

**EXPLORING THE ROLE OF EMOTIONAL INTELLIGENCE (EI) TO STRENGTHEN THE  
ARTIFICIAL INTELLIGENCE (AI) FOR SUSTAINABLE HR PRACTICES IN THE POST COVID-19  
ERA**

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**Abstract**

Emotional Intelligence is booming up as equal to Artificial intelligence. The dynamic business environment keeps changing the dimensions of various business factors such as technological, social, environmental and economic, rapidly. According to the changes, organizations are redefining HR practices quite innovatively using Artificial Intelligence. The ability of an individual to be aware, define and control emotions to achieve the desired outcome in the organizational environment is known as Emotional Intelligence, whereas Artificial intelligence is an expert system processing by machine and simulating human intelligence to complete the task. The role of AI in HR practices is widely penetrated in to the functional areas of HR and they are recruitment, learning & development, Performance management and compensation management. However, a study found that AI has limits connecting the emotional aspects of the individuals in the work place and is unable to predict the definite emotions which will strengthen organizational productivity. The objective of the study is to explore the role of emotional intelligence in artificial intelligence and prevent possible emotions using machine learning. The conceptual study develops the research model to experiment connection of EI with AI to strengthen the sustainable innovate HR practices in the business environment.

**Keywords:** *Emotional Intelligence, Artificial Intelligence, HR practices, Business environment*

**1. INTRODUCTION**

Emotional Intelligence and Artificial Intelligence are transforming people and organizations quite extensively. The Covid-19 pandemic has forced the business environment to bring changes in their Sustainable HR practices. Even though technological developments are booming and the application of AI in business operations is drastically improved, the need for human resources plays a vital role in business execution.

Emotional Intelligence was created (Peter Salovey & John Mayer, 1990) by the ability of the individual to monitor and control the emotions & feelings for their action. Individuals are joined together to achieve the common goal of the organization and they vary with their emotions and feelings.

However, lack of awareness of emotional intelligence leads to workplace conflict and poor interpersonal relationships in the organization. AI is a tool by which an organization can prevent and forecast business. Even to a greater extent, can employee AI enabled robots for their operations. Currently, AI-enabled robots aren't in use due to the cost factor and high investment in small and medium scale companies in India.

The need for the study is to explore Emotional Intelligence and its role in strengthening the AI. It is much needed to analyze the impact of the human factor on the performance of the machine. The new normal situation has allowed the employees to do innovative practices in their respective domain.

The major objective of the study is to explore the role of emotional intelligence and to analyze how EI facilitates to strengthen the Artificial Intelligence for sustainable practices in the post-Civil-19 era. (S. Magapu & Vaddiparty, 2019) examined on the Emotional Intelligence, the result of the study indicates that individuals are needed to recognize the emotions and behavioural traits for achieving the desired individual and organizational outcome and it is referred as EI.

Though limited literature was there on the sustainable HR practices (Thom & Zaugg, 2004) was stated that the Implementation of proper and transparent procedures on HR practices such as talent acquisition, learning & development and performance management is ensures the sustainable HR practices in the organization.

The success of a sustainable business model is not only measured through the financial performance of the organization, but also by the impact of the business model on social and environmental factors. Business organizations are adopting technological development (AI) for improving business and to compete with the global business players (Hahn & Figge, 2011).

At the same time, there are chances to impair the environment and society by continuous consumption of energy resources and producing the green gas effect. The level of awareness is much needed to all the levels of management with regard to sustainable HR practices in the organization and they can find a way to connect their practices with sustainable development goals. Previous studies clear that organizations need to work beyond the profitability and sustainability of the environment & society.

The study was planned to be conducted among the various cadre of employees of manufacturing units which belong to small and medium scale enterprises. Basically, the detailed plan of the study is to keep the EI as a mediating variable, and what kind of performance improvement AI can bring about sustainable HR practices. The present study also will find out whether the EI's has any significant association with AI and Sustainable HR practices or not.

This paper is accumulated into nine segments. They are; introduction, theoretical framework, reviews of literature, methodology, results& discussion, conclusion, practical implications, scope for future research and references.

2. THEORETICAL BACKGROUND

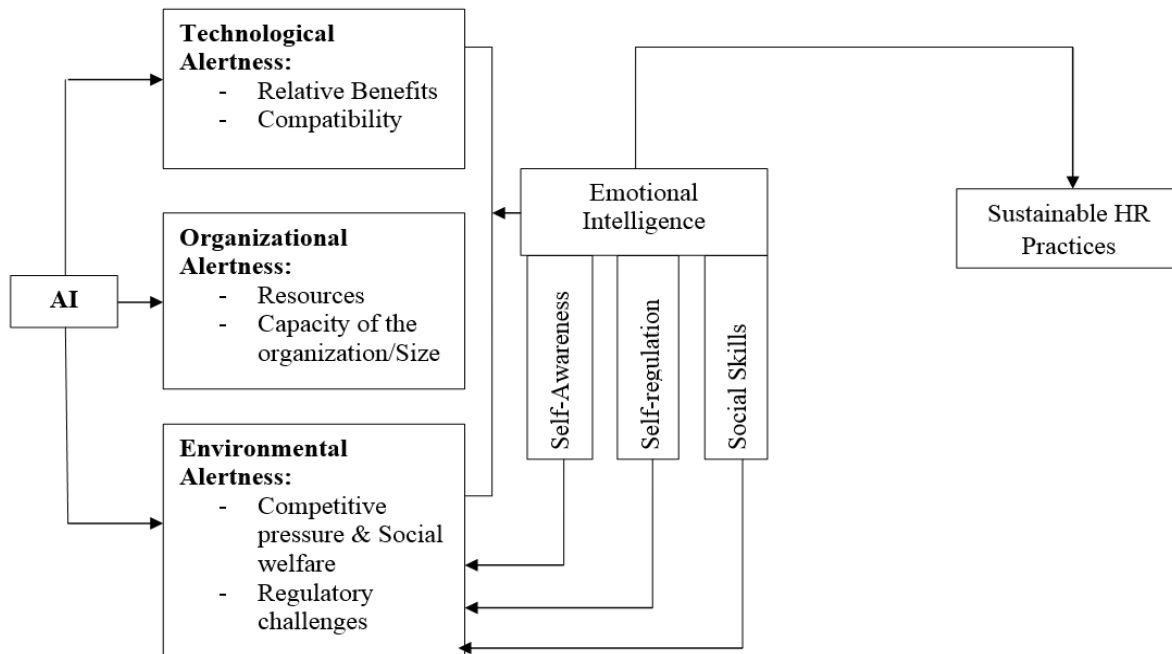


Figure 1

Artificial Intelligence

The continuous development of technology helps businesses to solve the diversified issues in their operations. The elements of AI such as machine learning and deep learning do not solve the operational issues in the manufacturing industry but also prevent the challenges of the human factor within the business environment. AI is a machine-based system designed to execute human-induced tasks (A.Simon, 1980). AI is interconnected with multiple disciplines and its success and failure depend on the support or input of them. AI ensures to develop the capacity of the organization from the present level to the next level. Because of this reason, many companies are continuously investing in the R&D of AI and its implementation (Nabiyev et al, 2013). The business expansion is increasing the human roles in the organization. It increases the possibilities for multiple comments and systems in the organization. Thus, the technological revolution paved a way to rectify those challenges and designed a computer-based machine to make the business process at has more ease and to reduce the human factor interventions in the business process that is referred as AI (S. Magapu & Vaddiparty, 2019)

TOE framework

As indicated in figure 1, the technological context describes the relative benefits of implementation of AI in business organization and its compatibility in operational efficiency. The ease of doing the operation, expectations, suitability of the technology to meet industrial expectations and its computing factors ensure the success of its implementation (Seunguk Na et al, 2021). The human supporting system plays a major role in-adaptation of technologically driven business organizations. Generally, small & medium scale industry faces the resistance of change from the human factor. The technological acceptance and its successful implementation are possible by

means of the human factor. The previous study shows the interconnectedness of AI & EI. AI can be used to replace the human in operations but without human intelligence, the technological implementation is quite a challenging task. Emotional Intelligence has a significant association with technological acceptance and its implementation (S. Magapu & Vaddiparty, 2019). Organizational alertness explains internally generated ideas that are to be implemented based on the requirements of the industry. The capacity of the organization such as capital, human resources, process clarity, business size and strategy are much needed and those are to be analyzed strategically (Adamantia Pateli, 2020). There is a need to rectify the organizational barriers which resist accepting technological changes. In particular, organizational culture, absorptive capacity, resources, fairness and top level management are major factors which influence directly on technological advancement and its implementation. Environmental considerations are a supporting system for any organization. It helps to expand the business further. Irrespective of the industry, certain environmental factors such as industrial pressure, uncertainty, strict regulations, market conditions and competition can't be negligible. Small and medium scale business organizations are in the position to bring the innovative business model for sustaining and surviving in the industry. Though AI involves cost and it is a need oriented to face tough competition in the market (Danie Smit & Sunet Eybers, 2022).

### **3. REVIEW OF LITERATURE**

(Daniel White & Hirofumi Katsuno, 2022) were examined the challenges associated with artificial emotional intelligence. The study was emphasis the feasibility of developing the automatic application which recognize the human emotions and improve the performance of the employees. The study was simplified the cultural factors which are associated artificial emotional intelligence and also they found contrast AEI while comparing the cultural differences. It was an evident to study EI and AI beyond the cultural factors.

(Emine Kambur, 2021) critically examined the relationship between EI and AI. The present technological transformational era is in a position to combine the human and machine factor together to achieve the organization goals. Their study highlighted the wide use of AEI and its impact on the individual productivity. In spite of the occurrences of the advanced technology in the business, individuals with high emotional intelligence can perceive and learn the AI in their related work. Organizations need to work on the emotional labour strategies which facilitate the employees to experience positively in the work place and also it leads to produce the positive organizational results.

(Serge Rebouillat et al, 2020) Stated that Emotional intelligence is an up-and-coming area or beyond the AI. Their study was stress upon the relationship among AI-EI-IP. Intellectual Property & Artificial Intelligence are the organizational outcome. The study exposed that when the business organizations were seriously taken care on their employees' emotional intelligence; in return they found significant improvement in the operational outcome.

The study conducted by (S. Magapu & S. Vaddiparty, 2019) declares that AEI is a tool to solve human and machine related problems in the business world. Emotional Artificial Intelligence increases the operational efficiency in the multiple sectors such as health care services, manufacturing and automobiles. They studied AEI variables such as machine learning, deep learning, appraisal and expressions of emotions, regulation of emotions interchangeably; it also reveals the strong association between AI and EI in industrial productivity.

(Megan Beck and Barry Libert, 2017) The study observed that the human factor is very biased and it reflects on the communication system of the organization where, as AI especially, machines can diagnosis the complex the challenges which prevailing in the existing operational set up. The study concludes that the human factor & its capabilities are viewed as second priority and it is having less impact on industrial productivity.

(Sandeep Kumar & M.Sharma, 2012) studied the level of convergence between AI and EI using neural network computing systems. Apart from the technical association, the study found that emotions of the individuals and their intelligence are co-related occurrences. The study concluded that human emotions have a high significance with intelligence. Thus, emotions are to be considered majorly while processing the AI architecture.

(Jacob Cherian & Sherine Farouk, 2017) investigated sustainable HR practices and how they impact the performance of the organization. The study was collected from 150 respondents from organizations. The study observed a significant impact on the organization's performance positively. In particular, business organizations which have taken initiatives to implement sustainable practices in learning & development, talent acquisition, retention and performance management have improved significantly.

(Mazur.B, 2013) studied the three major dimensions of a sustainable business model, such as sociological aspects, psychological aspects and green aspects. Their study clears the relationship between organizational internal stakeholders and external stakeholders. Alertness and implementation of innovative technology has momentous correlations with social and environmental factors. The transparency in organizational sustainable goals and the level of awareness among the internal stakeholders helps in preventing environmental and social hazards.

#### **4. METHODOLOGY**

The rationale of study is to explore the emotional intelligence and its role in strengthening the AI for sustainable HR practices among the employees of Small and Medium Scale enterprises. Questionnaire was the instrument to collect the data from 121 respondents. Emotional Intelligence was used as a mediating variable and AI adoption and its acceptance level was studied using TOE framework.

The research has formulated the following hypotheses:

- H1: There is a significant relationship between artificial intelligence and technological alertness/readiness of the organization.
- H2: There is a significant relationship between artificial intelligence and Organizational alertness/readiness.
- H3: There is a significant relationship between artificial intelligence and Environmental alertness/readiness.
- H4: There is a significant relationship between self-awareness and sustainable HR practices.
- H5: There is a significant relationship between self-regulations and sustainable HR practices
- H6: There is a significant relationship between social skills and HR practices
- H7: There is a significant relationship between emotional intelligence and artificial intelligence.

Basically, the study population was small and medium scale enterprises in Southern Tamil Nadu. Convenience sampling techniques were adopted. It means getting the responses wherever possible to get as per the convenience of the researcher. The structured questionnaire was circulated among the 185 respondents and 121 respondents responded properly. Collected data was taken to analyze using systematic statistical tools.

**5. DATA COLLECTION AND RESULT ANALYSIS**

The study covers three dimensions, such as Artificial Intelligence and its challenges in implementation (TOE-Technological, Organizational and Environmental factors), Emotional Intelligence & its elements and Sustainable human resource practices. Questions were formulated for all the dimensions based on the hypothesis using the five-point Likert scale. All three dimensions cover the level of AI awareness among the respondents, factors which support implementing AI in the organization and the role of emotional intelligence in executing AI and sustainable HR practices. However, there was a limitation with regard to the number of variables chosen for the study. For instance, though many variables are there in the EI, the present study has chosen self-awareness, self-regulation and social skills. Likewise, for the present, only limited variables were taken to study the TOE framework on the implementation of AI in the small and medium scale enterprises of Southern Tamil Nadu.

**Table 1: Demographical factors of the respondents**

Demographic Variables		N	%	Mean	Std. deviation
Gender	Male	45	37.19	2.14	0.367
	Female	76	62.8		
Age	18-25	15	12.39	3.32	0.874
	26-33	63	52.06		
	34-41	27	22.31		
	42-49	18	14.87		
Marital status	Married	27	22.31	1.61	0.412
	Single	88	72.72		
	Others	10	8.26		
Educational qualification	Higher Secondary or below	4	3.3	2.3	0.781
	Diploma/ITI	11	9.09		
	Degree	74	61.15		
	Master degree	33	27.27		

The above table 1 shows that 62.8 (76) percent of the respondents are in the female category and 37.19 (45) percent of the respondents are male. Age wise classification was made among the respondents and it shows that 52.06 (63) percent of the respondents are belongs to 26-33 years, 22.31 (27) percent of the respondents are 34-41 years, 14.87 (18) percent of them in category of 42-49 and 12.39 (15) percent of them in the category of 18-25 years. It shows the diversified age category was employed for the study. Educational qualification of the respondents are 61.15 (74) percent of the respondents were degree holders, 27.27 (33) percent of the respondents are holding Master degree and 9.09, 3.3 (11), (4) percent of the respondents are Diploma/ITI and Higher secondary below level respectively.

**Table 2: Reliability Analysis**

Cronbach's Alpha	%	N
<b>Artificial Intelligence</b>	0,842	22
Technological alertness	0,841	3
Organizational alertness	0,715	3
Environmental alertness	0,697	3
Self-awareness	0,795	3
Self-regulation	0,774	3
Social skills	0,589	4
Sustainable HR practices	0,748	3
<b>Emotional Intelligence</b>	0,772	15

The above Table 2 shows, the reliability analysis of the scale of Artificial Intelligence is found to be 0,842, while the Cronbach's alpha values and its sub dimensions of 0.841, 0.715, 0.697, 0.795, 0.774, 0.589, 0.748, respectively. The reliability result of the emotional intelligence scale is also determined to be 0.772. Thus, it can be stated that the AI and EI scales are fairly dependable.

**Table 3- Variables and its relationship**

**Analysis of correlation AI adoption and Emotional Intelligence variables**

	1	2	3	4	5	6	7	8
Technological alertness	1	0.651**	0.732**	0.823**	0.521**	0.351**	0.425**	0.431**
Organizational alertness		1	0.676**	0.687**	0.431**	0.523**	0.410**	0.520**
Environmental alertness			1	0.712**	0.507**	0.510**	0.406**	0.631**
Self-awareness				1	0.511**	0.548**	0.412**	0.544**
Self-regulation					1	0.710**	0.432**	0.411**
Social skills						1	0.654**	0.321**
Sustainable HR practices							1	0.545**
Emotional Intelligence								1

\*\*Significant at the 0.01 level

Correlation Analysis was executed to know the relationship among the variables. The above table 3 shows the varying coefficient between 0.3 and 0.5. According to the analysis, the reasonable correlation strength 0.431 was found between the AI and Technological alertness of AI. It has been revealed that the moderate strength of 0.520 between AI and organizational alertness. 0.631 is correlation strength between AI and environmental factors. 0.544, 0.411, 0.321, 0.545 are the correlation strength between AI & self-awareness, self-regulation, social skills and sustainable HR practices respectively. Thus, the relationship among the variables found very significantly at the level of (0.01). The result of the study is accepting the H1, H2, H3, H4, H5, H6 and H7.

Emotional Intelligences variables are self-awareness, self-regulation and social skills; correlation strength was 0.511, 0.548, 0.412 & 0.544 and all other EI variables are correlated with high significance. Thus, AI enabled TOE framework and its variables are strongly associated with EI. This study paves a way to choose handsome variables from the TOE & EI dimensions for understanding the accumulated strength of various dimensions of the study variables.

**Table 4: Regression Analysis of Emotional Intelligence and AI adoption supporting variables**

Dependent variable	Independent Variables	B	Std. Error	Beta	t	Sig
Emotional Intelligence	Technological alertness	0.231	0.078	0.321	3.61	0.001
	Organizational alertness	0.278	0.862	0.217	2.39	0.014
	Environmental alertness	-0.129	0.221	-0.178	-1.27	0.167
	Self-awareness	-0.073	0.083	-0.071	1.35	0.684
	Self-regulation	0.074	0.062	0.016	1.06	0.321
	Social skills	-0.131	0.087	-0.221	-1.25	0.321
	Sustainable HR practices	0.402	0.053	0.617	8.01	0

By examining the above table 4, it is evident that association of Emotional Intelligence with the technological alertness is  $\beta = 0.321$  levels. Therefore H1,, H7 are accepted. There is a significant relationship found between technological alertness and EI. Likewise, organizational factors  $\beta = 0.217$  and  $\beta = -0.178$ ,  $\beta = -0.071$ ,  $\beta = 0.16$ ,  $\beta = 0.221$ ,  $\beta = 0.617$ , environmental, self-awareness, self-regulation, social skills and Sustainable HR Practices respectively. Hence, TOE-AI framework dimensions are ( $0,05p >$ ).

In this paper, EI and AI enabled TOE variables are formulated to compare and test an average of two sets of groups. The study used emotional intelligence as a dependent variable and AI enabled TOE variables as independent variables. Hence, small and medium scale enterprises of Southern Tamil Nadu found that capacity-of investment and risk-taking ability was quite moderate. The success rate of start-ups and AI-enabled businesses has been improving gradually. The human factor plays a crucial role in business operations and their productivity. The study found a significant association between the AI-enabled factors and EI.

## 6. DISCUSSION

The inseparable elements of businesses are the human factor and the technical factor. Technological development has penetrated to all sectors. Specifically, the role of Artificial Intelligence in business operations has improved drastically. The present study highlighted the significant relationship of EI and AI between the enabled frameworks. According to (Seunguk Na et al, 2022) the personalities of the individuals have positive influences whereas technological traits are external in nature. It is a subject to discuss how specifically the personality traits are positive productivity factors. To add value to the previous study, Emotional Intelligence was employed for the study and analyzed its role in strengthening Artificial Intelligence. (S. Magapu & S. Vaddiparty, 2019) Artificial Emotional Intelligence plays major roles in many occupations and there is a need to rectify the problems in execution. Basically, the current study focused on the challenges faced by small and medium scale enterprises in the implementation of AI, studied using the TOE framework and its and AI & sustainable practices. Comparing the TOE framework and its variables, it was found that SMEs are reluctant in terms of investing in AI-based instruments because of cost factors. Though there is a requirement to update the technology in the respective business, cost factors prevent them from taking the decision on AI.

Environmental factors such as market size, rivalry, market pressure force them to take decisions about adopting the technology in business. At the same time, SMEs require strong support from organizational factors for successful execution. Resources such as capital, HRs, size and nature of



the organization are to be aligned with all other factors. The present study has chosen human factor (EI) and its association with AI & Sustainable HR practices in SMEs. It was evident how social skills and self-awareness are being connected with sustainable practices and positively influencing the industrial productivity. (Daniel White & Hirofumi Katsuno, 2022) Diversified cultural perspectives influenced artificial emotional intelligence and a system required to recognize the emotions and performance. To discuss the system perspective further, the study requires relevant variables such as investment pattern, capacity of the SMEs. From the analysis, a prototype model was developed which has enabled AI & EI with sustainable HR practices.

## **7. CONCLUSION**

Artificial Intelligence (AI) and its application in business are inevitable. AI is a basis for futuristic technological developments. An AI driven system is preventing the futuristic market based on the available data. Machine learning and deep learning are the basis for recognizing the human emotions in the workplace and tracing individual and organizational productivity. As the equal of advanced technological development, EI of employees also need to be strengthened to accept the change in business operations. The present study employed the TOE framework to find out how far these variables are influencing the implementation of Artificial Intelligence in the SMEs. The result of the study revealed that more than the organizational and environmental variables, technological alertness has significant association with implementation of AI. Further, a conceptual model was developed with the required hypotheses on EI and its influence towards sustainable HR practices. The result shows social skills and self-regulation of the employees is correlated with sustainable practices with regard to human resources.

## **8. SCOPE FOR FURTHER STUDY**

The present study has been limited by the samples. The study has been carried out using an extended TOE framework (with limited variables) and its influence on the implementation of AI in the small and medium scale industry. It was conducted as a perceptual study in which the responses of the employees from the SMEs were analyzed. The study can be developed further as a feasibility analysis with regard to enabling AEI-based SMEs for the development of the business in future.

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