THE RELATIONAL EFFECTS OF PERCEIVED LEADERSHIP 4.0, WORKPLACE OSTRACISM, AND INNOVATIVE WORK BEHAVIOR ON ORGANIZATIONAL PERFORMANCE IN THE FOURTH INDUSTRIAL REVOLUTION (4IR)

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Abstract

This study evaluates the correlational effects of perceived leadership 4.0, workplace ostracism, innovative work behavior, and organizational performance within work organizations. The sample for this investigation was extracted from ten (10) organizations in Oyo and Lagos States, Nigeria. They are organizations from Nigeria's service, financial, and manufacturing industries. Guarantee Trust Bank Plc, FullRange Microfinance Bank Limited, First Bank Plc, Evans industries Limited, Nestlé Nigeria Plc, Friesland Campina Nigeria Plc, IBFC Alliance Limited, United Bank for Africa Plc, DHL Courier Service, and Martyns Consulting Limited. This investigation has adopted a cross-sectional survey method, where the current scholar randomly distributed the study's questionnaires. Nonetheless, from the 500 questionnaires floated, 478 were suitable for investigation and analyzed with a Statistical Packages for Social Sciences (SPSS version 27). This investigation noted a significant correlation between Leadership 4.0, workplace ostracism, innovative work behavior, and organizational performance. It further stated the significant joint influence of Leadership 4.0, workplace ostracism, innovative work behavior on organizational performance within Nigeria's work organizations in the 4IR. Managers and leaders of work organizations are encouraged to investigate and adopt the most suitable leadership styles (for instance, Leadership 4.0) for the diverse situations and challenges, presented by the 4IR. They should also consistently encourage workplace support, using further employee/workplace family support in job-sharing programs. Besides, they should promote innovative management practices, as they are essential in overcoming the challenges, posed by the 4IR.

Keywords: industrial revolution, leadership, isolation, innovation, performance, Nigeria.

1. Introduction

The fourth industrial revolution refers to the speedy changes in the plan, invention, application, process, and service of manufacturing structures, products, and components [1]. The fourth industrial revolution may be shown in every area of existence, from using technology to consumer commodities and services. [2, 3] suggests four stages of the industrial revolution. The first revolution occurred latterly in the 18th century, focusing on mechanization. The second happened at the opening of the 20th century and concentrated on energy and production in large quantities. In addition, IT systems, automation, and microchip technology emphasized the third industrial revolution in the 1970s. The present and fourth industrial revolution exploits several innovative technologies, such as big data analytics, 3D printing, cyber-physical systems (CPS), and cloud computing. This era focuses on the acquisition of data, evolution of automation, and technology, which, when merged, changes various value-chain events, reaching from marketing to distribution and from design to production [4]. Eventually, the fourth industrial revolution refers to how a blend of technologies transforms individuals' work, lives, and relationships; it epitomizes a massive change in how the world functions [5].

Managers focus on understanding which factors influence organizational performance. Meanwhile, organizational performance is the degree, to which an organization satisfies its shareholders' needs, customers, and employees alike. [6, 7] posit that organizational performance is its actual output, measured against its proposed outcomes. However, several factors affect organizational performance within work organizations [8]. Many researchers have focused on relative organizational performance measurements as they depend on quantitative measures to identify opponents [9]. Therefore, organizations must focus on performance assessment mechanisms [10].

[11] noted that Professor Klaus Schwab was the first scholar to coin the term "Leadership 4.0" to mean a fresh leadership style. This new approach to Leadership has features of higher levels of eagerness, enablement, and commitment, which impacts positive collaboration, innovation, performance, and learning within organizations within the context of the emerging fourth industrial revolution [12]. [13]'s study proposed that this new leadership style in the fourth industrial revolution (4IR) will feature innovation, behavioral signs, and higher reasoning elasticity rather than the usual domain know-how. Hence, leaders coach employees with the digital leadership style and encourage intellectual flexibility rather than teach or control [11]. With empowerment, leaders may certify that people are not controlled by technology but benefit from more freedom, opportunities, choices, and eventually, control over their own lives [14].

Workplace ostracism makes employees feel isolated and not part of the organization [15, 16]. It makes employees dissatisfied with their job and shows less interest and involvement in their work [17]. It eventually reduces the performance and motivation of employees, as they are dissatisfied and have reduced work zeal; it causes emotional, behavioral, mental, and physical exhaustion [18, 19]. It has become a focus of investigation for scholars and human resources managers. It significantly determines employee and organizational performance, innovation, commitment, productivity, efficiency, and many more [20].

Innovative work behavior (IWB) possesses other purposes when related to ingenuity. It focuses on identifying, designing, applying, and assessing fresh concepts and links them with development in the work procedure and subsequent performance. Thus, creativity remains a sub-dimension of IWB because of its part in the opening stage of identifying the gap in improving performance and suggesting creative new ideas [21, 22]. The concept of IWB aims at creating and decisively applying innovative new ideas significant in improvising product design, user experience, optimizing routine within an organization [20].

In Nigeria, the impact of the fourth industrial revolution is getting more apparent. The trading model is transformed from conventional buying and selling to e-commerce [23]. Also, as seen in the Dangote-Sinotruk initiative (a joint venture that aims to produce 10,000 commercial vehicles annually with very few employees locally), automated manufacturing, which needs very few humans, shows that Nigeria is not entirely lazing away from the trend. Yet, the efforts in Nigeria are minimal and not commensurate with her counterparts around the globe. Hence, the introduction of 4IR requires Nigeria to bring out new sources of revenue other than the Oil and gas that is dwindling to a halt [23]. Besides, the earlier singular focus on government funding should be seen as unfitting, and new attention should be on government regulation, strategic direction, and management skills. Taking these factors into consideration will make Nigeria part of the future nations [24].

Therefore, to understand and increase organizational performance in Nigeria within the new trend (4IR), this paper investigates the impacts of the essential factors capable of ensuring performance within work organizations. Although the relationship between some variables has been investigated in prior studies, the relational effects of perceived leadership 4.0, workplace ostracism, innovative work behavior, and organizational performance in the fourth industrial revolution era have not yet been explored. Thus, this paper looks at exploring it in Nigeria's work organizations. Thus, the present research adds to the literature and remains pertinent for employment relations, higher learning, and human resources practices.

1. 1. Leadership 4.0 and Organizational Performance

Because of the influence of the 4IR on humanity and the obligation of organizations in driving pertinent changes, [25] noted Leadership as necessary to the inconsistency of possible harm

versus profits to working organizations and society. [12] opined that Leadership is vital to guaranteeing work organizations' existence and organizational performance capabilities. Hence, the fourth industrial revolution with innovation, agility, and higher reasoning elasticity than usual domain know-how may directly influence organizational performance. This will require a fresh leadership style and management approaches, which will meet the pace of these new changes [26]. [11] submitted that, amongst the confusion and ambiguity, caused by the fourth industrial revolution, the future would be owned by organizations, managers, and leaders who can invent, adapt, and collaborate. Hence, leadership 4.0 significantly impacts organizational performance. Leadership 4.0 stimulates collaborative, innovative, agile, and ethical behaviors, which are significant for future organizational success and performance in the fourth industrial revolution era [27]. Thus, the following is hypothesized:

H1: Perceived leadership 4.0 significantly correlates with organizational performance in Nigeria's work organizations in the 4IR.

1. 2. Workplace Ostracism and Organizational Performance

Previous studies have established that perceived workplace ostracism decreases organizational performance [28–30]. The problem of organizational performance full of workplace ostracism made scholars focus on exploring and addressing this concern with advanced reflection to detect the roots of workplace ostracism for work organizations and other stakeholders [31, 32]. By reducing employees' abilities, workplace ostracism may weaken their motivation to perform effectively on the job. Hence, this misattribution can negatively affect the employer, making employees less likely to engage in conscientious work efforts that benefit their organizations [33, 34]. Studies have shown that perceived workplace ostracism makes individuals appraise themselves as miserable failures, provoking them to display less organizational commitment and lower job satisfaction, leading to poor performance [35, 36]. Reinforced by the studies on perceived workplace ostracism and organizational performance, stated above, the present investigation hypothesized that:

H2: Perceived workplace ostracism significantly relates to organizational performance in Nigeria's work organizations in the 4IR.

1. 3. Innovative Work Behavior and Organizational Performance

According to [26], organizational performance could be induced in the 4IR by competencies and behaviors, such as collaboration, innovation, skill, and learning. [11] insinuated that, within the ambiguity, caused by the 4IR, the future would be owned by organizations, and their performance is undoubted if they encourage and adapt innovative work behavior. [11] found a substantial positive link between IWB and organizational performance. Furthermore, [1] suggested a significant positive relationship between innovation and organizational performance. Also, [37] indicated a positive link between IWB and organizational performance within the 4IR era. Besides, [14] opined that more proactive and innovative behavior would be required to achieve organizational performance in the 4IR. To understand the relational effect of innovative work behavior on organizational performance in Nigeria's work organizations in the 4IR, the present research has projected the following hypothesis:

H3: Innovative work behavior significantly affects organizational performance in Nigeria's work organizations in the 4IR.

1. 4. Leadership 4.0, Workplace Ostracism, and Innovative Behavior

[11] postulated that leaders that adopt a Leadership 4.0 encourage innovation amongst their followers. Also, [27] suggests that Leadership 4.0 promotes innovative behaviors in the 4IR. [38] further indicated that when encouraged by their leaders who have adopted a Leadership 4.0, followers feel more incentivized to be innovative. Furthermore, [39] examined the connection between digital Leadership and IWB among leaders and followers. Their discoveries underscored the fact that Leadership 4.0 positively shaped innovative work behavior. Besides, Leadership 4.0 promotes followers' skills to explore or create alternative constructive viewpoints, thus stimulating innovative work behavior [40, 41]. A report noted a negative connection between workplace ostracism and IWB, indicating that when employees feel ignored at their workplaces and are not part of

the conversation, they become discouraged, demotivated, and uncounted within the organization. Hence, employees' ostracised ego, productivity, and confidence lead to ineffectiveness and reduced innovative work behavior [20]. When employees feel overlooked and indignant, they lose interest in their assigned work, reducing IWB. Hence, there is a negative correlation between workplace ostracism and IWB [28]. An encouraging workplace environment increases the innovative work behavior of its employees; instead, workplace ostracism decreases employees' IWB and performance levels [28, 42]. Workplace ostracism further disrupts innovative work behavior [34, 43]'s study found that Leadership 4.0 inversely correlated with workplace ostracism. According to [44], leadership style can be an antecedence of workplace ostracism.

Thus, according to the stated literature, the following propositions are worded:

H4: There is a significant correlation between Leadership 4.0, workplace ostracism, and innovative work behavior in Nigeria's work organizations in the 4IR.

H5: Leadership 4.0, workplace ostracism, and innovative work behavior collectively impact organizational performance in Nigeria's work organizations in the 4IR.

The present research aimed to add to the literature by investigating the relational impacts of perceived leadership 4.0, workplace ostracism, innovative work behavior, and organizational performance in the fourth industrial revolution era to significantly imply a pragmatic model to encourage and increase organizational performance in the 4IR.

2. Materials and Methods

This paper espoused a cross-sectional survey method. Questionnaires were floated among respondents to test this paper's hypotheses and collect data on their opinions on leadership 4.0, workplace ostracism, IWB, and organizational performance. Study participants consent to participate in the investigation, as the present study was introduced and consent requested. Therefore, questionnaires were administered to 500 staff from ten Oyo and Lagos States, Nigeria organizations. These ten (10) organizations were chosen from Nigeria's service, financial, and manufacturing industries. Guarantee Trust Bank Plc, FullRange Microfinance Bank Limited, First Bank Plc, Evans industries Limited, Nestlé Nigeria Plc, Friesland Campina Nigeria Plc, IBFC Alliance Limited, United Bank for Africa Plc, DHL Courier Service, and Martyns Consulting Limited. Thus, the current researchers motivated voluntary input from the participants and ensured the respect of ethical matters. Four hundred and seventy-eight (478) surveys were retrieved and concluded fittingly to usage. The retrieved data was cleaned and analyzed with a Statistical Packages for Social Sciences (SPSS version 27). Concerning the statistical methods, used in the present study, this paper conducted a zero-order correlation and multiple regression analysis. Meanwhile, the present research piloted reliability analyses to achieve the measure's local reliability.

2. 1. Instrumentation

In this study, the survey included different sections:

Section A – Employees' demographics

This segment contains the participants' demographics, such as marital status, gender, age, job level, education qualification, and industry type.

Section B – Leadership 4.0 scale (L4.0S)

Leadership 4.0 was adopted from the study of (27) and operationally expressed as three (3) scopes, namely engagement, empowerment, and enthusiasm. The engagement subscale contained six items, with a Cronbach's alpha coefficient of α=0.76. The current paper realized a Cronbach's alpha coefficient of α=0.87. The empowerment dimension consisted of five items. The Cronbach's alpha coefficient of this dimension was α=0.72, while the current study achieves an α=0.85 Cronbach's alpha coefficient. The enthusiasm dimension comprised four items, having an α=0.82 Cronbach's alpha coefficient, while the present study attains a Cronbach's alpha coefficient of α=0.89. Altogether, the Leadership 4.0 scale contained fifteen items. Each item was answered, utilizing a 5-point Likert-type answer scale, where "1=Strongly Disagree" and "5=Strongly Agree".

Section C – Workplace ostracism scale (WOS)

The items of workplace ostracism were adopted from (20). This scale contained seven items, with a Cronbach's alpha coefficient of α=0.812. This paper, however, achieved an α=0.881 Cronbach's alpha coefficient. All the workplace ostracism items were measured with the 5-point Likert Scale (1="Strongly Disagree"; 5="Strongly Agree").

Section D: Innovative work behavior scale (IWBS)

This scale deals with the respondents' opinions about their innovative work behavior. The construct was adopted from (45)'s study and contained fourteen items, with a Cronbach's alpha coefficient of α=0.94. Meanwhile, the present study achieved a Cronbach's alpha coefficient of α=.90. This measure has a 6-point Likert response format: "1=Never" to "6=Always".

Section E – Organizational performance scale (OPS)

This survey segment comprised items, designed to measure organizational performance, considered essential for the 4IR. This measure was adopted from the study of (27). It contained twenty-six items, classified under four sub-sections: Human Capital abilities (8 items), Business Model and Value Creation/Service Orientation (7 items), Digital Risk Management (9 items), and Personal opinion of organizational sustainability/competitiveness (2 items). The human capital capabilities sub-scale contained eight items, with a Cronbach's alpha coefficient of α=0.85. A Cronbach's alpha coefficient of α=0.91 was achieved in the current investigation. In the digital risk management sub-scale with eight items, the initial developer reported a Cronbach's alpha coefficient of α=0.90. At the same time, the present research attains a Cronbach's alpha coefficient of α=0.92. The business model and value creation/service orientation dimension were nine items. This dimension's initial Cronbach's alpha coefficient was α=0.89, while the current study achieves an α=0.91 Cronbach's alpha coefficient. The personal perception of organizational survival/sustainability/competitiveness comprised only one item, having an α=0.89. Cronbach's alpha coefficient, while this paper reaches a Cronbach's alpha coefficient of α=0.93. Every item was answered with a 5-point Likert-type answer scale, where "1=Strongly Disagree" and "5=Strongly Agree".

However, the present research conducted a trial study to spot any likely difficulties earlier and authenticate the measure's effectiveness.

3. Results

The data, analyzed in the current investigation, are shown in **Table 1**.

Table 1

Demographics of the study's participants

Characteristics	Category	Frequency	Percent (%)
1	2	3	4
Age	20–34	106	22.2
	35–49	286	59.8
	50 and Above	86	18.0
	Total	**478**	**100.0**
Gender	Male	238	49.8
	Female	240	50.2
	Total	**478**	**100.0**
Marital Status	Single	197	41.2
	Married	281	58.8
	Total	**478**	**100.0**
Work Experience	1–5	103	21.5
	6–10	187	39.1
	11–15	99	20.7
	16 and Above	89	18.6
	Total	**478**	**100.0**
Educational qualification	HND/B.Sc./B. Tech	192	40.2
	M.Sc./MTech	142	29.7
	Other Professional Qualifications	144	30.1
	Total	**478**	**100.0**

Continuation of Table 2

1	2	3	4
	Non–managerial/non-supervisory	91	19.0
	Supervisor/Team Leader	195	40.8
Job level	Middle Management	106	22.2
	Senior Management	86	18.0
	Total	**478**	**100.0**
	Financial	170	35.6
	Manufacturing	155	32.4
Industry Type	Service	153	32.0
	Total	**478**	**100.0**

Source: Author's fact-finding

Table 1 demonstrates that 106 respondents were 20–34 years old, 286 were 35–49 years old, and 86 participants were 50 and above. The table further specifies that 238 respondents were male, while 240 were female. Besides, the table shows that 197 respondents were single, whereas 281 were married. The respondents' work experience category indicated that 103 respondents had 1–5 years of work practice, 187 had 6–8 years of work experience, and 99 had 11–15 years of work experience. In comparison, 89 respondents had above 16 and more years and work experience. Moreover, the results revealed that 192 participants were Higher National Diploma/Bachelors of Science/Bachelors of Technology holders, 142 were Master of Science/Master of Technology holders, and 144 had Other Professional Qualifications. Furthermore, the present results included that 91 participants were on the Non-managerial/Non-supervisory job level, 195 on the Supervisor/Team Leader job level, 106 on the Middle Management job level, and 86 participants on the Senior Management job level. In addition, **Table 1** reveals that 170 respondents were from the Financial industry, 155 from the Manufacturing industry, and 153 from the Service industry.

4. 1. Inferential Statistics
Data analysis in the present study has also produced the following inferences.

Table 2
Zero-Order correlations, showing the Correlation between employee demographics, Leadership 4.0, workplace ostracism, innovative work behavior, and organizational performance in Nigeria's work organizations.

Variables	Gender	Age	M. St.	Edu Q.	Work Exp.	Job Level	Ind. Type	L4.0	WO	IWB	OP	Mean	SD
Gender	1						.					1.50	0.501
Age	−0.026	1										1.96	0.633
Marital Status	0.042	**0.549****	1									1.59	0.493
Educational Qualification	**0.121****	**0.676****	**0.787****	1								1.90	0.833
Work Experience	**0.093***	**0.323****	**0.254****	**0.261****	1							2.36	1.018
Job Level	**−0.097***	**0.735****	**0.460****	**0.574****	**0.335****	1						2.39	0.990
Industry Type	**−0.318****	**−0.466****	**−0.507****	**−0.657****	**−0.105***	**−0.482****	1					1.96	0.822
Leadership 4.0	**0.328****	**0.540****	**0.352****	**0.547****	**0.304****	**0.218****	**−0.370****	1				53.0983	3.99538
Workplace Ostracism	−0.033	**−0.698****	**−0.511****	**−0.693****	**−0.501****	**−0.541****	**0.256****	**−0.718****	1			15.1025	3.12090
Innovative Work Behavior	0.082	**0.793****	**0.452****	**0.697****	**0.357****	**0.583****	**−0.430****	**0.832****	**−0.847****	1		50.1025	3.65664
Organizational Performance	−0.080	**0.617****	**0.600****	**0.747****	**0.337****	**0.310****	**−0.380****	**0.801****	**−0.844****	**0.806****	1	95.6820	6.09080

*Note: ** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed)*

Table 2 above indicates the relationship between employee demographics, Leadership 4.0, workplace ostracism, innovative work behavior, and organizational performance in Nigeria's work organizations. Hence, its relationship inferences are further shown in **Fig. 1** below.
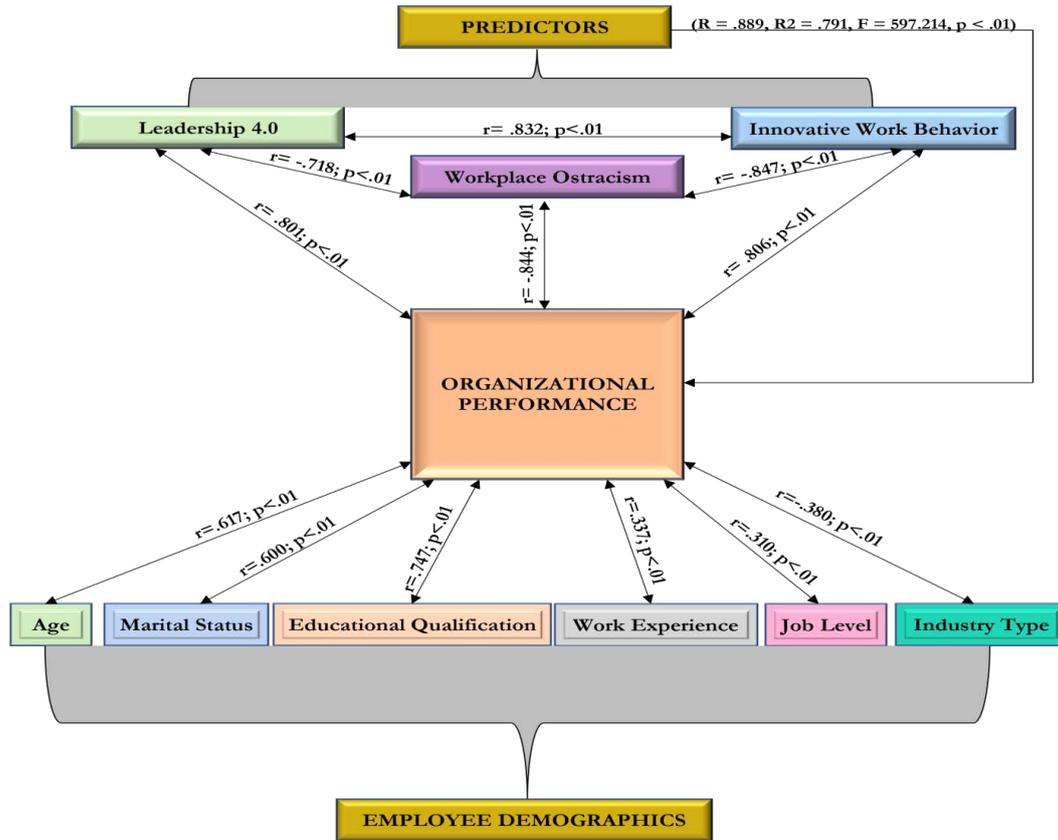

Fig. 1. Zero-Order correlations model, showing the link between employee demographics, Leadership 4.0, workplace ostracism, innovative work behavior, and organizational performance in Nigeria's work organizations

Table 3

A multiple regression, showing the combined impact of L4.0, workplace ostracism, and innovative work behavior on organizational performance

Model	R	R-squared	Adjusted R-squared	F	Sig
1	0.889[a]	0.791	0.789	597.214	0.000

Note: Predictors: (Constant), Innovative Work Behavior, Leadership 4.0, Workplace Ostracism

The resulting matrix from **Table 2** indicates that Leadership 4.0 strongly and positively relates to organizational performance in Nigeria's work organizations (r=0.801; p<0.01). The p-value is enough. So, the stated hypothesis, namely, perceived leadership 4.0 significantly correlates with organizational performance in Nigeria's work organizations in the 4IR, is accepted. The present results indicate a robust and significant negative correlation between workplace ostracism and organizational performance in Nigeria's work organizations (r=–0.844; p<0.01). The p-value is acceptable. Thus, the indicated hypothesis is confirmed: perceived workplace ostracism significantly relates to organizational performance in Nigeria's work organizations in the 4IR. Furthermore, **Table 2** reveals a strong and significant positive relationship between IWB and organizational performance in Nigeria's work organizations (r=0.806; p<0.01). The value p is enough. Thus, the

hypothesis, stated earlier, namely, innovative work behavior has a significant relationship with organizational performance in Nigeria's work organizations in the 4IR., is accepted.

Furthermore, **Table 2** indicates a substantial and positive correlation between leadership 4.0 and innovative work behavior in Nigeria's work organizations (r=0.832; p<0.01). The present results show that workplace ostracism significantly and negatively relates to innovative workplace behavior within Nigeria's work organizations (r=−0.847; p<0.01). Besides, **Table 2** indicates a significant and negative correlation between Leadership 4.0 and workplace ostracism within Nigeria's work organizations (r=−0.718; p<0.01). These positions affirm the hypothesis: there is a significant correlation between Leadership 4.0, workplace ostracism, and innovative work behavior in Nigeria's work organizations in the 4IR.

In addition, the present results show that all the employee demographics under study except gender (age, marital status, job level, educational qualification, work experience, and industry type) have a significant correlation with organizational performance within Nigeria's work organizations (r=0.617; p<0.01; r=0.600; p<0.01; r=0.747; p<0.01; r=0.310; p<0.01; r=0.337; p<0.01; r=−0.380; p<0.01) respectively. All the p values are adequate.

Also, **Table 3** shows that Leadership 4.0, workplace ostracism, and innovative work behavior significantly and jointly influence organizational performance in the 4IR (R=0.889, R2=0.791, F=597.214, p<0.01). The p-value is sufficient. These results show that Leadership 4.0, workplace ostracism, and innovative work behavior significantly, jointly, and positively induced an 88.9 % variation in organizational performance. Therefore, the assumption is established that there is a combined impact of Leadership 4.0, workplace ostracism, and innovative work behavior on organizational performance within Nigeria's work organizations in the 4IR.

5. Discussion

The present findings showed that perceived Leadership 4.0 significantly and positively correlates with organizational performance in Nigeria's work organizations in the 4IR. This observation assumes that adopting leadership 4.0, which makes leaders coach employees with the digital leadership style and encourage intellectual flexibility rather than teach or control, increases organizational performance in Nigeria's work organizations in the 4IR. This result is consistent with prior empirical evidence that Leadership is vital to ensuring work organizations' survival and organizational performance capabilities [12]. It also supports [11]'s opinion that, amongst the confusion and ambiguity of the fourth industrial revolution, the prospect belongs to organizations, managers, and leaders who adapt, innovate, and collaborate. The present finding further corroborates [27]'s position that Leadership 4.0 promotes novel, collaborative, swift, creative, and ethical behaviors, significant for future organizational success and performance in the fourth industrial revolution era.

This paper has established a significant and negative link between workplace ostracism and organizational performance in Nigeria's work organizations in the 4IR. The present findings imply that the more workers in Nigeria's work organizations feel isolated and not part of the organization, the less performance. These findings add to some scholars' existing views, and opinions (for example, [28–30]) that perceived workplace ostracism decreases organizational performance. This result is also in line with [36]. They noted that perceived workplace ostracism makes individuals appraise themselves as miserable failures, provoking them to display less organizational commitment and lower job satisfaction, leading to poor performance.

In addition, the current results established that innovative work behavior significantly and positively relates to organizational performance in the 4IR. This result concludes that there will be more organizational performance within Nigeria's work organizations as employees generate and decisively apply innovative new ideas. Hence, the present results support [11], who found a significant positive correlation between innovative work behavior and organizational performance. These findings also validate the position of [14] that more proactive and innovative behavior would be required to achieve organizational performance in the 4IR. The present results further corroborate the findings of [1], which suggested a significant positive connection between innovation and organizational performance.

Furthermore, this paper posits that Leadership 4.0 is significantly and positively linked to innovative work behavior. This view implies that the more leaders adopt leadership 4.0 in Nigeria's work organizations, the more staff exhibit innovative work behavior. Hence, it confirms [11] that leaders who adopt a Leadership 4.0 encourage innovation amongst their followers. The current finding also supports [27], who suggests that Leadership 4.0 promotes innovative behaviors in the 4IR. The result also supports the discoveries of [39], which mentioned that Leadership 4.0 positively shaped innovative work behavior. Moreover, the present investigation established that workplace ostracism significantly and negatively relates to innovative workplace behavior. This view suggests that the more employees feel isolated and not part of the organization, the lesser they exhibit innovative work behavior. Hence, this paper confirms [20]'s view that employees feel ignored and not part of the conversation; they become discouraged, demotivated, and uncounted within the organization. Hence, employees' ostracised ego, productivity, and confidence lead to ineffectiveness and reduced innovative work behavior. It also supports the literature by [28] that there is a negative correlation between workplace ostracism and IWB. In addition, this paper noted a significant and negative correlation between Leadership 4.0 and workplace ostracism. This fact assumes that the more Leadership 4.0 is adopted in work organizations, the lesser the employees feel ostracised. Hence, this position corroborates [43]'s view that showed that Leadership 4.0 inversely correlated with workplace ostracism; and [44, 45]'s position clarifies that leadership style can be an antecedence of workplace ostracism.

This paper has further established that employee demographics (marital status, age, work experience, job level, educational qualification, and industry type) have a significant relationship with organizational performance. Marital status, age, work experience, educational qualification, and job level significantly and positively correlated with organizational performance. In contrast, industry type has a significant negative relationship with organizational performance.

The current investigation has further established that Leadership 4.0, workplace ostracism, and innovative work behavior significantly, jointly, and positively predict organizational performance within Nigeria's work organizations in the 4IR. Hence, these predictors together induced an 88.9 % variation in organizational performance within Nigeria's work organizations. The other 11.1 % variation in organizational performance within Nigeria's work organizations is predicted by variables, not considered in the present study. This result validates the proposed statement: there is a combined impact of Leadership 4.0, workplace ostracism, and innovative work behavior on organizational performance in Nigeria's work organizations within the 4IR.

Consistent with the present results, the present study aimed to imply a pragmatic model to encourage and increase organizational performance within the 4IR. Thus, the model is in **Fig. 2**.
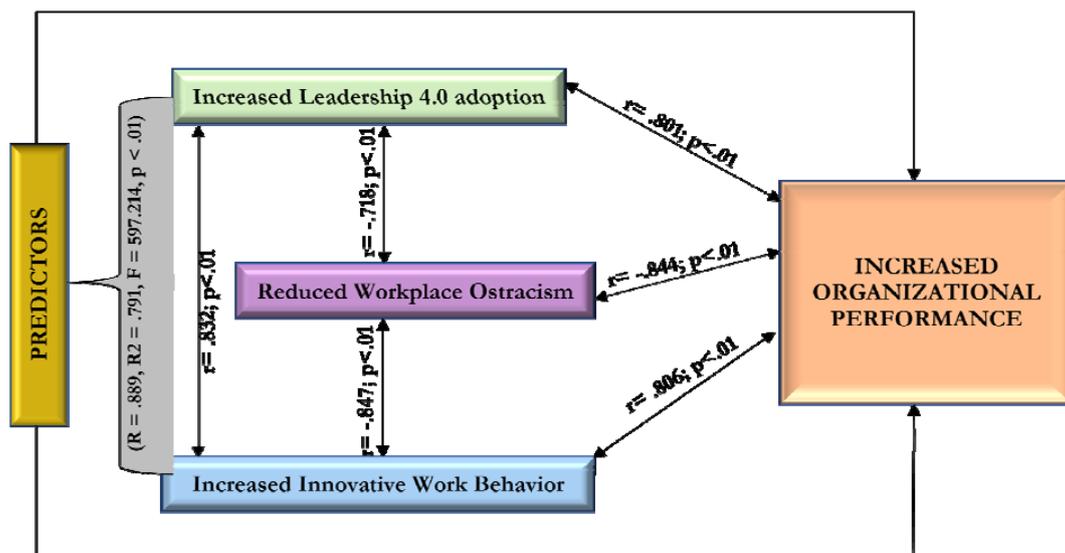

Fig. 2. A practical model to significantly encourage and increase organizational performance within the 4IR. Source: Author's findings

Research limitations. The present results are with some limitations. Firstly, the recent sample was restricted to the employees across the Lagos and Ibadan cities of Lagos and Oyo States, Nigeria. Hence, a future study should look into employees in other regions and States of Nigeria. This will ensure the generalizability of the findings. Second, the current research adopted a cross-sectional survey design.

The prospects for further research. Thus, future studies need to use an in-depth qualitative inquiry to operationalize further the concepts, linked to organizational performance.

6. Conclusion

The present study concludes that Leadership 4.0 and innovative work behavior have a significant tendency to increase organizational performance. In contrast, workplace ostracism reduces it in Nigeria's work organizations. It further settles that Leadership 4.0, workplace ostracism, and innovative work behavior significantly and jointly influence organizational performance. Therefore, these stated variables predict organizational performance in Nigeria's work organizations.

The hypothesis – perceived leadership 4.0 significantly correlates with organizational performance in Nigeria's work organizations in the 4IR – is confirmed. Also, the stated hypothesis is established: perceived workplace ostracism significantly relates to organizational performance in Nigeria's work organizations in the 4IR. In addition, the stated hypothesis, namely, innovative work behavior has a significant relationship with organizational performance in Nigeria's work organizations in the 4IR, is proved. Furthermore, the hypothesis that there is a significant correlation between Leadership 4.0, workplace ostracism, and innovative work behavior in Nigeria's work organizations in the 4IR is proved. Besides, the stated hypothesis is established: leadership 4.0, workplace ostracism, and innovative work behavior collectively impact organizational performance in Nigeria's work organizations in the 4IR.

However, the following suggestions are beneficial:

This paper advocates that organizations investigate and adopt the most suitable leadership styles (for instance, Leadership 4.0) for the diverse situations and challenges, presented by the 4IR.

Given the sensitive nature of workplace ostracism, employers should always encourage workplace support, using additional employee/workplace family support in the form of job-sharing programs. This increases employees' perception that help is available and accessible in the workplace.

Also, leaders and the management within the work organization should encourage innovative management practices, as they are essential in overcoming the challenges posed by the 4IR.

Furthermore, for more research, this paper advises mixed-method pragmatic investigations better to understand the predictors of organizational performance in the 4IR.

Acknowledgment

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