

## What Motivate Faculty Member to Do Research? A Literature Review

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**Abstract:** In order to positioned them-self as a world class research university, many universities in developing countries attempt to increase research productivities while teaching activities still dominate the process of academic. Since, the productivity of research and publication is affected by the willingness of faculty member to do research, it is important to examine factors that can motivate faculty member to do research. This study aims to generate the single framework of research motivation, based on literature review towards various motivation theory. Using synthesis process from literature review, this study has developed framework for research motivation, consist of six dimension, namely: achievement, enjoyment, work it self, recognition, rewards and pressure. The indicators for each dimensions are carefully derived from empirical literatures.

**Key words:** Framework development, research motivation, literature review, theory, process

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### INTRODUCTION

Many universities, especially in developing countries are struggling to positioned them-self as a world class research university. Most of them attempt to increase research productivities whereas teaching activities are still dominating the process of universities. Many faculty members in universities in those countries are more willing to perform teaching instead of conducting research and having publication. Willingness to perform is usually called motivation. Research motivation is one of important factors that can be associated with prominent researcher. Intrinsically, research work and produce research output should be an achievement by faculty member as a researcher. It should make them be proud of their job, give them advancement and the work it self is meaningful and interesting for them. However, many faculty members conduct poor research only for fulfill the minimum requirement for promotion. There is a chance that the low research performance of faculty members also affected by extrinsic rewards in form of decent salary and pay for performance. Finding of one research said that empirically their research supports the argument that explain the role of both intrinsic and extrinsic motivation (Ringelhan *et al.*, 2013). Other research show that intrinsic motivation is positively correlated with research productivity, whereas extrinsic motivation is negatively correlated (Horodnic and Zait, 2015), however, other study (Chang and Mills, 2013) found that after

implementation of a point-based reward system, the respondent experience increasing in research activity. Many studies related to research motivation are conducted in vary perspectives, for example from perspective process theory of motivation such as expectancy theory (Estes and Polnick, 2012) but most of the studies are conducted in perspective of content theory of motivation that deliver question of what factors that are related to motivation. In the other hand, studies that focus on research productivity only mention motivation as one important factor that affect research productivity with lack of exploration in motivation theories literatures. This study aims to generate the single framework of research motivation, based on literature review towards various motivation theory. It is expected that with having this framework, researcher can develop the instrument to measure the motivation of faculty member to do research that have carefully considered a wide range of perspectives of motivation theories.

### Theoretical background

**Motivation literatures in general:** There are many theories of motivation proposed by scholars, one of them is the theory of two factors from Herzberg (1987) that is started to be investigated from 1959. Early study from Herzberg conducted towards accountant and engineer (Herzberg, 1987), therefore, theory form Herzberg is considered appropriate to be used to examine the context of knowledge worker includes academicians. Based on

twelve investigations, it is reported that there are factors that led to extreme satisfaction, namely achievement, recognition, work itself, responsibility, advancement and growth and some factors that led to extreme dissatisfaction namely company policy and administration, supervision, relationship with supervisor, work conditions, salary, relationship with peers and personal life. It must be understood that the study emphasizes that there are separate factors which producing job satisfaction and job dissatisfaction. Hygiene factor, according to Herzberg actually is not a factor that can motivate individual (Herzberg, 1987).

Although, there are several controversy regarding Herzberg's theory (Malik and Naeem, 2013) but the theory is still considered valid (Lundberg *et al.*, 2009). Some studies (Worlu and Chidozie, 2012; Mehboob *et al.*, 2009; Smerek and Peterson, 2007) find different result with the original theory of Herzberg where they said that both hygiene and motivator factors motivate individual. It is because those studies only examine job satisfaction variable and not include the job dissatisfaction variable in their investigation. Another study that conduct study in context of non knowledge worker also find different result with the original theory. It is also found that hygiene factors were the dominant motivators of sales man (Tan and Waheed, 2011). Based on previous study, can be concluded that both hygiene and motivator factors should be considered and examined as the determinants of motivation.

Currently, the terms hygiene and motivators factors are not common, instead, scholars use the terms intrinsic and extrinsic motivation. Some extrinsic factors that be considered as the most significant according to previous study include status and salary (Worlu and Chidozie, 2012; Smerek and Peterson, 2007). Although, extrinsic reward is important in motivating individual, other study emphasize the importance of intrinsic factors as it is the nature of human that should be understood clearly. From intrinsic factors, the 'work itself' indicators considered as the highest significant indicator (Worlu and Chidozie, 2012; Mehboob *et al.*, 2009; Smerek and Peterson, 2007). The work itself indicator is motivation that come from the factors embedded on the work itself, consist of five characteristics that can motivate individual, namely: task variety, task identity, task significance, feedback and autonomy (Hackman and Oldham, 1976). Theory that specifically explain both extrinsic and intrinsic motivation factor is Self-Determination theory (Deci and Ryan, 2008). Using Self-Determination theory, Barkoukis *et al.* (2008) explain the indicators of both extrinsic and intrinsic factors of motivation. According to them, there are several indicators that can be used to measure the intrinsic

motivation that lie in individual, namely: tendency to knowing something, to accomplish the job and experience stimulation. Tremblay *et al.* (2009) explained that Intrinsic motivation is the activity that individual choose because it finds interesting and satisfying to do. Also, intrinsic motivation creates individual doing some activities voluntary and because they want to do it. Other study measures intrinsic motivation from behavior indicators such as desire to do the activity, fully belong to people self and actively engage to their activity (Klymchuk, 2014).

Tremblay *et al.* (2009) divided extrinsic motivation into several different types. This distinction is based on extrinsic motivation that controlled by external factors or autonomous. The first type of extrinsic motivation is external regulation. External regulation is the activity that individual doing in order to get reward. Next is introjected regulation, the behavior that seen by behavior such as self-esteem and guilt. After that there is identified regulation which is activity that individual doing because it finds important have meaning or value. The last type is integrated regulation which refers to activity that individual sense as activity that has value. Can be concluded that extrinsic motivation affected by punishment, reward and someone that control their activity (Klymchuk, 2014).

**Research productivity-related literatures:** As have been mentioned in the first section, most studies of research productivity, when mention motivation as one of antecedents factors of research productivity, do not have complement them-self with strong theoretical foundation for the variables that have been developed in the papers. However, some studies use extrinsic and intrinsic reward as a basis in conceptual development of indicators. Meta analysis conducted toward international studies between 1988 and 2008 found that there are three cluster factors that were the most frequent investigated, includes, institutional characteristics, intrinsic motivation and knowledge, skills and other individual characteristics (Wills *et al.*, 2013). Other studies mention intrinsic motivation as psychological factor that significantly affect research productivity (Shariatmadari and Mahdi, 2012). Intrinsic motivation is consider related to factors such as job satisfaction (Tafreshi *et al.*, 2013) research preference/interest (Shariatmadari and Mahdi, 2012; Perry *et al.*, 2000) curiosity (Shariatmadari and Mahdi, 2012), autonomy (Shariatmadari and Mahdi, 2012), cumulative advantage (Fox, 1983; Bentley and Blackburn, 1990) feedback and peer recognition (citation) (Fox, 1983). Related to extrinsic factors, there are several studies that mention promotion system (Gregorutti, 2010) incentive

(Gregorutti, 2010), reward system (Shariatmadari and Mahdi, 2012; Chen *et al.*, 2010) salary raise, getting an admin assignment or chaired professorship and reduced teaching load (Wills *et al.*, 2013) as indicators for extrinsic motivation.

**Research motivation scales:** Some scholars have developed and validated a scale that be used to measure research motivation, although the validation limited to single country (Leech and Haug, 2016; Ryan, 2014) or even single field of discipline (Obilo and Alford, 2015) or one university (Deemer *et al.*, 2010). Some studies use faculty members as respondents (Deemer *et al.*, 2010) while others use student, from undergraduates (Smith *et al.*, 2014) or graduates program (Obilo and Alford, 2015; Deemer *et al.*, 2010; Litalien *et al.*, 2015). Although, there is also study that have been conducted in several countries in several languages to validate the instrument (Gagne *et al.*, 2015). Current research shows that there is no unique factor of motivation that yield higher levels of research productivity (Ryan and Mirabent, 2016). Thus, scholars put effort to develop one scale to measure research motivation by combining various factors. From theory perspectives, some studies used research motivation scale that is developed in tripartite model, derived from achievement motivation theory, intrinsic and extrinsic motivation (Obilo and Alford, 2015; Deemer *et al.*, 2010). Some studies simply use two factors of motivation: intrinsic and extrinsic motivation (Becker *et al.*, 2015; Horodnic and Zait, 2015). There are also studies that based on single theory such as Self Determination Theory (Litalien *et al.*, 2015; Gagne *et al.*, 2015). Some studies (Ryan, 2014; Ryan and Mirabent, 2016) use meta-theory that incorporates a wide range of motivation theories.

**MATERIALS AND METHODS**

This study is basically a conceptual paper which is based on literature review. From literature review authors concluded that currently there are five model of research motivation scale: classic model; tripartite model; self-determination model; meta-theory model and other model that derived from exploratory research. This study try to combine those five models into one framework.

**RESULTS AND DISCUSSION**

Classic model refer to the Herzberg (1987)’s two- hygiene and motivator-factors model. In addition to Herzberg Model, researchers used job characteristic model to explore the characteristics of job’s factors of

Table 1: Dimensions and indicators of research motivation

Dimensions	Indicators
Achievement	Curiosity Accomplishment Advancement, growth
Enjoyment	Enjoyment, actively engage, pleasure Interesting, research interest Passion, love, desire
Work itself	Meaning, significance, important Task variety Task identity Autonomy Feedback
Recognition	Recognition, status
External rewards	Financial rewards Promotion
Pressure	Institution policy Work environment

motivation. Tripartite model of research motivation derived from from achievement motivation and self-determination theory that consist of three dimensions: failure avoidance; extrinsic reward and intrinsic reward (Deemer *et al.*, 2010). Meta-theory model (Ryan, 2014) consists of five dimensions, namely: Instrumental motivation (rewards); intrinsic process motivation (fun/enjoyment ); goal internalization; internal self-concept (values) and external self-concept motivation (recognition). Self-Determination Model (Gagne *et al.*, 2015) consists of amotivation, external regulation (social), external regulation (material), introjected regulation (self-esteem), identified regulation (meaning), intrinsic motivation (enjoyment). Other model derived from exploration studies (Chaiyasoonthorn *et al.*, 2014 ) consists of: internal goals (curiosity, altruism, productivity achievement uch as books, licenses or patent; self-actualization; to be a role model external goals(financial rewards, promotion); pressure (research environment, obligation) and love (love to do research). From those models, researcher come up with synthesis of six dimensions, namely: achievement, enjoyment work it self, recognition, rewards and pressure. Researchers are fill in each dimensions with indicators derived from literatures as seen in Table 1.

**CONCLUSION**

Using synthesis process from literature review, this paper has developed framework for research motivation, consist of six dimension, namely: achievement, enjoyment, work it self, recognition, rewards and pressure. The indicators for each dimensions are carefully derived from empirical literatures.

## RECOMMENDATION

In future research, process of validation can be done to validate the instrument that developed using this framework.

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