

# IMPACT OF INSTITUTIONAL SUPPORT ON RESEARCH PRODUCTIVITY OF FACULTY IN ENGINEERING INSTITUTES – AN EMPIRICAL STUDY

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### Abstract

With the changing dynamics of evaluating faculty productivity that has been a matter of discussion across all academic institutions, there is a need to understand the various components of Faculty productivity that have changed over a period of time. The productivity in research related aspects is one such dimension which needs to be thoroughly looked at considering the fact that the productivity in research is a direct measure of innovation of an Institute and that of the University and Society at large. While research productivity basically gets influenced by a lot of factors, those that pertain to the institution are of paramount importance as the variations in the institutional support could have a direct bearing on the faculty research performance. While this is true for all kinds of educational institutions of higher education, engineering domain has gained tremendous significance in the recent past as far as the research related outcomes are concerned amongst the faculty members. The objective of the present research is thus to understand the intricate role of Institution Support encompassing: leadership, environment and facilities on the research productivity of faculty in engineering Institutes. A multi-state stratified random sampling was employed to collect data from 381 faculties. The data was collected from the questionnaire method and was analyzed through tools such as descriptive statistics and correlations. Furthermore, confirmatory factor analysis and multiple regression techniques were employed to understand the intricate role of the components of institutional support on faculty research productivity. The results reveal that all the components of institutional support had a direct bearing on the research productivity of Faculty at large and were instrumental enough in explaining the variations in the productivity in research emphasis and culture for the institutions as a whole.

**Keywords:** Research, Faculty, Productivity, Engineering Institutes, Institutional Support, Research Emphasis, Culture & Research Outcomes.

### INTRODUCTION

The role played by teachers in the present-day world is immense and does not need an introduction. With the landscape of education across different countries in the world, it becomes important on the part of the trainers and the teaching community alike to add value on a daily basis. Teaching as a holistic process involves mentoring, student engagement, Counselling, Performance assessment, Stakeholder engagement, Curriculum design and value addition. While all of these carry equal weightage, one aspect that stands out as being the most significant of them all is the ability to carry out effective research (Bayarçelik & Taşel, 2012; Blanco et al., 2016)..

In fact the research output of teachers in higher educational institutions is considered as a cornerstone for not just policy making but also enhancement of productivity of corporate and different sectors of the economy (Clegg, 2012); (Kpolovie & Dorgu, 2019).. The expectations of those pursuing research have drastically changed over the years and now includes outputs such as citations, Receiving external grants, Guidance of projects of students and that of doctoral work of other research Scholars, Publications in top tier International journals etc to name a few.

However what really matters is the understanding of the variables that influence effective research that is carried out by researchers across various educational institutions in the world. Some of these factors could be individual pertaining to the area of motivation that is intrinsic or the career goals that are set out by individuals, the ambition and the achievement factors that are espoused by the individuals, the kind of competence researchers would want to have while pursuing research and so on.

Another set of factors would be looking at the kind of support extended by institutions and organizations that the faculty represent. This might include areas pertaining to the environment prevailing in the Institute, the kind of research culture that has been embedded in the Institute so far, the role of academic leadership in enhancing productivity of researchers and the kind of infrastructure and logistic arrangements that is backed up by organizations who are willing to promote research [Gershman, Kuznetsova, 2013]

The ability to be very effective in research is therefore a summary of both individual and institutional characteristics that need special attention by those pursuing research and that of the policy makers at the same time in order to enhance research outcomes and productivity. While the academic literature has in detail focused regarding the individual motivations to take a research as a career and pursuant for academic fraternity, there is less research that is carried out in terms of faculty research in engineering institutions as a whole.

This is especially true in the case of India where the number of Engineers is growing year by year and so is the mushrooming number of colleges that are offering engineering courses that are coming up. With India being the hub for technology and innovations pertaining to engineering products and services and thereby creating a labor economy that is backed up by engineering talent, it becomes a compelling case to understand the significant forces that enhance the research productivity amongst the faculty members who teach in engineering educational institution as such.

While all the Indian states are at the forefront of imparting education pertaining to engineering courses, Karnataka state stands out as being unique considering the fact that Bangalore which is a part of Karnataka happens to be a Silicon Valley and is considered as the I.T Hub in India. With a high number of engineering colleges that Add value on a daily basis in creating Engineers, They are also steering their best efforts to ensure that the goal of research and Innovations are also observed at the same time. The present research study thrives thus to understand the role of institutional support in enhancing research outcomes and productivity of Faculty members of engineering Institutes in Karnataka state.

## REVIEW OF LITERATURE

Saad A. Alghanim & Rashid M (2011) opined that Faculty members who reported involvement in administrative activities were less likely to publish. Those who reported supervising postgraduate students or had attained training on research methods were more likely to produce research. Respondents perceived that lack of time, lack of research assistants, lack of funds for research, and being busy with teaching load were the most cited obstacles impeding research productivity.

Joe W. Kotrlik & James E. Bartlett (2002) in their research on Factors associated with research productivity of agricultural education faculty stated that Faculty members' perceptions of their research confidence, and the number of graduate assistant hours allocated to the faculty member determine research productivity of faculty; percent of the faculty member's time allocated to research, salary, organizational culture and support of research, age, gender, rank, number of master's students advised to completion in the last five years – did not determine FRP (Hemmings and Kay, 2016; Pasupathy and Siwatu, 2014); The number of graduate assistant hours allocated to the faculty member explains a substantial proportion of faculty research productivity.

Quiambao Dolores T and Baking Enrique G (2014) prove that Research productivity is significantly influenced by the extent of research promotion of institutions in terms of promotion of the research environment and providing mentors' assistance (Zacher et al., 2019).; research capability building; uplifting researcher's cognitive competencies, technical skills; faculty members with longstanding success or integrity in research are often admired by other faculty and students as being on the cutting edge of their career. Demographic factors and institutional factors yielded relationship with the productivity of journal publication. Individual factors and leadership factors, on the other hand, did not demonstrate any correlations with that of journal productivity; it was found that institutional factors significantly correlate with the productivity of journal publication amongst research officers (Veld et al., 2010)..

Giovanni Abramo; Gianluca Murgia (2017) in their research work on 'The relationship among research productivity, research collaboration, and their determinants' found that Collaboration at intramural and domestic level has a positive effect on research productivity. Differently, all the forms of collaboration are positively affected by research productivity; the higher the academic rank the greater the positive impact on research performance and collaboration, especially at the international level; Male academics show greater research performance and intensity of collaboration than females, especially at the international level.

Alaa S Jameel & Abd Rahman Ahmad (2020) in a study of 87 academic staff randomly selected Cihan University Erbil, Iraq reveal that Fund, Collaboration, ICT and Job Satisfaction had positive and significant impact on Research Productivity [Gokhberg et al., 2011], although Fund has the highest impact on Research Productivity. The implication of this study is the management of universities should pay greater attention on research funding opportunities, rewarding collaboration among researchers, enabling ICT and improving job satisfaction to boost research productivity of the academic staff;

Research Productivity was positively predicted by Collaboration (Dever and Morrison, 2009; Edgar and Geare, 2013); Job Satisfaction has positive impact on Research Productivity among the academic staff. Universities need to pay more attention to their academic staff's job satisfaction in terms of empowerment, justice, workload, and training to enhance staff skills particularly in writing articles and how to use the software in research.

Isaac Abe & Virimai Mugobo (2021) in a study of academic staff found that Heavy workload, career ambiguity, poaching, staffing, sabbatical leave policy, large student numbers, unawareness of incentives, poor retention strategies, institutional history, understanding of research mandate, clarity of policies and procedures and poor time management emerged as the contributing factors to low research output; private sector, herein referred to as the "industry", was poaching highly skilled academics to work in companies; research-based performance management may be detrimental to high quality teaching.

Jisun Jung (2012) in a study pertaining to Faculty Research Productivity in Hong Kong across Academic Discipline highlighted that Hong Kong academics are highly internationalized in terms of research activities. Moreover, research productivity is influenced by a number of factors, including personal characteristics, workload, differences in research styles, and institutional characteristics. In addition, considerable variation exists regarding the determinants of research productivity across disciplinary categories. Senior academics tend to be more productive than junior academics. Therefore, an academic's rank correlates positively with research productivity; academics in hard disciplines (natural sciences, engineering, and medical science) publish many more journal articles than those in soft disciplines (humanities, social sciences, and business). In addition, they have the advantage of receiving more research funding as well as having more opportunities to present at scholarly conferences; regarding institutional characteristics, it is interesting that academics in soft disciplines are influenced by commercial orientation.

Bill Buenar Puplampu (2015) in a data collected from 46 faculty members via open forums reveal that a research-oriented culture expressed through factors such as leadership, institutional support, job satisfaction, articulation or otherwise of relevant values have significant impacts on research output (Ma et al., 2016; Takeuchi et al., 2009; Wu and Chaturvedi, 2009).; There was no clear institutionally backed research drive or framework by which faculty could expect to receive direct, consistent and regular support towards research. For example, there were many faculty members who never had any impetus to take their sabbatical leave and direct such leave towards research projects. Some also noted that the leadership of the School at various times had not placed emphasis on research and did not seem to have led the way through their own behaviours.

Amanda H. Goodall & John M. McDowell (2014) in their study titled Leadership and the Research Productivity of University Departments signify that Academic departments led by Chairs who have accomplished research careers are associated with improved research performance; Share of publications to non-US Economics departments has a

significantly negative effect; articles that are published to authors outside the US Economics departments reduce the available pool.

The institution's share of Economics publications that go to faculty based in non-Economics departments (e.g., business and policy schools) in the Chair's institution is significantly positive; scholar-leaders may find it easier to recruit and retain other top scholars. It was argued there that this may be because of reputational factors (Hamermesh & Pfann, 2012), or because a head who is a cited scholar signals to potential recruits that he or she understands how to create the right incentives and work environment for other research-focussed academics (Andrews & Farris 1967; Goodall, 2009).

Carole J. Bland, Bruce A. Center (2005) found that the validity of faculty, department, and leadership characteristics identified in the Bland et al. (2002) model were confirmed as necessary for high levels of research productivity. Faculty productivity was influenced more by individual and institutional characteristics; group productivity was more affected by institutional and leadership characteristics. We found a significant difference in faculty research productivity according to appointment type (tenure-track faculty were more research productive than were faculty on other appointments). This is consistent with previous studies. Regression revealed the important role of the department head. He or she keeps the core missions in front of faculty, makes the generation of dollars through research a high expectation, and assures communication. Similarly, department heads have a great deal to do with the number of hours faculty devote to teaching as well as other roles and what work is recognized non-monetarily. Satisfaction with a department seems to be primarily associated with institutional and leadership variables rather than with an individual faculty's variables.

Perceived support from the department head for both faculty's teaching and research efforts is particularly important, as is having one's opinions seriously considered and having opportunities to pursue research interests (Van Scotter, Motowidlo and Cross, 2000).

Having capable colleagues is also important, as is reflected in having recruitment strategies to attract talent, having a sufficient number of faculties, and having a network of faculty. When individual faculty's research productivity is the goal, nothing substitutes for recruiting faculty with a passion for research, providing them with formal mentoring programs, facilitating their networks, and providing time for them to do research. It also confirms that an individual's research productivity is influenced by a combination of individual characteristics and institutional characteristics. Institutions that want most of their faculty, instead of a few stars, to be highly research productive should emphasize institutional and leadership characteristics such as clear coordinating goals, research emphasis, communication, and assertive-participative governance and infrastructure [Suslov, 2010; Kuznetsova et al., 2015].

## CONCEPTUAL FRAMEWORK

### Research Objectives

1. To identify the most significant variables amongst institutional support components influencing faculty research productivity.
2. To examine the role of environment component of institutional support on faculty research productivity.
3. To examine the role of leadership component of institutional support on faculty research productivity.
4. To examine the role of facilities component of institutional support on faculty research productivity.

## METHODS

The present study is descriptive in nature as it examines the details pertaining to research outcomes of faculty and the factors behind it with an empirical lens. A stratified random sampling procedure is employed to select the samples (institutes) needed for the study which is explained as follows: At the first stage, engineering colleges in Karnataka are stratified based on ownership/funding (Government Colleges, Private Colleges, Aided Colleges and Deemed Universities). Then the total number of faculty in engineering institutes is determined – which happens to be 36862 faculty in a total of 194 colleges. Slovin's formula is then deployed to assess the sample size which comes to 381. This size of 381 is then divided amongst the strata pertaining to colleges decided in step 1. Accordingly 34 samples from Government Colleges that constituted 9% of the strata, 290 samples from Private – affiliated colleges that constituted 76% of the strata, 19 samples from Aided Colleges that constituted 5% of the strata and 38 samples from Deemed Universities that constituted 10% of the strata have been identified for the purpose of the study.

As the researcher wanted to throw light on differences in research productivity across different designations, the sample constitutes a mix of assistant professors, associate professors, professors and departmental heads. As far as the branches within engineering education are concerned, the researcher laid emphasis on the core branches (viz Mechanical and Civil Engineering Departments) and the branches with significant admissions (viz Computer Science and Electronics & Communication Engineering Departments).

Data was collected using structured questionnaires over a six months time period from May 2023 to October 2023. The questionnaire comprised of 24 items to measure various components of intrinsic motivation, measured through a Likert scale. The data later was analyzed statistically with the help of descriptive statistics, exploratory factor analysis and usage of multiple regression analysis.

### Scope of the Research

The present research seeks to collect inputs from Faculty in engineering institutes only. Within engineering institutes, the research covers branches of Mechanical and Civil Engineering, Computer Science and Electronics & Communication Engineering. Moreover the research covers engineering institutes in Bengaluru region. The selection of engineering institutes is based on ownership/funding and thus confines to four categories of institutes namely government colleges, private – affiliated/autonomous colleges, aided colleges and deemed universities.

Moreover though there are good number of indicators available to measure research productivity/outcomes, the present research tries to cover nine major indicators namely publications, citations, grants/funding, guidance, book chapters, IPRs, editorials, resource person and consultancy.

### RESULTS

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Emphasis	381	1.0	5.0	4.034	.7755
Culture	381	1.0	5.0	4.016	.7946
Styles	381	1.0	5.0	4.045	.7367
Scholarly Acts	381	1.0	5.0	3.966	.7514
Resources	381	1.0	5.0	4.079	.8040
Mentoring	381	1.0	5.0	4.073	.7397
Valid N (listwise)	381				

[Note: The factors influencing research productivity are measured qualitatively using Likert scale statements and dimensions with 1 indicating Strongly Disagree, 2 indicating Disagree, 3 indicating either Disagree or Agree, 4 indicating Agree and 5 indicating Strongly Agree]

Inference: As all the six dimensions measuring institutional support centre on the value 4, it can be deduced that majority of the sample “Agree” to all the items and construct that intend to measure research productivity via institutional support.

### Correlations

As a pre-requisite to multiple regression and usage of confirmatory factory analysis, correlations amongst the dimensions of Institutional Support have been calculated to throw more light on possible inter-relationships amongst the independent variables – the results of which are as follows:

Correlation Matrix							
		Emphasis	Culture	Styles	Sch Acts	Rewards	Mentoring
Correlation	Emphasis	1.000					
	Culture	.593	1.000				
	Styles	.444	.426	1.000			
	Sch Acts	.467	.380	.502	1.000		
	Rewards	.368	.412	.260	.337	1.000	
	Mentoring	.335	.441	.303	.336	.626	1.000

## Inferences

Research emphasis correlates with other variables with values of 0.593 (culture), 0.444 (Leadership Style) and 0.467 (Scholarly Acts of Leaders) – that indicate a strong positive relationship while those with Rewards (0.368) and Mentoring (0.335) indicate a semi strong to a weak relationship.

Research culture correlates strongly with Culture, Leadership Styles and Mentoring (0.593, 0.426 and 0.441) while weakly with Scholarly acts of leaders (0.380).

Leadership Styles correlates strongly with Scholarly acts and Research culture (0.502 and 0.426) and weekly with the other variables.

Rewards correlate strongly with Mentoring assistance for research (0.626) and weekly with the other determinants.

## Model Testing using CFA

The paper takes a deep dive to confirm via testing hypothesis pertaining to a set of factors on the institutional support forefront with a view to establish its relationship with research productivity. Thus in order to test the hypothesis that a relationship between observed variables (faculty research productivity) and their underlying latent constructs (institutional support as defined by environment, leadership and facilities) exists, confirmatory factor analysis technique is made use of.

[Note: IS refers to Institution Support; Env refers to Environment; Lead refers to Leadership and FRP denotes Faculty Research Productivity]

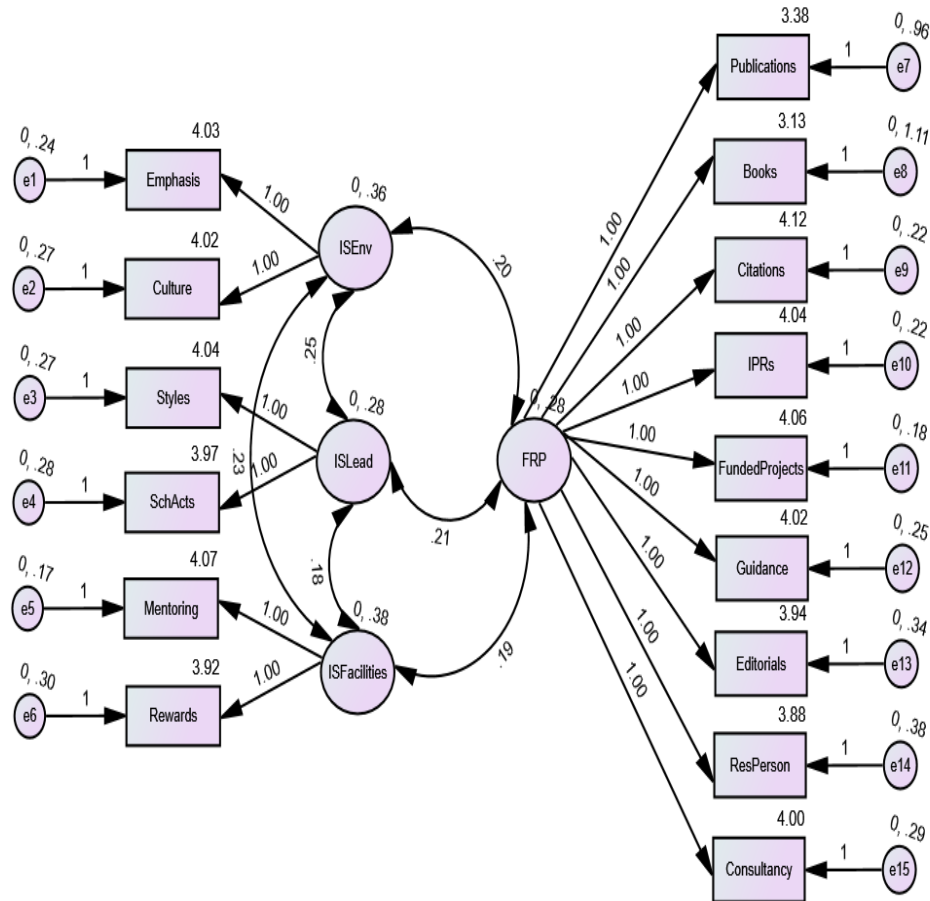
As a pre-requisite, the model tried to assess the possible combinations among these variables, the outcomes of which are tabulated as under:

### Correlations: (Group number 1 - Default model)

			Estimate
FRP	<-->	IS Env	.633
FRP	<-->	IS Facilities	.578
IS Env	<-->	IS Lead	.789
IS Lead	<-->	IS Facilities	.548
IS Env	<-->	IS Facilities	.626
FRP	<-->	IS Lead	.740

From the above table it is evident that there exists a strong correlation amongst all possible factors and that of latent variables that are considered in the model.





(Confirmatory Factor Analysis of the role of Institutional Support on Faculty Research Productivity)

The acceptability of the model is assessed further through the various goodness of fit indicators that are explained as under:

**Absolute Fit Measures**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	40	391.4	95	.000	3.120

As the value of Chi Square denoted by CMIN/DF is 4.120 which is within the acceptable range (<3 good and <5 acceptable), there exists an absolute fit for the above model and

thus it is evident that relationship between observed variables and the latent constructs are well defined and it can be deduced that changes in research productivity can be explained by changes in institutional support. [This is also proved as the P value is 0.000 as per the benchmark]

### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.919	.920	.943	.915	.942

As all the indicators (CFI: Comparative Fit Index), (NFI: Normed Fit Index) and (Tucker – Lewis Index) all values are above 0.9, it further validates the acceptability of the proposed model.

### RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.142	.133	.151	.000

As the probability value of the root mean square error of approximation (RMSEA) is less than 0.05, it further clarifies the worthwhileness of the present model.

### Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Emphasis	<---	IS Env	.779
Culture	<---	IS Env	.761
Styles	<---	IS Lead	.709
Sch Acts	<---	IS Lead	.708
Mentoring	<---	IS Facilities	.835
Rewards	<---	IS Facilities	.748
Publications	<---	FRP	.477
Guidance	<---	FRP	.729
Editorials	<---	FRP	.671
Res Person	<---	FRP	.651
Consultancy	<---	FRP	.702
Books	<---	FRP	.449
Citations	<---	FRP	.750
IPRs	<---	FRP	.746
Funded Projects	<---	FRP	.780

### Intercepts: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P
Emphasis	4.034	.040	101.535	***
Culture	4.016	.041	98.649	***
Styles	4.045	.038	106.126	***
Scholarly Acts	3.966	.038	104.008	***
Mentoring	4.073	.038	107.222	***

	Estimate	S.E.	C.R.	P
Rewards	3.919	.042	92.360	***
Books		.061	51.648	***
Citations	4.121	.036	113.405	***
IPRs	4.037	.037	110.575	***
Funded Projects	4.060	.035	116.345	***
Guidance	4.018	.037	107.525	***
Editorials	3.937	.041	97.028	***
Resource Person	3.882	.042	92.764	***
Consultancy	4.000	.039	103.147	***
Publications	3.378	.057	59.183	***

As the P value of all the variables used in the CFA falls within 0.05, it is evident that the hypothesis of all these variables influencing faculty research productivity is valid.

### Tests of Hypotheses (Multiple Regressions):

#### Hypothesis 1:

H<sub>0a</sub>: Research Emphasis and Research Culture of an Institution does not influence faculty research productivity.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.479 <sup>a</sup>	.229	.225	.5790

Inference: As  $r=0.479$ , there exists a strong relationship between Research Emphasis and Research Culture and faculty research productivity measured qualitatively.

ANOVA						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.708	2	18.854	56.232	.000 <sup>b</sup>
	Residual	126.738	378	.335		
	Total	164.446	380			

Inference: As the sig value of 0.000 is less than p value of 0.05, we reject the null hypothesis and conclude partly that Research Emphasis and Research Culture of an Institution does influence faculty research productivity.

Coefficients							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
1	(Constant)	2.417	.173		13.948	.000	
	Emphasis	.377	.048	.444	7.918	.000	Significant
	Culture	.046	.046	.055	.989	.323	Insignificant

#### Hypothesis 2:

H<sub>0a</sub>: Leadership Styles and Scholarly acts of leaders do not influence faculty research productivity.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.532 <sup>a</sup>	.283	.280	.5583

Inference: As  $r=0.532$ , there exists a strong relationship between Leadership Styles and Scholarly acts and faculty research productivity measured qualitatively.

ANOVA						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.605	2	23.302	74.747	.000 <sup>b</sup>
	Residual	117.841	378	.312		
	Total	164.446	380			

Inference: As the sig value of 0.000 is less than p value of 0.05, we reject the null hypothesis and conclude partly that Leadership Styles and Scholarly Acts of an Institution does influence faculty research productivity.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.950	.180		10.811	.000
	L Styles	.255	.045	.286	5.676	.000 Significant
	Sch Acts	.287	.044	.055	2.228	.000 Significant

### Hypothesis 3:

H<sub>0a</sub>: Rewards and Mentoring do not influence Faculty Research Productivity.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.425	.181	.177	.5970

Inference: As  $r=0.425$ , there exists a strong relationship between Rewards and Mentoring and faculty research productivity measured qualitatively.

ANOVA						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.740	2	14.870	41.726	.000 <sup>b</sup>
	Residual	134.707	378	.356		
	Total	164.446	380			

Inference: As the sig value of 0.000 is less than p value of 0.05, we reject the null hypothesis and conclude partly that Mentoring and Reward Facilities of an Institution does influence faculty research productivity.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.649	.188		13.097	.000
	Rewards	.254	.045	.311	5.676	.000 Significant
	Mentoring	.151	.049	.170	3.106	.002 Significant

## **FINDINGS**

The present study tried to understand the implications of the various factors from the perspective of institutional support that could affect the faculty research productivity at large. From analysis of the descriptive statistics it was evident that the majority of the sample had agreed upon all the six variables as being influential in altering their research productivity.

6 pertinent factors namely Research Emphasis, Research Culture, Leadership Style, Scholarly Acts of leaders, Rewards and Mentoring were correlated among themselves and it was found that all of these factors to a larger extent have a greater amount of correlation with each other. Of these inter-relations it was found out that the rewards strongly correlate with mentoring assistance for affecting research productivity. Coming next as per as the relationships were the element of culture with research Emphasis.

To confirm if the observed variables were actually related to the latent constructs or not, a confirmatory factor analysis technique was employed. The correlations in the model reveal that there was a significant relationship between all the components of the model. Likewise the regression weights and the intercepts revealed that all values were having a significant relationship with each other. The model was also considered fit on almost all the parameters there by proving that the theoretical model developed to validate the impact of institutional support on faculty research productivity is true indeed.

Further in the regression analysis it was revealed that research emphasis, rewards, mentoring, leadership styles and scholarly acts of leaders did have a large influence on faculty research productivity. However the research culture did not have a significant influence on the research productivity of faculty.

## **CONCLUSION**

The present research has proven that institutional support largely influences the research productivity of faculty in engineering Institutes. The role of the environment, the role of leadership and the role of facilities have largely been associated with research productivity and outcomes of faculty in engineering domains of mechanical, civil, computer science and electronics/communication. With the growing emphasis on research based performance assessment of faculty members in engineering institutes, the present study vouches to help policy makers develop a critical understanding of institutional support factors and help steer research goals of faculty.

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