managing negative emotions.
✓ Overcoming interpersonal challenges.
✓ Living a balanced life.
✓ Distinguishing between what is within and outside of your control.
✓ Creating a resilient culture.

Implications for Future Research

Each dimension of Human Capital Sustainability Leadership could be further examined especially the area of mindful leadership since this is an emerging field. Other resilience domains of education, health, marriage, and friendship could also be explored by using Maltby, Day, Hall, and Chivers’s (2019) Domain-Specific Resilient Systems Scales.

Antecedents and outcomes of Human Capital Sustainability Leadership style and resilience could be investigated at the organization's micro-, meso-, and macro-level. Prominent leadership styles could be analyzed on how it affects the system's maintenance, sustainability, and retention. This could also be done within an organization covering each functional department (human resource, operations, marketing, and finance), to other organizations, and other industries, giving way for comparative analysis. One could also explore other variables that could intervene, mediate, and moderate the relationship between leadership styles and resilience. Longitudinal studies could be done. Human resource management and organizational practices other than leadership styles could be examined on how will it be associated with resilient systems.
The correlation of human capital sustainability leadership style.

References


Yin, R. (2016). *Qualitative research from start to finish* (2nd ed.). The Guilford Press.
