# Sustainability Performance in the Post-Pandemic Era: Employee Resilience Impact on Improving Employee and Organizational Performance

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*Abstract*—Severe changes to Organizational Sustainability (OS) have been brought about by the COVID-19 pandemic. This situation forces organizations to tackle the competencies required to augment Employee Resilience (ER) and make profitable growth. This study explores how ER contributes to both individual and organizational success in the wake of the COVID-19 pandemic. We suggest that employees who possess strong coping mechanisms and adaptability are better equipped to handle ongoing disruptions, resulting in improved individual performance metrics like productivity, engagement, and innovative thinking. Hence, exploring the efficiency of ER in improving EP and OS in post-pandemic (PP) is the aim of this research. By utilizing convenience sampling techniques, a total of 422 employees have been collected from numerous organizations. After that, the study's hypothesis is analyzed by using Structural Equation Modelling (SEM). As per the study's findings, the ER factors of "Job Satisfaction (JS)", "Self-Efficacy (SE)", "Supervisors' Support (SS)", and "Facilitating Conditions (FC)" have positive and significant associations with organizational efficiency. Furthermore, the study's findings also exhibited that there is the most important relation between SE and EOP.

*Keywords*—Employee resilience, employee performance, organizational performance, sustainability, and post-pandemic.

## I. INTRODUCTION

THE world has faced unparalleled transformations and challenges across all industries during the worldwide COVID-19 pandemic. The disruption led by the COVID-19 pandemic has impacted every sphere of life, such as the economy, health, and society. A long-lasting influence on businesses and their employees is created by the pandemic. It is extensively accepted that Human Resources (HRs) are regarded as the backbone of an organization; the pandemic has hit that backbone, leading to decreased well-being of productivity and employees [1]-[3]. In a world full of uncertainties, there is a great need to explore positive HR strengths for addressing workplace difficulties and augmenting organizational behavior. Employees are taken into account as an asset to an organization. Thus, efficient utilization of the HRs is required for the sake of individuals and organizations. Hence, ER has become essential for business and the world in this assiduous lifestyle [4]-[6]. ER, which comprises solving personal conflicts in attaining work-life balance and reacting to the organization's demands, is a dynamic and reflective process [7], [8]. In Fig. 1, a pictorial depiction of ER's impact on OP is illustrated.

### A. Problem Statement

ER is a critical resource for any organization in the current rapidly changing environment, especially after the pandemic crisis. Organizational development experts and researchers need to build validity for this environment's demands for developing resilience. More stress is placed on understanding the influence of ER on EOP over the past few decades [9], [10]. The prevailing research on resilience in organizations generally utilized variables, which reflect the notion of recovery but not the adversity's role in fostering the growth of organizations and employees. Before and during the pandemic, various researchers focused on developing scales for ER in numerous sectors. Yet, these scales' usage is not assessed in PP, specifically in the Indian context. Thus, the present research seeks to investigate the importance of ER in improving employee and OS performance in the PP era.

### B. Research Objectives

It is imperative to articulate fundamental goals that facilitate the systematic delineation of the process to attain the aforementioned aim. The objectives are outlined as follows:
- To explore the effectiveness of ER on the effective performance of an employee and organizations after the pandemic
- To identify the effective relationship between ER and OS

The remainder of this paper is organized as follows: The literature on the study constructs is reviewed in Section II. The research methodology, encompassing context, target samples, sampling, data collection, and data analysis is comprised in Section III. The data analysis outcomes, namely reliability and validity, hypothesis testing, regression, and so on are discussed in Section IV. Further, in the final section, the conclusion of the study, limitations, and future directions are rendered.

## II. LITERATURE REVIEW

This section comprehensively discusses the literature concerning ER, EP, and organizations' sustainability performance.

Sari and Wahyuni [11] concentrated on investigating ER against Organizational Commitment Behavior (OCB). From 136 Inspector General Employees at the Ministry of Law and Human Rights, a questionnaire data sample was considered. By using an SEM analysis, a hypothesis for a study was generated

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and tested. As per the empirical results, there was a positive relation between ER and OCB. Yet, the selected sample size might not be a good representative of the entire Indigenous population.



Fig. 1 ER effectiveness on sustainability performance of an organization [18]

Minh and Long [12] recognized the influence of transformational leadership on adaptive resilience in a PP era. Quantitative research data were gathered from 324 employees in Vietnam through a convenient sampling technique. As per the findings of a study, ER, psychological resilience, and adaptive resilience were directly impacted by transformational leadership. However, the study only took the limited mediators and moderators into account for the findings, which might affect the generalizability of the results.

Lu et al. [13] intended to analyze Sustainable HR Management (SHRM) practices, ER, and employee results toward the common good values. Among 96 firms in China, an online questionnaire survey was conducted across various industries. Subsequently, for validating the measurement framework, the multilevel confirmatory factor investigation was used. The study concluded that ER was significantly affected by sustainable practices of HRM, thus resulting in a high level of Work Engagement (WE). The variables of ER and WE were only measured by the study; but the other valuable variables that affected employee outcomes were not measured.

Prayag and Dassanayake [14] aimed to explore tourism ER, Organizational Resilience (OR), and financial performance with a mediating role of creative SE. Data were gathered from 478 tourism and hospitality organizations that were affected by COVID-19 in Sri Lanka by utilizing a purposive non-probability sampling approach. As per the outcomes, the employees' creative SE had an important positive impact on ER. In addition, the study displayed that ER and adaptive resilience had a positive influence on firms' financial performance. Nevertheless, only one respondent from every single organization was surveyed, thereby giving a biased view of both ER and OR.

Al Ameri [15] analyzed the impact of ER and OR on OP after COVID-19. Next, a quantitative and SEM approach was used to analyze the relation between the variables in a convenient sample of 394 employees in the UAE. As per the study result, an organization's resilience was negatively impacted by work stress, whereas ER was a positive indicator of the organization's resilience. The study was based on cross-sectional research; hence, causal inferences could not be drawn between the variables.

Ibrahim and Hussein [16] deliberated the relationship between resilience at work, JS, and WE amongst engineers. By utilizing a random sampling technique, a sample of 100 engineers was collected from an Egyptian oil and gas company. Study's statistical findings showed that a strong positive relationship was detected amongst all the WE aspects. Furthermore, there was an important relationship between resilience and WE. The study was done within a particular oil and gas company, which limited the findings' generalizability to other organizations within the industry or to engineers in diverse sectors.

Soltani and Soleimanian [17] described the impacts of staff resilience on OP in Isfahan Melli Bank branches. From 249 employees from 25 branches in Isfahan, a primary questionnaire sample was gathered. An SEM was applied to test data and generate a hypothesis. As per the outcome, the staff resilience had a positive and significant impact on the OP. According to the study's limitations, no systematic research was done in Iran. Thus, the results' generalization to other organizations was not cautiously performed.

## III. RESEARCH METHODOLOGY

### A. Research Design

In this study, the role of ER in enhancing employee and OS in the PP era is examined. Furthermore, the effective relationship between the influencing variables of ER and OP is explored in the study. For exploring the effectiveness of ER on EOP, a descriptive research design is adopted in the study. The design presents data meaningfully, which enables understanding of the attributes of a group in circumstance and

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aids the researcher in reaching logical conclusions. Moreover, the parts of formal studies are structuring the research design and investigating the questions. To address the objectives of the research, the questionnaire is structured. Among the sampled respondents, in-depth interviews are conducted. In this research, a questionnaire is designed and sent with a brief introduction that clearly explains the main scope of this research. Therefore, Fig. 2 shows the design of the conceptual framework of the research phases.
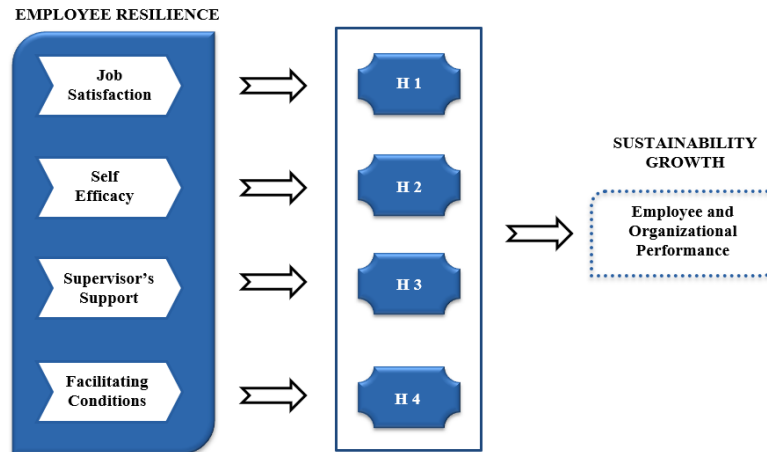


Fig. 2 Conceptual design of research study

### B. Study Setting and Sample Collection

The participants chosen for this study comprised numerous organizations in metro cities in India. Among the selected organizations, 500 questionnaires are distributed. After the final sample collection, only 422 out of 500 respondents completed the structured questionnaire properly and others did not properly reply to the structured questionnaire. In addition, choosing participants from diverse domains ensures that a diverse range of perspectives and experiences are captured by the study. The respondents are asked to finish the resilience questionnaire. The useable questionnaires' resultant response rate is 84.4% (422).

### C. Study Instruments

Based on the factors influencing ER and its significant role in the PP era, questions are developed. The study details are clearly explained before administering the questionnaire, and we obtain verbal informed consent from every single participant. To prevent the respondents from becoming self-conscious, the interviews are not recorded, which often happens among respondents who have an inherent mistrust of research. Also, we took some notes during the interviews.

### D. Data Source

In the study, primary data gathered via self-administered interviews that encompass closed questions are utilized. The questionnaire is designed on a 5-point Likert-type scale. A questionnaire is regarded as the data collection instrument of choice, and formulating and administrating the research analysis is easier. It also renders a relatively simple technique for the study of values, attitudes, beliefs, and motives. Primary data are the original data gathered directly from the empirical field investigation. In addition, they are gathered based on the questionnaire survey. After that, the secondary source of data is collected from numerous articles, magazines, journals, newspapers, and so on.

### E. Bias Reduction

By using the sampling technique, the sample is chosen to diminish the selection bias. Therefore, the possibility of interviewer bias is averted by employing a standardized questionnaire and standardizing the questionnaire administration process.

### F. Fitting the Structural Model

SEM has been utilized for gaining conceptual clarity on ER. A group of statistical processes, including factor analysis, regression analysis, and principal component analysis that assists in testing hypothetical complex relationships between observed and unobserved latent variables is referred to as SEM. Thus, SEM consists of two components. Firstly, the measurement models that investigates the relationship between observed variables and unobserved variables. In addition, they compare the model's characteristics with the empirical data along with test whether the data fit the methodology or not. Secondly, the relation between the latent variables and unobserved variables is dealt by the structural model.

### G. Data Analysis

During the sample selection, a convenience sampling technique is deployed. Regarding the effort, time, and money spent on data collection, this technique is efficient as well as effective. The questionnaire is pre-tested for ensuring that the questions are clear as well as easy to understand. This study facilitates the researcher to gather data that are accurate and relevant to the research objective. By employing descriptive statistics (measures of central tendency and measures of variance), the gathered data are investigated. Moreover, in order to test for significant differences, regression analysis is applied.

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Additionally, to find the relationship between ER and EOP after the pandemic crisis, the hypothesis of a study is formulated after the pandemic crisis; further, by applying SEM, the relationships have been tested.

## IV. RESULT AND DISCUSSION

Here, the factors that influence ER in enhancing EP and OS are analyzed by the confirmatory factor. After that, the descriptive statistics of the variables have been investigated. A hypothesis of the study has been generated, where a total of four hypothesis relationships have been framed and tested. Finally, in this section, the significant relation between the variables has been explored and discussed by applying a regression analysis.

### A. Factor Influencing ER in Developing Employee and Organizational Performance

The variables of JS, SE, SS, and FC are considered as the independent variables in this research. Numerous tests were performed for establishing construct validity, content validity, and the research instrument's reliability. Further, to extract the factors, the principal component methods were used. Next, Cronbach's Alpha (CA) coefficient was utilized for testing the instrument's reliability, which was captured by the questionnaire on a Likert scale. Hence, in Table I, the confirmatory factor analysis for ER is represented.

TABLE I
CONFIRMATORY FACTOR ANALYSIS

| Variables | Item | Item loading | CA |
|---|---|---|---|
| JS | JS1 -Taking everything into account | 0.888 | 0.893 |
| | JS2 - I feel satisfied about my job | 0.885 | |
| SE | SE1 - I have mastered the skills needed for my job | 0.944 | 0.957 |
| | SE2 - I am confident of my ability to do my job | 0.960 | |
| SS | SS1 -Supervisor strongly considers my goals and values | 0.870 | 0.882 |
| | SS2 - Supervisor really cares about my wellbeing | 0.877 | |
| FC | FC1 - I have the resources needed to work from home efficiently | 0.867 | 0.855 |
| | FC2 - The technology platform rendered by the organization is compatible with the work I do from home | 0.843 | |

The instrument's validity and reliability are evaluated with the use of convergent as well as discriminant validity. Also, through convergent and discriminant validity, the instrument's validity and reliability are evaluated [3], [6]. The coefficient of CA is unacceptable if it is below 0.60. Reliability values are above acceptable thresholds in this analysis. As per the findings, the variable "SE" achieved the highest CA value (0.957) and the item "I am confident of my ability to do my job" obtained the highest factor value (0.960) than other variables.

### B. Descriptive Statistics

A descriptive statistical investigation of mean and standard deviation has been computed for the selected variables with a sample size of 422 respondents, and it is presented in Table II.

According to the analysis, diverse measures were employed to depict the attributes of each variable [3], [6]. The degree of asymmetry in the distributions was exhibited by the skewness, thereby revealing a slight leftward skewness for the variables, and the "Kurtosis" indicated the shape of the distributions. The columns labeled "Minimum" and "Maximum" presented the minimum observed values for each variable (1) and the maximum observed values (5), respectively. When analogized to other variables, the variable "SE" has achieved the highest mean value (4.67), whereas the variable "FC" has gained the lowest mean value (3.98). Fig. 3 diagrammatically specifies the descriptive statistics of variables.

TABLE II
ANALYSIS OF DESCRIPTIVE STATISTICS

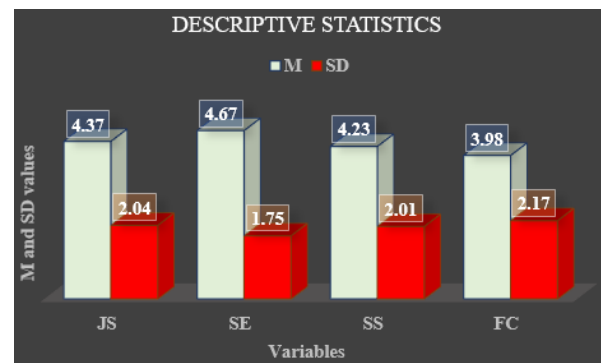| Variables | Mean (M) | Standard deviation (SD) | Skewness | Kurtosis | N | Min | Max |
|---|---|---|---|---|---|---|---|
| JS | 4.37 | 2.04 | -1.613 | 0.525 | 422 | 1 | 5 |
| SE | 4.67 | 1.75 | -1.724 | 0.707 | 422 | 1 | 5 |
| SS | 4.23 | 2.01 | -1.475 | 0.666 | 422 | 1 | 5 |
| FC | 3.98 | 2.17 | -1.213 | 0.388 | 422 | 1 | 5 |



Fig. 3 Graphical illustration of descriptive variables

### C. Structural Model: Hypotheses Testing

The structural framework's outcomes for the standardized path coefficients as of the bootstrapping process are investigated for testing the hypothesized relationships. Hence, in Table III, the hypothesis analysis's outcomes are depicted.

The β-value and p-value have been examined for each hypothesis. The variable that attained a considered fit of T-statistics at 1.96 or above is regarded as a positive and significant relationship. A positive relation with EOP has been obtained by all the generated hypotheses [3], [6]. As per the analysis, the H2 achieved the highest positive and significant relationship with the EOP (β = 0.845, p = 0.000) compared to the other variables. Fig. 4 depicts a model of SEM analysis.

TABLE III
HYPOTHESIS ANALYSIS

| Hypothesis | Path coefficient | β | p-value | Result |
|---|---|---|---|---|
| H1: The employee resilience of JS had a positive influence on EOP | JS→EOP | 0.830 | 0.001 | Accepted |
| H2: The employee resilience of SE had a positive influence on EOP | SE→EOP | 0.845 | 0.001 | Accepted |
| H3: The employee resilience of SS had a positive influence on EOP | SS→EOP | 0.811 | 0.000 | Accepted |
| H4: The employee resilience of FC had a positive influence on EOP | FC→EOP | 0.769 | 0.001 | Accepted |

*D. Regression Analysis*

Here, by employing the variables in the study, the significant coefficient values have been detected and are shown in Table IV.

TABLE IV
UNSTANDARDIZED AND STANDARDIZED COEFFICIENT ANALYSIS

| | Unstandardized coefficients | | Standardized coefficients | t-value | Tolerance | VIF |
|---|---|---|---|---|---|---|
| | B | SD | Beta | | | |
| (Constant) | 0.589 | 0.092 | 0.782 | 8.24 | | |
| JS | 0.174 | 0.090 | 0.751 | 7.40 | 0.84 | 3.81 |
| SE | 0.178 | 0.061 | 0.773 | 8.77 | 0.91 | 3.83 |
| SS | 0.173 | 0.091 | 0.724 | 6.48 | 0.79 | 3.75 |
| FC | 0.133 | 0.070 | 0.616 | 5.55 | 0.58 | 2.82 |

In Table IV, the analysis of unstandardized and standardized coefficients for JS, SE, SS, and FC is represented. The variable of "SE" achieved the highest β-value (0.773), and its SD value is 0.061. Moreover, the highest t-value (8.77) is obtained by SE, and the lowest t-value (5.55) is obtained by "facilitating condition".
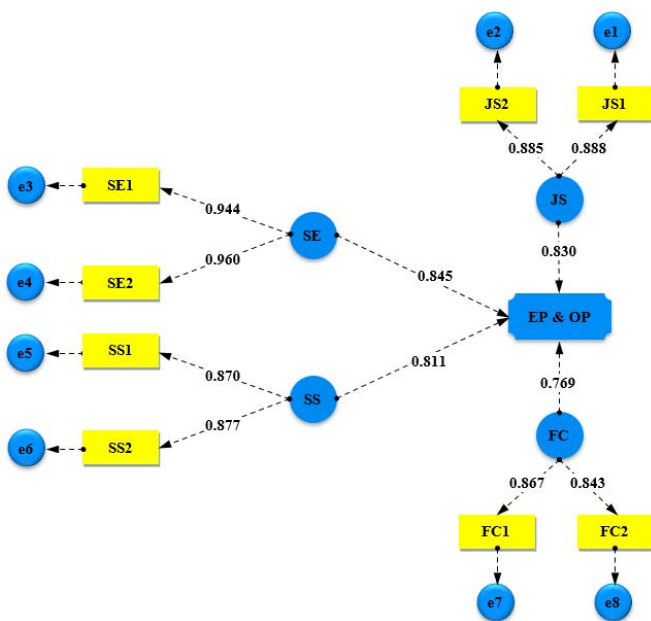


Fig. 4 Measurement model

## V. CONCLUSION

In this research, the effectiveness of ER in the development of EOP in the PP is investigated. In addition, the relation between ER and OS is examined in this study. Hence, the study's hypothesis has been generated and tested through an SEM. As per the findings of the study, hypothesis 2 had attained the highest significant relation between ER and EOP, i.e., (β = 0.845, p = 0.001). Subsequently, the regression analysis also exposed that SE is significantly correlated with EP and OS growth, i.e., (β = 0.773). To reflect the profitability of the organizations, the implementation of effective practices of ER must be dynamic. Nevertheless, the breadth of diversity and variations inherent in various organizations might not be comprehensively encapsulated by the study's utilization of a particular sample and context. Therefore, conducting in-depth research is significant to render valuable insights into the fluctuations and developments in EP and OS across a period of PP time.

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