



# PREDICTORS OF FACULTY RESEARCH PRODUCTIVITY

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## ABSTRACT

*Determining the factors of research culture that explain the research productivity of faculty in a state university is the main goal of this paper. Research productivity was gauged using the number of completed researches and published research outputs in refereed journals. Purposive sampling was employed to obtain the 57 participants of the study. A valid and reliable survey instrument was used to gather the data. Mean and Stepwise Multiple Regression were used to arrive these findings. The faculty members were of the opinion that they have mastery in conducting research. The environmental and institutional aspects of research culture that promote research productivity exist but were less practiced. Faculty research productivity needs improvement particularly on the number of published research outputs in refereed journals. The regression analysis revealed that research culture composed of personal, environmental, and institutional factors explained 8.1% of the variance in the faculty research productivity. However, it was only the institutional factors that was found as significant ( $<.05$ ) predictor of the faculty research productivity. Knowledge of the research performance of the faculty will enable faculty members and administrators to know where they stand in research collectively. The findings can be translated into practical use to address faculty research productivity.*

**KEYWORDS:** *research culture, research competency, research productivity, predictors, faculty*

## INTRODUCTION

Research is one of the trifocal functions of universities. It is so critical that it determines the quality of any higher institution. It is among the objective indicators for ranking of world universities (Bland et. al., 2006). Research is also one of the parameters used as basis for benefit grants to universities. The picture above goes to show the crucial importance of research in Higher Education Institutions (HEIs). Thus, research productivity must be periodically evaluated.

In Eastern Samar State University, the sole University in Eastern Samar Province, Philippines, study on research productivity was done yet it focused only on the number of completed researches and research presented in scientific fora. Further, no studies have identified the predictors of faculty research performance inclusive of completed researches and publication in refereed journals. Hence, this study was conducted.

The debate over the most appropriate measure of research productivity revolved around the two fundamental dimensions of quantity and quality. The most frequently used measure of research productivity is the numerical publication count.

Literature shows numerous factors that have been found to be associated with research

performance. In the review of the factors associated with research productivity in higher education institutions in Africa, there appeared to be two categories of correlation of research productivity: individual and institutional factors (Uwizeye et. al., 2021). Similarly, individual and institutional characteristics were used as measure of faculty research productivity in selected leading public universities in Kenya (Khalid, 2021). For the purposes of the present study, the predictor of research productivity was research culture categorized as personal factors, environmental factors, and institutional factors.

Personal factors include research knowledge, research experience, and encouragement for research activities<sup>[4]</sup>. Some faculty members do not conduct research activities due to lack of research skills. Research skills enhancement programs are needed to arrange not only for senior faculty members but also for junior faculty members. Faculty members do research for the sake of promotion and recognition. Time and departmental duties affect their research and time is allocated for both research and teaching activities (Hardre et. al., 2011). Libraries of Higher Education Institutions are not enriched with new books and majority of books are not fulfilled the present requirements.



Environmental factors facilitate the faculty members to implement their individual characteristics in aspect of increasing their research output. Environmental factors include collaborative situation, mentoring, encouraging group environment, communication between faculty members and head of department, provision of resources and facilities for professional development of faculty members (Bland et. al., 2006).

Institutional factors include university policies, mission and goals (Meigounpoory & Ahmadi, 2021). Institutional factors include the availability of research funding, level of institutional networking, and the degree of research collaborations (Uwizeye et. al., 2021). Lack of time for research activities is a major hindrance for research activities. Strategies for time allocation are needed for teaching and research activities (Clemena & Acosta, 2007).

This study hypothesized that predictor variables does not explain a significant proportion of the variance of research productivity of faculty researchers. Thus, the purpose of this research was geared toward identifying the drivers that promote research productivity of a state university.

## OBJECTIVES

The purpose of this study was to determine the factors that best predict research productivity of faculty. Specifically, it addressed the following objectives:

1. describe the faculty perception on research culture of the state university under study;
2. describe the research productivity of the faculty under study, and
3. determine if the selected variables explain a significant proportion of the variance of research productivity of faculty researchers.

## METHODS

### Population and Sample

The population for this study included full-time faculty members with at least Assistant Professor Rank employed at the Eastern Samar State University Main Campus. Using Table for Determining Sample Size of a Known Population (Krejcie & Morgan, 1970), a random sample of 70 faculty members was selected.

### Instrumentation

The instrument consists of four parts. Part I focused on the personal factors of research culture which may influence faculty research productivity. It is composed of items that assessed the research competency of faculty members. This portion was adapted from the instrument used to measure the factors associated with research productivity of agricultural education faculty with internal consistency coefficient of .80 (Kotrlik et. al., 2002).

Part II deals with the faculty member's perception on the environmental factors among Colleges/Departments that influence the research productivity of faculty. Part III focused on the institutional factors that may influence research productivity of faculty. The second and third portions of the instrument were adapted from the instrument used to measure the factors of research culture prevalent in a public sector university (Iqbal & Muhammad, 2018). Part IV gathered data on the number of completed researches and published in refereed journals in the last two years 2019-2020.

### Data Collection

The researcher gathered the data through online platform. The questionnaire with cover letter was sent to the identified faculty respondents. For ethical consideration, it was made clear that their participation is voluntary and their personal details were treated with utmost confidentiality.

### Statistical Analysis

Mean was used to describe the University's research culture composed of personal factors, environmental factors, and institutional factors. Multiple regression analysis was used to determine the extent of influence of the independent variables to research productivity. The alpha level was set a priori at .05. Research productivity was calculated as follows: the respondent was given a credit of 1.0 for each article published for which they were the sole author, a credit of .50 for each co-authored article published for which they were the lead author, and a credit of .33 for each co-authored article published for which they were not the lead author (Kotrlik et. al., 2002). Similarly, for completed researches the respondent was given a credit of 1.0 for each completed research for which they were the sole researcher, a credit of .50 for each co-researcher for which they were the study leader, and a credit of .33 for each co-researcher which they were not the study leader.

## RESULTS AND DISCUSSION

### Research Culture

Research culture was measured in three dimensions, namely: personal factors, environmental factors, and institutional factors. In this study, personal factors focused on research competency of the surveyed faculty. The faculty members assessed themselves as Master in all of the indicators. The grand mean of 3.83 means the faculty showed mastery in conducting research. On the other hand, based on the respondents' responses in the indicators pertaining to the environmental factors as component of the research culture of the University, the item "Opportunities to become involved in research activities are provided in our College/Department"



got the highest mean rating of 3.63 which means frequently practiced while the item “Continued guidance is provided for research skills” got the lowest mean rating of 3.14 which means sometimes practiced. The grand mean is 3.44 which mean frequently practiced. Moreover, among the indicators on institutional factors of research culture, item “Institution demands to be productive in research” got the highest mean rating of 4.23 which means always practiced. While the item “Computing resources and facilities are provided” got the lowest mean rating of 2.44 which means rarely practiced. The grand mean of 3.15 which means sometimes practiced indicates that the faculty members of the University perceived that the institutional factors of research culture are less practiced.

### Research Productivity

The surveyed faculty reported that, in the past two years, they had completed an average of 2.44 researches which they were the sole researcher, an average of .70 co-researcher for which they were the study leader, and .32 co-researcher for which they were not the study leader. Moreover, in the past two years, they had published an average of 1.73 refereed journal articles for which they were the sole author, an average of .58 co-authored refereed journal

articles for which they were the lead author, and .36 co-authored refereed journal articles for which they were not the lead author. This result indicates that research productivity of the surveyed faculty needs to be improved.

### Predictors of Faculty Members Research Productivity

Table 1 presents the result of regression analysis. Regressing the independent variables on the faculty research productivity resulted in an  $R^2$  value of 0.81, indicating that about 8.1% of the variance in the faculty research productivity could be accounted for by a combination of the components of research culture, namely: personal factors, environmental factors, and institutional factors. However, it was only the institutional factors that was found as significant ( $<.05$ ) predictor of the faculty research productivity. Moreover, since the overall  $p$ -value  $< \alpha$  (0.05), the null hypothesis stating that research culture which is composed of the personal, environmental, and institutional factors does not explain the variance of the faculty members’ research productivity in terms of completed researches and publication in refereed journals is rejected in terms of institutional factors.

**Table 1. Regression analysis between research productivity and: research culture (personal factors, environmental factors, institutional factors)**

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Research Culture	1.157	1.105		1.105	0.267
Personal Factors	-0.703	0.492	-0.338	-1.429	0.150
Environmental Factors	0.066	0.900	0.042	0.073	0.942
Institutional Factors	0.686	0.681	0.471	1.008	0.032**
R=0.285 $R^2=0.081$ F-value=2.878    p-value=0.004    **p<.05					

To address this gap HEIs should build institutional support to research through the provision of research enabling environments, policies and incentives (Uwizeye et. al., 2021).

The surveyed faculty reported themselves as master in all aspect of conducting research yet research productivity of the University need to be improved. This result of the present study is in contrast with the findings that faculty members do not conduct research activities due to lack of research

skills (Meigounpoory & Ahmadi, 2012). However, the result is in consonance to the research findings that performance of administrative duties along with academic duties, lack of funds, absence of professional journals are the major causes of low productivity which reduced the research productivity of faculty members (Iqbal & Muhammad, 2018). The result of the present research endeavor is similar to the findings that research productivity is influenced by institutional characteristics in the study that



examines the research productivity of Hong Kong academics using regression analysis (Jung, 2012).

Hence, the environmental and institutional factors influencing research culture need to be strengthened to promote faculty research productivity; affiliations to research organizations and access to databases and journal be increased to provide the faculty more opportunities and venue to publish their research outputs; and institutional support may be improved by providing the faculty researchers the computing resources, facilities, adequate library resources, increased fund allocations for research projects, and adjustment of teaching workload with research work.

The present study measured research productivity by evidence not by self-reported data. This was done to ascertain the quality of work and validity of the results.

## CONCLUSION

Based on the conditions under which this study was conducted and the foregoing findings, the following conclusions were drawn: the faculty members were of the opinion that they have mastery or were competent in conducting research but the environment is not conducive for research and institutional support were less practiced; faculty research productivity needs improvement particularly on the number of published research outputs; and the institutional factor of research culture is a significant predictor of research productivity.

This paper put forward that the environmental and institutional factors influencing research culture should be strengthened to promote faculty research productivity; the University's affiliations to research organizations and access to databases and journal should be increased to provide the faculty more opportunities and venue to publish their research outputs; and institutional support may be improved by providing the faculty researchers the computing resources, facilities, adequate library resources, increased fund allocations for research projects, and adjustment of teaching workload with research work. Lastly, despite of these contributions, this study has limitations. This paper focused only on research competency as a component of individual characteristic. Hence, a similar study could be conducted using different research productivity parameters and to include other higher education institutions.

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