Article

Role of ChatGPT and Skilled Workers for Business Sustainability: Leadership Motivation as the Moderator

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Abstract: ChatGPT is an AI tool that was primarily developed by OpenAI with the support of its GPT-3.5 and GPT-4 platforms and large language models. ChatGPT has been fine-tuned with both supervised and reinforcement learning technology. Various types of organizations are interested in adopting applications supported by GPT-3.5 and GPT-4 platforms, but there is an acute shortage of trained workers in this field. Research is needed to investigate the role of this very new technology and skilled workers in maintaining business sustainability. Also, few studies have investigated the role of leadership motivation in accelerating business sustainability. Therefore, this study aims to examine the role of ChatGPT and skilled employees in business sustainability. It also investigates the moderating impact of leadership motivation on business sustainability. With the help of resource-based view (RBV) and the extant literature, a theoretical model was developed, which was then validated using the PLS-SEM technique on feedback from 209 respondents. The study finds that both ChatGPT and skilled workers have significant impact on improving business sustainability. The study also demonstrates that leadership motivation significantly impacts business sustainability.

Keywords: disruptive innovation; ChatGPT; sustainability; PLS-SEM; leadership motive; RBV

1. Introduction

Artificial intelligence (AI) has considerable pervasive impacts on people's daily lives. However, the potential impacts of AI on organizational functions have not yet received enough attention from researchers [1]. At this juncture, with the success achieved by ChatGPT, people can realize the extent that AI is involved in different fields. ChatGPT is a large language model (LLM) AI-based tool developed by Open AI currently on the GPT-3.5 and GPT-4 platforms. Due to the rapid development of AI algorithms, studies on chatbots are becoming popular [2]. According to Melis et al. [3], language models are used in chatbots to provide real-time feedback to customers. The abilities of chatbots are enhanced by the power of ChatGPT with the nexus between deep learning and the large language model founded on the GPT platform (generative pre-trained transformer) architecture [4]. With the combination of unsupervised pre-training and supervised fine-tuning, chatbots can respond like human experts to customer queries.

The massive global adoption of chatbots has highlighted their extensive use for developing and testing software and writing business letters and contracts, essays, and poetry [5,6]. It has been observed that ChatGPT could affect 80% of the jobs in the USA [7]. With such prolific advantages, organizations require employees who are skilled at using the ChatGPT tool in an efficient manner to extract its best potential [8]. Employees who have skills in AI and ChatGPT need to also have a strong understanding of natural language processing (NLP), which facilitates developing models that can successfully analyze, understand, and generate human language. Moreover, ChatGPT could be used for designing

and developing products as well as developing sales approaches [9]. Thus, it appears that ChatGPT has immense potential to help an organization sustain its business, provided it has sufficient human resources with AI-related skills.

Organizations using ChatGPT also need to incorporate sustainable conditions [10]. It is worth mentioning that sustainability in organizations refers to their strategizing and planning to effectively reduce the environmental impacts resulting from their business operations [1]. The practices of organizations are typically analyzed and evaluated against environmental, social, and governance metrices. Organizations need to realize that, for sustainability, it is not enough to act on environment-related issues only, but they also need to ensure society's long-term well-being. Organizations can also be financially more sustainable if their employees are skilled at using modern technologies such as chatbot tools [11–13]. Organizations might derive sustainable benefits from using ChatGPT, and to extract the best potential from this platform, the leadership of the organizations must be supportive of adopting ChatGPT applications [14]. ChatGPT helps organizations to meet their sustainability goals. From small ventures to large corporations, ChatGPT can guide businesses on their sustainability journey and drive positive change. Using ChatGPT, businesses can achieve their sustainable goals. ChatGPT can be linked as a sustainability advisor for businesses of various sizes [2,12,14]. Retailers can use AI-driven ChatGPT to optimize energy usage in stores and reduce transport emissions when delivering products [4,5]. However, researchers are still not clear on how organizations that adopt ChatGPT could enhance their sustainability performance and what kind of skills their employees are required to have to efficiently use it. Also, studies are scant to understand the role of leadership in facilitating an organization to adopt ChatGPT. In this vein, the present study aims to address the following research questions (RQs).

RQ1: How can skilled workers and the adoption of ChatGPT improve business sustainability of organizations?

RQ2: Does leadership motivation have any moderating impact on business sustainability of organizations?

The authors have duly addressed the above research questions by developing a theoretical model with the help of the literature and theories. The proposed theoretical model was validated using the factor-based partial least square structural equation modelling (PLS-SEM) technique that analyzed the input of 209 respondents. To substantiate the empirical findings, the present study has integrated resource-based view (RBV) [15] and status quo bias (SQB) theory [16]. Both theories were applied because neither could explain on its own how skilled employees and the adoption of ChatGPT could simultaneously impact organizational business sustainability under the moderating influence of leadership motivation.

2. The Literature Review

To realize the effectiveness of ChatGPT, it is necessary to study the earlier works in this connection. ChatGPT is considered a language generation tool that relies on neural networks [17]. ChatGPT can predict the next word depending on the preceding text [18]. Until recently, machine learning (ML) was principally used for prediction. However, ChatGPT uses developed self-sponsored machine learning, and it includes a neural network learning model that can process information which passes through several layers containing nodes called "neurons" that can connect varied information with the data [19].

Cano et al. demonstrated that ChatGPT is a powerful tool for executing different business activities [20]. Zhai found that ChatGPT can be successfully applied by the education sector in three principal ways, namely, to automate administrative tasks, to personalize learning, and to help in teaching [21]. ChatGPT has become useful in the new discipline of "humanics", which is a technique that can help pupils develop their innate strengths for the labor market where they will work in the future [22]. A study by Terwiesch highlighted that ChatGPT helps examiners award grades to students [23]. Other studies have also highlighted the applications of ChatGPT in different business sectors [13,24] and that organizations are using it for customer relationship management,

human resources, sales, and other business activities [8,25,26]. ChatGPT can also be useful in research activities [27,28].

Several scholars have argued that ChatGPT is poised to play a key role in shaping future sustainable development [13,29,30]. For example, it has been observed that ChatGPT, acting as an advanced NLP model, can play a critical role in automating the analysis of large amounts of data on carbon emissions [31,32]. It has also been noted that leadership support of an organization in adopting any modern technologies of Industry 4.0 will result in better performance of that organization [33–36]. Thus, from this discussion, it is seen that applications of ChatGPT are beneficial and can improve the efficiency of organizations, but the extant literature has not extensively investigated the role of skilled employees in adopting ChatGPT applications and improving business sustainability. So, there is a gap in the literature that this study has strived to bridge.

3. Theory and Hypotheses Development

Within a few months of ChatGPT being introduced, it has gained considerable academic and media attention [37]. However, through the applications of ChatGPT, organizations can identify the patterns and trends in environmental data with the support of natural language understanding [38]. To appropriately use ChatGPT applications and extract their best potential, organizations' employees must have adequate skills and expertise [39,40]. Such skilled human resources are considered valuable, rare, inimitable, and non-substitutable (VRIN) resources, which organizations need to use the chatbot tool in the best way. This idea is based on the concept of resource-based view (RBV) [15].

An organization's resources represent the factors it owns or controls, which are eventually transformed into final products and services [41,42]. RBV posits that all resources of an organization do not have equal potential for achieving a better competitive advantage. The proponents of RBV have specifically opined that organizations that possess resources that are simultaneously valuable, rare, inimitable, and non-substitutable (VRIN) could have a better competitive advantage. As the main objective of an organization is to make a profit, RBV emphasizes that there should be an intra-organizational focus, and it holds that an organization's success lies principally in how it is best able to utilize its in-house VRIN resources [43,44]. Thus, in terms of RBV, it is evident that skilled human resources could impact the performance of an organization, which could eventually help it to achieve its sustainability goals. Again, with different modern technologies, including the applications of ChatGPT, an organization can automate its business activities, which are expected to reduce its power consumption, manage waste better, and detect if the organization is exceeding permissible carbon emissions [32,45]. The adoption of generative AI along with LLM is perceived to have significant environmental implications. Usage of AI-enabled ChatGPT can help reduce energy consumption and mitigate climate change issues, thereby improving sustainability performance [46]. All these discussions led to the formulation of the following hypotheses.

H1. *Skilled workforce (SKM) positively influences the business sustainability (BUS) of organizations.*

H2. *Adoption of ChatGPT (AOC) in organizations positively influences business sustainability (BUS).*

Moderating Role of Leadership Motivation

Organizations must have skilled employees who can use different applications of modern technologies to ensure their sustainable growth. In the initial stage of adopting any new technology, organizations often experience that most employees are reluctant to use it over the legacy system and sometimes resist learning and actively using such new technologies [47,48]. This concept is an extension of the status quo bias theory [16]. Since this theory has been attributed to both loss aversion and endowment effect, the leaders of organizations need to motivate employees to accept the decisions of the leadership team to use new technologies. Leaders need to relate various success stories about the new technologies and highlight how the applications are effective and could benefit both the

organizations and the employees [49–52]. Employees need proper training to change the status quo [33], and the leaders of the organizations could support them by providing them training and workshops to develop their knowledge and skillsets. These preparations could help the employees realize the importance of learning and using new technologies and shake off the tendency to adhere to legacy processes [51]. Accordingly, it is hypothesized as follows.

H3a. *Leadership motivation (LSM) positively moderates the relationship between a skilled workforce (SKM) and business sustainability (BUS).*

H3b. *Leadership motivation (LSM) positively moderates the relationship between adoption of ChatGPT (AOC) and business sustainability (BUS).*

With all these inputs, a theoretical model was developed, and it is provided in Figure 1.
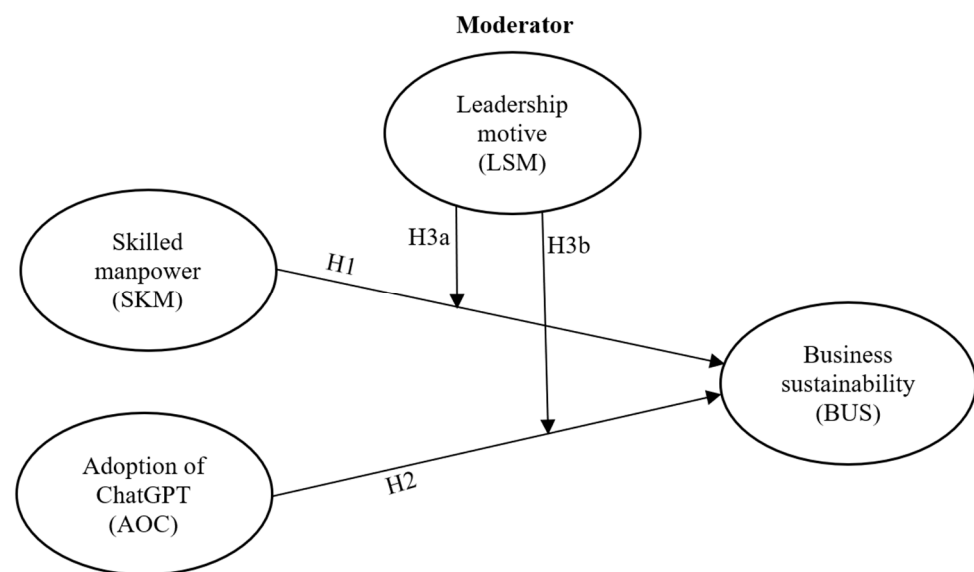

Figure 1. The conceptual model (adopted from RBV and status quo bias theory).

4. Research Methodology

In this study, a quantitative approach was taken to verify the correlations among the variables. To validate the proposed theoretical model, the researchers used the partial least square structure equation modelling (PLS-SEM) technique from WarpPLS6.0 software [53]. As a multivariate as well as non-parametric technique, PLS-SEM is most often applied to assess path relationships [54]. The PLS-SEM technique is also used to analyse a complex model in a simpler way when the model includes a moderating variable [55]. Here, the data has been quantified with a 5-point Likert scale where 1 is Strongly Disagree (SD), and 5 is Strongly Agree (SA).

4.1. Preparation of Research Instruments

After studying the extant literature, a few questions were prepared in the form of statements. The wordings of the questions were adjusted according to the context of the present study. The questions were then pretested to assess that they were clear. For this, the opinions from eight experts were taken. Six of the experts worked in industry and possessed considerable knowledge in the domain of this present study. The remaining two experts were selected from academia, and each had more than ten years of research experience in the field of this present study. Their opinions helped make the wordings of the questions simpler and more easily understandable.

After completion of the pretest, a pilot test was also performed on 30 respondents selected through the convenience sampling technique. These 30 respondents were not included in the main survey. Analysis of their feedback helped to enhance the readability,

understandability, and comprehensiveness of the questions. Throughout all these processes, eventually, 18 questions were finalized. The list of 18 questions with their sources has been duly provided in the Appendix A.

4.2. Collection of Data

To collect data, organizations in India were selected from the list available from the Bombay Stock Exchange (BSE), India. This country was selected because it is the fifth largest economy in the world and one of the BRICS countries. According to different organizations and UN associations, many organizations in India are reported to be taking various measures to achieve sustainable development goals (SDGs) set by the United Nations [56]. Moreover, India is a hub for many technology-based organizations, and a list was obtained from BSE of those organizations that are involved in promoting sustainability using modern technologies [56]. BSE is one of the largest exchanges in the world, and it was the first stock exchange in Asia to join United Nations' SSE (Sustainable Stock Exchange) initiatives (https://www.bseindia.com, Accessed on 7 June 2023). Initially, 800 organizations were randomly selected from the BSE list. After scrutinizing the list, it was determined that 539 organizations had skilled employees to use modern technologies to achieve better sustainability. As the sample unit was the organization, the top executives of each of these 539 organizations were contacted. They were invited to participate in the survey, and they were informed that the aim of this study was purely academic and that the confidentiality and anonymity of the participating respondents would be strictly preserved.

After being contacted several times, 411 executives eventually agreed to take part in this survey. They were provided with the response sheets that contained the 18 instruments. They were also provided with information on how to fill in the response sheet. They were requested to send the completed response sheets within two months (November–December 2022). Within the specified time, only 221 respondents had returned the response sheets, which was a response rate of 53.77%. The response sheets were first checked to determine if they had been completed correctly. Twelve sheets were found to be incomplete, so they were not considered. Analysis was conducted on the responses of 209 respondents against 18 instruments. The details of the organizations are provided in Table 1.

Table 1. Details of organizations (N = 209).

Particular	Category	Number (N)	Percentage (%)
Organization age	Older organization (≥20 years of establishment)	140	66.9
	Younger organization (<20 years of establishment)	69	33.1
Organization size	Large organization (>5000 employees)	120	57.4
	Mid-sized organization (500–5000 employees)	60	28.7
	SME (<500 employees)	29	13.9
Organization type	Service-oriented organization	125	59.8
	Manufacturing organization	84	40.2
Industry	Automotive	38	18.2
	Textile	21	10.0
	Pharmaceutical	25	12.0
	Telecommunication	33	15.8
	Information technology	42	20.0
	Retail	50	24.0

5. Analysis of Data and Results

5.1. Measurement Properties and Discriminant Validity Test

To assess the convergent validity, the loading factor for each instrument was estimated. To examine the validity, consistency, and reliability of the constructs, the average variance extracted (AVE), Cronbach's alpha (α), and composite reliability (CR) of all the constructs were assessed. The estimated values of the different parameters were found to be within the permissible range. Table 2 provides the results.

Table 2. Measurement properties.

Constructs/Items	LF	AVE	CR	A	t-Values
SKM		0.85	0.87	0.89	
SKM1	0.87				22.21
SKM2	0.89				27.16
SKM3	0.96				36.11
SKM4	0.94				24.05
SKM5	0.95				20.13
SKM6	0.90				26.17
AOC		0.87	0.88	0.89	
AOC1	0.95				22.88
AOC2	0.84				29.86
AOC3	0.95				27.06
AOC4	0.94				39.53
AOC5	0.90				28.11
AOC6	0.89				29.07
BUS		0.81	0.83	0.87	
BUS1	0.89				26.13
BUS2	0.86				24.92
BUS3	0.92				27.61
BUS4	0.95				29.04
BUS5	0.96				26.17
BUS6	0.92				20.31

Next, to verify the discriminant validity of the constructs, the square roots of all the AVEs were estimated. The square roots of AVEs were found to be greater than the corresponding bifactor correlation coefficients. The results satisfy the Fornell and Larcker criteria [57], confirming discriminant validity of the constructs. The results are provided in Table 3.

Table 3. Discriminant validity test (Fornell and Larcker criteria) [57].

Constructs	SKM	AOC	BUS	AVE
SKM	0.92			0.85
AOC	0.26	0.94		0.87
BUS	0.29	0.34	0.90	0.81

5.2. Common Method Bias (CMB)

The results of the present study depend on self-reported measures. Hence, one cannot overrule the possibility of there being CMB. To mitigate the risks of this occurring, as a

post hoc measure, some procedural remedies were taken. The pretest and pilot test of the survey helped to simplify the wordings of the survey instruments. This was done to reduce the biased replies as far as possible. In addition, all the respondents were informed that their identities would not be disclosed. Then, to confirm that CMB was not present, Harman's single factor test (SFT) was conducted. The first factor came out to be 23.11%, which is less than the highest recommended value of 50% [58]. However, Harman's SFT has been criticized as not being a robust and conclusive test for CMB [59]. To rectify this issue, the marker correlation test was conducted [60]. The results of this test also highlighted that there was no evidence of CMB in the replies of the respondents. Therefore, it can be construed that the CMB was not a problem in the present study.

5.3. Moderator Analysis (Multigroup Analysis)

In the present study, leadership motivation was considered as a moderator impacting the relationships of SKM→BUS (H1) and AOC→BUS (H2). To test the significance of the moderator on these two linkages, multigroup analysis (MGA) was undertaken. For this, the bootstrapping procedure was adopted with consideration of 5000 resamples. The effects of the moderator "leadership motivation" (LSM) was categorized as either Strong LSM or Weak LSM. It appears that the p-value difference was less than 0.05 for the effects of the two categories of the moderator LSM on H1 and H2, which confirms that the effects are significant [61]. The results are provided in Table 4.

Table 4. Moderator analysis (MGA).

Linkages	Hypotheses	Moderator	p-Value Difference	Remarks
(SKM→BUS) × LSM	H3a	LSM	0.03	Significant
(AOC→BUS) × LSM	H3b	LSM	0.01	Significant

5.4. Hypotheses Testing

To test the hypotheses, the bootstrapping procedure with consideration of 5000 resamples was adopted. Further, an omission separation 7 was considered, and cross-validated redundancy was estimated to find that the Q^2 value was 0.061, which is positive. It indicates that the proposed theoretical model has enough predictive relevance [61]. To examine the model fit, the approach recommended by Henseler et al. [62] was undertaken. Here, SRMR (standardized root mean square residual) was considered as a standard index for validating the model. It was observed that SRMR values emerged as 0.062 for PLS and 0.033 for PLSc. Both these estimated values are less than the permissible highest value of 0.08 [63], indicating that the model is in order. The path coefficients of different linkages were computed along with the respective p-values. The coefficient of determination (R^2) concerning the endogenous variable was also estimated. Table 5 provides the results.

Table 5. Structural equation modelling.

Linkages	Hypotheses	Path Coefficients	p-Values	Remarks
SKM→BUS	H1	0.37	$p < 0.001$ (***)	Supported
AOC→BUS	H2	0.43	$p < 0.01$ (**)	Supported
(SKM→BUS) × LSM	H3a	0.11	$p < 0.05$ (*)	Supported
(AOC→BUS) × LSM	H3b	0.17	$p < 0.01$ (**)	Supported

Note: $p < 0.05$ (*); $p < 0.01$ (**); $p < 0.001$ (***).

With all these inputs, the validated model is provided in Figure 2.
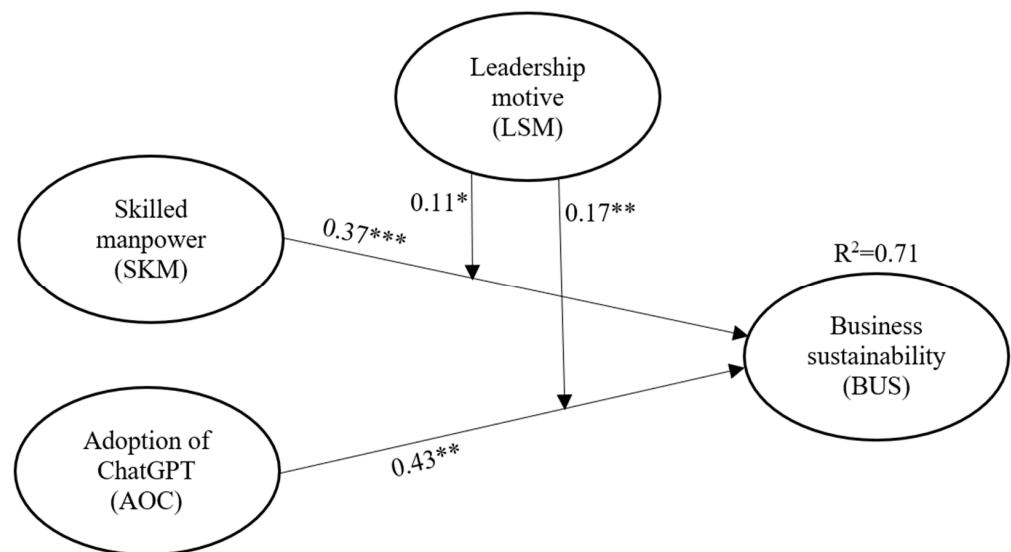
Figure 2. Validated model (SEM). **Note:** $p < 0.05$ (*); $p < 0.01$ (**); $p < 0.001$ (***).

5.5. Results

The present study has formulated four hypotheses. Out of these four hypotheses, two hypotheses are concerned with the moderating effects of leadership motivation on the relationships SKM→BUS (H1) and AOC→BUS (H2). The statistical analysis supported all four hypotheses. The study results demonstrate that SKM impacts BUS significantly and positively since the path coefficient is 0.37 with a level of significance of $p < 0.001$ (***). The study demonstrates that AOC impacts BUS significantly and positively since the path coefficient is 0.43 and the level of significance is $p < 0.01$ (**). The moderator LSM impacts H1 significantly and positively with a path coefficient of 0.11 and a level of significance of $p < 0.05$ (*). The relationship between the moderator LSM and H2 is significant and positive as the path coefficient is 0.17, and the level of significance is $p < 0.01$ (**). The results of the analysis found that the coefficient of determination was $R^2 = 0.71$, which means that SKM and AOC could simultaneously predict BUS to the extent of 71%, which is the explanatory power of the proposed theoretical model.

6. Discussion

The present study has highlighted how disruptive innovation from the advent of applications of ChatGPT and other LLMs is interlinked with organizations' sustainable growth. This study has found that the adoption of disruptive technology like the AI-enabled ChatGPT application could ensure organizations achieve sustainable development objectives, which is also considered one of their principal goals. With its ability to understand, generate, and classify text, ChatGPT can be used to improve sustainability efforts by automating data analysis processes [14,20]. Also, applications of AI-enabled ChatGPT can safely enhance human development goals and protect natural resources to impact sustainability issues [64]. It was observed that organizations could sustain their business activities by adopting ChatGPT. This idea has received support from a study by Khowaja et al. [64].

The present study has also demonstrated that leadership motivation facilitates sustainable business growth by positively impacting the relationships between that and its two predictors: skilled employees and ChatGPT adoption. As discussed in Section 5.3, MGA analysis found the moderator effects of leadership motivation on H1 and H2 to be significant. Here, the moderating effects of leadership motivation (LSM) on the linkages SKM→BUS (H1) and AOC→BUS (H2) will be discussed through a simple slope analysis that compares the effects of Strong LSM and Weak LSM on the relationships. This analysis is illustrated in Figures 3 and 4.
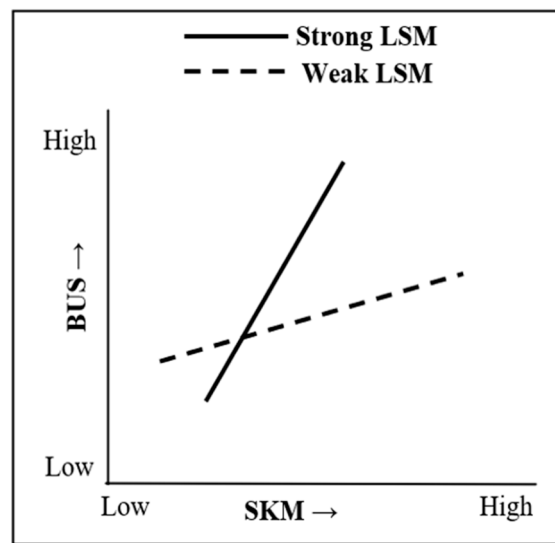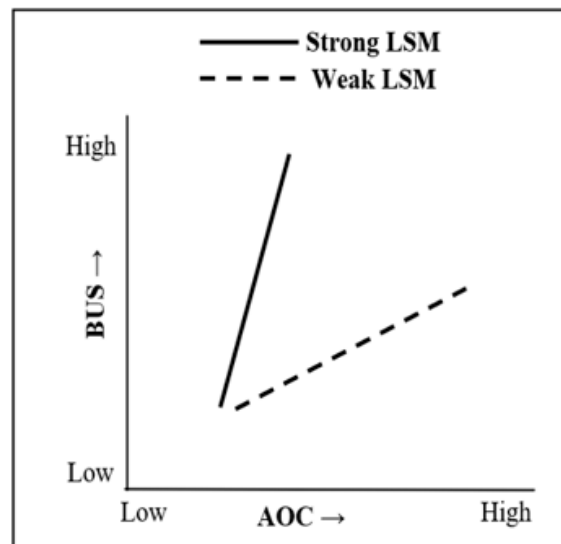
Figure 3. Effects of LSM on H1.

Figure 4. Effects of LSM on H2.

In the two graphs (Figures 3 and 4), the continuous lines represent the effects of Strong LSM on H1 and H2, whereas the dotted lines represent the effects of Weak LSM on H1 and H2. We can observe from the slopes of the two graphs that as the SKM (Figure 3) and AOC (Figure 4) increase, Strong LSM has a greater effect than Weak LSM on the rates of increase of BUS since, in both the graphs, the slopes of the continuous lines are more than the slopes of the dotted lines.

6.1. Theoretical Contributions

The present study has demonstrated that ChatGPT should be considered a promising application of AI in the workplace to achieve better business sustainability. The present study has also revealed that organizations that adopt ChatGPT can benefit from enhanced creativity and innovation, improved work efficiency, as well as increased professional abilities and competencies of the employees that make them adequately aware of the importance of upholding their organizations' commitments to sustainability goals. This study has also thrown light on the fact that, in the near future, being able to work with applications like ChatGPT will become a basic required skill set for jobs in marketing, sales, design, and operations. Also, such applications will help organizations maintain

their obligations to society for environmental and economic sustainability. This study has revealed that to develop different applications using ChatGPT-like technology, employees need to understand NLP and different programming skill sets. The present study has also emphasized the essentialities of leadership motivation to encourage employees to use AI-based ChatGPT. Therefore, the leadership team should make sure the employees are properly trained so that they can more easily use the new technologies. Such efforts from the leadership can bring long-term success to the organizations. No other studies are known to have extensively analyzed and investigated all these salient issues simultaneously. This is considered a unique theoretical contribution of this study.

This study has demonstrated that there is a need for a skilled workforce that possesses VRIN characteristics. Employees with such skills will help their organizations extract the best potential from the applications of AI-based ChatGPT. This is an extension of the applicability of the resource-based view (RBV) [15]. Also explained in this study is the reluctant nature of employees towards shifting the business style and process through the introduction of ChatGPT-type applications. Employees resist changing traditional systems to such disruptive technological applications. Thus, to explain this attitude, the present study has extended the concept of status quo bias (SQB) theory [16].

Recent studies have demonstrated that applications of ChatGPT can enhance efficiency of educational organizations, automate business processes to achieve better performance, and improve the accuracy of decision-making and data analysis [65–67]. The present study has extended the concepts of these earlier studies to demonstrate how skilled workers who are duly supported by the leadership of the organizations could use applications of ChatGPT to ensure better business sustainability. This is claimed to add value to the extant literature.

6.2. Implications to Practice

The accelerated diffusion of ChatGPT has critical implications as well as consequences for practitioners and policymakers. This study advocates that to gain competitive advantages, it is imperative that organizations use AI-enabled tools like ChatGPT to improve efficiency and productivity. To extract the best potential of ChatGPT, organizations need to change some activities. For example, to ensure better sustainability in the education sector, the curricula need to be appropriately adjusted to accurately accommodate programming skills and basic understandability of AI applications in the classrooms. Besides, the instructors themselves can use ChatGPT applications for different instructional activities, assignments, and query solutions, which could be beneficial for the students.

The present study also highlights that skilled workers can improve business sustainability in organizations. This implies that the leaders of the organizations need to offer their employees training to efficiently use AI-enabled tools like ChatGPT. It is suggested that the leadership of organizations has a critical role in motivating their employees to use these tools to achieve better business sustainability. For example, they can show examples of successful applications of ChatGPT or other GPT systems in organizations so that employees realize that organizations need to uphold their commitments to social and environmentally sustainable goals for their long-term performance and competitiveness. Governments also have the responsibility to frame appropriate regulations and policies to protect people from the misuse of ChatGPT-like applications. At the same time, they should watch that such policies do not discourage organizations from using these systems in an appropriate manner.

6.3. Limitations, Conclusions, and Future Scope

The present study has both theoretical and practical implications, but it is not free from all limitations. First, the realization of the effects of ChatGPT on organizations is at the crawling stage. The respondents' answers in the survey were mostly contemplative. Hence, one needs to be cautious when applying the results to actual adopters. Second, the survey collected feedback from respondents at organizations in India. This has external validity

issues and lacks generalizability. It is suggested that future researchers should collect data from respondents evenly spread across the globe to arrive at more generalizable results. Third, the present study analyzed the data of 209 respondents. This does not represent the entire organizational ecosystem. It is suggested that future researchers should consider responses from more respondents to fill in this lacuna. Fourth, the explanative power of the proposed theoretical model is 71%. It is suggested that future researchers should consider other constructs and other boundary conditions to examine if the explanative power of the revised model could be enhanced. In spite of all these limitations, it is believed that this research offers a robust foundation towards further exploration of this topic, highlighting the importance of ongoing research in this domain to better understand the influence of ChatGPT-like applications in organizations as well as in the broader society.

Appendix A

Table A1. Summary of questionnaire.

Items	Source(s)	Statements	Response [SD][D][N][A][SA]
SKM1		I think appropriate skill sets are essential for the employees to use modern applications effectively.	[1][2][3][4][5]
SKM2		I believe that training is an important aspect to use modern technologies efficiently.	[1][2][3][4][5]
SKM3	[4,28,30,41,46,51,66]	Organizations must invest in readiness activities to make their employees more skillful.	[1][2][3][4][5]
SKM4		The leadership team should proactively sponsor different skilling programs for the employees.	[1][2][3][4][5]
SKM5		Most of the employees in our organizations can use modern technology like ChatGPT efficiently.	[1][2][3][4][5]
SKM6		I believe that the leadership team should motivate the employees to pick up new skill sets.	[1][2][3][4][5]
AOC1		I am aware of ChatGPT applications.	[1][2][3][4][5]
AOC2		I think that modern technologies can help improve the operational efficiency of the organization.	[1][2][3][4][5]
AOC3	[18,26,37,52,64,65,67]	Adoption of modern technology like ChatGPT could help improve competitiveness.	[1][2][3][4][5]
AOC4		Our organization has already adopted different applications of ChatGPT.	[1][2][3][4][5]
AOC5		I believe that ChatGPT can predict various business-related outcomes accurately.	[1][2][3][4][5]
AOC6		Most of the departments of our organization use ChatGPT applications.	[1][2][3][4][5]

Table A1. *Cont.*

Items	Source(s)	Statements	Response [SD][D][N][A][SA]
BUS1		I believe efficient use of modern technology is important for business sustainability.	[1][2][3][4][5]
BUS2		Sustainable business organizations will have better competitiveness.	[1][2][3][4][5]
BUS3	[15,25,32–34,44]	Operational sustainability is a prerequisite to have better business sustainability.	[1][2][3][4][5]
BUS4		I believe that skilful employees can help in improving business sustainability.	[1][2][3][4][5]
BUS5		I think that the leadership team plays a vital role in formulating strategy for better business sustainability.	[1][2][3][4][5]
BUS6		Sustainable organizations are more profitable.	[1][2][3][4][5]

Note: SD = Strongly Disagree; D = Disagree; N = Neither disagree nor agree; A = Agree; SA = Strongly Agree.

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