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Exploring Performance Measurement System for Lecturer (PMSL): Comparison among Three Models in Indonesia, Singapore and Turkey

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ABSTRACT

This study aims to explore the Performance Measurement System for Lecturer (PMSL) through a comparison study in three countries, namely Indonesia (MY), Singapore (IT), and Turkey (IMU). The comparative study is conducted by a multiple case approach with interviews. Informants are lecturers who have structural positions and are involved in PMSL policy. The results showed MY had a PMSL policy that was aggressive enough to improve the performance of their lecturers relatively lower at the international level. MY reward special incentives for certain performance target and hold a science camp mentoring to improve their lecturers' capabilities. Meanwhile, IT classifies lecturer performance measurements into teaching and research tracks. This makes lecturers more focused so that their performance will improve. Turkey's IMU has policies in three aspects namely pedagogic (mentoring), knowledge management, and administration easiness. This research result is expected to give real contribution to the refinement of PMSL policy model at universities in Indonesia to trigger lecturer performance improvement. This study explains how PMSL as a derivative of goal setting theory is effectively successfully implemented at a University in three different countries which in this case have different organizational cultures.

KEYWORDS: Global Achievement, Lecturer, Performance Measurement System, University

INTRODUCTION

The increasingly higher institutional competition in the current global era in many sectors, including public sector, has increased the concern to studies related to performance measurement in order to allocate resources better (Juhl & Christensen, 2008). Many institutions endeavor to re-design their performance measurement system, at both organizational and individual levels, to improve the performance quality (Franceschini & Turina, 2013). Universities and lecturer, as the actors within, can neither be excluded from this phenomenon.

Studies related to performance measurement in the public sector have extensively been conducted throughout the world. However, the number of such studies is relatively infrequently conducted in developing countries (Akbar, Pilcher, & Perrin, 2012; Putu S, Jan van Helden, & Tillema, 2007; van Helden & Uddin, 2016), particularly concerning performance measurement system for lecturers at universities. In the context of performance measurement for lecturers in Indonesia as set forth in Law No. 14 year 2005 concerning teachers and lecturers, lecturer's main duties which then become their performance benchmark consist of three, namely teaching, research, and community service. Unfortunately, the existence of regulation dealing with performance indicator fails to motivate universities to develop a performance measurement system for lecturers at their institutions. Only a few of them has developed it, including MY university. This results in a large number of universities with no a well-structured PMSL pattern. It is this phenomenon which then creates problems, leading further to the low lecturer performance in Indonesia, especially when the performance measurement uses global indicators, such as multi-country collaborative research, visiting professor, postdoctoral, and publication in internationally reputable journals.

In reference to the data from internationally reputable research indexing institution scimagojr.com, the research performance of Indonesian lecturers as measured by their publication in the internationally reputable journal (Scopus-indexed) is ranked at 57th place. This is far below several South East Asia countries such as Singapore (32), Malaysia (35), and Thailand (43)¹. Meanwhile, in terms of their community service, based on 2015 Kemenristekdikti annual report, 3,000 titles are funded and this equals to 9,000 lecturers. Despite its increasing number each year, this number is far too low when compared to the number of lecturers in Indonesia, i.e. only 270,263 (3.33%) lecturers. This number is far below the proposed performance target. In terms of their teaching, the methodology at many universities in Indonesia is relatively conventional. It is possible that this is due to the fact that the majority of lecturers are still master degree. From 230 thousand lecturers in Indonesia, most of them hold a master degree, i.e. 155,519 (67.61%). Only 31,554 (13.72%) have a doctoral degree. 37,000 or 16.08% lecturers are even found to still hold a bachelor degree (Oebaidillah, 2017). Additionally, collaboration with foreign universities for the purpose of student exchange, visiting professor, and curriculum update as the IT era demands so is done only by several big campuses.

The above data clearly indicates that the Indonesian lecturer's performance and competitiveness at the global level is still left behind the neighbouring ASEAN countries. In response to this phenomenon, from 2016 until recently Indonesian government has massively been promoting and launching many policies. The aim is to improve the

¹ Source: <http://scimagojr.com/countryrank.php> (accessed Sunday, May 28, 2017, 05:46 West Indonesian Timezone)

lecturer's performance, by assigning incentive and punishment. Unfortunately, this incentive and punishment policy seem more like a reactive, poorly-planned one. As a matter of fact, to comprehensively improve lecturer's performance which includes all aspects of performance measurement (teaching, research and scientific publication, and community service), a well-structured PMSL is needed (Franceschini & Turina, 2013).

Until recently, studies on how PMSL should be designed, particularly for universities in Indonesia, are rarely conducted. The importance of studies on PMSL in Indonesia which is intended for redesigning model cannot be separated from the condition where the dominant idea of higher education as a social institution in the recent disruption era has changed. Nowadays, the university is considered as a certain economic sector which aims at teaching current and future manpower, advancing economic development and conducting industry-based and applied research (Juhl & Christensen, 2008). University assumes the responsibility for education and future leaders through a sustainability society (Amaral, Martins, & Gouveia, 2015; Cavicchi & Vagnoni, 2018; Cortese, 2003).

Departing from this fact, this study aims at exploring and comparing how PMSL is implemented in one university in three different countries, namely Indonesia, Singapore, and Turkey using multiple case study approach. This study is conducted in campuses which have designed PMSL and is considered successful in promoting their lecturers to perform. This study involved three campuses from different developing countries that have different levels of development in the quality of education. The aim is to obtain a richer insight about how those three campuses from different countries and of course with different education policies designed their PMSL designs. It is expected that the findings in this study are highly important to be an initial stepping stone towards the development of PMSL within campuses in Indonesia. Theoretically, this research's findings contribute to new references on PMS in higher educational institutions, particularly in relation to how PMSL as a reflection of goal setting theory can be effectively implemented at a university in three different countries. Practically, this research's findings are expected to give the real contribution to the refinement of PMSL policy at universities in Indonesia to allow it to trigger lecturer performance improvement.

Goal Setting Theory

According to Goal Setting Theory, formulating goals is a cognitive process that is related to behavioral determinants. In this concept, it is believed that the goals that are clearly defined and realized by the individual or group of individuals (organizations) that set will produce a higher level of achievement if it is accompanied with the acceptance of the set goals (Locke 1975; Basri 2013). Departing from this argument, the organization formulates PMS policies that are associated with efforts to achieve optimal performance. Locke dan Latham (2013) contend that the absence of specific goals and objectives can be a source of ambiguity, confusion, and lack of direction for subordinates. Conversely, the adoption of performance measures, both financial and non-financial, causes the development of goals and objectives to be more specific and allows to provide clear direction to organization employees.

Performance Measurement System for Lecturer (PMSL)

The term PMS we use in this research refers to the integration of performance measurement and performance management. Referring to the definition proposed by (Millmore, Lewis, Saunders, & Thornhill), performance measurement can be defined as "*a process of assessing the performance against pre-determined measures of performance, based on key success factors (KSF) which may include measures of deviation from the norm, tracking past achievements and measures of output and input.*" Based on this assertion, it is clear that performance

measurement focuses on the activities of measurement and report how well someone or something to do targeted. Performance measurement is highly helpful for the purpose of evaluating, controlling, and improving performance (Abdel-Maksoud & Abdel-Maksoud, 2015; Behn, 2003). Meanwhile, performance management is the process which helps an organization formulates, applies and changes their strategy to achieve a performance in the effort of fulfilling what the public-stakeholders expected for public sector context (Verweire & Van Den Berghe, 2004).

Merchant and Van der Stede (2007) define PMS as a mechanism to allocate responsibilities and authorization right (to make decisions), predetermined performance target, and reward for target achievement. Generally speaking, PMS is consistent with the concept promoted in goal setting theory (Locke & Latham, 2013). According to this theory, PMS is a concept which explains that building a goal is a cognitive process related to the behavioral determinant. In this concept, it is believed that a realistically- and clearly-defined goal which is realized by the setting individual or group (organization) will result in higher achievement level when equipped with acceptance of the set goal (Basri, 2013; Locke, 1975).

Locke and Latham (2013) in their goal setting theory suggest that the absence of certain goals and target can be a source of ambiguity, confusion, and lack of direction for subordinates. On the contrary, adopting performance measurement, either financial or non-financial, causes the development of goals and targets to be more specific and allows one to give a clear direction to their subordinates (Gabedi N Molefe, 2010). This way, the presence of a clear goal setting concept in the performance measurement system formulation for subordinates will lead to the growth of work motivation and commitment to goals (Locke & Latham, 2013), as well as a clear strategy planning (Hammer, Haney, Wester, Ciccone, & Gaffney, 2007) which in turn results in performance improvement.

Several studies have found that it is important to evaluate the information dimension of contemporary performance measurement system (Chenhall, 2005; Ittner, Larcker, & Randall, 2003). Ittner et al. (2003) argue that a set of diverse steps of measuring performance is an important feature of a performance measurement system. Ittner et al. (2003) consider a variety of performance measurement, namely financial performance (traditional) and non-financial performance is expected to reflect the strategic performance is not reflected in the measurement of short-term finance or accounting. Likewise, Henri (2006) argues that a comprehensive system which needs to be designed to measure performance in all important fields for an institution.

In the context of the university as a public institution, and lecturers as the actors within, performance measurement from non-financial aspects have actually been the greater focus than the organization of the business sector. This is because the public sector has a characteristic as an organization intended for public service, rather than gaining profit (Ulum & Sofyani, 2016). This means the performance of individuals in public sector is directed more to achieve the targeted benefits of welfare nature, in university context it is educational service quality, research and involvement in the community in certain empowerment or problem-solving activities. This is consistent with the concept of performance management for lecturer formulated by Gabedi Nicholas Molefe (2012) in the form of performance measurement dimension framework (See Figure 1).

It is important to note that to attract greater fundings (grants) from the government and other private donors, it is necessary to have sufficient assurance on the institutional success which is measured from the lecturer and institution's performance. These expectations can be fulfilled by empowering lecturers by effectively using a performance management

system (Molefe, 2010). Unfortunately, in the lecturer’s performance measurement in Indonesia, what actually happening is that the government merely sets the performance indicators which should be fulfilled with no mechanism being proposed to universities to achieve the performance. Kemenristekdikti seems to assign this duty to the universities themselves to prepare their own strategies. This absence of references and standards leads for the failure of many lecturers in Indonesia to achieve the performance they set.

Neely (2005) suggests that PMS fail to give a positive impact on performance when it is designed with new organizational environment and needs. For example, the tight coercion by Kemenristekdikti to improve lecturer’s performance, particularly in terms of international publication and cooperation with various campuses abroad, can only be fulfilled by those campuses with great resources and stable good governance, and ability to adapt to the new global educational climate. Nevertheless, when seen in universities with relatively fewer (human and financial) resources, then this performance improvement effort has been less effective. The main problem is the absence of a good PMSL design. Re-designing PMSL is a process which should be accomplished as a functionality implanted from a strategic management system (Pinheiro de Lima, Gouvea da Costa, & Angelis, 2008) to ensure a performance quality improvement (Franceschini & Turina, 2013).

From this reform phenomenon, as its implication, this PMSL study becomes something urgent to do (Rana, Hoque, & Jacobs, 2018). The traditional PMS began to be a hot and viable topic in the early twentieth century. Its usefulness and relevance became limited because of the highly rapid current development (Munir & Baird, 2016). It is this state of affairs which leads management accounting researchers (Hoque, 2014; Ittner & Larcker, 2001; Kennerley & Neely, 2002; Rasid, Ruhana Isa, & Khairuzzaman Wan Ismail, 2014) to criticize traditional PMS, particularly the climate change in the public sector (Moll & Hoque, 2008).

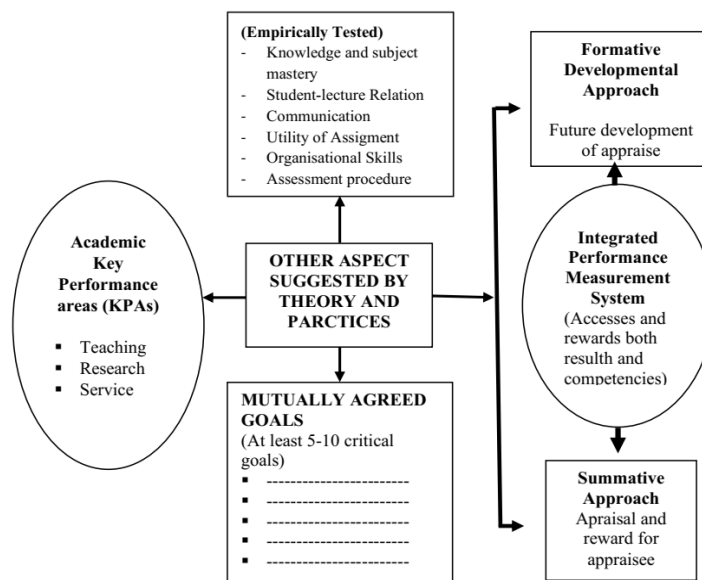


Figure 1. Conceptual Framework of Lecturer’s Performance Measurement Dimensions

METHOD

This research aims at exploring the performance measurement system for lecturers practice in three different countries, and in particular in one university in Indonesia, then comparing it with the universities in other countries, in this case, Singapore and Turkey.

Table 1.
Research
Information
Codification

Code	Qualification	University	Country	Position/Experience
MLA	Full Professor	IMU	Turkey	Management and Organization Chair
ASM	Full Professor	MY	Indonesia	Chairman of the university senate
SKM	Associate Professor	MY	Indonesia	Vice Rector for Academic Affair
AP	Associate Professor	IT	Singapore	Member of Information Systems Audit and Control Association (ISACA)

Thus, the multiple-case study is conducted to investigate the PMSL phenomena to be captured (Fahlevi, 2016). The focus of this research is on exploring how the strategies are implemented by the said universities in achieving the lecturer's performance target set by their respective country. This research will also formulate a new model of performance measurement for lecturers in Indonesia which is based on the research's findings. Singapore is chosen for comparison for this country is one of Indonesia's close neighboring countries yet their university ranking is relatively better. Meanwhile, Turkey is chosen for this country is one of those European countries whose education is developing rapidly and it has fairly tight educational cooperation with Indonesia.

The data of this research come from the informants of one of universities in the countries being studies with a criterion that they are assuming an office or function related to PMSL policy in their respective universities. The detail of informants is presented in Table 1. The invitation to participation in the study is sent via email. The informants are informed about the study, its objectives, and what information is being sought for. The data are obtained using semi-structured interviews. Before conducting field interviews, we first formulated the interview protocol consisting list of the questions. Some experts were involved to assess whether the questions were relevant to answer the research problems and to reach the research objectives. After getting a few suggestions, the interview protocol was improved. The detailed basic questions of this research are presented in Table 2.

The informants suggesting their interest to participate are contacted to set the right time, and to them a copy of the interview guideline is given. These informants are confident that their information is used only for the purpose of research, therefore their anonymity and specific matters will be handled with care. The recorded data are then transcribed using word per word. Technically in the field, when it seems that elaboration is needed, then the researcher would provide further questions to the informants, in particular concerning interesting findings obtained from the informant's responses.

The data are analyzed using thematic-deductive analysis approach suggested by Braun and Clarke (2006) and Sofyani, Akbar, and Ferrer (2018). This approach focuses on analyzing the structure of primary data obtained from the interview to find the general theme contained in the data. Several steps needed to analyze the qualitative data include processing and preparing data for analysis by transcribing the interview as adjusted with the source of information, data coding, categorization, and conclusion drawing (Creswell, 2012). The data validity testing is done by re-checking the transcript to ensure that no error

is made during the transcription process. As to ensure the data reliability, a question-answer among fellow researchers (peer de-briefing) is done to increase the research result accuracy (Creswell, 2012).

No.	Item of Question	Objective
1	Can you please explain what aspects are assessed for the lecturer's performance measurement in your country?	To explore the main aspects applied by the government in the local country to universities in measuring their lecturer's performance.
2	How is the teaching and learning model applied in your university to support the generation of globally competitive students?	To find a picture of the policy model implemented in the research object university in relation to the teaching and learning quality management aspect which generates graduates with good global competency.
3	What strategy is employed by your university to motive the lecturers in your university to be high-achievers at global level so that they can support your university to be wordclass university (Does it use a mechanism of coercif, incentive nature or so forth, please specify) ?	To find the general pattern of university policy in motivating lecturers to be high-achievers at international level.
4	What kind of policy is implemented in your institution which aims at increasing the number and quality of lecturer's research & publication, particularly at international level?	To explore the policy model implemented by the university to specifically increase the number and quality of lecturer's research & publication at international level.
5	What kind of policy is implemented in your institution which motivates lecturers to improve their participations in the community?	To explore the policy model implemented by the university which can motivate lecturers to improve their participation in the community.
6	Can you please shortly tell us how is the application of performance measurement system to improve lecturer's performance in your university?	To obtain the general description in relation to PMSL policy practices implemented in the university. This question will be the basis for further questions related to the technical and specific aspects, as well as the uniqueness of how a university's PMSL is designed.

Table 2.
Initial questions and the purpose of exploration

RESULTS AND DISCUSSION

PMSL in Indonesia and Policy in MY

PMSL in Indonesia is commonly known as *Pedoman Beban Kerja Dosen dan Evaluasi Pelaksanaan Tri Dharma Perguruan Tinggi* issued by the Minister of Education in 2010. The point of this policy has something to do with the Lecturer's Workload Evaluation Report or *Laporan Evaluasi Beban Kerja Dosen (LEBKD)*. In this LEBKD, three aspects are used as the benchmark of lecturer's performance, namely teaching, research and community service. In simpler way, these Indonesian lecturer's performance indicators are presented in Figure 2.

These three main aspects have three further derivatives, namely for teaching aspect involves: having classes, advising and testing final projects, and writing teaching materials (books, module, handout). For research aspect, it includes conducting research and

publishing research-based article in a scientific journal. Meanwhile, The last main aspect is performing or participating in an activity related to the application of research result in the community to solve the occurring social issues.

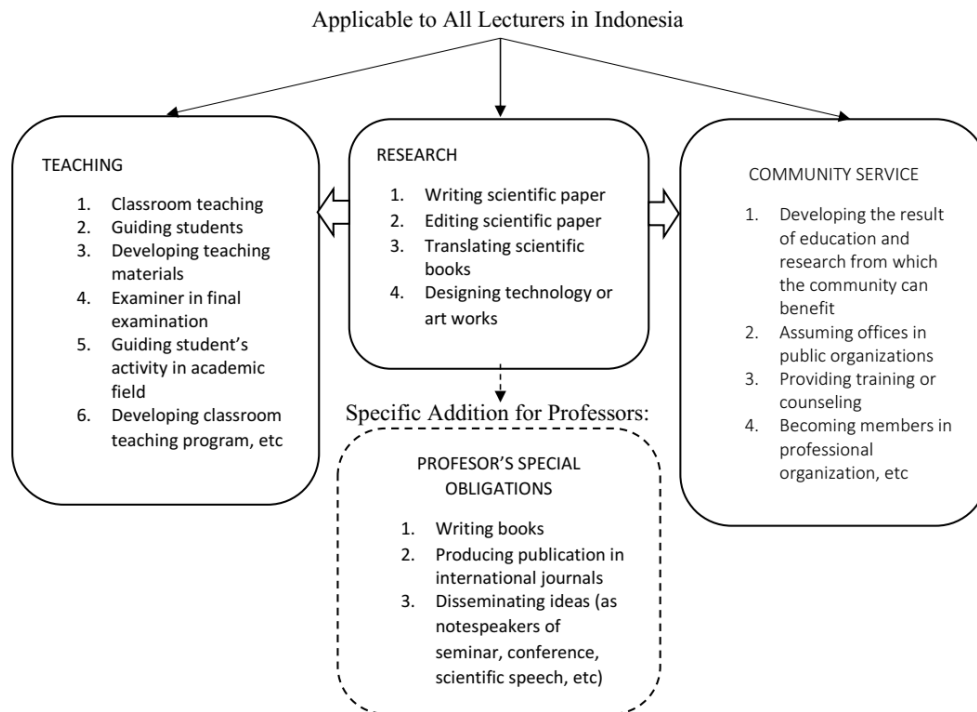


Figure 2.
Indonesian
Lecturer's
Performance
Indicators

While this PMSL has been governed by the Ministry of Research, Technology and Higher Education or *Kementrian Riset Teknologi Dan Pendidikan Tinggi* (Kemendikristekdikti), the ministry still tolerate when a university makes additional aspects of performance measurement as long as it does not deviate from the previously established regulations. For example, for Islamic universities, it has been common to include the obligation to participate in Islamic propagation, as in the case of Universitas Muhammadiyah Yogyakarta.

From the perspective of the policies implemented by the government in supporting lecturer's performance, Kemendikristekdikti provides research and community service grant schemes for lecturers in all universities with various competition schemes. In fact, this policy still has many problems. Firstly, the amount of fund provided by Indonesian government is relatively small compared to the neighboring country such as Singapore and Malaysia. This is because the budget amount allocated in APBN is highly limited and the number of existing universities and lecturers are so large. Secondly, the output of research and community service grants used to be (until 2015) merely in the form of research report, rather than scientific publication in reputable journals. As a result, the funds disbursed to support lecturer's performance cannot actually contribute to the improvement of university's quality and reputation.

To deal with the limited amount of grant fund from the Kemendikristekdikti, which might not necessarily be won by a university, many universities in Indonesia allocate the budget from their internal fund to support the activities which are directed to lecturer's performance (researching, publishing research result, writing books, and serving the community). The weakness of this policy is that only universities with great income can produce research, publication, and high-quality books for they are supported by great amount of budget. For

universities with lesser income, the research conducted by their lecturers usually do not show great quality to be published in globally reputable journals. It is even often found that no adequate incentive is available to support the activities which serve as lecturer's performance indicator, such as writing books, serving the community and researching.

Additionally, universities with great income will usually invite Professors from abroad with better research and publication qualities, and then they are asked to be research partners. Their visit is usually for sharing knowledge related to research quality and scientific publication improvements. Yet, once again, such a program requires relatively great amount of budget. In other words, the main problem of performance measurement system for lecturers implementation is that no sufficient support is available from the government, particularly in relation to the improvement of lecturer's capability in improving their performance globally and also to the minimum reward being offered.

In MY case itself, it is safe to say that the implementation of PMSL is fairly structured since it is supported by lecturer's performance assessment information system and performance incentive. Based on this information system, the university can monitor to what extent the lecturer's performance achievement has progressed (#SKM). This IS also produces outputs in the form performance unit score, wherein when a lecturer can achieve the minimum score, they will then obtain a reward which can be received on a monthly basis (#SKM).

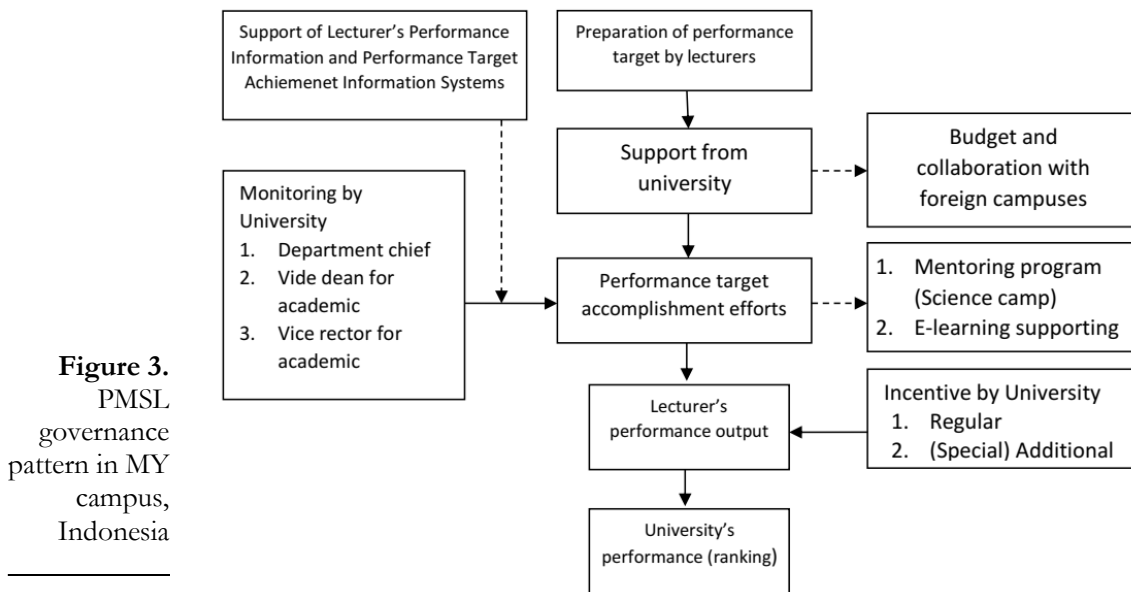
In addition to IS and reward, the effort made by the university to improve lecturer's performance is building collaboration with top universities abroad, particularly in terms of research, teaching and data sharing² (#ASM). Furthermore, to improve the teaching and learning quality towards global standards, MY do some benchmarking to reference books and learning materials in Singapore and Australia. What has been done by the Civil Engineering department can be an example of it. This aims to allow the graduates of MY to speak not only at national level, but at world level as well.

On their way to improve the performance of lecturers in MY in relation to the aspect of publication in international journals, it is found that some of them lack self-confidence for having so little experience. This makes the percentage of lecturers writing articles which are published in reputable international journals very low, i.e. only around 5% of around 660 lecturers (#SKM). To promote improvement, the university establishes a policy of holding mentoring for lecturers with great potentials to write in reputable international journals they call as Science Camp program. This program is implemented by bringing lecturers to register to hotels in tourism spot, to allow better mood and concentration of these lecturers, thus triggers inspiration to write. This program initiated just recently in 2017 is quite successful in increasing the percentage of lecturers who write articles in international journal to 20% in Science Camp 1, and it is targetted to be 35% in Science Camp 2 (#SKM). To gear up these lecturers to write in internationally reputable journal, the university also provides special incentive amounting to five times their basic salary (#SKM).

Lastly, the strategy in MY to improve lecturer's performance is by optimizing e-learning. At MY, those lecturers who optimize their e-learning also receive huge incentive. This aims none other than reducing lecturer's job overload, for 49% of the total classes can be performed via e-learning. This e-learning helps lecturers increase their time efficiency and

² In Indonesia, data sharing refers to the deployment of junior lecturers to campuses with higher rankings than MY, mostly abroad, with an intention of providing them with more advanced academic experience.

save them from bringing heavy equipment such as books, bags, and notebooks to classes since all materials have been available in the e-learning system (#ASM). In addition, this e-learning can also be operated for public lecture where notespeakers such as professors from abroad can be invited, as what have been done by the Civil Engineering department (#ASM). From the research findings in MY, we formulate a PMSL pattern as presented in Figure 3.



PMSL in Singapore and Policy in IT

Compared to Indonesia, the model of performance measurement system for lecturers in Singapore is significantly different. In this country, the government formulates PMSL according to the types of universities which are divided into three: academic, vocational, and post-secondary studies. Academic universities are more driven to produce academic research, rather than teaching. Therefore, research and publication become indicators with greater weights (#AP). Furthermore, another aspect included in PMSL is community service.

“Academic universities generally emphasize more on academic research aspect than teaching. Such emphasis is done to those lecturers in research track. This aspect is not really emphasized to those lecturers in teaching track. Another aspect is service to universities, for example assuming certain offices in universities.”

Furthermore, for vocational universities, research (including publication) and teaching aspects have balanced portions in their mechanism of measuring lecturer's performance. Lecturers should have good industry-based vocational teaching and research performances (#AP). However, the focus of research developed by lecturers in such a university should be based on vocational discipline which can actually be implemented in industry. In these universities, community service also becomes the main aspect measured in PMSL.

“... in Singapore, for vocational universities, PMSL is implemented in different ways from academic campuses. In vocational campuses, the teaching and research

(particularly vocational research) aspects have relatively balanced weight. Another aspect is the same as in academic universities, i.e. service to university.”

Finally, for post-secondary study universities, the lecturers here focus more on teaching process. The lecturer’s performance indicator in such a university is mostly in teaching aspect, rather than research and publication. Just as the case with other two university types, lecturers in such a university are also demanded to be involved in community service (#AP).

“... Post-secondary study universities in Singapore focus more on teaching full-time and part-time students. Part-time students are generally those who have had occupation. The proportion of teaching in such a university is higher than the academic or vocational research. Another aspect is that they will also be assessed for their performance of service to university.”

In IT Singapore, the effort to improve performance is done seriously. In terms of the mechanism made by the university to motivate their lecturers to achieve an optimal performance, a coercive and incentive mechanism is applied (#AP). The coercive mechanism requires lecturers to publish their research within a certain term (two or three years), in a certain number and in a reputable international journal. The university will also evaluate their lecturers’ teaching performance tightly. When they can do it, the university gives incentive in the form of grant fund internally, and inform them external grant fund opportunities. While in the Singapore campuses the demand for research is quite high, junior lecturers will be supervised by a special team called as applied research committee to improve their research and publication quality.

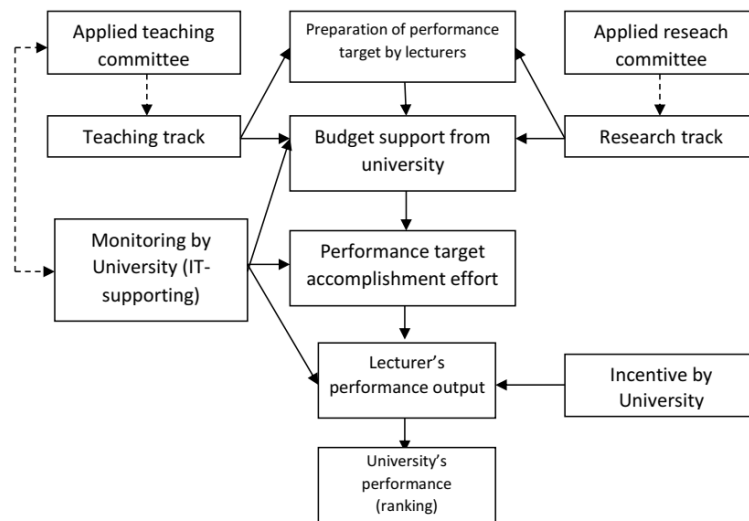
“The journal should meet the criteria of The UTD Top 100 Business School Research Rankings, ABDC Journal Rangkings (Rank A* and Rank A), and Scimago Journal Rank (Q1). When lecturers in these academic universities can publish their research according to the predetermined criteria, they will receive incentive in the form of tenor position in the said university. The university gives incentive in the form of grant fund internally, and inform them external grant fund opportunities. The university will also evaluate their lecturers’ teaching performance tightly. The evaluation is made twice in a semester or trimester.”

An interesting finding in Singapore in relation to the effort of their university to increase the number of publication is that they do so by placing their lecturers based on their passions (#AP). For example, those lecturers with strong passion in research and publication fields will be directed to be lecturers at academic universities, and lecturers who love teaching and learning activities will be directed to post-secondary education universities. This policy is implemented not when an individual has been a lecturer, rather they do so since the recruitment process.

“While universities in Singapore have a good research performance, they remain aware that each lecturer tend to have specialty in one aspect, whether it is research or teaching. Therefore, those with good research performance will be motivated to be lecturers in research track, and those with sound teaching performance will be placed in teaching track. This way, the research performance can be increased optimally.”

“Those in research track with good research performance will not be assigned with high teaching hour loads. And those in teaching track is assigned with higher teaching hour proportion, since they have good teaching ability. The same applies to practice track, their teaching hours are higher than those in research track.”

Figure 4.
PMSL
governance
pattern in IT
campus,
Singapore



In terms of teaching, in order to generate graduates with global competency, in Singapore lecturers are demanded to update the knowledge in the field they are specialized in. This is done by participating in international conference and conducting up-to-date research. In addition to knowledge, lecturers are also demanded to update their teaching method to match the current development. This activity is monitored by Head of Department and Faculty and supervised by a special team called Applied Teaching Committee (#AP).

“Lecturers are constantly demanded to update their knowledge in their discipline. In addition to updating the knowledge they have, lecturers should also continuously update their method of teaching students to match the increasingly faster development of information technology.

Furthermore, for participation in the community, Singapore decides that the research conducted by lecturers is part of community service. This is because they think the outcome of research will eventually be technology or policy which will be benefited from by the community even when it is not in direct manner (#AP). Therefore, no special strategy is found to improve this activity. From the study findings in IT campus, Singapore, a PMSL pattern can be formulated as presented in Figure 4.

PMSL in Turkey and Policy at IMU

Three main aspects are used by Turkey government in measuring lecturer's performance, namely teaching, academic achievement, and job suitability aspects. For teaching aspect, it is measured by students, and academic achievement and job suitability aspects are measured by assessors assigned by the university. The strategies to improve performance applied by the university are motivating the academic staff to collaborate with universities and academics from abroad in organizing events at international level such as conference and seminar, improving academics and student standards, and more importantly visiting other academic institutions abroad through Scientific Research Project Unit, which supports the project and mobility proposed by the program. This policy is implemented optionally, rather than coercively. Additionally, the university provides bonus to gear up lecturers to achieve higher academic achievement, i.e. giving monthly bonus (#MLA).

“PMSL in Turkey includes three aspects, namely: Teaching (measured by student surveys), Academic achievement (measured by Academic Incentive Program, a monthly bonus added to payment and calculated according to number of publications,

attendance to scientific gatherings, scientific projects, awards, number of references etc. Last, Work congruence (measured by number and volume of assignments and duties offered by top management)”.

From Turkey government themselves, they launched a policy effectively applicable in 2016 in the form of a national incentive system called as Academic Incentive Program which was applied to all universities in Turkey. Reflecting lecturer's academic performance, this system assigns score to each academic activity. When a lecturer scores the perfect point, they will earn around 25% extra bonus of their monthly average salary. Despite its less ideal initial implementation, several academic studies indicate that this incentive system works well to improve lecturer's performance, since it makes them eager to produce more scientific paper and diverse their publication (#MLA).

“Turkey government takes part in promoting lecturer's quality. They launched the so-called Academic Incentive Program which was applied to all universities in Turkey. This policy is equipped with incentive in the form of additional salary received by lecturers who successfully fulfill the requirement in a monthly basis.”

In terms of their effort to increase lecturer's publication, they build a (#MLA) model consisting of three aspects of improvement:

1. Pedagogic. There should be a learning environment which can nurture lecturer's mentoring and supervision skills. This derives from the fact that not all lecturers, particularly the junior ones, have extensive experience in publishing their works in reputable journals. Under such circumstance, supervision from senior lecturers and professors is needed.
2. Knowledge management. The university should have an information system to trace, evaluate and organize lecturer development. There should be an environment which supports and nurtures lecturer's information literacy skills.
3. Administrative support. There should be an incentive to promote international mobility, network, and cooperation. In this case, lecturers should be motivated to be part of academic parent organization and create new networks in their fields.

Furthermore, in terms of increasing lecturer's participation in the community, IMU does it by motivating lecturers to be part of non-profit organization's project (public sector). This motivation is of course coupled with incentive (#MLA). The Turkish lecturers' activity in public institutions is part of community service, which is also found in Singapore.

“We always encourage the IMU Lecturers to become part of the project in public institutions. Being a member of a nonprofit organization should be an incentive for a lecturer. I think each faculty member may find a venue to participate this kind of activities according to his or her personal orientation and interests. For instance, lecturers on business management may find opportunities with chambers and lodges. Likewise, lecturers on education may find teaching and learning opportunities through public schools. Last semester, our ten lecturers taught at ten prominent high schools as a part of one of our University's social responsibility projects.”

In terms of improving the lecturer's performance quality with global competitiveness, IMU believes that designing and applying incentive system require assessment and understanding of individual differences. Since academic staff is the university's intellectual capital and intangible assets which are hard to measure, there is no best way, rather it is what can be done as best as one can to improve it (#MLA), and they include:

1. Establishing a valid assessment system and setting global standards to measure lecturers.

2. Making material being taught globally meaningful and interesting.
3. Applying teaching methods that encourage active and cooperative learning.
4. Encouraging independence and innovative ways to improve teaching methods.

In short, the PMSL model in IMU Turkey is presented in Figure 5. From the findings described in previous sections, the researchers summarize it in Table 3 showing comparison of PMSLs in Indonesia, Singapore and Turkey and Table 4 explaining comparison of PMSL Strategies in Indonesia, Singapore and Turkey.

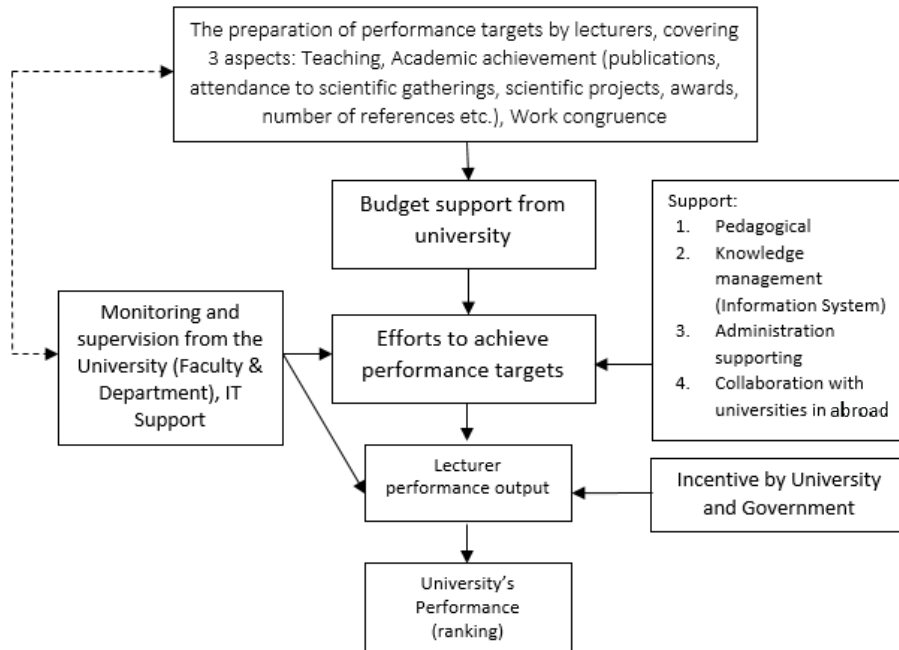


Figure 5.
PMSL
governance
pattern in
IMU campus,
Turkey

Indicator/Country	Indonesia	Singapore	Turkey
Teaching	There are specific rules regarding the amount of teaching times as distinguished based on lecturer's functional office, lack of functional office, expert assistant, lector, chief lector, and professor. For example, regular lecturers have a minimum of teaching hours of 12 SKSs (equal to 50 minutes x 12 = 600 minutes or 60 hours). It is evaluated by the ministry.	It is assigned more for lecturers in post-secondary education universities, and lower weights for lecturers at academic universities. For lecturers in vocational universities, their teaching weight is equal to that of vocational (industry-based) research. It is evaluated by the universities.	The number of classes taught by a lecturer is around 1 to 3. Lecturer's performance from teaching aspect is assessed by students, and the information will be used by the universities for their evaluation of the performance of the lecturer being assessed.

Table 3.
Comparison
of PMSLs in
Indonesia,
Singapore and
Turkey as
Seen from
Lecturer's
Three Main
Duties

Indicator/Country	Indonesia	Singapore	Turkey
Research and Publication	<p>Treatments are varied for lecturers with different functional offices, namely:</p> <ul style="list-style-type: none"> • Expert assistant and lector should at least have 1 article in journal with ISSN • Chief lector should at least have 1 article in Sinta 1 or 2-indexed national journal or 1 article in non-reputable international journal. • Professor should have at least 1 article in reputable (Scopus- or Thomson Rouser-index) international journal 	<p>It is assigned more to lecturers from academic universities and less to lecturers in post-secondary education universities</p>	<p>It is included in the aspects of the so-called Academic Achievement. Evaluation of this aspect is calculated according to number of publications, attendance to scientific gatherings, scientific projects, awards, number of references etc</p>
Community Service	<p>It becomes a complementary obligation, at least once a semester. The activity should be in the form of direct participation in the community.</p>	<p>Lecturers may not be participate directly in the community. This activity is deemed as inherent to the research conducted by lecturers since the research outcome will eventually be enjoyed by the community.</p>	<p>Similar to Indonesia, lecturers are encouraged to get involved in public development by being directly involved in public institution's activities. However, this aspect is not mandatory in PMSL. Assuming an office in the university is considered as</p>

Indicator/Country	Indonesia	Singapore	Turkey
Assuming Office in University	It does not serve as a main indicator, rather it serves as a reduction of teaching performance obligation indicator. Therefore, lecturers should still visit the community to serve them.	It is deemed as a community service.	having performed community service. It is deemed as a community service.

284

No.	Country	Strategy	Organizer	Explanation
1	Indonesia (MY)	Lecturer certification	Ministry	It is organized by the Ministry of Research, Technology and Higher Education or Kemenristekdikti to encourage lecturers to fulfill their mandatory performance indicators. Certified lecturers will receive incentive at 1x monthly basic salary. However, those who fail to meet their mandatory performance indicator will lose this incentive opportunity.
		Incentive for associate professor	Ministry	Chief lector has higher publication obligation than regular lecturers (with expert assistant and rector ranks). With this greater

Table 4.
Comparison
of PMSL
Strategies in
Indonesia,
Singapore and
Turkey

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9.3

No.	Country	Strategy	Organizer	Explanation
		Incentive for Full Professor	Ministry	obligation, they are also provided with greater incentive. However, the incentive would not be given to those failing to fulfill the provision of minimum number of publications, i.e. one article in International journal or Sinta 1 or 2- indexed national journals. Full Professor has specific obligations (see Figure 1). They also receive special incentive which is not given to those who fail to meet the special duty requirements for Full Professor.
		Incentive for publication in reputable international journal	Ministry and university	This incentive is provided by Kemenristekdikti for those who successfully publish their work in Scopus Q1- or Q2-indexed journals. In addition, in certain universities additional incentive other than the one received from Kemenristekdikti is usually given.
		Supervision	University	This policy is

No.	Country	Strategy	Organizer	Explanation
		Ranking Scheme	Ministry	<p>organized in the form of senior lecturer or full professor mentoring to assistant professor or junior lecturers to write scientific paper in reputable international journal. This policy is conducted by university initiative, not by government. Government deliberately stimulate universities in Indonesia by announcing their rankings from various categories. This policy is also coupled with incentive for developing the universities. For example, universities and individuals with highest number of publications will receive award from Kemenristekdikti in Sinta Award program.</p>
		Unit Performance Indicator	University	<p>The university involve lecturers in preparing independently the performance target they will have to achieve for a year, and</p>

No.	Country	Strategy	Organizer	Explanation
2	Singapore (IT)	Preparing lecturer's track	Ministry and university	then the university will provide the budget and also supervise and monitor their efforts to achieve them. PMSL is prepared based on lecturer's track categorization, whether their focuses are on research or teaching.
		Incentive for research and publication from internal and external parties	Ministry and university	Any lecturer successfully publishing their articles in reputable international journal will be given incentive by the university and they have the chance to receive external grant from parties beyond the campus or even from abroad.
		Tight monitoring by the university	University	The campus has prepared budget and work plan for lecturers. From this information, the university can monitor their lecturer's performance on a monthly basis.
		Participation in preparing performance targets	University	The university involves lecturers in preparing independently the performance target they will

No.	Country	Strategy	Organizer	Explanation
3	Turkey (IMU)	Academic Incentive Program	Ministry	<p>have to achieve for a year, and then the university will provide the budget and also supervise and monitor their efforts to achieve them. What makes it different from Indonesia is that the activity is adjusted to the lecturer's track, whether they are those focusing on research or on teaching.</p> <p>The program is made by Turkish ministry of higher education to improve lecturer's performance in three main aspects (teaching, academic achievement, and congruence work). Incentive amounting to 25% of monthly salary is given by the government.</p>
		Pedagogic/mentoring/supervision	University	<p>Assistance program for junior lecturers to improve their performance in three main aspects.</p>
		Knowledge management	University	<p>It is supported by an information system on lecturer's performance track and career path.</p>

No.	Country	Strategy	Organizer	Explanation
		Administrative support	University	The easiness and support of handling administration to perform lecturer's three main duties.
		Support of collaboration with top universities outside of Turkey	University	The university encourages collaboration in the effort of improving the academics and student standards and Scientific Research quality.

Discussion

This research's findings explain that the PMSL pattern at IT Singapore will be different for lecturers with different categories. Lecturers in academic universities will focus more on research than on teaching, and on the contrary lecturers in post-secondary education universities will focus more on teaching than on research. Meanwhile, vocational universities have equal teaching and research weights. From this condition, IT can maximize their lecturer potentials to achieve the optimal institutional performance. This is consistent with the job focus concept as suggested by McDonald and Siegall (1992) who state that individuals tend to have more convincing behaviors of their job targets when what they do have clear and focused specifications.

Specifically experience job satisfaction (*job satisfaction facets*). Such state of affairs will have positive impact on performance improvement. From here onward, the goal setting theory concept in PMSL needs to consider such aspects as lecturer's job satisfaction and passion to allow the achievement of optimal performance.

PMSL model applicable in Indonesia is still too general for all lecturers. This is because the categorization of universities in Indonesia is not coupled with PMSL pattern diversification. In fact, study, research and vocational universities have similar performance benchmark. From these differences in functional offices, a different pattern of performance measurement system for lecturers surfaces. For example, research and publication are mainly assigned to lecturers with chief lector office and professor. Nevertheless, many campuses do not apply this stratification policy. Lecturers at any level are demanded to perform similarly with an equal workload. Once again, the presence of a clear PMSL pattern which matches the university type culture becomes highly important.

One of the different aspects between Singapore and Indonesia in regard to community service or participation in the community is that it stands alone in Indonesia while in Singapore this aspect has been inherent to the academic or vocational research they conduct. For those lecturers who have conducted research on topics which have something to do with social or public interests, or provide solutions for industrial issues, then the research is deemed to have some impact on the society or the industry and it is acknowledged as the form of lecturer's community service. This pattern is also applicable in Turkey where assuming the office of a department chief, dean, or other offices in the

university (public institution), is considered to have served the community. If the same pattern is applied in Indonesia, it is highly likely that it will have positive impact on lecturers in Indonesia, considering that assuming an office in universities is frequently time-consuming for dealing with administrative issues, thus it is quite often that a university official no longer has adequate time to visit the community to serve them. This is as suggested by Jones, Chonko, Rangarajan, and Roberts (2007) on job overload. They say that the job overload as a result of time pressure along with the many commitments to be accomplished in their duties have made people lose their focus and stressed and it eventually leads to work performance decline. Several strategic policies can be performed in the presence of online learning or e-learning and information system-based bureaucracy to allow a fast, easy and time-effective handling of administrative issues as implemented in the three universities in this study.

In addition to their differences, these three campuses in the three countries have something in common, i.e. the lecturers participate in determining the performance measurement. This activity gives positive impact on performance since the lecturers share more awareness of their responsibility to achieve the performance targets they have decided themselves. This is consistent with the concept of participation in improving performance (Cooke, 1994; Irawanto, 2015; Nazaruddin & Setyawan, 2011). This finding provides an additional view that a PMSL concept which derives from goal setting theory also requires subordinate's participation to determine the performance target, in this case the lecturers themselves, in addition to the strategic targets set by leaders at the university. The relation between PMSL and this participation in determining performance targets is interesting for study using hypothesis testing in a statistic fashion.

Another interesting finding is that when viewed from its PMSL pattern, MY which represents Indonesia seems more aggressive in encouraging its lecturers to perform. This can be seen from the special (additional) incentive when the international level performance can be reached. It can also be seen from the existence of science camp (mentoring) program. In our opinion, this cannot be separated from the condition of MY organization whose members are mostly characterized by old-generation educators, i.e. a culture when Indonesia's higher education focuses only on teaching at classrooms. Most lecturers in MY hold Master degree. These old-generation lecturers do not possess sufficient experience in conducting collaborative research between countries nor scientific publication in top international journal. Therefore, when they are demanded with higher performance targets in the current new university climate, such as research publication in reputable international journal, these old-generation lecturers need supervision and additional trainings. Sofyani et al. (2018) explain that assistance (mentoring, supervision and training) and additional education, in this case in the form of science camp, is needed to improve employee's capability. Moreover, educations and programs alike can improve one's self-confidence to reach the targeted higher performance demand (Lovely, 2004). Unlike MY, both IT and IMU are state universities which are relatively younger, i.e. they were established in 2009 and 2010 respectively. During its establishment, lecturers are recruited through tight selection. As a result, the lecturers they recruited were chosen ones, graduated from doctoral (Ph.D) program, highly motivated, passionate, competent, mature in researching academic fields, and in possession of ability to perform highly. This allows the universities to not give too intense incentive and supervision. It is this condition which we conclude to be the reason why the PMSL pattern in MY (Indonesia) seems more like an ambitious effort than IT and IMU which relatively more stable in terms of their lecturer resources.

CONCLUSION

291

We find that the PMSL patterns in the three universities in three different countries are different. It is interesting to note that MY's (Indonesia) PMSL has higher aggressivity than IT (Singapore) and IMU's (Turkey) PMSLs. This might be due to the level of education lack of lecturers in MY (Master degree) as compared to IT and MY who on average hold doctoral degree. MY's aggressivity can be seen from the provision of special incentive for certain performance targets, and the intensive mentoring (Science Camp) program to improve lecturer's ability particularly in achieving their performance target of collaborative research with foreign campuses and international publication. Meanwhile, the policy in IT (Singapore) related to PMSL is highly brilliant, i.e. they make a lecturer performance target pattern which matches their tracks, either teaching or research. This helps lecturers focus more on their passion, allowing to reach job satisfaction and stimulate to perform optimally. In addition, in IMU Turkey, their leaders focus more on developing the three main aspects in improving lecturer's performance, i.e. pedagogic strengthening (mentoring), knowledge management, and administration easiness.

From many findings of this study, an insight is available for policy makers in Kemenristekdikti of Indonesia, particularly, in terms of refining the PMSL policy model for Indonesian universities to make it a trigger for improving lecturer's performance to make them competitive at global level (Global Achievement). In a more concrete sense, performance measurement should be coupled with a PMSL which matches the university's environment, such as an adjustment according to the types of university (research, study, vocation). Such supports as IT, easy bureaucracy, acknowledgment of structural office as part of community service can be an effort of evading job overload, thus will lead to an optimal performance achievement by lecturers.

Finally, this research has its inevitable limitations. Firstly, this study only uses one university in one country as their representative. The results do not of course represent the phenomenon occurring in all universities in the three concerning countries. Secondly, this study is not longitudinal research. The exploration of information is focused only on result of interview with the informants. Thus, the conclusion from this research result in a wider scope should be drawn with great caution.

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REFERENCES

- Abdel-Maksoud, A., & Abdel-Maksoud, B. (2015). Developing a performance measurement model for agricultural extension agents: An interdisciplinary approach. *Journal of Accounting & Organizational Change*, 11(2), 215-246.
- Akbar, R., Pilcher, R., & Perrin, B. (2012). Performance measurement in Indonesia: the case of local government. *Pacific Accounting Review*, 24(3), 262-291.
- Amaral, L. P., Martins, N., & Gouveia, J. B. (2015). Quest for a sustainable university: A review. *International Journal of Sustainability in Higher Education*, 16(2), 155-172.

- Basri, Y. M. (2013). Mediasi Konflik Peran dan Keadilan Prosedural dalam Hubungan Pengukuran Kinerja Dengan Kinerja Manajerial. *Jurnal Akuntansi dan Keuangan Indonesia*, 10(2), 225-242.
- Behn, R. D. (2003). Why measure performance? Different purposes require different measures. *Public administration review*, 63(5), 586-606.
- Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Cavicchi, C., & Vagnoni, E. (2018). Sustainability performance measurement inside academia: The case of a north Italian University. *Journal of Accounting & Organizational Change*, 14(2), 138-166.
- Chenhall, R. H. (2005). Integrative strategic performance measurement systems, strategic alignment of manufacturing, learning and strategic outcomes: an exploratory study. *Accounting, Organizations and Society*, 30(5), 395-422.
- Cooke, W. N. (1994). Employee participation programs, group-based incentives, and company performance: A union-nonunion comparison. *ILR Review*, 47(4), 594-609.
- Cortese, A. D. (2003). The critical role of higher education in creating a sustainable future. *Planning for higher education*, 31(3), 15-22.
- Creswell, J. W. (2012). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. California: Sage Publication.
- Fahlevi, H. (2016). Understanding why the role of accounting is unchanged in Indonesian public hospitals. *Journal of Accounting & Organizational Change*, 12(2), 203-222.
- Franceschini, F., & Turina, E. (2013). Quality improvement and redesign of performance measurement systems: an application to the academic field. *Quality & Quantity*, 47(1), 465-483.
- Hammer, M., Haney, C. J., Wester, A., Ciccone, R., & Gaffney, P. (2007). The 7 deadly sins of performance measurement and how to avoid them. *MIT Sloan Management Review*, 48(3), 19.
- Henri, J.-F. (2006). Organizational culture and performance measurement systems. *Accounting, organizations and society*, 31(1), 77-103.
- Hoque, Z. (2014). 20 years of studies on the balanced scorecard: trends, accomplishments, gaps and opportunities for future research. *The British accounting review*, 46(1), 33-59.
- Irawanto, D. W. (2015). Employee participation in decision making: Evidence from state owned enterprise in Indonesia. *Management: journal of contemporary management issues*, 20(1), 159-172.
- Ittner, C. D., & Larcker, D. F. (2001). Assessing empirical research in managerial accounting: a value-based management perspective. *Journal of accounting and economics*, 32(1-3), 349-410.
- Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society*, 28(7), 715-741.

- Jones, E., Chonko, L., Rangarajan, D., & Roberts, J. (2007). The role of overload on job attitudes, turnover intentions, and salesperson performance. *Journal of Business Research*, 60(7), 663-671.
- Juhl, H. J., & Christensen, M. (2008). Quality management in a Danish business school—A head of department perspective. *Total Quality Management*, 19(7-8), 719-732.
- Kennerley, M., & Neely, A. (2002). A framework of the factors affecting the evolution of performance measurement systems. *International journal of operations & production management*, 22(11), 1222-1245.
- Locke, E. A. (1975). Personnel attitudes and motivation. *Annual review of psychology*, 26(1), 457-480.
- Locke, E. A., & Latham, G. P. (2013). *New developments in goal setting and task performance*: Routledge.
- Lovely, S. (2004). Scaffolding for New Leaders: Coaching and Mentoring Helps Rookie Principals Grow on the Job and Gain Confidence. *School Administrator*, 61(6), 10.
- McDonald, T., & Siegall, M. (1992). The effects of technological self-efficacy and job focus on job performance, attitudes, and withdrawal behaviors. *The Journal of Psychology*, 126(5), 465-475.
- Merchant, K. A., & Van der Stede, W. A. (2007). *Management control systems: performance measurement, evaluation and incentives*: Pearson Education.
- Millmore, M., Lewis, P., Saunders, M., & Thornhill, A. M. T. 2007. *Strategic human resource management: contemporary issues*.
- Molefe, G. N. (2010). Performance measurement dimensions for lecturers at selected universities: An international perspective. *SA Journal of Human Resource Management*, 8(1), 13.
- Molefe, G. N. (2012). Performance measurement model and academic staff: A survey at selected Universities in South Africa and abroad. *African Journal of Business Management*, 6(15), 5249.
- Moll, J., & Hoque, Z. (2008). New organizational forms and accounting innovations: The specifier/provider model in the Australian public sector. *Journal of Accounting & Organizational Change*, 4(3), 243-269.
- Munir, R., & Baird, K. (2016). Influence of institutional pressures on performance measurement systems. *Journal of Accounting & Organizational Change*, 12(2), 106-128.
- Nazaruddin, I., & Setyawan, H. (2011). Pengaruh Partisipasi Penyusunan Anggaran terhadap Kinerja Aparat Pemerintah Daerah Dengan Budaya Organisasi, Komitmen Organisasi, Motivasi, Desentralisasi, dan Job Relevant Information Sebagai Variabel Moderasi. *Jurnal Akuntansi dan Investasi*, 12(2), 197-207.
- Oebaidillah, S. (2017). Indonesia masih Minim Dosen Bergelar Doktor. Retrieved 08 august, 2018, from <http://mediaindonesia.com/read/detail/121751-indonesia-masih-minim-dosen-bergelar-doktor>

- Pinheiro de Lima, E., Gouvea da Costa, S. E., & Angelis, J. J. (2008). The strategic management of operations system performance. *International Journal of Business Performance Management*, 10(1), 108-132.
- Putu S, N., Jan van Helden, G., & Tillema, S. (2007). Public sector performance measurement in developing countries: A literature review and research agenda. *Journal of Accounting & Organizational Change*, 3(3), 192-208.
- Rana, T., Hoque, Z., & Jacobs, K. (2018). Public sector reform implications for performance measurement and risk management practice: insights from Australia. *Public Money & Management*, 1-10.
- Rasid, S. Z. A., Ruhana Isa, C., & Khairuzzaman Wan Ismail, W. (2014). Management accounting systems, enterprise risk management and organizational performance in financial institutions. *Asian Review of Accounting*, 22(2), 128-144.
- Snipes, R. L., Oswald, S. L., LaTour, M., & Armenakis, A. A. (2005). The effects of specific job satisfaction facets on customer perceptions of service quality: an employee-level analysis. *Journal of business research*, 58(10), 1330-1339.
- Sofyani, H., Akbar, R., & Ferrer, R. C. (2018). 20 Years of Performance Measurement System (PMS) Implementation in Indonesian Local Governments: Why is Their Performance Still Poor? *Asian Journal of Business and Accounting*, 11(1), 151-227.
- Ulum, I., & Sofyani, H. (2016). *Akuntansi (Sektor) Publik*. Yogyakarta: Aditya Media Publishing.
- van Helden, J., & Uddin, S. (2016). Public sector management accounting in emerging economies: A literature review. *Critical Perspectives on Accounting*, 41, 34-62.
- Verweire, K., & Van Den Berghe, L. (2004). *Integrated performance management: a guide to strategy implementation*: Sage.