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Academics' research productivity dynamics: psychological needs, research orientation, and desire for recognition

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ABSTRACT

Malaysian higher education institutions aim to improve their reputation and visibility by focusing on research publications. Consequently, they face complexity in motivating research productivity compared to the high demand for academic research output and diversity of academics. This paper aims to fill the knowledge gap in investigating the dynamics of research productivity through the interplay of psychological needs satisfaction (PNS) to share knowledge, research orientation, and desire for recognition as intrinsic motivators. This quantitative research surveyed academics (N=310) in public and private Malaysian universities and data was analyzed using partial least squares structural equation modeling (PLS-SEM). The findings revealed that both research orientation and desire for recognition play a critical role in motivating academics' research productivity. Additionally, the study demonstrates that when academics perceive their psychological needs as satisfied, they engage in knowledge-sharing behavior (KSB), which positively affects research productivity, though not as significantly as previously assumed. The study contributes to the literature as pioneering research investigated the role of research orientation, and desire for recognition in motivating academics' research productivity. It widens the decision makers awareness in higher education institutions to understand the intrinsic motivations of research productivity that motivate them to develop research productivity policies.

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1. INTRODUCTION

In recent decades, the higher education industry that helps a country's knowledge-based economy thrive has become increasingly multi-layered and complex with the expansion in discipline knowledge and rising societal demand on academic research output as knowledge contribution [1]. Malaysian educational institutions pursue to improve their reputation and visibility in the public, commercial, and educational landscape; hence, their scholarly publication production is critical to contribute to the creation of new knowledge, raise their reputation and ranking, foster entrepreneurship, and innovation and improve the quality of their academic staff, all of which strengthen the institutions' and the nation's economic position [2]. Universities aim to gain recognition in the global sphere through focusing on the learning process and research publishing to exchange knowledge [3]. Therefore, academics in higher education institutions, where knowledge is generated, shared, and published, are motivated to produce research not just by the pursuit for knowledge or sharing it, but also by their orientation towards research and getting acknowledgment.

Higher education institutions seek to increase their academic staff productivity and stability by adapting incentive systems to encourage academics' intrinsic motivation [4]. However, according to Valdivieso *et al.* [5], factors such as age, academic standing, time spent conducting research, financial allocation, recognition, and research leaders all have a direct impact on research productivity. Despite the importance of the productivity and performance concepts are of interest to both academic scholars and practicing managers [6], few studies [2], [7] look into academics' research productivity in Malaysia. Research productivity is influenced by several intrinsic and extrinsic motivators which are an area of scholarly exploration under the self-determination theory [8]. Therefore, this study investigates the determinants of Malaysian academics' research productivity the extent to which it is influenced by satisfying academics' psychological needs, which could be enhanced by research orientation and desire for recognition.

Through a review of the literature, this study identified two components that might enable academics' self-determination to generate research. These components are research orientation and desire for recognition, which serve as the foundation for the suggested theoretical research model of research productivity. A study on academic career advancement and success [9] revealed that research orientation-based, gender-based, and mentor-based heterogeneity are helpful, even though academics may have varied research orientations. Moreover, a study by Mayer and Rathmann [10] investigating research productivity considering gender differences, found considerable gender variations in academic journals' research output, mainly due to recognition, prestige, acknowledgment, and career progress. However, the relationships between research orientation, desire for recognition, and research productivity remain contentious. This paper aims to fill the knowledge gap by investigating how research orientation, psychological needs satisfaction (PNS), knowledge-sharing, and the desire for recognition as intrinsic motivators are likely to promote research productivity and enhance self-determination. This paper will outline the techniques that higher education institutions can adopt to enhance research productivity.

2. THEORETICAL BASIS

According to self-determination theory, individuals have three basic psychological needs: autonomy, competence, and relatedness, which these needs underpin growth and development. PNS is defined as the fulfillment of three basic human needs that are essential for psychological well-being and motivation [11]. Autonomy refers to having control over one's own work environment and the ability to make decisions that impact one's work, competence refers to feeling capable and efficient at one's job, and relatedness refers to feeling connected to people in the workplace. Research has shown that when these criteria are met, academics are more engaged, fulfilled, and driven in their work and knowledge-sharing behavior (KSB) [12]. Ferger and Rechberg [13] demonstrated that people are intrinsically driven to share knowledge when their psychological needs are met. In addition, it has been found that intrinsic and extrinsic motivations have a relatively positive impact on research productivity [14]. Contributing to self-determination theory, this study integrated both research orientation and desire for recognitions among academics as intrinsic motivators that can play an important role to motivate academics' self-determination, and subsequently are likely to promote academics' research productivity.

Research productivity refers to the participation in research activities, involvement in professional bodies, applying for grants, and dedicating time to research [15]. Adapting to the changing environment, higher education institutions are stressing knowledge focus in their initiatives, notably in the knowledge economy aim for international prominence through high-quality research, intellectual property, academic publications, financing, and post-graduate supervision. The higher education institutions seek to implement tenure and promotion for academic employees [2], and strive for international prominence by focusing on education and research publications [3]. Concurrently, KSB is recognized as a way to increase both individual and group production, particularly to promote professional competence [16]. This boosts the academic performance and research engagement, influencing academics' and researchers' competitiveness in the job market [17]. Academics in higher education institutions, holding various positions such as professors, researchers, and lecturers, primarily play a variety of roles in education and research publication, all of which rely heavily on KSB [18]. Even though researchers are interested in the concepts of productivity and performance, several studies [2], [7] have evaluated the academics' research productivity in Malaysia.

Since individual behavior relates to whether or not a person wants to share knowledge, academics' KSB must be a vital component in boosting research productivity and effectiveness [19]. Several studies have investigated academics' behavior in Malaysia. Research by Mat *et al.* [20] revealed that academics are crucial in knowledge creation, sharing, and research production, strengthened by top management policies, organizational rewards, system quality, and individual factors. Therefore, academics play a crucial role in developing knowledge-based learning institutions as an ideal place to create, acquire, share knowledge, and produce research. Hence, universities often implement knowledge management activities to promote

collaboration and knowledge contribution in the form of academic research productivity. The research productivity of academics may be restricted by various factors, and investigating research productivity among academics in higher education institutions is necessary to contribute to this field of research. Given their proactive approach to KSB, academics are expected to conduct more research [21]. Thus, the more favorable academics' KSB, the more likely they are to produce superior research findings. This leads to the postulate that KSB is positively related to research productivity.

Furthermore, research orientation topic is a common research area, resulting in a wide range of definitions, concepts and methods of application. Academic orientation is mostly based on academics' primary areas of interest of one or both of teaching and research [22]. The amount of emphasis that an academic places on research production, compared to other academic activities, is pushed by the perception of being in the forefront of the research profession [23]. The latest discussion point in the continuing debate over a purposeful research orientation to the scientific research process is relationship between academic career, institutional branding, ranking, financing, commercialization and research outputs [24]. Academics with high-performing research generally work longer hours and emphasize research with an international emphasis [22]. These academics and scholars are expected to do high-impact research that advances knowledge in their discipline [25]. Ooms *et al.* [9] stated that research orientations among academics can vary greatly, ranging from articles publications to practical applications, such as patents and innovations based on academic focus.

Since knowledge-sharing is an integral part of academic life and a component of the academic environment, academics who actively engage in knowledge-sharing, often notice their research orientation becomes more dynamic, informed and adaptable to changing academic landscapes [12]. KSB is a powerful way to build and enhance academics' research orientation since it provides access to a plethora of knowledge, fosters cooperation, and provides motivation to drive high-quality research endeavors. Sumanen *et al.* [26] noted that the commercialization of education ties research productivity to hiring, rankings, and funding, raising concerns amid pressures to publish and challenges with replicating findings. This causes fluctuations in academic research orientation as research orientation in academic networks had a favorable influence on research productivity levels among Malaysian doctorate candidates [27]. Therefore, a variety of factors impact this fluctuation, including career advancement, institutional culture, academic discipline, and professional experience [9]. Academics with a positive research orientation have the opportunity to optimize their capacity for research output and to be at the forefront of their areas in terms of implementing and being updated with new knowledge in practice [28]. This study is one of the few studies that pay attention to research orientation in previous studies, and this study addresses that gap by investigating the impact of academics' research orientation on their research output.

Moreover, academics want to be recognized for their efforts and contributions in a variety way of recognition including promotion or job security because they demonstrate that a person has excelled in their profession and is being credited for it [5]. The fact that academics usually work long hours and do substantial research is one element contributing to this desire for research recognition and acknowledgment, since it offers them a sense that their efforts are acknowledged and have an impact [29]. As a result, higher education institutions that recognize and promote their academic staff are more likely to have higher levels of their academics' engagement, morale, and job satisfaction. Even though academic jobs are anchored in the organizational structure of a university, they are evaluated based on the quantity and quality of their scholarly research publications and are recognized as members of a cohort and a scientific community. Therefore, most endowed positions at higher education institutions are given to senior academics, and academics have numerous opportunities for recognition at the local, regional, and national levels [30]. Such recognition is critical in higher education to develop one's identity as an academic and as a future professional [31]. Therefore, recognition is frequently evaluated organizationally through processes and principles used to credit, accredit, and certify prior learning and skills [18].

The recognition is regarded as a successful process that raises standards and opens the door for future education and growth, which benefits both personally and academically, as well as the learning experience and sense of accomplishment [32]. According to Gaikwad [33], the desire for recognition appears reasonable in light of academics' ambitions for personal advancement, enhanced status, gaining publication reputation, developing career tenure, and being recognized in the academic field, all of which drive them to produce more research. Whereas, Roe [34] observed that people may struggle to receive recognition for their academic achievements; if they are unable to do so or fear losing this opportunity, academic dishonesty may develop as a response to misrecognition or disrespect. Missingham [35] argued that a lack of rewards and recognition for research outputs, as well as the availability, discoverability, and connectivity of knowledge as part of scholarly knowledge, serve as barriers. The quantity and quality of academics' research productivity may change depending on the recognition received. Li *et al.* [36] identified an implied motivation behind KSB, stating that individuals proactively share valuable knowledge to gain

social status and self-recognition. This feeling helps to increase academic research productivity; thus, the study contends that Levine [37] concept of the desire for recognition, which may offer a key insight into the primary explanation, can deepen our understanding of how interpersonal recognition promotes the development of research productivity. According to previous studies [5], [38], academics compete for recognition and reputation, driving them to publish as a means of survival in global academic competition. The value of research that receives peer recognition within the closed research community through publications and conferences has an impact on academic behavior [39]. The assumptions and relationships contributed to form the following research model shown in Figure 1.

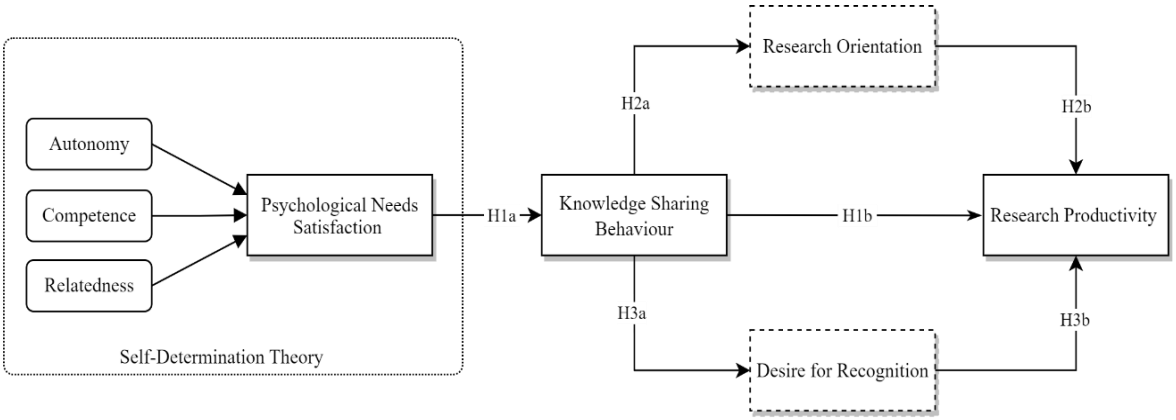

Figure 1. Research model

3. METHOD

The Ministry of Higher Education reported a total of 66,388 academic staff in Malaysia [40]. To calculate the sample size for statistical tests, the study adhered to the power analysis method [41], which is commonly used in social and behavioral studies. The minimum sample size based on G*Power 3 tool is 74 respondents, which is considered a good representation of the population compared to other calculation methods. The data were collected from 312 self-administered surveys from public and private universities' academics in Malaysia [40], [42]. However, the academics in the sample comprised 55.5% of males and 44.5% females, with the majority aged between 36 and 55, and an average age of 38. However, 61.6% of academics were Malay, 19.7% were Chinese, 9.4% were Indians, and 9.4% were made up from other ethnicities. Moreover, it seems that most academics are highly competent with 70.6% holding Ph.D. degree, 27.7% holding master's degree 1.6% holding bachelor's degree.

The proposed research model was evaluated using the partial least squares structural equation modeling (PLS-SEM) technique, with SmartPLS. This study employed English-language measuring questions modified from prior studies, using a 6-point Likert scale to avoid response bias [43]. A pre-test was conducted to ensure face and content validity of the measurement items. However, the research productivity was examined utilizing six indicators [15]. While the KSB, measured using five indicators [44]. Moreover, autonomy, competence, and relatedness constructs' 9-items, derived from Guardia *et al*. [8] were used to assess PNS. Furthermore, the research orientation which examine the "being at the leading edge of the profession" measured by the six indicators of Pitout and Ther [28]. Finally, the desire for recognition, which measures the 'social esteem from co-workers' as presented by Levine [37] measured using three items from Renger *et al*. [45].

The research measurement model was evaluated; however, the factor loadings were evaluated, and the PNS had an issue with factor loadings for the reversed items (PNS3=0.260, PNS5=0.356, PNS8=0.287) besides the research orientation indicators (ORI1=0.644, ORI2=0.676) which were deleted. Otherwise, the results revealed that the model was valid and reliable holding strong Cronbach's alpha (CA) and composite reliability (CR) above the minimum threshold of 0.70 [46]. Moreover, the cross-loadings of measurement model ideally demonstrated that the set of indicators of observed constructs measures a latent construct adequately. Furthermore, the convergent validity (CV) assessing average variance extracted (AVE) indicated that all constructs are measuring the same underlying concepts. Table 1 lists the measurement indicators with validity and reliability tests results.

Table 1. Loadings, composite reliability, and average variance extracted

Construct	Indicator	Factor loading	AVE	CA	CR (Rho_c)	Discriminant validity
PNS	Autonomy	0.890	0.783	0.862	0.916	0.885
	Competence	0.870				
	Relatedness	0.890				
KSB	1	0.817	0.810	0.941	0.955	0.900
	2	0.917				
	3	0.938				
	4	0.910				
	5	0.912				
PRO	1	0.763	0.659	0.896	0.921	0.812
	2	0.807				
	3	0.785				
	4	0.860				
	5	0.849				
	6	0.804				
ORI	3	0.870	0.777	0.904	0.933	0.881
	4	0.890				
	5	0.890				
	6	0.880				
REC	1	0.935	0.879	0.931	0.956	0.937
	2	0.940				
	3	0.936				

Note: KSB=knowledge-sharing behavior, PRO=research productivity, ORI=research orientation, REC=research recognition

4. RESULTS

Assessing the statistical significance of the coefficient, Figure 2 indicates significance p-values of the path coefficients. This is evident in that the latent construct of 'PNS' (β=0.562, p<0.000) has moderate positive relationship on 'KSB', while KSB (β=0.130, p<0.008) has weak linear relationship to 'research productivity'. The hypotheses (H1a) and (H1b) were accepted. Furthermore, the association between KSB to 'research orientation' (β=0.513, p<0.000) indicates moderate positive relationship nearly to the association between 'research orientation' with 'research productivity' (β=0.381, p<0.000) that indicates a moderate positive relationship. Hence, both (H2a) and (H2b) were accepted accordingly. Moreover, the relationship between KSB to 'desire for recognition' (β=0.515, p<0.000) indicates moderate positive relationship similarly to the association between 'desire for recognition' with 'research productivity' (β=0.412, p<0.000) that revealed a moderate positive correlation. This concludes that both (H3a) and (H3b) were accepted. Overall, the results of this study confirm and exhibit substantial and statistically significant path coefficients of the hypotheses evaluated, notably the hypotheses: (H1a), (H1b), (H2a), (H2b), (H3a), and (H3b). As a result, the investigation supports all presented hypotheses.

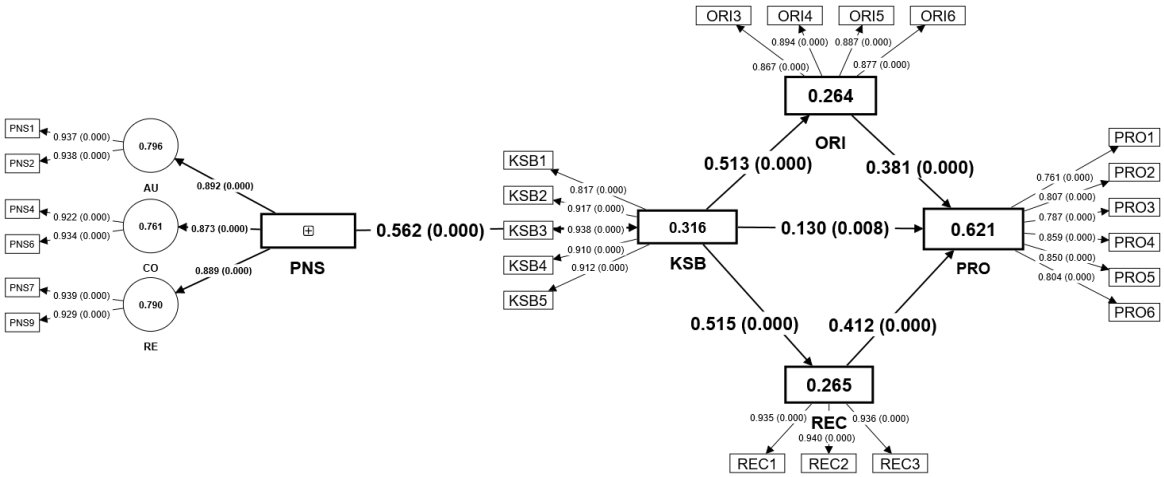

Figure 2. Structural research model

The study used Hair and Ringle guidelines to calculate effect sizes (f2) to understand the practical significance of relationships between predictor and outcome variables. However, the larger f2 over 0.35 values indicate stronger relationships, while smaller ones indicate less influence [46]. The findings showed

that all constructs' relationships are almost large and strong to each other except the relationship between 'KSB' to 'research productivity' which has moderate effect size. This concludes that the research model has practical significance in the findings' real-world implications. Moreover, the evaluation of the coefficient of determination unveiled the extent to which the endogenous latent variables influence the associated exogenous variables. According to Hair *et al.* [46], R2 values above 0.67 represent a substantial impact, while values ranging from 0.33 to 0.67 indicate a moderated effect, and those falling between 0.19 and 0.33 suggest a more modest impact. However, Figure 2 shows that the constructs' R2 of 'research productivity' attains 0.621 value, which indicates moderate and close to substantial impact of the endogenous latent variables on 'research productivity'. This notably reveals a high level of predictive accuracy. Moreover, 'PNS', as endogenous latent construct, modestly and nearly moderately influence the exogenous variable construct 'KSB' (R2=0.316), whereas as 'KSB' have modest influence on both 'research orientation' (R=264) and 'desire for recognition' (R=265). Overall, all the R2 values reveal that the model exhibits robust predictive power exceeding the 0.19 threshold. Figure 2 shows the path coefficient and constructs' R2.

5. DISCUSSION

The study results demonstrate significant and meaningful relationships between the key variables under investigation, which are represented by the important indicator of statistical significance of the path coefficients as shown in Figure 2. PNS clearly exhibits a moderate positive relationship with KSB (β=0.562, $p<0.000$). Furthermore, the relationship between KSB and research productivity was presented with modest association strength (β=0.130, $p<0.008$). This corroborates Ryan and Deci [11] self-determination theory and the relationships align with recent studies [47]–[50], which found that intrinsic motivators significantly impact 'KSB' in academic settings. As a result, hypotheses H1a and H1b were both accepted which suggests that when academics perceive their psychological needs as satisfied, they are more likely to engage in 'KSB'. Consequently, while KSB has a positive influence on 'research productivity', it is not as strong as initially hypothesized. This aligns with several studies [15], [51] who revealed that academics 'KSB' has substantial impact on 'research productivity'.

Furthermore, the association between KSB and 'research orientation' demonstrates a significant moderate positive association (β=0.513, $p<0.000$), paralleled to the relationship between 'research orientation' and 'research productivity' (β=0.381, $p<0.000$). These findings support the notion stated by Werker and Hopp [25], that a strong research orientation coupled with effective knowledge production activities can enhance academic output. This finding, however, contrasts with what Sumanen *et al.* [26] revealed, as it connects academic outputs to the intention of pursuing a doctorate. These results affirm the acceptance of both hypotheses H2a and H2b, proving that academics who master their knowledge-sharing are directed to have a strong research orientation promoting their research productivity.

The results revealed that the relationship between KSB and desire for recognition was found also noteworthy, with a moderate positive correlation (β=0.550, $p<0.000$), similarly to the relationship between 'desire for recognition' and 'research productivity' (β=0.550, $p<0.000$) which is characterized by a moderate positive relationship. However, this align with Hurst *et al.* [30] recommendations and it could somehow align with what Sa *et al.* [52] stated that in male-dominated fields, the higher recognition and productivity of men can be linked to greater acknowledgment and rewards, which enhance their motivation. Therefore, hypotheses H3a and H3b were accepted, suggesting that academics who actively share knowledge effectively are more likely immersed in desire for recognition, and this desire significantly promotes their research productivity.

These findings thereof substantiate the study, underscoring the importance of these research model relationships. The study evaluated the relationships' effect sizes (f2) to understand the magnitude of the relationships between predictors and outcome variables, which offers additional insights into the practical significance of these relationships. However, all relationships between constructs, except for the relationship between KSB and 'research productivity' were found with large and strong effect sizes above 0.33, indicative of a large effect size. The relationship between KSB and research productivity was found with a moderate effect size (F2=0.027). Following the suggestions of Hair *et al.* [46], R2 values above 0.67 are considered substantial, values between 0.33 and 0.67 considered a moderated effect, while values between 0.19 and 0.33 suggest a more modest impact. Therefore, evaluating the model's predictive accuracy of the model using the coefficient of determination (R2), the results revealed that research productivity construct possessed R2=0.621, which signifying a substantial impact and a high level of predictive accuracy. This establishes the model's ability to effectively predict research productivity. Moreover, PNS indicates a modest to moderate impact on 'KSB' with an R2 value of 0.316. Nevertheless, KSB has a more modest impact on both 'research orientation' (R2=0.264) and 'desire for recognition' (R2=0.265). These values indicate the model exhibits robust predictive power, surpassing the 0.19 threshold for each relationship [46].

6. CONCLUSION

The findings revealed that the research orientation and desire for recognition as intrinsic motivators are significantly influencing academics' research productivity with moderate impacts. Highlighting the substantial and statistically significant path coefficients observed in all tested relationships reveals that both variables of academics' research orientation and desire for recognition could stimulatory promote academics' research productivity as intrinsic motivators. This supports the assumption that self-determination can be gained while academics obtain higher research orientation, desire for recognition besides being autonomy, competent, and associated to their community.

Since there is a lack of studies on research orientation and academics' desire for recognition, this study contributes significantly to the theoretical field of precedents factors of KSB and research productivity within the academic and research communities. These variables were examined to what extent they could promote academics' research productivity as intrinsic motivators, which enriches existing factors embedded in the self-determination theory. These variables were found significantly promoting academics to share knowledge and produce research in their academic setting. This likely occurs due to the satisfaction of academics' psychological needs, which enhances KSB and research productivity. Practical and empirical implications of this research can be applied to knowledge management practices within organizations. Enhancing research orientation and desire for recognition as intrinsic motivators, alongside satisfying researchers' psychological needs, leads to increased research productivity.

The study is particularly relevant to academics in higher education institutions, as it increases awareness of the significance of research orientation and desire of recognition to promote academics' research productivity. Future research involving mixed method approaches with exploring moderating impact of academic discipline and career stage should explore how various motivations including: visibility, peer validation, citations, advisership, leadership roles, resource accessibility, and professional reputation influence research productivity. Policymakers in higher education institutions should ensure promoting engagement, fostering initiatives that facilitate knowledge-sharing, establishing a structured system for recognizing academics' contributions, encouraging academics' research orientation, and ensuring an environment where academics can publish their research freely and effectively.

REFERENCES

[1] Q. Nguyen, C. Klopper, and C. Smith, "Affordances, barriers, and motivations: engagement in research activity by academics at the research-oriented university in Vietnam," *Open Review of Educational Research*, vol. 3, no. 1, pp. 68–84, Jan. 2016, doi: 10.1080/23265507.2016.1170627.

[2] S. K. Dhillon, R. Ibrahim, and A. Selamat, "Factors associated with scholarly publication productivity among academic staff: case of a Malaysian public university," *Technology in Society*, vol. 42, pp. 160–166, Aug. 2015, doi: 10.1016/j.techsoc.2015.04.004.

[3] R. E. Bawack and J. R. K. Kamdjoug, "The role of digital information use on student performance and collaboration in marginal universities," *International Journal of Information Management*, vol. 54, p. 102179, Oct. 2020, doi: 10.1016/j.ijinfomgt.2020.102179.

[4] C. Albert, M. A. Davia, and N. Legazpe, "Job satisfaction amongst academics: the role of research productivity," *Studies in Higher Education*, vol. 43, no. 8, pp. 1362–1377, Aug. 2018, doi: 10.1080/03075079.2016.1255937.

[5] P. A. Valdivieso, B. A. Alecchi, and D. Arévalo-Avecillas, "Factors that influence the individual research output of university professors: the case of Ecuador, Peru, and Colombia," *Journal of Hispanic Higher Education*, vol. 21, no. 4, pp. 450–468, Oct. 2022, doi: 10.1177/15381927211008684.

[6] S. Ramkumar, "Research productivity through the lens of doctoral guidance: a study of Sanskrit Universities in India," *Journal of Scientometric Research*, vol. 9, no. 1, pp. 19–28, May 2020, doi: 10.5530/JSCIRES.9.1.3.

[7] M. A. Fauzi, C. T. Nya-Ling, R. Thurasamy, and A. O. Ojo, "An integrative model of knowledge sharing in Malaysian higher learning institute," *Kybernetes*, vol. 47, no. 5, pp. 1031–1052, May 2018, doi: 10.1108/K-10-2017-0388.

[8] J. G. L. Guardia, R. M. Ryan, C. E. Couchman, and E. L. Deci, "Within-person variation in security of attachment: a self-determination theory perspective on attachment, need fulfillment, and well-being," *Journal of Personality and Social Psychology*, vol. 79, no. 3, pp. 367–384, 2000, doi: 10.1037//0022-3514.79.3.367.

[9] W. Ooms, C. Werker, and C. Hopp, "Moving up the ladder: heterogeneity influencing academic careers through research orientation, gender, and mentors," *Studies in Higher Education*, vol. 44, no. 7, pp. 1268–1289, Jul. 2019, doi: 10.1080/03075079.2018.1434617.

[10] S. J. Mayer and J. M. K. Rathmann, "How does research productivity relate to gender? Analyzing gender differences for multiple publication dimensions," *Scientometrics*, vol. 117, no. 3, pp. 1663–1693, Dec. 2018, doi: 10.1007/s11192-018-2933-1.

[11] R. M. Ryan and E. L. Deci, "Intrinsic and extrinsic motivation from a self-determination theory perspective: definitions, theory, practices, and future directions," *Contemporary Educational Psychology*, vol. 61, p. 101860, Apr. 2020, doi: 10.1016/j.cedpsych.2020.101860.

[12] B. M. Albaram and Y. M. Lim, "Conceptualization social influence from the need to belong perspective on psychological needs' satisfaction to share knowledge," *Heliyon*, vol. 9, no. 2, p. e13764, Feb. 2023, doi: 10.1016/j.heliyon.2023.e13764.

[13] K. Ferger and I. D. W. Rechberg, "Self-determination theory and its predictors for sharing knowledge: a critical review," *VINE Journal of Information and Knowledge Management Systems*, vol. 54, no. 5, p. 1170, 2024, doi: 10.1108/VJIKMS-01-2022-0030.

[14] F. A. Ganotice *et al.*, "What characterize high and low achieving teams in interprofessional education: a self-determination theory perspective," *Nurse Education Today*, vol. 112, p. 105321, May 2022, doi: 10.1016/j.nedt.2022.105321.

[15] M. A. Fauzi, C. T. Nya-Ling, R. Thursamy, and A. O. Ojo, "Knowledge sharing: role of academics towards research productivity in higher learning institution," *VINE Journal of Information and Knowledge Management Systems*, vol. 49, no. 1, pp. 136–159, Mar. 2019, doi: 10.1108/VJIKMS-09-2018-0074.

[16] K. Y. N. Ng, "The moderating role of trust and the theory of reasoned action," *Journal of Knowledge Management*, vol. 24, no. 6, pp. 1221–1240, Aug. 2020, doi: 10.1108/JKM-01-2020-0071.
[17] L. H. Pinto and D. C. Ramalheira, "Perceived employability of business graduates: the effect of academic performance and extracurricular activities," *Journal of Vocational Behavior*, vol. 99, pp. 165–178, Apr. 2017, doi: 10.1016/j.jvb.2017.01.005.
[18] J. Hamann, "The making of professors: assessment and recognition in academic recruitment," *Social Studies of Science*, vol. 49, no. 6, pp. 919–941, Dec. 2019, doi: 10.1177/0306312719880017.
[19] O. F. Al-Kurdi, R. El-Haddadeh, and T. Eldabi, "The role of organisational climate in managing knowledge sharing among academics in higher education," *International Journal of Information Management*, vol. 50, pp. 217–227, Feb. 2020, doi: 10.1016/j.ijinfomgt.2019.05.018.
[20] T. Z. T. Mat, D. S. T. Ismawi, and E. K. Ghani, "Do perceived pressure and perceived opportunity influence employees' intention to commit fraud?" *International Journal of Financial Research*, vol. 10, no. 3, pp. 132–143, 2019, doi: 10.5430/ijfr.v10n3p132.
[21] H. M. Chen, Y. H. Yuan, C. H. Wu, and C. Y. Dai, "Moderator effects of proactive knowledge transfer among knowledge transfer usefulness, management, and innovation: a study of knowledge innovation effective model construction," *International Journal of Knowledge Management*, vol. 13, no. 1, pp. 16–33, Jan. 2017, doi: 10.4018/IJKM.2017010102.
[22] M. Kwiek, "High research productivity in vertically undifferentiated higher education systems: who are the top performers?" *Scientometrics*, vol. 115, no. 1, pp. 415–462, Apr. 2018, doi: 10.1007/s11192-018-2644-7.
[23] M. Messner, "Research orientation without regrets," *Critical Perspectives on Accounting*, vol. 26, pp. 76–83, Feb. 2015, doi: 10.1016/j.cpa.2013.05.013.
[24] S. Singh, "A theoretical discussion on the state of scientific research and publishing: critical reflections and new directions," *Human Arenas*, vol. 3, no. 2, pp. 214–228, Jun. 2020, doi: 10.1007/s42087-019-00077-7.
[25] C. Werker and C. Hopp, "Balancing act between research and application: how research orientation and networks affect scholars' academic and commercial output," *Journal of Business Economics*, vol. 90, no. 8, pp. 1171–1197, Sep. 2020, doi: 10.1007/s11573-020-00979-x.
[26] M. Sumanen, T. Reho, T. Heikkilä, P. Mäntyselkä, H. Halila, and K. Mattila, "Research orientation among general practitioners compared to other specialties," *Scandinavian Journal of Primary Health Care*, vol. 39, no. 1, pp. 10–16, Jan. 2021, doi: 10.1080/02813432.2021.1880072.
[27] N. Ahmad, N. S. Imm, Y. A. Aziz, and N. K. Basha, "Why not knowledge-based HRM? Its direct and indirect effect on innovative service offerings," *SAGE Open*, vol. 10, no. 4, pp. 1–10, Oct. 2020, doi: 10.1177/2158244020983003.
[28] H. Pitout and M O. Ther, "Research orientation of South African occupational therapists," *South African Journal of Occupational Therapy*, vol. 43, no. 2, pp. 5–11, 2013.
[29] M. Masinde and J. Coetzee, "Modelling research productivity of university researchers using research incentives to crowd-in motivation," *International Journal of Productivity and Performance Management*, vol. 72, no. 5, pp. 1509–1530, May 2023, doi: 10.1108/IJPPM-12-2020-0669.
[30] C. Hurst *et al.*, "The Pittman Scholar Program for junior faculty recognition at the University of Alabama at Birmingham Heersink School of Medicine," *Medical Education Online*, vol. 28, no. 1, Dec. 2023, doi: 10.1080/10872981.2023.2182188.
[31] D. H. Jensen and J. Jetten, "Exploring interpersonal recognition as a facilitator of students' academic and professional identity formation in higher education," *European Journal of Higher Education*, vol. 8, no. 2, pp. 168–184, Apr. 2018, doi: 10.1080/21568235.2017.1374195.
[32] M. Snyman and G. van den Berg, "Experiences of nontraditional students and academics of the recognition of prior learning process for admission to graduate studies: a South African case study in open distance learning," *Journal of Continuing Higher Education*, vol. 70, no. 2, pp. 71–87, May 2022, doi: 10.1080/07377363.2020.1861577.
[33] P. Gaikwad, "Balancing research productivity and teaching by faculty in higher education: a case study in the Philippines," *Journal of Higher Education Theory and Practice*, vol. 21, no. 7, pp. 181–192, Aug. 2021, doi: 10.33423/JHETP.V21I7.4495.
[34] J. Roe, "Reconceptualizing academic dishonesty as a struggle for intersubjective recognition: a new theoretical model," *Humanities and Social Sciences Communications*, vol. 9, no. 1, p. 157, May 2022, doi: 10.1057/s41599-022-01182-9.
[35] R. Missingham, "Understanding information needs of Australian business organisations," *Australian Library Journal*, vol. 65, no. 1, pp. 3–16, Jan. 2016, doi: 10.1080/00049670.2016.1121771.
[36] Z. Li, S. S. Kumar, R. Kishore, B. Krishna, and S. Lingam, "Hidden motivation for knowledge sharing behavior and organizational recognition: the moderating role of need for status," *Humanities and Social Sciences Letters*, vol. 8, no. 4, pp. 493–504, 2021, doi: 10.18488/JOURNAL.73.2020.84.493.504.
[37] A. Levine, "The struggle for recognition: the moral grammar of social conflicts.Axel Honneth," *Ethics*, vol. 108, no. 3, pp. 619–622, Apr. 1998, doi: 10.1086/233837.
[38] B. A. Mercan and A. Yalçıntaş, "Deconstructing the discourse of self-corrective intellectual property markets," *Rethinking Marxism*, vol. 33, no. 2, pp. 281–303, Apr. 2021, doi: 10.1080/08935696.2020.1857643.
[39] Z. Dooly, A. Duane, and A. O'Driscoll, "Creating and managing EU funded research networks: an exploratory case," *Electronic Journal of Business Research Methods*, vol. 20, no. 1, pp. 1–20, Jan. 2022, doi: 10.34190/ejbrm.20.1.2556.
[40] Ministry of Higher Education Malaysia, "Macro Higher Education Institutes," Statistik Pendidikan Tinggi 2020: Kementerian Pengajian Tinggi Malaysia. Accessed: Jul. 05, 2024. [Online]. Available: https://www.mohe.gov.my/muat-turun/statistik/2022-3/1177-statistik-pendidikan-tinggi-2022-bab-1-makro-institusi-pendidikan-tinggi/file
[41] E. Erdfelder, F. Faul, and A. Buchner, "GPOWER: a general power analysis program," *Behavior Research Methods, Instruments, and Computers*, vol. 28, no. 1, pp. 1–11, Mar. 1996, doi: 10.3758/BF03203630.
[42] A. P. Olesen, L. Amin, Z. Mahadi, and M. Ibrahim, "Exploring the organisational context of research misconduct in higher learning institutions in Malaysia," *Developing World Bioethics*, vol. 22, no. 2, pp. 76–85, Jun. 2022, doi: 10.1111/dewb.12298.
[43] L. J. Simms, K. Zelazny, T. F. Williams, and L. Bernstein, "Does the number of response options matter? Psychometric perspectives using personality questionnaire data," *Psychological Assessment*, vol. 31, no. 4, pp. 557–566, Apr. 2019, doi: 10.1037/pas0000648.
[44] C. N. L. Tan, "Enhancing knowledge sharing and research collaboration among academics: the role of knowledge management," *Higher Education*, vol. 71, no. 4, pp. 525–556, Apr. 2016, doi: 10.1007/s10734-015-9922-6.
[45] D. Renger, S. Renger, M. Miché, and B. Simon, "A social recognition approach to autonomy: the role of equality-based respect," *Personality and Social Psychology Bulletin*, vol. 43, no. 4, pp. 479–492, Apr. 2017, doi: 10.1177/0146167216688212.
[46] J. F. Hair (Jr.), G. T. M. Hult, C. M. Ringle, and M. Sarstedt, *A primer on partial least squares structural equation modeling (PLS-SEM)*, 3rd ed. Thousand Oaks, CA: SAGE Publications, Inc., 2022.
[47] S. Assegaff, Kurniabudi, and E. Fernando, "Impact of extrinsic and intrinsic motivation on knowledge sharing in virtual communities of practices," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 1, no. 3, pp. 619–626, 2016, doi: 10.11591/ijeecs.v1.i3.pp619-629.

[48] M. Nguyen, A. Malik, and P. Sharma, "How to motivate employees to engage in online knowledge sharing? Differences between posters and lurkers," *Journal of Knowledge Management*, vol. 25, no. 7, pp. 1811–1831, Aug. 2020, doi: 10.1108/JKM-08-2020-0649.
[49] C. Buzzai, L. Sorrenti, S. Costa, M. E. Toffle, and P. Filippello, "The relationship between school-basic psychological need satisfaction and frustration, academic engagement and academic achievement," *School Psychology International*, vol. 42, no. 5, pp. 497–519, Oct. 2021, doi: 10.1177/01430343211017170.
[50] M. Gagné, A. W. Tian, C. Soo, B. Zhang, K. S. B. Ho, and K. Hosszu, "Different motivations for knowledge sharing and hiding: the role of motivating work design," *Journal of Organizational Behavior*, vol. 40, no. 7, pp. 783–799, Sep. 2019, doi: 10.1002/job.2364.
[51] A. V. Atieno, O. B. Onyancha, and T. Kwanya, "Trends, patterns and determinants of research productivity at the Technical University of Kenya," *Information Development*, vol. 38, no. 1, pp. 97–113, Mar. 2022, doi: 10.1177/0266666920983400.
[52] C. Sá, S. Cowley, B. Shahrin, C. Stevenson, and A. Su, "Disciplinary gender balance, research productivity, and recognition of men and women in academia," *PLoS ONE*, vol. 18, no. 12, Dec. 2023, doi: 10.1371/journal.pone.0293080.

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