Drivers of Loyalty among Employees of Open Online Flexible Distance Learning Higher Education Institutions

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Abstract
This study delves into the complex interplay of factors influencing employee loyalty within open online flexible distance-learning higher education institutions. Specifically, it examines how perceived attractiveness, perceived performance, and perceived social responsibility interact with perceived competence, acting as a mediator in this relationship. Grounded in Social Exchange Theory (SET), the research design involved meticulous data collection through a comprehensive survey questionnaire, resulting in a robust dataset comprising 369 valid responses. Employing advanced analytical tools such as SmartPLS 4, the study unveiled significant insights into the role of perceived competence as a key determinant of employee loyalty. The findings underscored the pivotal role of perceived competence in mediating the relationships between perceived attractiveness, perceived performance, perceived social responsibility, and employee loyalty. This mediation mechanism highlights the importance of employees' perceptions of their own abilities in shaping their loyalty to the organization. Moreover, the implications of these findings are far-reaching. They suggest that interventions aimed at enhancing perceived attractiveness, perceived performance, and perceived social responsibility should also prioritize the development of perceived competence among employees. By bolstering employees' confidence in their capabilities, organizations can foster a more loyal and engaged workforce. The study advocates for a holistic approach to enhancing employee loyalty in open online flexible distance learning higher education institutions. It emphasizes the need for institutions to not only promote these factors but also to consider individual differences and organizational culture in their strategies. This research contributes to the existing body of knowledge by shedding light on the complex dynamics of employee loyalty in the context of online higher education. By offering actionable recommendations and highlighting areas for further exploration, it paves the way for the

development of comprehensive strategies to enhance employee loyalty in this evolving educational landscape.

Keywords: Perceived Attractiveness, Perceived Performance, Perceived Social Responsibility, Perceived Competence, Employee Loyalty

Introduction

Employees' loyalty within Open Online Flexible Distance Learning Higher Education Institutions (OOFDLHEIs) globally is undergoing a transformative phase, shaped by diverse factors in the educational landscape. Traditionally, loyalty was tethered to tenure and institutional affiliation (Damberg et al., 2022). However, contemporary trends reflect a shift towards more dynamic and inclusive metrics. In the wake of the COVID-19 pandemic, remote work and flexible learning arrangements have become commonplace, challenging traditional notions of loyalty (Budur & Poyural, 2021). Employees now prioritize meaningful engagement, professional development opportunities, and alignment of organizational values. To adapt, OOFDLHEIs are fostering cultures of innovation and inclusivity, leveraging technology to enhance remote collaboration and communication (Silva et al., 2023). Additionally, institutions are investing in employee wellness programs, mental health support, and work-life balance initiatives to bolster loyalty and retention (Hosseini et al., 2022). Furthermore, the globalized nature of online education has increased competition for talent, necessitating proactive measures to attract and retain skilled professionals. OOFDLHEIs are responding by offering competitive benefits packages, remote work flexibility, and avenues for career advancement, thus nurturing a workforce that is not only loyal but also agile and adaptable in an ever-evolving educational landscape (Marić et al., 2021). Higher Education Institutions (OOFDLHEIs) are evolving in tandem with global trends. The COVID-19 pandemic accelerated the adoption of remote work and flexible learning, reshaping loyalty dynamics (Chang et al., 2021). Employees now prioritize factors like meaningful engagement, professional growth, and work-life balance. OOFDLHEIs are responding by fostering inclusive cultures, investing in technology for remote collaboration, and offering wellness initiatives (Srivastava & Singh, 2021). Moreover, amidst increasing competition for talent, institutions are enhancing benefits and career development opportunities to retain skilled professionals (Oh et al., 2021). This shift reflects Malaysia's commitment to adapting to the changing educational landscape, ensuring a loyal and resilient workforce in OOFDLHEIs (Kumar et al., 2021). In Malaysia, employee loyalty among Open Online Flexible Distance Learning Higher Education Institutions (OOFDLHEIs) faces challenges amidst evolving educational paradigms. With the rapid expansion of online learning, employees may feel disconnected from institutional values and lack opportunities for meaningful engagement (Amzat et al., 2023). Additionally, the gig economy's allure and global competition for skilled professionals further strain loyalty. Moreover, inadequate support for remote work arrangements and limited career advancement avenues contribute to employee turnover (Ooi et al., 2022). Addressing these issues requires OOFDLHEIs to prioritize inclusive cultures, invest in professional development, and offer competitive benefits to foster loyalty and retain talent in Malaysia's dynamic educational landscape (Rashid & Mustafa, 2022). This study holds significant implications for policymakers, employees, and Open Online Flexible Distance Learning Higher Education Institutions (OOFDLHEIs) in Malaysia. Policymakers can utilize findings to inform regulations promoting employee welfare and fostering a conducive work environment. Employees stand to benefit from improved job satisfaction, career development opportunities, and better work-life balance. For OOFDLHEIs, insights into the challenges of employee loyalty can guide

strategies to enhance organizational culture, implement effective remote work policies, and invest in employee support programs, ultimately fostering a loyal and engaged workforce. Thus, this study serves as a valuable resource for stakeholders seeking to optimize performance and retention in Malaysia's OOFDLHEIs sector. The purpose of this study is to assess the direct and indirect relationship between perceived attractiveness, perceived performance, and perceived social responsibility with employees' loyalty with perceived competence as a mediator among the employees in open online flexible distance learning higher education institutions.

Literature Review
Underpinning Theory
Social Exchange Theory (SET) serves as a robust theoretical framework to underpin the study exploring the direct and indirect relationships between perceived attractiveness, perceived performance, and perceived social responsibility with employees' loyalty, with perceived competence as a mediator, among employees in open online distance learning higher education institutions. SET posits that individuals engage in social interactions and relationships based on the expectation of receiving rewards while minimizing costs. In the context of higher education institutions offering open online distance learning, perceived attractiveness encompasses benefits such as flexible learning schedules and access to quality education resources. Individuals perceiving these institutions as attractive are likely to reciprocate by demonstrating loyalty. Similarly, perceived performance reflects employees' evaluations of the institution's effectiveness in delivering educational services. Positive perceptions of performance contribute to employees' trust and commitment, fostering loyalty. Perceived social responsibility, emphasizing ethical practices and community engagement, further strengthens the bond between employees and the institution, enhancing loyalty through perceived fairness and trustworthiness. Perceived competence acts as a mediator, influencing employees' perceptions of their deserved rewards within the institution. Higher perceived competence may heighten expectations for recognition and rewards, shaping loyalty outcomes. Through SET, this study provides insights into the intricate social exchange dynamics within open online distance learning institutions, elucidating the mechanisms driving employees' loyalty in the digital educational landscape.

Relationship between Perceived Attractiveness, Perceived Competence & Loyalty
The relationship between perceived organization attractiveness, employee loyalty, and perceived organization competence as a mediator is fundamental in understanding organizational dynamics and employee behavior (Damberg et al., 2022). Perceived organization attractiveness encapsulates the overall appeal, reputation, and desirability of an organization as an employer, while employee loyalty signifies the commitment and dedication of employees toward their organization (Belanche et al., 2021). Perceived organization competence, acting as a mediator, plays a crucial role in shaping the relationship between organization attractiveness and employee loyalty. When employees perceive their organization as competent in its operations, leadership, and ability to achieve goals, it enhances their trust and confidence in the organization (Kim et al., 2023). This perception of competence reinforces the attractiveness of the organization as an employer, leading to increased employee loyalty. Moreover, perceived organizational competence serves as a mechanism that strengthens the positive effects of organization attractiveness on employee loyalty (Damberg et al. 2024). Employees are more likely to remain loyal to organizations they

perceive as competent because they believe in the organization's capability to provide a conducive work environment, opportunities for growth, and overall satisfaction. Perceived organization attractiveness positively influences employee loyalty, and perceived organization competence acts as a mediator, reinforcing this relationship by instilling trust and confidence in the organization's abilities, thereby fostering greater employee loyalty and organizational commitment (Kervyn et al., 2022). Given that, the following hypotheses were proposed for this study

> *H1: There is a relationship between perceived attractiveness and employee loyalty among the employees in open online distance learning higher education institutions.*
> *H2: There is a relationship between perceived attractiveness and perceived competence among the employees in open online distance learning higher education institutions.*
> *H3: There is a mediating effect of perceived competence on the relationship between perceived attractiveness and employee loyalty among the employees in open online distance learning higher education institutions.*

Relationship between Perceived Performance, Perceived Competence & Loyalty
The relationship between perceived organization performance, employee loyalty, and perceived organization competence as a mediator is pivotal in understanding how employees perceive and engage with their workplace (Chikazhe & Makanyeza, 2022). Perceived organization performance refers to employees' subjective assessment of how well their organization performs in achieving its goals, meeting objectives, and delivering results. Employee loyalty signifies the emotional attachment, commitment, and dedication of employees towards their organization. It encompasses factors such as retention, engagement, and advocacy (Sherwani et al., 2023). Perceived organization competence acts as a mediator in this relationship by influencing how employees interpret organizational performance. When employees perceive their organization as competent in its operations, leadership, and execution of tasks, it enhances their trust and confidence in the organization's ability to perform effectively (Fetriah & Hermingsih, 2023). This perception of competence reinforces the positive relationship between perceived organizational performance and employee loyalty. Moreover, perceived organizational competence serves as a mechanism through which organizational performance impacts employee loyalty (Kolvereid & Amo, 2021). Employees are more likely to remain loyal to organizations they perceive as competent because they believe in the organization's capability to maintain high-performance levels and achieve success in the long run. In summary, perceived organizational performance positively influences employee loyalty and perceived organizational competence acts as a mediator, strengthening this relationship by instilling trust and confidence in the organization's abilities to perform effectively, thereby fostering greater employee loyalty and organizational commitment (Das et al., 2021). therefore, the following hypotheses were proposed for this study:

> *H4: There is a relationship between perceived performance and employee loyalty among the employees in open online distance learning higher education institutions.*
> *H5: There is a relationship between perceived performance and perceived*

competence among the employees in open online distance learning higher education institutions.
H6: There is a mediating effect of perceived competence on the relationship
between perceived performance and employee loyalty among the employees in open online distance learning higher education institutions.

Relationship between Perceived Social Responsibility, Perceived Competence & Loyalty
The relationship between perceived social responsibility, employee loyalty, and perceived organization competence as a mediator is a crucial aspect of organizational behavior and employee engagement. Perceived corporate social responsibility refers to employees' perceptions of their organization's commitment to social, environmental, and ethical responsibilities beyond profit-making motives. Employee loyalty signifies the emotional attachment commitment, and dedication of employees toward their organization (Jaeger & Fifka, 2024). It encompasses factors such as retention, engagement, and advocacy. Perceived organization competence acts as a mediator in this relationship by influencing how employees interpret corporate social responsibility initiatives (Tosun & Tavsan, 2024). When employees perceive their organization as competent in implementing corporate social responsibility practices, it enhances their trust and confidence in the organization's ethical standards and social impact. This perception of competence reinforces the positive relationship between perceived corporate social responsibility and employee loyalty (Le, 2023). Moreover, perceived organizational competence serves as a mechanism through which corporate social responsibility impacts employee loyalty. Employees are more likely to remain loyal to organizations they perceive as competent in corporate social responsibility because they believe in the organization's ability to contribute positively to society and uphold ethical principles (Amoako et al., 2021). Perceived corporate social responsibility positively influences employee loyalty, and perceived organization competence acts as a mediator, strengthening this relationship by instilling trust and confidence in the organization's abilities to effectively implement corporate social responsibility initiatives, thereby fostering greater employee loyalty and organizational commitment (Shareef, 2023). Hence, the following hypotheses were proposed for this study:

H7: There is a relationship between perceived social responsibility and employee loyalty among the employees in open online distance learning higher education institutions.

H8: There is a relationship between perceived social responsibility and perceived competence among the employees in open online distance learning higher education institutions.

H9: There is a relationship between perceived competence and employee loyalty among the employees in open online distance learning higher education institutions.

H10: There is a mediating effect of perceived competence on the relationship between perceived social responsibility and employee loyalty among the employees in open online distance learning higher education institutions.
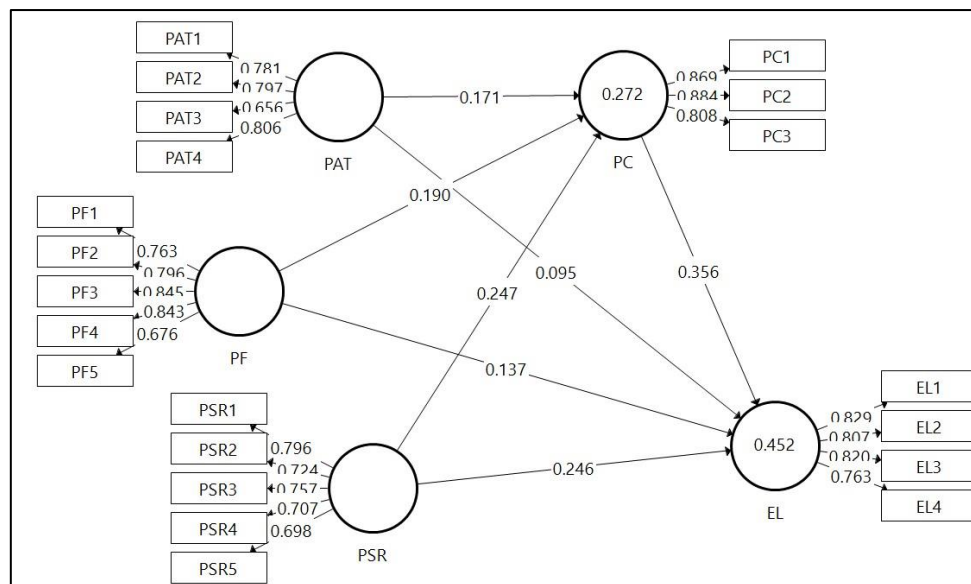
Figure 1: Research Framework

Notes: PAT=Perceived Attractiveness   PF=Perceived Performance   PSR= Perceived Social Responsibility   PC=Preceived Competence   EL=Employee Loyalty

Methodology

The population of this study comprises students of open online flexible distance learning higher education institutions of Open University Malaysia, Wawasan University, and Asia e-University. However, it was not feasible to specify the entire population of the open online flexible distance learning students considering that would not all be known and access would be difficult. For this reason, a non-probability sampling method particularly purposive sampling was applied. The qualifying criteria that respondents had to fulfill for this study were that they had to be open to online flexible distance learning students. A purposive sampling method followed suit whereby the population that shares certain characteristics, or you are researching issues likely to have unique cases. There were a total of 21 observed variables and data was collected from Open University Malaysia, Wawasan University, and Asia e-University respondents using a self-administered questionnaire. The survey questionnaire served as the primary instrument for data collection, encompassing measurement items including perceived attractiveness adopted from Schwaiger (2004) (4 items), perceived performance adopted from Schwaiger (2004) (5 items), perceived social responsibility adopted from Lee et al (2005) (5 items), perceived competence Schwaiger (2004) (3 items), and loyalty adopted from Lee et al (2001) (4 items). The data utilized in the study were primary. Students were approached and surveyed via mainly two methods – face-to-face and online. There was a total of 482 questionnaires distributed and 385 were returned, constituting a response rate of 79.8%. After data screening and cleaning, a total of 369 usable responses were obtained from the sampling exercise and used for the analysis. In this study, Structural Equation Modeling (SEM) is the selected analytical approach, with analysis conducted using the Smartpls4 software tool. Smartpls4 is acknowledged for its adeptness in managing intricate SEM models, as documented by(Ringle et al., 2022).

Data Analysis

Respondents profile

Below are the profiles of the respondents who actively engaged in the study, as outlined in Table 1.

Table 1
Respondents' Profiles

		Frequency	Percent
Gender	Male	221	59.9
	Female	148	40.1
Age	<30 Years Old	27	7.3
	31-40 Years Old	85	23.0
	41-50 Years Old	151	40.9
	51-60 Years Old	74	20.1
	>60 Years Old	32	8.7
No year service	<5 Years	21	5.7
	6-10 Years	50	13.6
	11-15 Years	111	30.1
	16-20 Years	107	29.0
	21-25 Years	47	12.7
	26-30 Years	16	4.3
	>30 Years	17	4.6
Position	Academician	289	78.3
	Non-Academician	80	21.7
	Total	369	100.0

Common Method Bias

Introduced by Kock (2015) and refined by Kock & Lynn (2012), the collinearity test methodology is a comprehensive approach addressing both vertical and horizontal collinearity aspects. Pathological collinearity is identified through variance inflation factors (VIFs) exceeding 3.3, signifying significant concern for common method bias within the model (Kock & Lynn, 2012). Consequently, if the VIFs derived from the thorough collinearity assessment fall below 3.3, it can be inferred that the model remains unaffected by common method bias (Kock, 2015). As illustrated in Table 2, the VIFs resulting from the overall collinearity assessment were found to be below 3.3, affirming the absence of any common method bias issue within the model.

Table 2
Full Collinearity Test

	EL	PAT	PF	PSR	PC
EL		11.753	1.751	1.679	1.521
PAT	1.625		1.435	1.625	1.622
PF	2.161	1.911		1.770	2.168
PSR	1.895	1.979	1.619		1.983
PC	1.358	1.562	1.568	1.568	

Outer Model
In this study, we adhered to the methodology advocated by Hair et al (2017) to evaluate each measurement in both the first and second orders, facilitating the identification of items with loadings below the 0.7 threshold. Analysis of construct reliability and validity revealed that the Average Variance Extracted (AVE) for all constructs ranged from 0.544 to 0.730, surpassing the 0.5 benchmark, thus indicating robust convergent validity Hair et al (2017) (Table 3). Moreover, the composite reliability for all constructs exceeded 0.7, falling within the range of 0.847 to 0.893. Additionally, Cronbach's alpha values for all constructs were greater than 0.7, varying from 0.757 to 0.846 (Table 3). To ensure discriminant validity, the initial step involved evaluating cross-loadings to ensure appropriate representation and measurement of respective constructs (Table 4). Subsequently, we employed the Heterotrait-Monotrait (HTMT) ratio for further assessment, adhering to the recommended criterion for examining discriminant validity in Variance-Based Structural Equation Modeling (VB-SEM) (Henseler, Ringle & Sarstedt, 2015). Table 5 presented the HTMT ratios, original sample, and 95% confidence intervals, affirming compliance with the HTMT threshold of 0.85.

Table 3
Construct Reliability & Validity

	CA	CR	AVE
EL	0.820 (0.785, 0.851)	0.880 (0.859, 0.899)	0.648 (0.602, 0.689)
PAT	0.757 (0.707, 0.802)	0.847 (0.820, 0.871)	0.581 (0.533, 0.629)
PC	0.815 (0.762, 0.854)	0.890 (0.861, 0.911)	0.730 (0.675, 0.773)
PF	0.846 (0.816, 0.875)	0.893 (0.871, 0.909)	0.620 (0.577, 0.667)
PSR	0.791 (0.746, 0.824)	0.856 (0.831, 0.877)	0.544 (0.497, 0.589)

Notes: 97.5% Confidence Interval, CA=Cronbach Alpha   CR=Composite Reliability AVE=Average
Variance Extracted

Table 4
Cross Loadings

	EL	PAT	PC	PF	PSR
EL1	**0.829**	0.429	0.541	0.501	0.517
EL2	**0.807**	0.368	0.411	0.428	0.404
EL3	**0.820**	0.352	0.430	0.435	0.440
EL4	**0.763**	0.271	0.438	0.298	0.384
PAT1	0.362	**0.781**	0.307	0.445	0.306
PAT2	0.355	**0.797**	0.255	0.404	0.328
PAT3	0.276	**0.656**	0.347	0.468	0.480
PAT4	0.364	**0.806**	0.339	0.552	0.395
PC1	0.536	0.378	**0.869**	0.432	0.433
PC2	0.480	0.345	**0.884**	0.403	0.398
PC3	0.439	0.326	**0.808**	0.339	0.337
PF1	0.325	0.467	0.294	**0.763**	0.460
PF2	0.401	0.430	0.361	**0.796**	0.549
PF3	0.520	0.593	0.466	**0.845**	0.599
PF4	0.446	0.470	0.374	**0.843**	0.564
PF5	0.317	0.446	0.274	**0.676**	0.429
PSR1	0.388	0.354	0.325	0.542	**0.796**
PSR2	0.395	0.349	0.341	0.438	**0.724**
PSR3	0.347	0.326	0.312	0.450	**0.757**
PSR4	0.474	0.375	0.398	0.517	**0.707**
PSR5	0.389	0.409	0.295	0.508	**0.698**

Table 5
Hetrotrait-Monotrait (HTMT) Ratios

	Ratios	2.50%	97.50%
PAT -> EL	0.558	0.418	0.661
PC -> EL	0.687	0.591	0.767
PC -> PAT	0.521	0.385	0.615
PF -> EL	0.603	0.497	0.696
PF -> PAT	0.762	0.668	0.835
PF -> PC	0.538	0.401	0.637
PSR -> EL	0.663	0.569	0.745
PSR -> PAT	0.638	0.528	0.719
PSR -> PC	0.561	0.448	0.656
PSR -> PF	0.804	0.720	0.869

Note: A two-tail percentile bootstrap test at 5% confidence interval
(2.5%, 97.5%) with 5,000 sub-samples was performed

Structural Model
In this study, the evaluation of the structural model adhered to the methodology outlined by Hair et al. (2017), which involved scrutinizing pathway coefficients (β) and coefficients of determination (R^2). The Partial Least Squares (PLS) method was employed, utilizing 5000 sub-samples to determine the significance level of path coefficients. The findings from hypothesis testing for confidence intervals, encompassing path coefficients (beta), corresponding t-

statistics, and p-values, are presented in Table 3. This rigorous examination provides valuable insights into the significance and robustness of the relationships among the variables within the structural model. The detailed hypotheses testing results in Table 6 offer a nuanced analysis of each hypothesis, focusing on Beta coefficients, T-statistics, P-values, and the final decisions regarding hypothesis support.

Hypothesis H1: The direct relationship between perceived attractiveness and employee loyalty is not supported, as evidenced by the non-significant beta coefficient (β = 0.095, t = 1.606, p = 0.109). Thus, hypothesis H1 is rejected, suggesting that perceived attractiveness alone does not significantly predict employee loyalty in open online distance learning higher education institutions. *Hypothesis H2:* Perceived attractiveness positively influences perceived competence, as indicated by the significant beta coefficient (β = 0.171, t = 2.770, p = 0.006). Hence, hypothesis H2 is accepted, affirming that perceived attractiveness contributes to the perception of competence among employees in these institutions. *Hypothesis H3:* Perceived attractiveness indirectly affects employee loyalty through perceived competence, as supported by the significant beta coefficient (β = 0.061, t = 2.414, p = 0.016). Thus, hypothesis H3 is accepted, indicating that perceived competence mediates the relationship between perceived attractiveness and employee loyalty.

Hypothesis H4: The direct link between perceived performance and employee loyalty is not established, as evidenced by the non-significant p-value (p = 0.053). Therefore, hypothesis H4 is rejected, suggesting that perceived performance alone does not significantly influence employee loyalty. *Hypothesis H5:* Perceived performance positively impacts perceived competence, as evidenced by the significant beta coefficient (β = 0.190, t = 2.684, p = 0.008). Hence, hypothesis H5 is accepted, indicating that perceived performance contributes to the perception of competence among employees. *Hypothesis H6:* Perceived performance indirectly affects employee loyalty through perceived competence, as supported by the significant beta coefficient (β = 0.068, t = 2.462, p = 0.014). Thus, hypothesis H6 is accepted, suggesting that perceived competence mediates the relationship between perceived performance and employee loyalty.

Hypothesis H7: Perceived social responsibility has a direct positive impact on employee loyalty, as indicated by the significant beta coefficient (β = 0.246, t = 4.061, p = 0.000). Therefore, hypothesis H7 is accepted, affirming that perceived social responsibility significantly predicts employee loyalty in open online distance learning higher education institutions. *Hypothesis H8:* Perceived social responsibility positively influences perceived competence, as evidenced by the significant beta coefficient (β = 0.247, t = 4.083, p = 0.000). Hence, hypothesis H8 is accepted, indicating that perceived social responsibility contributes to the perception of competence among employees. *Hypothesis H9:* Perceived competence significantly predicts employee loyalty, as evidenced by the substantial beta coefficient (β = 0.356, t = 6.989, p = 0.000). Therefore, hypothesis H9 is accepted, affirming that perceived competence is a strong predictor of employee loyalty in these institutions. *Hypothesis H10:* Perceived social responsibility indirectly influences employee loyalty through perceived competence, as supported by the significant beta coefficient (β = 0.088, t = 3.555, p = 0.000). Thus, hypothesis H10 is accepted, indicating that perceived competence mediates the relationship between perceived social responsibility and employee loyalty.

Table 7 provides a comprehensive summary of effect sizes, assessed independently of sample size, according to Cohen's criteria (1992): small (0.020 to 0.150), medium (0.150 to 0.350), or large (0.350 or greater). The observed effect sizes in this study ranged from small (0.010) to large (0.168). Intrinsic Value Inflation Factor (VIF) values, as outlined in Table 7, remained below the more lenient threshold of 5, with the highest value recorded at 2.302. This level of collinearity enables meaningful comparisons of sizes and interpretation of coefficients within the structural model. A notable degree of explained variance for the endogenous construct is evident, with an R^2 value of 0.452 (Figure 1). Regarding the mediator, the model explained approximately 27.2% of the variance in the structure, as indicated by an R^2 value of 0.272.

The evaluation of the model's inference and managerial recommendations involved conducting out-of-sample predictive analysis using the PLSpredict method (Shmueli et al., 2016, 2019). Table 8 illustrates that PLS-SEM consistently outperformed naive mean predictions, demonstrating superior Q^2 predictions (>0) and consistently lower RMSE values compared to linear model (LM) benchmarks, thus indicating its robust predictive strength. Furthermore, across all seven instances, the RMSE values for PLS-SEM predictions remained consistently lower than those of the linear model (LM) prediction benchmark, underscoring the predictive capability of the proposed model, as demonstrated in Table 9. The incorporation of the Cross-Validated Predictive Ability Test (CVPAT) by Hair et al (2022), and its integration with PLSpredict analysis by Liengaard et al (2021), are notable advancements. Table 9 reaffirms the superior predictive capabilities of PLS-SEM, with lower average loss values compared to indicator averages and LM benchmarks, providing additional evidence of its enhanced predictive performance.

Ringle and Sarstedt (2016); Hair et al (2018) proposed Importance Performance Map Analysis (IPMA) to assess latent variable significance and effectiveness in explaining acceptance, as detailed in Table 10. The overall impact on employee loyalty was most pronounced for perceived competence (0.356), followed by perceived social responsibility (0.334), perceived performance (0.204), and perceived attractiveness (0.156), indicating their relative importance in employee loyalty. Perceived social responsibility scored highest (67.201), while competence had the lowest score (59.070) on a 0-100 scale, reflecting better performance by perceived social responsibility and lower achievement for perceived competence. Despite ranking first in employee loyalty importance, the perceived competence displayed the lowest performance. These results suggest prioritizing activities to improve perceived performance among the employees, potentially enhancing overall employee loyalty in open online distance learning higher education institutions.

Table 6
Hypotheses Testing Results

Hypotheses	Beta	T-statistics	P-values	2.50%	97.50%	Decision
H1: PAT -> EL	0.095	1.606	0.109	-0.026	0.202	***Rejected***
H2: PAT -> PC	0.171	2.770	0.006	0.039	0.285	*Accepted*
H3: PAT -> PC -> EL	0.061	2.414	0.016	0.010	0.111	*Accepted*
H4: PF -> EL	0.137	1.937	0.053	-0.002	0.283	***Rejected***
H5: PF -> PC	0.190	2.684	0.008	0.037	0.315	*Accepted*
H6: PF -> PC -> EL	0.068	2.462	0.014	0.016	0.124	*Accepted*
H7: PSR -> EL	0.246	4.061	0.000	0.131	0.369	*Accepted*
H8: PSR -> PC	0.247	4.083	0.000	0.113	0.350	*Accepted*
H9: PC -> EL	0.356	6.989	0.000	0.247	0.451	*Accepted*
H10: PSR -> PC -> EL	0.088	3.555	0.000	0.043	0.138	*Accepted*

Table 7
Effect Sizes (f^2) & Variance Inflation Factor (VIF)

	f^2			VIF	
	EL	PC		EL	PC
PAT	0.010	0.024	PAT	1.685	1.644
PC	0.168		PC	1.373	
PF	0.015	0.022	PF	2.302	2.253
PSR	0.057	0.045	PSR	1.932	1.848

Table 8
PLSpredicts

Items	PLS RMSE	LM RMSE	PLS - LM	Q^2_predict
EL1	0.612	0.621	-0.009	0.308
EL2	0.626	0.636	-0.010	0.204
EL3	0.680	0.687	-0.007	0.222
EL4	0.732	0.734	-0.002	0.131
PC1	0.611	0.614	-0.003	0.222
PC2	0.616	0.631	-0.015	0.188
PC3	0.666	0.680	-0.014	0.139

Table 9
Cross-Validated Predictive Ability Test (CVPAT)

	Average loss difference	T-value	P-value
EL	-0.120	5.728	0.000
PC	-0.089	4.588	0.000
Overall	-0.107	6.316	0.000

Table 10
Importance-Performance Map Analysis (IPMA)

Constructs	Total Effect	Performance
PAT	0.156	66.653
PC	0.356	59.070
PF	0.204	66.442
PSR	0.334	67.201

Discussion & Conclusion

Open online distance learning higher education institutions have a plethora of effective strategies at their disposal to ensure that perceived attractiveness, perceived performance, and perceived social responsibility positively and effectively influence employee loyalty, with perceived organizational competence serving as a mediator. Firstly, cultivating a transparent and communicative culture surrounding the institution's mission, values, and objectives can significantly bolster perceived attractiveness. Regular town hall meetings, open feedback channels, and inclusive decision-making processes can deepen employees' alignment with the organization's ethos. Secondly, prioritizing high-quality academic programs and offering robust avenues for professional development are instrumental in elevating perceived performance. Investing in cutting-edge technology, fostering a culture of innovation, and providing ample resources for faculty and staff to enhance their skills can further underscore the institution's commitment to academic excellence. Thirdly, championing social responsibility initiatives such as community engagement projects, sustainability endeavors, and diversity and inclusion efforts can elevate the institution's reputation and amplify perceived social responsibility among employees. Encouraging volunteerism, supporting charitable endeavors, and promoting a culture of empathy and social consciousness can reinforce employees' sense of pride and connection to the institution. Moreover, perceived organizational competence, mediated through these dimensions, solidifies employees' trust and confidence in the institution's capacity to thrive, thus nurturing greater loyalty and commitment. By integrating these multifaceted strategies, open online distance learning higher education institutions can foster a dynamic organizational culture that not only attracts but also retains top talent, ultimately fortifying their position in the competitive higher education landscape while advancing their overarching mission of knowledge dissemination and societal impact.

Theoretical contribution

The study contributes theoretically to the field of organizational behavior and human resource management by aligning with social exchange theory principles. According to social exchange theory, individuals engage in reciprocal relationships where they perceive the exchange of resources, such as support, recognition, and opportunities, to be fair and beneficial. In the context of the study, employees perceive organizational attractiveness, performance, and social responsibility initiatives as resources provided by the institution in exchange for their commitment and loyalty. The study's findings illustrate how these perceived organizational attributes influence employee loyalty, mediated by perceived organizational competence. This aligns with social exchange theory's premise that individuals evaluate the quality and fairness of exchanges within their organizational context, shaping their attitudes and behaviors towards the organization. By empirically demonstrating the relationships between perceived organizational factors and employee loyalty, the study

enriches the understanding of social exchange dynamics within the specific context of open online distance learning higher education institutions. Additionally, the study underscores the importance of fostering positive organizational environments characterized by transparent communication, support for professional growth, and commitment to social responsibility, all of which contribute to fostering mutually beneficial exchanges between employees and their institutions.

Practical Contributions
The study offers several practical implications for open online distance learning higher education institutions aiming to enhance employee loyalty and organizational effectiveness. Firstly, by recognizing the significance of perceived attractiveness, performance, and social responsibility, institutions can tailor their strategies to improve these dimensions. This might involve refining marketing efforts to highlight the institution's unique features and values, investing in technology and professional development programs to enhance academic quality and employee satisfaction, and implementing social responsibility initiatives to foster a sense of purpose and community engagement among employees. Secondly, understanding the mediating role of perceived organizational competence underscores the importance of building trust and credibility within the organization. Institutions can achieve this by promoting transparent communication, providing clear pathways for career advancement, and demonstrating competence in delivering on organizational objectives. Thirdly, by prioritizing employee well-being and engagement, institutions can cultivate a positive organizational culture that not only attracts top talent but also retains them in the long term. This may involve offering flexible work arrangements, promoting work-life balance, and recognizing employees' contributions through rewards and recognition programs. This study provides actionable insights for open online distance learning higher education institutions to strengthen employee loyalty and organizational performance through strategic initiatives focused on enhancing perceived attractiveness, performance, social responsibility, and organizational competence.

Suggestions for Future Study
Building on the findings of the study, future research could explore several avenues to deepen our understanding of employee loyalty within open online distance learning higher education institutions. Firstly, investigating the role of individual differences, such as personality traits and demographics, in shaping perceptions of organizational factors and their impact on employee loyalty could provide valuable insights. Additionally, exploring the influence of organizational culture and leadership styles on employee perceptions and loyalty outcomes could offer further clarity. Secondly, longitudinal studies could track changes in employee perceptions and loyalty over time, allowing for a more nuanced analysis of causal relationships and potential moderating factors. Finally, comparative studies across different types of higher education institutions or cultural contexts could help identify universal principles as well as context-specific factors influencing employee loyalty. By addressing these areas, future research can contribute to the development of comprehensive frameworks and practical interventions aimed at enhancing employee loyalty in the dynamic landscape of open online distance learning higher education.

Conclusion

This study sheds light on the crucial factors influencing employee loyalty within open online distance learning higher education institutions. By examining the roles of perceived attractiveness, performance, and social responsibility, along with the mediating effect of perceived organizational competence, the study underscores the multifaceted nature of employee loyalty dynamics. The findings highlight the importance of creating an organizational environment characterized by transparency, academic excellence, social responsibility, and perceived competence to foster employee loyalty effectively. Moreover, the study contributes to theoretical understanding by aligning with social exchange theory principles and offers practical implications for institutions seeking to enhance employee loyalty and organizational effectiveness. Moving forward, future research could explore individual differences, longitudinal trends, and comparative analyses to further enrich our understanding and inform targeted interventions aimed at cultivating a positive organizational culture conducive to employee loyalty and sustained success in the competitive landscape of higher education.

References

Amoako, G. K., Doe, J. K., & Dzogbenuku, R. K. (2021). Perceived firm ethicality and brand loyalty: the mediating role of corporate social responsibility and perceived green marketing. *Society and Business Review*, *16*(3), 398-419.

Amzat, I. H., Mohd Ali, H., Ibrahim, M. B., Othman, A., Bin Salleh, M. J., & Alade Najimdeen, A. H. (2023). Internationalization of Higher Education, University Quality Service, and International Students' Loyalty in Malaysia. *SAGE Open*, *13*(4), 21582440231210498.

Belanche, D., Casaló, L. V., Schepers, J., & Flavián, C. (2021). Examining the effects of robots' physical appearance, warmth, and competence in frontline services: The Humanness-Value-Loyalty model. *Psychology & Marketing*, *38*(12), 2357-2376.

Budur, T., & Poturak, M. (2021). Employee performance and customer loyalty: Mediation effect of customer satisfaction. *Middle East Journal of Management*, *8*(5), 453-474.

Chang, Y. P., Hu, H. H., & Lin, C. M. (2021). Consistency or hypocrisy? The impact of internal corporate social responsibility on employee behavior: a moderated mediation model. *Sustainability*, *13*(17), 9494.

Chikazhe, L., & Makanyeza, C. (2022). Self-perceived job performance as a mediator of the effects of academic satisfaction and quality on loyalty. *Journal of Marketing and Consumer Behaviour in Emerging Markets*, (2 (15), 37-52.

Damberg, S., Liu, Y., & Ringle, C. M. (2024). Does culture matter? Corporate reputation and sustainable satisfaction in the Chinese and German banking sector. *Journal of marketing analytics*, *12*(1), 6-24.

Damberg, S., Schwaiger, M., & Ringle, C. M. (2022). What's important for relationship management? The mediating roles of relational trust and satisfaction for loyalty of cooperative banks' customers. *Journal of Marketing Analytics*, *10*(1), 3-18.

Das, S., Ghani, M. U., Rashid, A., Rasheed, R., Manthar, S., & Ahmed, S. (2021). How customer satisfaction and loyalty can be affected by employee's perceived emotional competence: The mediating role of rapport. *International Journal of Management (IJM)*, *12*(3), 1268-1277.

Fetriah, D., & Hermingsih, A. (2023). The effect of perceived organizational support, work motivation, and competence on employee performance mediated by employee engagement. *Dinasti International Journal of Management Science*, *5*(1), 22-33.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Thousand Oaks, CA: SAGE.

Hair, J. F., Sarstedt, M., Ringle, C. M., and Gudergan, S. P. (2018). *Advanced issues in partial least squares structural equation modeling.* Thousand Oakes, CA: Sage Publications

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (3 ed.).* Thousand Oaks, CA: Sage.

Henseler, J., Ringle, C. M., and Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling, *Journal of the Academy of Marketing Science*, 43(1): 115-135.

Hosseini, S. A., Moghaddam, A., Damganian, H., & Nikabadi, S. M. (2022). The effect of perceived corporate social responsibility and sustainable human resources on employee engagement with the moderating role of the employer brand. *Employee Responsibilities and Rights Journal*, 1-21.

Jaeger, J., & Fifka, M. (2024). The relationship between perceived corporate social responsibility and perceived organisational performance in professional sports organisations. *European Sport Management Quarterly*, *24*(1), 222-245.

Kervyn, N., Fiske, S. T., & Malone, C. (2022). Social perception of brands: Warmth and competence define images of both brands and social groups. *Consumer Psychology Review*, *5*(1), 51-68.

Kim, G., Duffy, L. N., & Moore, D. (2023). Importance of residents' perception of tourists in establishing a reciprocal resident-tourist relationship: An application of tourist attractiveness. *Tourism Management*, *94*, 104632.

Kock, N., & Lynn, G. S. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems*, 13(7), 546-580.

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10.

Kolvereid, L., & Åmo, B. W. (2021). Quality and performance in small accounting firms. *International Journal of Productivity and Quality Management*, *32*(1), 129-145.

Kumar, V., Jain, S., & Singh, A. K. (2021). A nomological network study of employer branding with CSR, motivation and intention to stay. *Asia-Pacific Journal of Business Administration*, *13*(4), 553-573.

Le, T. T. (2023). Corporate social responsibility and SMEs' performance: mediating role of corporate image, corporate reputation and customer loyalty. *International Journal of Emerging Markets*, *18*(10), 4565-4590.

Liengaard, B. D., Sharma, P. N., Hult, G. T. M., Jensen, M. B., Sarstedt, M., Hair, J. F., &

Ringle, C. M. (2021). Prediction: Coveted, Yet Forsaken? Introducing a Cross-validated Predictive Ability Test in Partial Least Squares Path Modeling. *Decision Sciences*, 52(2), 362-392.

Marić, S., Berber, N., Slavić, A., & Aleksić, M. (2021). The mediating role of employee commitment in the relationship between corporate social responsibility and firm performance in Serbia. *Sage Open*, *11*(3), 21582440211037668.

Schwaiger, M.(2004) Components and parameters of corporate reputation –an empirical study, *Schmalenbach Bus. Rev*. 56, 46–71, doi: 10.1007/BF03396685 .

Oh, K. S., Han, J. R., & Park, S. R. (2021). The influence of hotel employees' perception of CSR

on organizational commitment: The moderating role of job level. *Sustainability*, *13*(22), 12625.

Ooi, L., Ng, K. L., Heng, W. C., Chua, Y. F., & Lim, Y. H. (2022). Human resource practices and employee engagement: A study among academicians in Malaysian private higher education institutions. *International Journal of Management Studies*, *29*(2), 71-100.

Rashid, S., & Mustafa, H. (2022). Corporate reputation antecedents and stakeholder loyalty in Malawi higher education institutions: employees' and students' perspectives. *Tertiary Education and Management*, *28*(1), 101-117.

Ringle, C. M., and Sarstedt, M. (2016). Gain more insight from your PLS-SEM results: The importance-performance map analysis. *Industrial Management & Data Systems.* 116: 1865–1886.

Ringle, C. M., Wende, S., & Becker, J-M. (2022). SmartPLS 4. *Oststeinbek*: SmartPLS. Retrieved from https://www.smartpls.com

Shareef, R. A. (2023). Employee perception of ethical corporate social responsibility on organizational performance. *Cihan University-Erbil Journal of Humanities and Social Sciences*, *7*(1), 98-106.

Shmueli, G., Ray, S., Estrada, V. J. M., and Chatla, S. B. (2016). The elephant in the room: predictive performance of PLS models. *Journal of Business Research*, 69: 4552–4564.

Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., and Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*. 53: 2322–2347.

Sherwani, K., Bala, H., & Khatoon, G. (2023). Perceived Organizational Support and Employee Loyalty as Mediators in the Relationship Between Leadership Effectiveness and Task Performance: A Study of Nurses in Erbil City.

Silva, P., Moreira, A. C., & Mota, J. (2023). Employees' perception of corporate social responsibility and performance: the mediating roles of job satisfaction, organizational commitment and organizational trust. *Journal of Strategy and Management*, *16*(1), 92-111.

Srivastava, S., & Singh, N. (2021). Do Corporate Social Responsibility (CSR) initiatives boost customer retention in the hotel industry? A moderation-mediation approach. *Journal of Hospitality Marketing & Management*, *30*(4), 459-485.

Tosun, P., & Tavşan, N. (2024). The impact of perceived corporate social responsibility on consumer happiness and brand admiration. *Management Decision*, *62*(2), 665-684.