

Effect of Leader Creativity Expectations on Creative Performance in Higher Education: Mediating Role of Intrinsic Motivation for Creativity

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Abstract

A plethora of research reported the positive effect of teachers' expectations on students' academic performance. However, very little is known about how academicians' perceived leader creativity expectations (LCE) affect their creative performance in higher education. With support from Pygmalion theory, this study's objectives are two-fold: a) to analyze the effect of academicians' perceived LCE on their creative performance; and b) whether the intrinsic motivation for creativity mediates the relationship between academicians' perceived LCE and creative performance. A usable sample of 281 responses is drawn from the full-time academicians of private-sector universities. The structural model demonstrates medium-to-high out-of-sample predictive power. This study is among the first reports in both creativity and education literature which assesses nonlinear effects and endogeneity using Ramsey's RESET test and Gaussian copula approach respectively to determine the robustness of the structural model's results. The findings suggest that, although academicians' perceived LCE has a significant positive effect on creative performance, it actually emasculates the intrinsic motivation of academicians in higher education. Besides, intrinsic motivation mediates the relationship between academicians' perceived LCE and creative performance. Implications and future directions are discussed.

Keywords: Leader Creativity Expectations, Intrinsic Motivation, Creative Performance, Higher Education.

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1. INTRODUCTION

Creative performance (CP) is the human behavior that is the outcome of the process of generating novel and useful ideas (Amabile, 1983). It has been increasingly acknowledged as one of the most essential drivers and critical mechanisms of organizational performance and its survival (Chaubey, Sahoo, & Khatri, 2019;

Hüttermann, Nerb, & Memmert, 2018; Koseoglu & Shalley, 2021). The CP of academicians in higher education is recognized as one of the major problems because the expectations from students and their parents, academicians, and the leaders of universities have unilaterally risen (Galletta, Gaskin, Koch, Anderson, & Jessup, 2020). Therefore, it is increasingly becoming a challenge for departmental heads to strengthen

the ability of their academicians in generating novel and useful ideas to solve academic problems (British Council, 2019; McKeown, 2019). Moreover, recent authors (e.g. Hwang, Choi, Shin, 2020; Nisula & Kianto, 2018; Zhang et al., 2018) have raised various research calls for further analyzing how academicians of higher education may be developed, enriched, and stimulated for CP in developing countries.

The psychological mechanism of communicating expectations for stimulating an individual's performance argues that "if one expects more one gets more" (Carmeli & Schaubroeck, 2007, p. 37) called 'Pygmalion effect' (Eden, 1984). Put simply, the Pygmalion effect describes how one's expectations lead to increase the performance of others. It has been reported in educational settings with numerous empirical studies (e.g. Raiz, Zubair, & Shahbaz, 2017 etc.) and demonstrated in a few notable meta-analyses too (e.g. Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009; Kierein & Gold, 2000; McNatt, 2000).

In a comprehensive meta-analytical review, Avolio et al. (2009) found that the Pygmalion effect has been tested in a sizable amount of experimental studies mainly in the educational context. More precisely, almost 500 (mostly experimental) studies replicated the seminal experiment of Rosenthal and Jacobson (1968) in which they found that teacher's expectations led to increase the academic performance of pupils (Buryanek, 2010; Rosenthal, 2002). More specifically, the direct effect of leader creativity expectations (henceforth, 'LCE') on creative performance has

been reported in a very limited number of studies such as in the Israeli financial service sector (Carmeli & Schaubroeck, 2007), R&D center of a large Chinese automotive firm (Jiang & Gu, 2017), R&D dyads in two Chinese high-tech companies (Qu, Janssen, & Shi, 2015), and R&D engineers, technicians, and scientists in a large American industrial corporation (Scott & Bruce, 1994).

2. LITERATURE REVIEW

In the present study the word academicians refer to the full-time faculty members of a higher education institution (HEI). Numerous studies appear to emphasize more on assessing the effect of teacher's expectations on the academic achievement/performance of school children, however, very little is understood about how academicians's perceived LCE affect their own CP in higher education. Therefore, the present study examines the direct effect of academicians's perceived LCE on their CP and the mediating role of intrinsic motivation for creativity between the LCE – CP relationship in higher education.

This is of additional importance in the context of various current issues. First, the COVID-19 pandemic urged HEIs to switch from their regular face-to-face pedagogy to a hybrid form of teaching having major emphasis on online classes (Verbree, Hornstra, Maas, & Wijngaards-de Meij, 2022). Consequently, the top management of HEIs requires their academicians to be more creative in terms of student engagement, and designing, delivery and coverage of courses to ensure an uninterrupted progress of academic activities. Unlike developed

countries, the HEIs of under-developed countries especially in the private sector faced substantial issues in achieving their sustainable academic progress of quality education simply due to very limited tangible and intangible resources. Although this study was conducted in the Pakistani context, it is also relevant for other countries as the leaders of HEIs substantially raise their creativity expectations from their academicians in almost every country which faced substantial difficulty in achieving Sustainable Development Goal (SDG 4) i.e. Quality Education. In short, the quality of education may be improved in higher education in post-COVID era if there should be more emphasis on encouraging and developing academicians for creative performance in academic activities.

3. THEORY AND HYPOTHESES

3.1 Pygmalion Theory

The Pygmalion theory is a kind of self-fulfilling prophecy (Rosenthal & Jacobson, 1968) which refers to a person's false prediction based on which he directs his behaviors and actions such that the prediction ultimately becomes true after some time (Merton, 1948). It does not certainly mean that the prediction he made is actually true. For instance, if students start to predict that they are going to fail in a particular examination (false prediction), consequently, they would stop making any serious efforts towards passing the examination (behavior). Later on, since they did not study hard to pass the examination (action), they would ultimately fail the examination which makes their self-fulfilling prophecy ultimately true. In other words, they

would have passed the examination if they had not directed their behavior and action based on the false prediction about themselves. Teachers build a self-fulfilling prophecy about their students, particularly for those who belong to a stigmatized group. The self-fulfilling prophecy and accuracy are inversely proportional to each other since the propensity of making an accurate prediction tends to increase if self-fulfilling prophecy declines (Jussim & Harber, 2005).

In a nutshell, the Pygmalion theory argues that positive expectations tend to enhance productivity and performance (Ambady & Rosenthal, 1993). Moreover, it describes an interesting style of leadership (Eden, 1992) in which a leader builds expectations from subordinates; consequently, they behave in accordance with their leader's expectations (Kierein & Gold, 2000). In particular, the degree of Pygmalion effect gets higher in situations where leaders are found to be more receptive and well received by their subordinates (Duan, Li, Xu, & Wu, 2017). Moreover, the Pygmalion theory also holds that subordinates serve as active agents such that they can not only analyze different critical scenarios of leadership but also possess the ability to determine whether they are going to acknowledge and internalize their leader's expectations (Karakowsky, DeGama, & McBey 2012). Thus, the Pygmalion effect largely involves a meaningful dyadic interaction between the leader and the subordinates (White & Locke, 2000). Besides, trust in and personal likeability for the leader are predominant factors in determining the effective interpretation, internalization and emergence of leader's expectations (Duan et al., 2017).

3.2 Leader Creativity Expectations (LCE) and Creative Performance

Managing attention of subordinates (Van de Ven, 1986) and setting expectations to meet creativity-related goals are the most crucial pre-requisites if a leader intends to observe high CP from subordinates. In fact, LCE is found to be a great tempting force (Locke & Latham, 1990) for CP. It represents a “socio-contextual factor” (Zhao & Guo, 2019, p. 224) which is grounded as the central tenet of the Pygmalion effect (Merton, 1948). Among family, customer, leader, and self-expectations, the LCE is the most influencing type of expectations in stimulating CP (Carmeli & Schaubroeck, 2007). High performance expectations from a leader substantially improve follower performance (Whiteley, Sy, & Johnson, 2012) by altering their motivations and expectancies (Eden, 1984).

A leader communicates his/her creativity expectations in the form of setting goals which tend to increase subordinates’ attention towards a specific direction such that they may mobilize their energies in meeting the desired goals and expectations (Shalley & Gilson, 2004). Moreover, a well-stated mission statement may also enable various project teams for CP (Pinto & Prescott, 1988). Notably, subordinates exhibit creativity particularly when they are cognizant of LCEs (Shalley, 1995). Therefore, leaders ought to set and timely communicate their creativity expectations to aspire to their subordinates for CP (Shalley & Gilson, 2004). In return, the subordinates expect their leader to be supportive, dependable, friendly, and mentor (Xu, Huang, Lam, & Miao, 2012).

In the most recent qualitative study, Aurava and Meriläinen (2022) found that the expectation of Finnish upper secondary school pupils is the dominating factor which enables them in developing creative games. Using a sample from an Italian Air Force, Battistelli, Odoardi, Cangialosi, Di Napoli, and Piccione (2022) confirmed that image outcome expectations have a significant effect on creative idea generation. Kincaid, Sennott, and Kelly (2022) found that women’s creativity and agency are found to be dissimilar than their counterparts when they face hookup cultures’ expectations of casualness and emotional detachment. In addition, the creativity literature has reported a significant positive effect of LCE on CP (e.g. Adil, Khan, Khan, & Qureshi, 2018; Hüttermann et al., 2018; Jiang & Gu, 2017; Qu et al., 2015; Przysinda, Zeng, Maves, Arkin, & Loui, 2017; Zhao & Guo, 2019). Furthermore, Dong, Bartol, Zhang, and Li (2017) have raised a research call to test the direct effect of ‘expectations’ on CP. Therefore, the following hypothesis is proposed:

H1: Academician’s perceived leader creativity expectations will have a significant effect on creative performance.

3.3 Leader Creativity Expectations and Intrinsic Motivation (IM)

The expectancy theory (Vroom, 1964) holds that motivation denotes the psychological needs to pursue a specific goal. However, this pursuit needs to satisfy at least two conditions: first, there must be an ‘expectation’ (i.e. an individual anticipates the occurrences of a goal state). Second, this goal state must have some attractiveness or an intrinsic value (called

'valence') for the individual so that this could serve as a motive to perform. Expectations represent variations of beliefs which attempt to relate human actions with the perceived appeal or avoidance of expected outcomes (Feather, 1990). Whatever an individual does in a given situation is assumed to concatenate with the perceived expectations the person holds as well as the perceived subjective value of the results that may take place as an outcome of his course of action (Feather, 1982). Therefore, motivation has been conceptualized as a product of valence and expectancy (Hsu, Cai, & Li, 2010) and it may be concluded that expectation leads to motivation (Feather, 1982). Moreover, according to the componential theory of creativity (CTC; Amabile, 1983) IM has been identified and reported as the most important predictor of CP (Hennessey & Amabile, 2010) which depends on various contextual factors such as LCEs (Meng, Tan, & Li, 2017). Expectations can be the 'game-changer' for the organization because, at one side it may bring creativity and innovation, but on the other side, it may badly affect the intrinsic motivation of low-performing employees for creative performance (Kumar, Hossain, Jin, Safeer, & Chen, 2021).

Despite a very strong theoretical background and a research call through a meta-analysis of Wanous, Poland, Premack, and Davis (1992), the empirical evidence for the specific relationship between LCEs and IM is still meager (Gkorezis & Kastritsi, 2017) with minor exceptions. For instance, Taris, Feij, and Capel (2006) found a very strong effect of expectations on IM of work values in a sample of 1,251 newcomer employees from different Western

European countries. Similarly, Gkorezis and Kastritsi (2017) also found a statistically significant and positive effect of employee expectations on IM in a Greek sample. Based on the expectancy theory and CTC which establish a very strong theoretical relationship between LCEs and IM supported by a few empirical evidence, the following hypothesis is articulated:

H2: Academician's perceived leader creativity expectations will have a significant effect on intrinsic motivation.

3.4 Intrinsic Motivation (IM) and Creative Performance

Intrinsic motivation (IM) refers to "doing of an activity for its inherent satisfactions rather than for some separable consequence" (Ryan & Deci, 2000, p. 56). It has been recognized as one of the most important factors for creative performance (Amabile, 1985). It is an autonomous or a self-determined behavior that is the most essential component for stimulating CP (Steele, McIntosh, & Higgs, 2017). In essence, it has a very strong direct relationship with CP because an employee cannot perform creativity unless he/she is intrinsically motivated (Zhou & Shalley, 2010).

Past studies have raised an interesting debate on the intriguing relationship between IM and an individual's ability for CP. Indeed, factors that drive human motivation and their ability for CP are the two interrelated concepts, nevertheless, they may not be used interchangeably. It is because the factors which actually reduce human IM do not necessarily tend to reduce their ability for CP. Similarly, the factors that reduce their ability for CP do not necessarily

tend to reduce their IM. Quite interestingly, the factors that inhibit an individual's ability for CP can have a countervailing effect on the IM of the individual because the person would start to strive harder to compensate for their behavior against the hindrances towards CP. Numerous experimental studies have endorsed the same idea in which inhibiting forces caused an increase in the IM of individuals to perform better on given tasks. In essence, IM is an integral factor for CP that may be enriched even in the social setting which is characterized by high inhibiting forces for CP.

The direct association between IM and CP has been well documented in past studies. For instance, seminal work in creativity discipline (e.g. Amabile, 1996) as well as numerous other empirical evidence in the 21st century (e.g. Auger & Woodman, 2016; Hannam & Narayan, 2015; Hur, Moon, Jun, 2016; Malik, Butt, & Choi, 2015; Muñoz-Pascual, & Galende, 2017; Steele et al., 2017) and meta-analyses (Jesus, Rus, Lens, and Imaginário, 2013; Liu, Jiang, Shalley, Keem, & Zhou, 2016) etc. indicate the significant positive role of IM in explaining CP. Besides, in a meta-analytical review, Gerhart and Fang (2015) have emphasized on further investigating IM as an important predictor of CP in other contexts. Based on the theoretical relationship between IM and CP followed by aforementioned evidence of empirical studies and meta-analyses and a research call, the following hypothesis is suggested:

H3: Intrinsic motivation for creativity will have a significant effect on creative performance.

3.5 Mediating Role of Intrinsic Motivation

Leader creativity expectations (LCE) make subordinates believe that their leader intends to raise their spirits and would assist them in CP (Scott & Bruce, 1994). It also indicates that the leader has a strong belief that LCE would help them overcome their fear of coming out of status quo which in turn, intrinsically motivates them for CP (Gong et al., 2009). Besides, LCE is an incredibly powerful inspirational method (Locke & Latham, 1990) which can positively affect the IM of subordinates for CP (Carmeli, Reiter-Palmon, & Ziv, 2010).

Intrinsic Motivation (IM) provides as a mediating mechanism between LCE and CP (Amabile, 1996; Steele et al., 2017) where LCE is not directly inherent in one's job itself; rather, it is an institutional or contextual factor whose presence may satisfy a teacher, however, its absence would certainly dissatisfy him. In fact, the absence of LCE can cause dissatisfaction, but its presence does not mean satisfaction (Fareed & Jan, 2016). Academicians would become skeptical of their CP due to the absence of creativity goal expectations from their departmental heads that ultimately reduce their IM for creative performance.

Besides, authors (e.g. Ahmad, Zafar, & Shahzad, 2015; Carmeli et al., 2010; Gu, He, & Liu, 2017; Hannam & Narayan, 2015; Hur et al., 2016; Liu et al., 2016; Malik, et al. 2015; Muñoz-Pascual, & Galende, 2017; Zhang & Bartol, 2010) etc. as well as meta-analytical reviews (e.g. Byron, Khazanchi, & Nazarian, 2010) have found IM as a very strong mediating variable for predicting CP. Nevertheless, a few studies (e.g.,

Shalley & Perry-Smith, 2001; Yoon, Sung, Choi, Lee, & Kim, 2015) have also reported a statistically non-significant mediating effect of IM for CP. Despite a strong theoretical significance of IM for CP, the mediating relationship of IM between contextual characteristics and CP provides ambiguous findings (Steele et al., 2017). Therefore, Jiang and Gu (2017), Martin, Guillaume, Thomas, Lee, & Epitropaki (2016), Wang et al. (2018), etc. have urged upon further

investigating a more direct and the mediating role of IM for CP. Therefore, the following hypothesis is advanced:

H4: Intrinsic motivation for creativity mediates the relationship between Academician's perceived leader creativity expectations and creative performance.

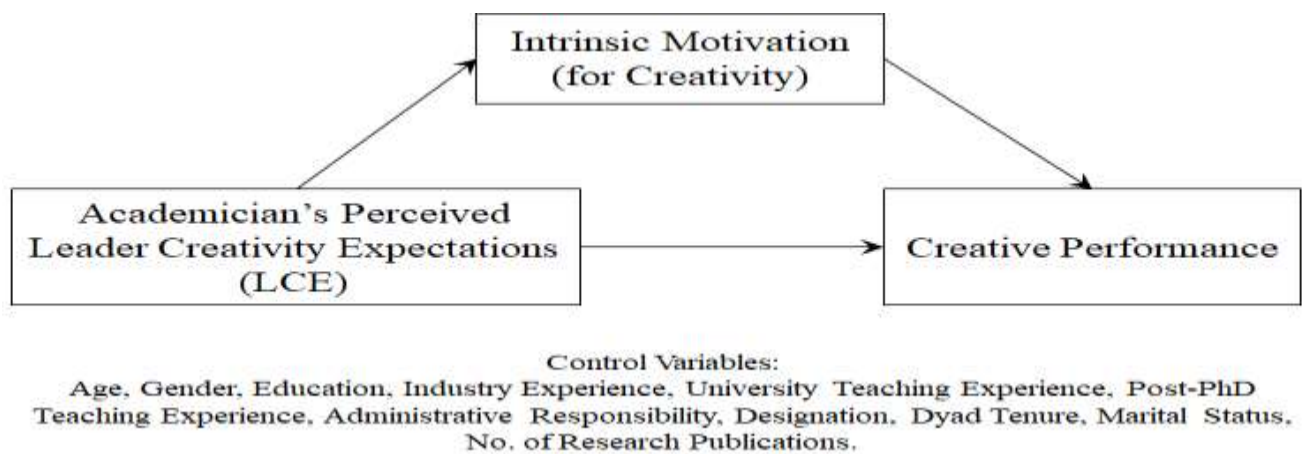


Figure 1: Research Framework

4. METHODOLOGY

4.1 Sample and Procedures

Data were collected from the individual full-time academicians of all 24 HEC-recognized private business schools of Sindh province of Pakistan using simple random sampling (SRS) technique as described below. Due to unavailability of any officially-published list of full-time academicians at federal or provincial level including the Higher Education Commission (HEC) of Pakistan, an in-person visit was made in each of the 24 business schools to fetch an approved list of all full-time academicians.

Consequently, we managed to receive a total of 24 separate lists from the business schools which provides a sampling frame of 676 names of full-time academicians. These 24 separate lists were then consolidated together into one table in Microsoft Excel and sequentially numbered from 1 to 676. Although, using *a-priori* statistical power analysis we estimated to distribute at least 369 questionnaires to maintain 60% response rate. In fact, Ahmad et al. (2015) reported this response rate in a creativity-related study in the province of Punjab, Pakistan. Considering the potential difference of social and cultural dynamics between Sindh and Punjab provinces of Pakistan, it was anticipated that 470 questionnaires would easily manage to achieve over 60% response

rate for the present study. Therefore, following the procedure of SRS technique, 470 random numbers were generated by using an online random number algorithm. The name of the academicians and their respective business schools were highlighted on the consolidated list which was matched with these 470 random numbers only. Finally, questionnaires were distributed only to those academicians whose names corresponded to these random numbers so that each member had an equal chance to be selected. In short, a total of 470 questionnaires were distributed out of which 348 were returned (response rate was 74%). After removing 46 incomplete/unengaged responses and 21 multivariate outliers at 99.99% CI (Tabachnick & Fidell, 2014), the usable sample was 281 for data analysis. Both anonymity and confidentiality were maintained throughout the data collection phase (Babbie, 2019).

The usable sample (N=281) included 217 male respondents (77.2%) where 234 respondents (83.3%) were less than or equal to 40 years of age. There were only 43 academicians having PhD education (15.3%). Over 76.2% of the sample was serving as lecturers, however, it included merely 10 associate professors (3.6%) and only 2 full professors (0.7%). The faculty distribution is found much lower than the general distribution of faculty designation (i.e. 7% associate professors and 8% full professors) in private sector universities of Pakistan (British Council, 2019). The number of publications is an objective measure of an academician's CP (Kim & Choi, 2017). A total of 228 respondents (81.1%) had up to 10 years of full-time teaching experience at higher education level in the usable sample. Table 1 shows the profile of respondents in detail.

Table 1: Profile of respondents (N = 281)

Demographic Variable	Indicator	Frequency	Percent
1) Sex	Male	217	77.2
	Female	64	22.8
2) Age	Between 25 and 30	69	24.6
	Between 31 and 35	155	55.2
	Between 36 and 40	10	3.6
	Between 41 and 45	32	11.4
	Between 46 and 50	4	1.4
	Above 50 Years	11	3.9
3) Highest Education	MPhil / MS only	162	57.7
	Enrolled in a PhD program	76	27.0
	PhD / DBA	43	15.3
4) Designation	Lecturer	214	76.2
	Assistant Professor	55	19.6
	Associate Professor	10	3.6
	Professor	2	0.7

5) Administrative Responsibility	None	260	92.5
	Head of Department	7	2.5
	Dean/Associate Dean	2	0.7
	Chairman / Chairperson	3	1.1
	Manager (e.g. Evening MBA Program)	3	1.1
	Director Academics	2	0.7
	Others	4	1.4
6) Dyad Tenure	1 to 3 years	202	71.9
	4 to 6 Years	70	24.9
	7 to 9 years	3	1.1
	10 years or more	6	2.1
7) No. of Publications (in the last 5 years)	None	47	16.7
	Between 1 and 5	176	62.6
	Between 6 and 10	63	22.4
	Between 11 and 15	30	10.7
	More than 15 Publications	12	4.3
8) Teaching Experience	1 to 5 years	170	60.5
	6 to 10 Years	58	20.6
	11 to 15 years	29	10.3
	16 to 20 years	20	7.1
	Above 20 years	4	1.4
9) Industry Experience	None	134	47.7
	Less than or equal to 5 years	120	42.7
	More than 5 years	27	9.6
10) Post PhD Teaching Experience	None/Not applicable	238	84.7
	Less than a year	6	2.1
	1 to 5 years	33	11.7
	6 to 10 Years	2	0.7
	11 to 15 years	2	0.7
11) Marital Status	Single	151	53.7
	Married	130	46.3

4.2 Measures

4.2.1 Leader Creativity Expectations (LCEs)

It attempts to measure the extent to which an academican perceives the level of creativity expectations from his/her departmental head. Four reflective items were adapted from

Carmeli and Schaubroeck (2007). One sample item reads, "My supervisor expects me to be creative". Responses were taken on a five-point Likert scale anchoring from 1 (not at all) to 5 (to a very large extent) in which a higher scale point represents a higher level of creativity

expectations of the leader. Cronbach alpha = 0.765 (omega = 0.783).

4.2.2 Intrinsic Motivation (IM) for Creativity

This study adapted five reflective items from Tierney, Farmer, and Graen (1999) to measure this reflective variable. One sample item reads, "I enjoy coming up with new ideas to improve students' learning". Responses were taken on a five-point Likert scale anchoring from 1 (strongly disagree) to 5 (strongly agree) where a higher scale point represents a higher level of intrinsic motivation for creativity. Cronbach alpha = 0.817 (omega = 0.817).

4.2.3 Creative Performance (CP)

This variable takes an academician's perspective of CP in his/her teaching profession. This study used a self-reported reflective measure of CP because of the following major reasons. First, Shalley, Gilson, and Blum (2009) have asserted that "employees are best suited to self-report creativity because they are the ones who are aware of the subtle things they do in their jobs that make them creative" (p. 495). Second, Ng and Feldman (2012) performed a meta-analysis of 86 empirical studies which have used self-rated and non-self-rated measures of employee creativity. Furthermore, Anderson, Potočník, and Zhou (2014) revealed in a very comprehensive meta-analysis that during 2002 and 2013 23.6% of 72 studies used self-report method to measure CP. Third, literature has proved a significant correlation between the subjective ratings and the objective measure of CP (e.g. Tierney et al., 1999) indicating that the self-rating measurement of employee CP is acceptable in creativity research (e.g. Zhou,

2003). Thirteen (13) items were adapted from Zhou and George (2001) to measure CP. The same scale has been used in recent studies too (e.g. Wadei, Chen, Frempong, & Appienti, 2021). One sample item states, "I am not afraid to take risks in exercising useful techniques for improving students' learning". Responses were taken on a five-point Likert scale anchoring from 1 (*never*) to 5 (*always*) where a higher scale point represents a higher degree of CP. Cronbach alpha = 0.825 (omega = 0.832).

4.2.4 Control Variables

We controlled for eleven personal characteristics of academicians of universities including age, sex, education, industrial experience, university teaching experience, post-PhD teaching experience, administrative responsibility, designation, dyad tenure, marital status, and number of research publications in the last five years. In fact, control variables such as age, gender, education, relevant experience, designation, and marital status have been used in previous creativity-related studies (e.g. Wang et al., 2018) assuming that they may directly affect CP. Moreover, we further controlled for industry experience, administrative responsibility, and dyad tenure because those academicians who have prior industry experience might have better exposure to generating creative ideas in their teaching profession. Similarly, it is further assumed that higher dyad tenure (i.e. the number of years the academician working under his/her current supervisor) may directly influence the CP of academicians because they have established better perception about the creativity expectations from his immediate supervisor.

5. ANALYSIS AND FINDINGS

5.1 Analytical Strategy

First of all, we assessed common method variance (CMV) bias and non-response bias using the conventional *post-hoc* Harman's single factor test and an independent sample t-test respectively in SPSS. A reflective measurement model was developed to evaluate the reliability and validity of latent variables (LV) that includes the assessment of the relationship between the LVs and their respective indicator items (Hair, Hult, Ringle, & Sarstedt, 2017). Royston's H test was applied in StatGraphics® Centurion software (version 18.1.08) to test the assumption of multivariate normality. Hypotheses were tested using a non-parametric PLS-SEM technique in SmartPLS version 3. More specifically, the mediation hypothesis was tested using the Barron and Kenney's (1986) approach in which the direct effect between the predictor and the outcome variable is estimated first without considering the mediator. It follows estimating the direct effect between the predictor and the mediator and then between the mediator and the outcome variable. In the last step, the direct effect between the predictor and the outcome variable is estimated in the presence of the mediator which leads to decide the nomenclature of the mediating effect. The PLSpredict procedure (Shmueli et al., 2019) was applied to estimate the out-of-sample (OOS) predictive power (Sarstedt & Danks, 2021).

Finally, the robustness of structural model including nonlinear effects and endogeneity were examined using Ramsey's (1969) regression equation specification error

test (RESET) and Gaussian copula approach in R studio respectively. The details of data analysis are described below.

5.2 Assessment of Common Method Variance (CMV) bias

To avoid reporting method-biased results (Podsakoff, MacKenzie, & Podsakoff, 2012) or erroneous conclusions (Reio, 2010) due to single-sourced and self-reported measures used in this study, the CMV bias (Campbell & Fiske, 1959) was tested. The first unrotated factor captured merely 28.73% of the total variance in the dataset that is less than the 50% threshold value (Chaubey et al., 2019). It indicates that there is no manifestation of the presence of CMV bias in this study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

5.3 Assessment of Non-Response Bias

All responses were classified into two groups: early respondents (i.e. those who responded within one month); and late respondents (i.e. those who responded after one month as a result of multiple triggering stimuli such as follow-up phone calls and emails). The usable sample of 281 responses consisted of 234 early responses (83.3%) and 47 late responses (16.7%). An independent sample t-test (Table 2) was computed to examine the potential presence of non-response bias using the extrapolation method (Armstrong & Overton, 1977) with 'successive wave' approach including follow-up calls and emails as mentioned above. One assumption of the extrapolation method is that those individuals who respond less willingly or substantially late are more likely to bear the characteristics of non-respondents (Pace, 1939).

The extrapolation method has been adopted by various studies (e.g. Carrera & Wei, 2017; Yu & Choi, 2014). The non-significant p-value of independent sample t-test for the equality of means for all the three latent variables indicates that there is no significant difference in early and

late responses suggesting that the useable sample is not inflated or affected by non-response bias and both the groups (i.e. early and late respondents) eventually represent the same target population (Pallant, 2016).

Table 2: Non-Response Bias using Independent Samples Test (N = 281)

Variables	Response	N	Mean	SD	Levene's Test for Equality of Variances		t-test for Equality of Means		Sig. (2-tailed)
					F	Sig.	t	DF	
LCE	ER	234	4.064	0.690	16.865	0.000	1.077	96.157	.284
	LR	47	3.979	0.447					
IM	ER	234	4.108	0.412	28.825	0.000	-1.051	54.131	.298
	LR	47	4.209	0.631					
CP	ER	234	3.927	0.393	1.940	0.165	0.345	279	.730
	LR	47	3.905	0.421					

Notes: ER = Early Response; LR = Late Response LCE = Leader Creativity Expectation; IM = Intrinsic Motivation; CP = Creative Performance; Equal variances are not assumed for LCE and IM; SD = Standard Deviation; DF = Degree of Freedom.

5.4 Measurement Model

In the measurement model the construct reliability and convergent validity are assessed by composite reliability (CR) and average variance extracted (AVE) respectively. The CR and AVE of each LV should be greater than 0.7 and 0.5 respectively (Hair et al., 2017). Besides, the outer loadings should be in excess of 0.708 for indicator reliability, however, loadings between 0.40 and 0.708 may also be retained provided that the CR and AVE of its LV meet their respective threshold values (Hair et al., 2017). Table 3 shows that most of the loadings are greater than 0.708, however, three indicators (CP10, CP6, and IM1) were also retained in the measurement model since they fall within 0.4 and 0.708 range with acceptable CR and AVE values

(Rasoolimanesh, Ringle, Jaafar, & Ramayah, 2017). Moreover, Cronbach's Alpha, rho_A, and CR values of all of the three LVs exceeds the 0.70 limit, indicating that the measurement model holds acceptable reliability too. Similarly, the convergent validity is also established since the AVE of all of the three LVs is greater than 0.50. Besides, means and standard deviation of all of the loaded items are tabulated in Appendix-A. Furthermore, we used Heterotrait-Monotrait (HTMT) ratio of correlations to assess the discriminant validity which measures the degree to which each LV is 'distinct' from other LVs in the measurement model (Chin, 2010). Table 4 shows that all ratios of correlation between the LVs are below the critical value of 0.85 and they are also statistically different from zero since they fall

within the lower and upper bound values of the CIBC as shown in brackets. It indicates that the

discriminant validity has been established (Henseler, Ringle, & Sarstedt, 2015).

Table 3: Measurement Model: Convergent Validity and Construct Reliability (N=281)

Latent Construct	Indicator	Loading	Alpha	rho_A	CR	AVE
Creative Performance			0.805	0.814	0.859	0.507
	CP10	0.606				
	CP11	0.737				
	CP12	0.828				
	CP4	0.716				
	CP5	0.738				
Intrinsic Motivation	CP6	0.624				
			0.829	0.835	0.881	0.597
	IM1	0.695				
	IM2	0.868				
	IM3	0.807				
	IM4	0.742				
Leader Creativity Expectations	IM5	0.741				
			0.839	0.844	0.903	0.756
	LCE1	0.870				
	LCE2	0.884				
	LCE3	0.855				

Notes: CR = Composite Reliability; AVE = Average Variance Extracted

Table 4: Discriminant validity using HTMT_{0.85}

Latent Variable (LV)	CP	IM	LCE
Creative Performance (CP)			
Intrinsic Motivation (IM)	0.783 [0.686; 0.880]		
Leader Creativity Expectations (LCE)	0.268 [0.227; 0.371]	0.512 [0.400; 0.621]	

5.5 Assessment of Normality

Royston's H test was applied to test the assumption of multivariate normality. This test measures the univariate normality by using Shapiro-Wilk test (Shapiro & Wilk, 1965) separately for each of the endogenous latent variables (i.e. intrinsic motivation and CP) and

finally it combines them to measure multivariate normality using Royston's H statistic. The significant p-value of Shapiro-Wilk test for both intrinsic motivation and CP shows that the data do not come from a univariate normal distribution (Table 5). Similarly, the p-value of Royston's H test indicates that the data do not come from a

multivariate normal distribution. Therefore, a non-parametric partial least square structural equation modeling (PLS-SEM) technique with

bootstrapping method was used for testing hypotheses.

Table 5: Assessment of Multivariate Normality using Royston's H Test (N = 281)

Endogenous Variables	Mean	Standard Deviation
Intrinsic Motivation (IM)	4.12	0.456
Creative Performance (CP)	3.92	0.397
Normality Tests	Statistic	P-Value
Shapiro-Wilk W (IM)	0.872	0.000
Shapiro-Wilk W (CP)	0.928	0.000
Royston's H	99.22	0.000

Note: Bivariate correlation between IM and CP = 0.62 ($p < .001$; two-tailed)

5.6 Hypothesis Testing and Explanatory Power

Table 6 describes the results of H1 to H4 when controlled for 11 demographic variables. In keeping with Hypothesis 1, Model 6 shows that LCE had a significant and positive effect on creative performance ($\beta = 0.266$; $p < .001$) therefore, H1 was supported. Moreover, LCE had a significant effect on intrinsic motivation (Model 2: $\beta = -0.451$; $p < .001$) therefore, H2 was supported, though, the negative effect was observed. Intrinsic motivation had a significant and positive effect on creative performance (Model 6: $\beta = 0.781$; $p < .001$) therefore, H3 was supported. Finally, intrinsic motivation significantly mediated the relationship between

leader creativity expectations and creative performance (Model 6: $\beta = -0.337$; $p < .001$) therefore, H4 was also supported. The nomenclature of the mediation effect is 'competitive mediation' (Zhao, Lynch, & Chen, 2010) or 'regularly partial mediation' (Nitzl, Roldan, & Cepeda, 2016) because the direct effect (from LCE to CP) and indirect (mediating) effect (from LCE to CP via IM) point in a different direction. Model 6 also shows that both LCE and IM accounted for over 50% of the total variance in explaining creative performance. Furthermore, the value of Stone-Geisser Q^2 coefficient also demonstrates substantially good in-sample 'explanatory power' of our model (Sarstedt & Danks, 2021).

Table 6: Results of direct and indirect effects (N=281)

Variables	Intrinsic Motivation		Creative Performance			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<u>Control Variables:</u>						
1) Admin Responsibility	0.092	0.051	0.070	0.000	0.022	0.026

2) Age	0.152	0.169	-0.014	-0.211	-0.169*	-0.159
3) Designation	0.066	0.053	0.048	0.004	-0.001	0.001
4) Dyad Tenure	-0.146	-0.08	-0.019	0.082	0.055	0.040
5) Education	-0.031	-0.072	0.007	0.254	0.040	0.031
6) Sex	0.014	-0.021	-0.118	-0.084	-0.084	-0.078
7) Industry Experience	0.007	-0.007	-0.110	-0.080	-0.102	-0.093
8) Marital Status	-0.081	-0.08	-0.100	0.075	-0.027	-0.029
9) Post PhD Experience	-0.105	-0.036	-0.066	0.005	-0.024	-0.021
10) Publications	0.145	0.084	0.019	-0.236	-0.065	-0.056
11) Teaching Experience	0.082	-0.036	0.157	-0.039	0.181*	0.187*
<u>Independent Variable:</u>						
LCE		-0.451***		-0.531	0.225	0.266***
<u>Mediating Variable:</u>						
IM					0.772***	0.781***
<u>Indirect (Mediating) Effect:</u>						
LCE – IM – CP						-0.337***
<u>Explanatory Power of Model:</u>						
ΔR^2		0.17***		0.29***		0.19***
R^2	0.05	0.22***	0.04	0.33***		0.52***
Adjusted R^2	0.01	0.19***	0.00	0.30***		0.50***
Predictive Relevance (Q^2)	0.02	0.12	0.00	0.02		0.25

Notes: 5,000 bootstrapping used. *95% CI ($p < .05$); *** 99.99% CI ($p < .001$)

LCE = Leader Creativity Expectations; IM = Intrinsic Motivation; CP = Creative Performance

5.7 Predictive Power using PLSpredict

Recent studies have also reported OOS predictive power in a sample of high-tech engineering SMEs (Adil & Ab Hamid, 2020) and in higher education (Adil & Khan, 2020). The Q^2 predict value of all indicators was in excess of zero. PLSpredict procedure internally develops a linear model (LM) to project that there is a simple linear relationship between the LVs instead of taking IM as a mediator (of the PLS model).

Actually the LM simply takes both LCE and IM as the independent variables of CP. We used mean absolute error (MAE) as the prediction statistic because the prediction errors of both IM and CP were not highly symmetrically distributed (Shmueli et al. 2019). With only one exception, Table 7 shows that the MAE of the PLS model is less than the MAE of the LM for all indicators suggesting that the structural model of the present study holds medium-to-high OOS predictive power (Shmueli et al. 2019).

Table 7: Out-of-Sample Predictive Power using PLSpredict

Indicator	MAE (PLS)	MAE (LM)	Is MAE (PLS) < MAE (LM)?
CP4	0.562	0.550	No
CP5	0.528	0.560	Yes

CP6	0.300	0.348	Yes
CP10	0.380	0.396	Yes
CP11	0.347	0.387	Yes
CP12	0.581	0.597	Yes
IM1	0.476	0.499	Yes
IM2	0.360	0.383	Yes
IM3	0.344	0.357	Yes
IM4	0.410	0.420	Yes
IM5	0.439	0.441	Yes

Note: MAE = Mean Absolute Error; PLS = Partial Least Square; LM = Linear Model

5.8 Checking Robustness of Structural Model

5.8.1 Assessment of Nonlinear Effects

To assess the robustness of the estimates of the structural model, we focused on checking non-linear effects and endogeneity. For the assessment of non-linear effects, we used Ramsey's (1969) regression equation specification error test (RESET) in R studio on the LV scores extracted after the convergence of the original model's PLS-SEM algorithm. Using 10,000 bootstrapped samples with no sign changes, Ramsey's RESET shows a non-significant p-value of CP [$F(2, 276) = 0.368, p = 0.692$] indicating that there is no significant nonlinear effect. Therefore, we conclude that the linear effects model is robust (Sarstedt et al., 2019).

5.8.2 Assessment of Endogeneity

Endogeneity denotes a key issue of regression-based methods when an exogenous LV is correlated with the error term of the endogenous LV indicating that the exogenous LV is predicting the endogenous LV and its error term (Hult et al., 2018; Sarstedt et al., 2020). To ascertain the potential presence of endogeneity, we followed the systematic procedure of Hult et al. (2018) starting with the application of Park and

Gupta's (2012) Gaussian copula approach, using the latent variable scores of the original model estimation as input in R studio. We first verify if the variables, which potentially exhibit endogeneity, are non-normally distributed. We do so by running the Kolmogorov–Smirnov test with Lilliefors correction (Sarstedt & Mooi, 2019) on the latent variable scores of LCE and IM, which serve as exogenous LVs in the PLS path model's partial regressions. The results show that none of the constructs has normally distributed scores (p-value of LCE and IM was 0.0002), allowing us to proceed with Gaussian copula approach.

Table 8 shows that except Gaussian copulas of LCE in Model 1, the bootstrapped p-value in Model 2 and Model 3 were statistically significant that leads us to conclude that endogeneity is somehow still present in this study, though we controlled for 11 variables. It partially supports the robustness of structural model results since it was not further possible to add any other control variables or any other valid and strong exogenous LV to completely mitigate the endogeneity problem (Hult et al., 2018). The coefficients and p-value of all of the 11 control variables were statistically non-significant for Models 1, 2, and 3 hence not shown in Table 8 to maintain clarity.

Table 8: Assessment of endogeneity using the Gaussian copula approach

Test	Construct	Coefficient	p-value
Gaussian copula of Model 1 (endogenous variable; CP)	LCE	0.308	0.000***
	IM	0.787	0.000***
	LCE_copula	-0.021	0.341
Gaussian copula of Model 2 (endogenous variable; CP)	LCE	0.259	0.000***
	IM	0.623	0.000***
	IM_copula	0.091	0.040*
Gaussian copula of Model 3 (endogenous variable; CP)	LCE	0.368	0.000***
	IM	0.533	0.000***
	LCE_copula	-0.059	0.041*
	IM_copula	0.137	0.016*

Note: LCE = Leader Creativity Expectations; IM = Intrinsic Motivation for Creativity

6. DISCUSSION

The social context of Pakistan presents a useful research context for the present study due to its very low rating of CP in Asia. More precisely, the Creative Productivity Index (CPI, 2014) ranked Pakistan at 23rd position out of 24 Asian countries due to a number of its macro-level issues such as low quality of higher education (Hanushek & Woessmann, 2012). Therefore, this report remarked that Pakistan may perform much better in higher education if the academicians in universities could perform creatively by generating novel and useful ideas in every possible curricular, co-curricular and extra-curricular activities. Similarly, Global Competitiveness Report (GCR, 2018) ranked Pakistan at the 115th position out of 137 countries. It was explicitly pointed out that the country remained substantially a very low performer in higher education and training in South Asia and the insufficient capacity to CP is

one of the major macro level issues of higher education in Pakistan.

The results of the first hypothesis indicated that LCE had a significant effect on CP ($\beta=0.266$, $p<.001$) thus, H1 was supported. Similarly, the findings of our third hypothesis suggested that intrinsic motivation for creativity had a significant effect on CP ($\beta=0.781$, $p<.001$), therefore, H3 was also supported.

We mainly investigated the application of Pygmalion theory by analyzing the effect of LCE on intrinsic motivation and CP of academicians in the context of private business schools. We found that LCE has a significant effect on intrinsic motivation (H2 was supported) and intrinsic motivation mediates the relationship between LCE and CP (H4 was supported). Nevertheless, the significant negative indirect effect might be strongly attributed to a number of context-specific occupational scenarios as delineated below.

The sample was drawn from the private business schools of a developing country where departmental heads build their creativity expectations from academicians. The academicians perceive that their CP shall be evaluated in near future where an evaluation team will be legitimized to execute a covert surveillance of their CP that generally cause to reduce their IM (Plant & Ryan, 1985). Moreover, the 'violation of expectations' that an academician might have experienced in the past may also exacerbate intrinsic motivation for CP (Demos, 2019).

In the private business schools of Karachi, an academician is generally made responsible to teach at least 4 courses of 3 credit hours each in addition to supervising dozens of industrial projects and/or research theses. The business department often demands their full-time academicians to undertake additional courses in almost every semester irrespective of their intention. These extra courses are found to be troublesome for academicians because university policies do not allow them to teach these extra (given) courses within their 40 hours per week duty schedule. To avoid substantial financial deduction in the amount received against these extra courses, most of them prefer taking extra courses in other business schools on their off days that ultimately results in substantial physiological and psychological repercussions to the academicians.

7. IMPLICATIONS OF THE STUDY

7.1 Theoretical Implications

The theoretical contribution of the present study is three folds. First, it extends the

Pygmalion Theory to the context of higher education of a developing country suggesting that academicians's perceived LCEs lead to increased creative performance. Second, as hypothesized, intrinsic motivation mediates the relationship between LCEs and creative performance. Finally, it contributes in the academic literature of creativity that LCEs actually emasculate the intrinsic motivation for creativity. This exclusive theoretical contribution was determined after assessing the robustness of the structural model's results.

7.2 Practical Implications

Most of the private business schools operate as a 'for-profit' business organization having one of the major emphases on increasing the total number of enrolment of new students in every semester by merely satisfying the minimum admission criteria set by the Federal Higher Education Commission (HEC) of Pakistan. Consequently, to remain competitive, departmental heads further build their expectations from their full-time faculty members for designing industry-specific graduate-level courses and organizing symposiums, seminars, guest-speaker sessions, and conferences without any financial benefits in return. The main repercussion of these increasing expectations lies in the fact that importance of teaching has been confined to merely 20-30% of the total expectations, whereas rests of the 70-80% expectations demand a faculty member to engage in co-curricular or extra-curricular activities every semester. More precisely, faculty members are generally found to be immensely pre-occupied in their individual obligations due to

which they perceive LCE as an additional 'burden' on their shoulders rather than taking it as an opportunity to excel in their professional career in academia. It further results in the fact that the majority of the faculty members are found to be non-active in research causing very low creative performance. Therefore, it is suggested that making an equilibrium between the expectations of departmental heads (leaders) and academicians is essential because not all expectations of either stakeholder may be fully materialized in higher education. As Kumar et al. (2021) pointed out, higher expectations can easily demotivate low-performing employees which can be very harmful for their institutions. This finding alludes that intrinsic motivation for creativity is most likely to be observed when the faculty members are mentally relaxed and there is an effective psychological contract (i.e. a mutual understanding) between the departmental heads and their faculty members about realistic and manageable expectations to achieve manageable outcomes of creative performance in addition to successfully completing teaching assignments.

8. LIMITATIONS AND DIRECTIONS FOR FUTURE STUDIES

The findings of this study should be viewed in light of the following limitations. First, despite using 11 control variables, the present study still cannot completely rule out the presence of endogeneity. Future studies should also check the unobserved heterogeneity using either finite-mixture or prediction-orientation segmentation. Besides, a cause-and-effect relationship may not be revealed due to the

cross-sectional data of the present study; therefore, future studies may perform a longitudinal study at multiple time points with multi-sourced data. Future studies may also include responses from public sector universities with a higher proportion of associate and full professors. Besides, the present research framework may also be tested in other academic disciplines at higher education level that require a great sense of CP (e.g. media sciences, liberal arts, fashion designing, entrepreneurship) etc. Future studies may also consider moderating variables for the relationship between IM and (individual or team) CP. For instance, climate for creativity (Hunter, Bedell, & Mumford, 2007), meta-cognition (Puryear, 2015), creativity-related cognitive process (Miller, 2014), climate of informality (Morand, 1998), and goal or career orientation of academicians and students (Pachler et al., 2019). Future studies may integrate the present model of the study with the theory of belongingness (Baumeister & Leary, 1995) in order to assess whether workplace mistreatment exhibits any direct or interaction effect on CP in post-COVID era. Finally, future studies may also develop new theoretical frameworks based on the most-recent 8P framework (Sternberg & Karami, 2021) to better understand creativity and its theories. Similarly, future studies may align the findings of this study with the green behavior using the lens of Pygmalion theory (e.g. Mo, Liu, & Wu, 2021).

9. CONCLUSION

Creative performance is recognized as the top-most leadership prowess in the 21st century which puts a greater emphasis on

enhancing and enriching the creative performance. The hyper-competition in today's turbulent era especially due to Covid-19 outbreak not only intensifies the management's thrust to optimize creative performance of academicians, but it also catapults substantial pressure upon them for generating novel and useful ideas to figure out academic and administrative problems. Thus in the higher education sector, the creative performance of academicians demands an increasing need for revitalizing both course contents and pedagogical instruments and mechanisms. It is argued that these demands may be materialized by introducing creative ideas in their respective educational establishments.

Besides, the top management should also need to realize that their creativity related expectations may be proactively observed only if the academicians are intrinsically motivated for creative performance. The present study substantiates the creativity and education literature by arguing that higher creativity expectations of departmental heads in higher education emasculates the intrinsic motivation of academicians for creative performance.

Declaration

This paper has been extracted from Scholar's PhD dissertation.

Appendix A: Descriptive analysis of loaded items (N = 281)

Construct/Associated Items	Mean	SD
<i>Leader Creativity Expectations (LCE)</i>		
LCE1: It is my perception that my supervisor thinks of me as a creative teacher.	4.085	0.901
LCE2: It is my perception that my supervisor thinks that creativity is important for me as a teacher.	4.260	0.731
LCE3: My supervisor expects me to be creative.	4.253	0.738
<i>Intrinsic Motivation (IM)</i>		
IM1: I enjoy finding solutions to complex problems.	4.032	0.698
IM2: I enjoy coming up with new ideas to improve students' learning.	4.178	0.524
IM3: I enjoy engaging in analytical thinking.	4.164	0.508
IM4: I enjoy creating new procedures to impart up-to-date knowledge among students.	4.199	0.605
IM5: I enjoy improving existing processes to optimize students' academic performance.	4.050	0.641
<i>Creative Performance (CP)</i>		
CP4: I am a good source of creative ideas.	4.142	0.731
CP5: I am not afraid to take risks in exercising useful techniques for improving students' learning.	3.915	0.782
CP6: I exhibit creativity on the job when given the opportunity to.	4.060	0.553
CP10: I suggest new ways of performing work tasks.	3.879	0.572
CP11: I search out new technologies, processes, techniques to better perform my academic responsibilities.	4.078	0.567
CP12: I promote and champion ideas to others.	3.786	0.816

Note: SD = Standard Deviation

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