Determinant of Lecturers' Research Productivity: A Comparative Study Between Universitas Negeri Surabaya (UNESA) and UiTM Malaysia

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This study aims to examine the effect of motivational variables, research behavior, research climate, and university support on the research productivity of lecturers at the Faculty of Economics and Business Unesa and UiTM Malaysia. Data was collected through questionnaires to lecturers from these universities. The results showed that motivation had a positive and significant effect on the research productivity of lecturers at the Faculty of Economics and Business, Unesa. Research behavior has a positive and significant effect on the research productivity of lecturers at the Faculty of Economics and Business, Unesa. The research climate has a positive and significant effect on the research productivity of lecturers at the Faculty of Economics and Business, Unesa. University support has a positive and significant influence on the research productivity of lecturers at the Faculty of Economics and Business, Unesa. Motivation, research behavior, research climate, and university support together have a significant positive influence on the research productivity of lecturers at the Faculty of Economics and Business, Unesa.

Keywords: research productivity, determinants, lecturers, comparative study

INTRODUCTION

The quality and quantity of research a tertiary institution produces are key benchmarks in academic achievement and excellence. Assessments regarding this matter have also been contained in higher education accreditation standards and procedures. Universities with a reputation as research-based universities are often indicated as having good quality (Hu and Gill, 2000; Bloedel, 2001 in Wichian, 2009). This encourages each tertiary institution to direct lecturers to be more productive in research. Many factors determine research productivity by lecturers in a tertiary institution. Wichian (2009) explains that individual and environmental characteristics are the main factors. Individual characteristics that affect research productivity are age, academic position, gender, years of service, and educational experience. In comparison, the environmental factors in question are institutional support, institutional size, and faculty (study program) accreditation. In Indonesia, research productivity tends to lag (Suarapembaharuan.com, 2008). This happens because knowledge transfer activities in universities in Indonesia are more emphasis on teaching than on research. In addition, a high teaching load makes lecturers lack time to research, so lecturers tend to allocate a long time to prepare teaching materials in class. The low ability of lecturers in research is also a challenge in building a research culture in Indonesia (Muhaemin, 2006). Limited facilities are also an obstacle to research growth in Indonesia. Many libraries are still not equipped with an up-to-date database of journals, laboratories, and equipment that have not been automated, and funds and rewards for conducting research that is considered not commensurate (Kompas.com, 2008). The results of previous studies using age as a driving factor for research productivity are still inconsistent. Bland and Berquist (1997) found that lecturers experience a decline in research as they age. However, Jitpitak (1989) in Wichian (2009) found that senior lecturers were more active in research activities than junior lecturers. In addition, gender as an individual character has also been associated with research productivity. The results of the study revealed that there were differences in the research productivity of female lecturers and male lecturers. Female lecturers were found to have fewer studies than male lecturers (Gmelch et al., 1984; Kotrlik et al., 2002). Meanwhile, years of service and educational background provide consistent results.

More extended experience as a lecturer tends to result in more research. The same thing also happens when the educational background of a lecturer is pure science, so it tends to produce more research than lecturers with an applied science background. This happens because knowledge and the ability to conduct research are important factors in producing research. Institutional support as one of the environmental factors was found to be an important factor in research productivity (Kelly and Warmbrod, 1986 in Kotrlik, 2002). Organizational support can be felt through the establishment of policies, the availability of literature in libraries and journal databases, the adequacy of research funds, and the availability of adequate facilities such as computers and laboratories (Wichian et al., 2009). Dundar and Lewis (2008) reveal that institutional support for research will differ due to the status of the university. State Universities focus more on teaching and community service, while Private Universities focus more on research and teaching. This difference in focus results in different support for research.

The factors that drive research productivity are also revealed in the research of Chen et al. (2004), who categorize personal motivation to conduct research into 2, namely investment factors (extrinsic rewards) and consumption factors (intrinsic rewards). Extrinsic awards are salary increases, academic positions, and job promotions. At the same time, intrinsic awards include lecturer satisfaction with research results, lecturer contributions to faculty accreditation, and recognition from colleagues. Chen et al. (2006) used the theory of expectations to explore the factors that can affect the productivity of lecturers in research. His study explained that interest and views regarding the importance of research are factors that influence research productivity. In addition, he found that lecturers' expectations in conducting research would be different for senior and junior lecturers. Senior lecturers are more motivated to conduct research due to intrinsic factors, while junior lecturers are more motivated to conduct research due to extrinsic factors.

An understanding of the factors driving lecturer productivity in research is important to know. This happens because higher education, as one of the elements in the National Education System, has a responsibility to educate the life of the nation through quality research results to solve humanity and national

problems. In addition, higher education is an institution dedicated to imparting knowledge and creating new knowledge through research.

Much research has been done on the determinants of productivity. Dundar and Lewis (1998) conducted a similar study on American lecturers. Chen et al., (2004) showed this study on 670 lecturers at business campuses in America. Wichian et al. (2009) examined the determinants of the productivity of lecturer research in Thailand. Tanimoto and Fujii (2002) examined the effectiveness of mentoring professors to junior lecturers in Japan in conducting research. Understanding the factors that are important in triggering the research productivity of lecturers in Indonesia is very important to increase the research productivity of lecturers in Indonesia.

The Faculty of Economics and Business (FEB) Unesa has now become a faculty with a national reputation. The accreditation of the majority of A study programs and student achievements on a national scale evidence this. Therefore, the direction of future development needs to be directed toward becoming a faculty with an international reputation. Based on this direction of development, it is hoped that the Faculty of Economics and Business will have competitiveness. Efforts toward faculties with international reputations are expected to begin to be realized in 2024, so various efforts need to be prepared to achieve them. One of the missions of the Unesa Faculty of Economics and Business is to improve the quality of research in the field of economics, economics, and business education that is reputable and contributes to the development of science and technology. Various efforts have been made to increase the quantity and quality of research and scientific publications at the national and international levels. Based on the achievement data of the main performance indicators in research quality improvement activities that contribute to the development of science and technology, it is known that the number of lecturer research at FEB Unesa has increased. However, collaborative research and those funded by external parties are still not optimal. The percentage of lecturers' scientific publications in national journals has increased, but publications in reputable indexed international journals are still relatively low.

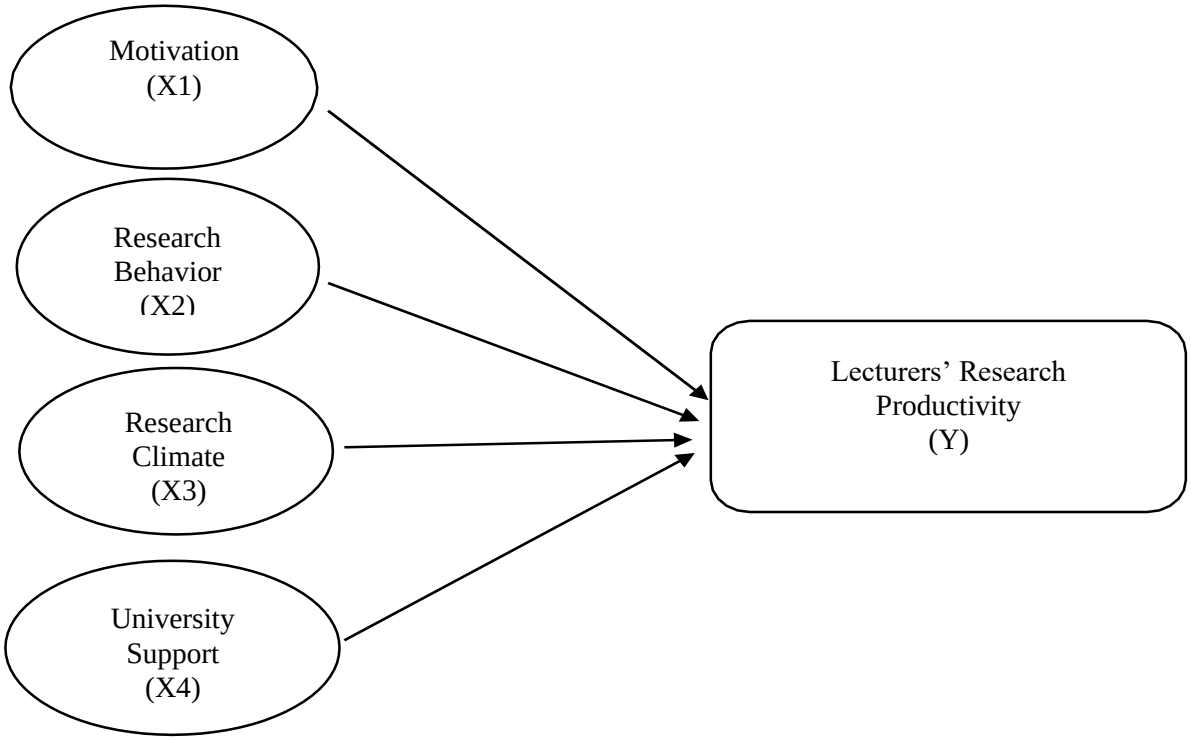
Based on these problems, it is essential to conduct this research to identify the determinants of research productivity for lecturers at FEB Unesa and UiTM Malaysia. It is hoped that knowing the factors relevant to conditions in Indonesia will serve as a reference in building a research culture and assisting Unesa Faculty and Environmental Study Program leaders in adopting policies to improve research achievement (excellence in research) for tertiary institutions in Indonesia towards world-class universities.

METHOD

This research was conducted on 38 FEB Unesa lecturers who were taken randomly. Validity and reliability tests are carried out to show the level of reliability or validity of an instrument. A valid or valid instrument has high validity. The instrument is said to be valid if it can measure what is desired and is able to reveal data from the variables studied appropriately.

The validity test in this study was carried out using the Pearson correlation validity analysis, with a sig. ≤ 0.03, Meanwhile, a reliability test was conducted to show the accuracy and precision of the gauges. A construct or variable is reliable if it gives a Cronbach alpha value ≥ 0.50. The data analysis technique in this study was carried out by multiple regression analysis using SPSS software.

FIGURE 1
CONCEPTUAL MODEL



RESULT

Before examining the research model, we conduct the validity and reliability testing for the instrument. The results are explained in table 1 and 2 as follows.

TABLE 1
RESULT FOR VALIDITY TEST

Variable	Item number	R table (Sign 5%)	R	Mark
Motivation (X1)	1	0,32	0,453	Valid
	2	0,32	0,425	Valid
	3	0,32	0,472	Valid
	4	0,32	0,359	Valid
	5	0,32	0,671	Valid
	6	0,32	0,642	Valid
	7	0,32	0,531	Valid
	8	0,32	0,548	Valid
	9	0,32	0,539	Valid
	10	0,32	0,341	Valid
	11	0,32	0,470	Valid
	12	0,32	0,649	Valid
	13	0,32	0,629	Valid

Research Behavior (X2)	1	0,32	0,546	Valid
	2	0,32	0,501	Valid
	3	0,32	0,597	Valid
	4	0,32	0,673	Valid
	5	0,32	0,697	Valid
	6	0,32	0,577	Valid
	7	0,32	0,613	Valid
	8	0,32	0,685	Valid
	9	0,32	0,544	Valid
	10	0,32	0,365	Valid
	11	0,32	0,706	Valid
	12	0,32	0,544	Valid
	13	0,32	0,743	Valid
	14	0,32	0,633	Valid
	15	0,32	0,682	Valid
	16	0,32	0,593	Valid
	17	0,32	0,537	Valid
	18	0,32	0,552	Valid
Research Climate (X3)	1	0,32	0,837	Valid
	2	0,32	0,886	Valid
	3	0,32	0,595	Valid
	4	0,32	0,883	Valid
University Support (X4)	1	0,32	0,466	Valid
	2	0,32	0,415	Valid
	3	0,32	0,773	Valid
	4	0,32	0,723	Valid
	5	0,32	0,780	Valid
	6	0,32	0,776	Valid
	7	0,32	0,875	Valid
	8	0,32	0,803	Valid
	9	0,32	0,721	Valid
	10	0,32	0,592	Valid
	11	0,32	0,761	Valid
	12	0.32	0,639	Valid
Research Productivity (Y)	1	0,32	0,591	Valid
	2	0,32	0,572	Valid
	3	0,32	0,578	Valid
	4	0,32	0,504	Valid
	5	0,32	0,423	Valid
	6	0,32	0,641	Valid
	7	0,32	0,591	Valid
	8	0,32	0,404	Valid
	9	0,32	0,457	Valid
	10	0,32	0,498	Valid
	11	0,32	0,398	Valid

	12	0,32	0,576	Valid
	13	0,32	0,643	Valid
	14	0,32	0,549	Valid
	15	0,32	0,595	Valid
	16	0,32	0,495	Valid
	17	0,32	0,391	Valid
	18	0,32	0,564	Valid
	19	0,32	0,518	Valid
	20	0,32	0,541	Valid
	21	0,32	0,602	Valid
	22	0,32	0,591	Valid
	23	0,32	0,331	Valid
	24	0,32	0,404	Valid

The questionnaire indicators can be considered valid if the calculated r-value is greater than the r-table. Table 1 shows that all indicators in the questionnaire are valid because all R Counts from the questionnaire indicators above are R Tables. Table 2 show that all the instruments for each variable in current research are reliable.

TABLE 2
RESULT OF RELIABILITY TEST

Variable	Cronbach's Alpha
Motivation (X1)	0,733
Research_Behavior (X2)	0,750
Research_Climate (X3)	0,818
University_Support (X4)	0,765
Research Productivity (Y)	0,740

After examined the validity and reliability of instruments, we examined the research hypothesis through multiple regression using SPSS. The results can be seen in table 3 as follow.

TABLE 3
RESULT OF HYPOTHESIS TESTING (MULTIPLE REGRESSION)

Unstandardized Coefficients				Standardized Coefficients	t	Sig.	CollinearityStatistics	
Model		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	51.950	14.527		3.576	.001		
	Motivation	.604	.266	.365	2.273	.030	.748	1.338
	Research_Behavior	.443	.134	.477	3.297	.002	.921	1.086
	Research_Climate	1.288	.591	.340	2.177	.037	.791	1.265
	University_Support	.524	.231	.397	2.268	.030	.627	1.596

a. Dependent Variable: Research_Productivity

DISCUSSION

Based on the research results, it can be seen that the P-value of the Motivation variable (X1) shows a result of 0.030, which means it is smaller than 0.05, so H_0 is rejected, and Ha is accepted. This means that there is an influence between motivation on research productivity. These results are under research conducted by Chen et al. (2006), which explains that personal encouragement affects the productivity of lecturers in conducting research. The greater the motivation a lecturer has in conducting research, the more it will affect the increase in lecturer research productivity. The personal motivation that drives a lecturer's research productivity can be divided into investment and consumption factors. Investment factors include the desire to increase knowledge, improve the quality of learning, and the need for self-recognition.

Meanwhile, the consumption factors that motivate lecturers to increase research productivity include the desire to get a promotion, additional high incentives, and a position. This study's results can be used as input for universities to motivate lecturers to increase research productivity by awarding them in the form of additional incentives for lecturers who have research productivity and work publications. Besides that, in terms of promotion (raising rank), universities should also look at the productivity of lecturers in research as one of the considerations.

Based on the study's results, it can be seen that the P-value of the Research Behavior variable (X2) shows a result of 0.002, which means it is smaller than 0.05, so that H_0 is rejected and Ha is accepted. This means that there is an influence between research behavior on research productivity. The more often a lecturer cultivates positive research behavior will be able to increase research productivity. Various kinds of research behavior are essential to developing, such as constantly having good discussions with colleagues and colleagues regarding the preparation of research ideas, collaborating in research (joint research), providing feedback and discussing research results, and supervising students in thesis writing, theses and dissertations need to be cultivated to form the emergence of positive research behavior so that later it will be able to increase lecturer productivity in research. Based on the research results, positive research behavior must always be cultivated to increase lecturer research productivity later.

Based on the research results, it can be seen that the P-value of the Research Climate variable (X3) shows a result of 0.037, which means it is smaller than 0.05, so that H_0 is rejected and Ha is accepted. This means that there is an influence between the research climate on research productivity. A positive research climate can increase lecturer research productivity. A research climate can be formed through the high commitment of all lecturers to conduct research as a form of implementing higher education tri-dharma, because one of the essential tasks of a lecturer is to conduct research. Through research, lecturers can contribute to helping the community in overcoming problems that occur. Apart from that, research can also be used to improve the quality of learning. In addition to this commitment, the research climate can also grow through positive support from the leadership and related parties and appreciation for the research results. Based on these results, it can be concluded that the growth of a positive research climate can increase lecturer productivity in research, so leaders must always foster a positive research climate in the university environment so that lecturer research productivity also increases.

Based on the research results, it can be seen that the P-value of the University Support variable (X4) shows a result of 0.030, which means it is smaller than 0.05, so that H_0 is rejected and Ha is accepted. This means that there is an influence between university support on research productivity. Positive support from institutions (universities) can increase lecturer research productivity. This is to the results of research by Wichian (2009), which explains that organizational support has also been found to be an essential predictor of the high number of lecturer studies. This support can be received in the form of the number of students who are seconded to be assistants in research, the number of research funds budgeted for departments, and the availability of literature in libraries and procedural research policies (Wichian, 2009). In addition, the results of research by Clemena and Acosta (2003) on lecturers at 14 universities in the Philippines found that reducing the teaching load was considered the most supportive thing to increase the number of lecturers' research. Based on the research results, it can be concluded that positive support from institutions (universities) in the form of facilities and convenience in conducting research has proven to increase lecturer research productivity.

CONCLUSION

The current study evidence that all the independent variables, including motivation, research behavior, research climate, and university support, positively affected on lecturers' research productivity. Accordingly, we suggest to the university administrator to foster the lecturer' motivation, especially in research activity. The university administrator should develop the positive climate and support to the lecturers to enhance the research productivity.

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