

## The Effect of the University's Core Values and Program Educational Objectives on the Real Estate Management Graduates through the Lens of Human Capital Theory

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### Abstract

The purpose of this tracer study is to investigate whether the B.S. Real Estate Management graduates in Mindanao are equipped with sufficient relevant industry skills to start a professional career. The study's objective is to describe the role of the university's core values and the program educational objectives in determining students' success in the licensure exams and employment. This paper considers the perspective of recent graduates from 2017-2022. The descriptive nonexperimental research design using Kendall's Tau Pairwise Correlations with Vovk-Sellke Maximum p-Ratio to evaluate the strength of association among the five variables was used. Based on the result, a significant moderate association existed between the university's core values and licensure examination, program educational objectives and licensure examination, professional practice, and employability. Moreover, a strong association between the core values and program educational objectives is evident. The paper concludes that the significant association of these variables supports the human capital theory that students consider their college education provides them with a broad range of knowledge and skills, leading to higher earnings and career growth opportunities.

**Keywords:** University's Core Values, Program Educational Objectives, Real Estate Management, Human Capital Theory

### Introduction

A significant problem in a Real Estate Management (REM) curriculum is the level of relevance of the program to the needs of the real estate industry. As a diverse and growing industry, it covers a wide range of roles and responsibilities for a REM program graduate, ranging from sales, development, and property management (Butler, Guntermann & Wolverson, 1998; Egwuatu, 2013). Through a comprehensive real estate curriculum that covers essential topics in sales, management, valuation, financing, contract, and property law, students need to develop knowledge and fundamental skills critical for success (Weinstein & Worzala, 2008; Musil, 2005).

However, the real estate industry is constantly evolving, with new regulations, technologies, and trends that shape the practice of the real estate profession (Pfnür & Wagner, 2020; Feth, 2021). Hence, REM graduates must be imbued with knowledge, skills, and attitude to practice their profession (Ogbenjuwa, Egbu & Robinson, 2022). Although, integrated into the REM curriculum is the practicum program which provides real opportunities for students to gain invaluable practical experience (Benedict & Goetcheus, 2014).

Researchers recognized significant gaps between the REM curriculum and the industry's needs. A comprehensive program is necessary to provide students with a strong knowledge and skills foundation applicable to a wide range of roles in the industry (Amidu, Ogbesoyen & Agboola, 2018). In contrast, the academe recognizes the need to stay updated with the latest trends and best practices (Poon, Hoxley & Fuchs, 2011). There is a need to gather information to identify areas that need improvement to address the need to align the curriculum relevant to the need of the industry (Poon, 2012; Chambers, Holm & Worzala, 2009).

The university's core values and the Program Education Objectives (PEO) are the two elements that assume a vital role in any curriculum design. Foremost the core values are an

essential aspect of determining that the curriculum aligns with the vision and mission of the university (McKimm, & Jones, 2018). It is vital to evaluate that the current curriculum alignment with the core values, the subjects, and the desired student outcome. Curriculum evaluation must identify the improvement, possible gaps in specific topics or lacking emphasis on certain core values. From correctly identifying areas for improvement, the learning outcome is developed and aligned with the core values, which are specific and measurable (Ainsworth, 2010). Learning activities designed to assist the student in attaining the desired outcome are expected to align with the core values (Kolomitro, Inglese & Idzikowski, 2017).

Designing a REM curriculum is a complex process that requires several factors, including the Program Educational Objectives (PEO), the subject matter, and the desired outcomes. Designing a curriculum based on PEO involved several elements in helping safeguard the curriculum's effectiveness and meet the needs of the learners and industry (Herring III & Williams, 2000)—clearly defined PEO results in an aligned, measurable, and specific course objective. The development of assessment to measure students' knowledge, skills, and abilities is alignment with the course objectives (Zundel & Mengel, 2007). Based on the PEO and assessment, developing learning outcomes must identify the ability graduates must demonstrate after graduating from the program (Mailloux, 2011). Thus, a curriculum map representing the interconnected learning objectives furnishes the comprehensive overview of the curriculum and ensures all learning objectives are covered effectively and adequately (Levin & Suhayda, 2018).

A tracer study of graduates of board courses is an essential tool for evaluating the program's quality and training to the students (Huffman, 2011). Tracer studies monitor graduates' employment status, professional career path, and career growth over a specific period after graduation (Poon, 2014). A tracer study assists program administrators in evaluating the effectiveness of the curriculum and training program in preparing students for a future professional career. The information gathered from the survey can track the graduates' employment status and professional career growth and focus on areas that need improvement to ensure that the program aligns with the industry's needs (Wadu Mesthrige, Lam, Chiang & Samarasinghalage, 2021).

The curriculum must be relevant to the need of the industry (Tu, Weinstein, Worzala, & Lukens, 2009). A tracer study is an instrument that assists in the curriculum design to meet the industry's current demand (Ooi & Yu, 2011). Graduates who struggle to find employment or work in areas unrelated to their degree indicate that the curriculum is irrelevant to the industry's needs. A tracer study furnishes the information to identify possible areas for curriculum improvement (Hoxley, Poon & Fuchs, 2011).

Designing a relevant curriculum requires insight into the weakness and strengths of the program and detecting the critical areas for improvement. By analyzing the data gathered from a tracer study, administrators possess the necessary information to improve the curriculum, instructions, and other areas (Amidu, Ogbesoyen & Agboola, 2018). Also, a reliable technique to monitor graduates' success assists in identifying the significant factors responsible for career growth (Jayantha & Chiang, 2012). Some of these factors manifest in the graduates' earnings, board exam performance, the program's relevance with their job performance, and contribution to the community. For programs that require passing the licensure exam, the result of the tracer study is an essential tool for the program to evaluate the effectiveness and relevance of their training and learnings to identify possible areas for enhancement and monitor the professional career success of graduates (Combs, 2004).

There are several challenges in conducting a tracer study due to several reasons, such as accessing accurate and complete data on the graduate's income, career growth, and employment status (Wagner, 2006). However, access to this data is challenging since some graduates may hesitate to complete a survey or not provide accurate information. Eventually, this may lead to

partial or incomplete data, which affects the study's validity (Ingram, Haynes, Davidson-Shivers & Irvin, 2004). In addition, tracking graduates is difficult. Graduates may move places or change contact information, which compounds researchers' challenges in following up with graduates and collecting the necessary data.

As a new program and few graduates, the REM has fewer population, which limited the sample size, affecting the findings' validity. The graduates in the sample size willing to participate might not represent the population (Faugier & Sargeant, 1997). Compounding this challenge is the possibility of respondent bias which depends on the graduate's accomplished instrument. Respondents may over-hype or under-hype their income, career growth, and employment status. However, these challenges are mitigated by ensuring data accuracy, using appropriate survey method, and leveraging technology to track graduates.

Formal education, such as the B.S. Real Estate Management is highly contributory and vital to enhancing the productive capacity of a population according to Human Capital Theory (HCT) (Marginson, 1989). HCT focuses on how education increases workers' efficiency and productivity by increasing knowledge and skills, which is the outcome of investment in individuals (Nafukho, Hairston & Brooks, 2004). Formal education is considered an investment in human capital, which proponents of HCT deem equally or even more helpful than physical capital (Lopez-Bazo & Moreno, 2008).

The HCT suggests that college educates individuals' knowledge and skills, transforming them into productive and valuable workers (Deming, 2022). College graduates enhance their productivity and value in the industry with a broad range of knowledge and skills including technological skills, communication, problem-solving, and critical thinking (Nafukho, Hairston & Brooks, 2004). An increase in their market value in the labor market, the HCT indicates that an increase in human capital makes workers more productive and therefore earn higher income (Hoyman & Faricy, 2009). On average, college graduates earn higher wages than less educated workers, confirming the HCT.

Based on the HCT, individuals with higher human capital led to career growth opportunities. Due to higher knowledge and skills, college graduates can take on new roles and responsibilities, leading to better career development (Hooley, 2021). Acquiring a higher level of knowledge and skills for college-educated workers benefits society. They increase the industry's productivity and growth, resulting in increased economic growth and prosperity (Gillies, 2015).

This tracer study intends to determine the career profile of the BS REM in terms of the number of times they took and passed the licensure exams, type of professional real estate practice, finding their first job, length of time to find and stay in the first job, the reason for staying or changing jobs and level of usefulness of REM degree in professional practice. Also, this tracer study aims to discover the competencies graduates find most useful in the practice of their profession and the personal values learned in the program most useful in achieving professional success. Finally, to measure if a significant association existed between the number of licensure examinations passed, professional practice related to the REM program, length of time to get the first job, the program's educational objectives, and core values.

## Methods

The quantitative descriptive correlational study, a nonexperimental research design, is used to answer the research objectives. Correlational research is proper when the objective is to determine the association between two or more variables within the same population (Curtis, Comiskey, & Dempsey, 2016). In this study, the measurement of the five study variables utilizing the standardized survey instruments of the university and examining the association among these variables. The literature in HCT inferred positive interdependencies between these

research variables. However, no explicit research supported these associations, indicating a gap in the literature.

From March 3 to April 3, 2023, 17 graduates of REM participated in the study. Since no previous studies measured the sufficiency of relevant industry skills to sustain a professional career among REM graduates in Mindanao, the Bayesian sampling technique was used to estimate the probability distribution based on this premise. The Bayesian method helped incorporate prior knowledge based on the employability study of Poon (2012) and Hoxley, Poon & Fuchs (2011). These studies were included in the analysis, and further, based on the posterior distribution, the Bayesian method was used to generate a sample to represent the distribution in this study based on prior research.

Based on the prior employability of 991 real estate graduates, 95 were unemployed (Poon, 2014), with a prior beta factor of (991,95). Based on the calculated Bayesian Inference, the one-sided credible interval at 95 percent lower bound or reliability was 89.96 percent (Harish, 2018). The 89 percent confidence interval was considered more stable than the 95 percent (Kruschke, 2014). McElreath (2018) recently suggested that 89 percent is the highest prime number that does not exceed the 95 percent unstable threshold. Moreover, a 95 percent interval needs at least 10,000 effective sample sizes (Kruschke, 2014).

Kendall's Tau Pairwise Correlations was used to determine four pairs of ranked variables, the university's core values and licensure examination, program educational objectives and licensure examination, professional practice related to the program and employability, and between the core values and program educational objectives. The Kendall's Tau Pairwise correlations were used to validate the HCT. In addition, to evaluate the strength of evidence on the association, the Vovk-Sellke Maximum p-Ratio is a statistical test used (Ruiz-Ruano García & López Puga, 2018).

### Results and Discussion

The purpose of this tracer study is to determine the career profile of the BS REM graduates, the various competencies that contributed to the professional practice, and the significant association between the number of licensure examinations passed, professional practice related to the REM program, length of time to get the first job, the program educational objectives and core values.

Depicted in Table 1, there are 11, or 65 percent, with Real Estate Broker License and six (6), or 35 percent, with both the Real Estate Broker License and Real Estate Appraiser License. Moreover, six (6), or 35 percent, graduated in 2020, and four (4), or 24 percent, graduated in 2021.

**Table 1. Career profile of the respondents**

<b>Licensure Examination/s taken and passed</b>		
One	11	65%
Two	6	35%
Total	17	100%
<b>Year Graduated From UM</b>		
2017	4	24%
2018	2	12%
2019	1	6%
2020	6	35%
2021	4	24%
Total	17	100%

There were eight (8), or 47 percent, are independent practitioners, and five (5), or 29 percent, admitted not practicing. In finding their first job, there are five (5), or 42 percent, recommended by someone and four (4), or 33 percent, as walk-in applicants. The majority, six (6) or 55 percent, find their first job between more than a month to less than six (6) months, and four (4), or 36 percent, in less than a month.

**Table 2. Relatedness of B.S. Real Estate Management degree with their career growth**

<b>Type of real estate service practitioner</b>	<b>f</b>	<b>Percent</b>
Independent practitioner	8	47%
Not practicing	5	29%
Employed practitioner	4	24%
Total	17	100%
<b>Length of time to land first job</b>		
Less than a month	4	36%
More than a month less than 6 months	6	55%
More than a year	1	9%
Total	11	100%
<b>Length of time stay in first job</b>		
6 months to less than 1 year	1	10%
1 to less than 6 months	4	40%
1 year to less than 2 years	2	20%
3 years to less than 4 years	3	30%
Total	10	100%
<b>Reason(s) for staying on the job</b>		
Salaries & benefits	7	28%
Related to course	6	24%
Career challenge	5	20%
Others (Peer influence, proximity to residence, family influence, gain more network)	7	28%
Total	25	100%
<b>Reason(s) for changing job</b>		
Salaries & benefit	9	33%
Career challenge	9	33%
Related to special skills	5	19%
Proximity to residence and try something new	4	15%
Total	27	100%
<b>Usefulness or applicability of the REM program to professional practice</b>		
Very much useful	10	59%
Much useful	4	24%
A bit useful	3	18%
Total	17	100%

There were four (4), or 40 percent, who stayed between one to less than six (6) months who stayed in their first job, and three, or 30 percent, who stayed three years to less than four years. Moreover, seven (7), or 28 percent, stayed due to salaries and benefits. Six (6), or 24 percent, stayed due to the job related to their course, and five (5), or 20 percent, stayed due to career challenges. Regarding the reason for changing jobs, 18 or 66 percent were due to career challenges and salaries and benefits, and five (5) or 19 percent were attributed to special skills.

The majority, ten (10) or 59 percent, considered that the degree of usefulness of REM to their professional practice is very high.

Regarding competencies learned in the REM program useful in the practice of the profession, 15 or 14 percent of the responses were attributed to communication skills, 14 or 13 percent were due to problem-solving and multi-tasking skills, and 12 or 11 percent were referred to human relations skills.

**Table 3. Competencies graduates learned in college are most useful in their first job**

Competencies learned in college most useful in the practice of the profession	<i>f</i>	Percent
Communication skills	15	14%
Multi-tasking	14	13%
Problem-solving	14	13%
Others (Human relations, critical thinking, leadership, public relations, instruction and technological)	63	59%
Total	106	100%

In terms of personal values learned in college most useful in achieving professional success, five (5) or 18 percent identified as motivated to grow, similar to the ability to work under less supervision, four (4) or 14 percent recognized strong work ethics and three (3) or 11 percent selected adaptability.

**Table 4. Personal values learned in the program are useful in achieving entrepreneurial success**

Personal values learned/ developed in college are most useful in achieving professional success	<i>f</i>	Percent
Motivated to grow	5	18%
Ability to work with less supervision	5	18%
Strong work ethics	4	14%
Adaptability	3	11%
Others (flexibility, honesty, integrity, morality, dependability, reliability, professionalism, self-confidence and self-motivated)	11	39%
Total		100%

In terms of their level of perception of the relation of core values in their professional practice, all were rated high, specifically, excellence (M = 4.00, S.D. =1.26), honesty and integrity (M = 4.18, S.D. 1.28); innovation (M = 3.91, S.D. = 1.22) and teamwork (M = 4.05, S.D. = 1.24). Similarly, it was also high with program educational objectives (M = 3.98, S.D. 1.30).

**Table 5. Level of perception on the relation of core values and PEO in their professional practice**

	Mean	SD	D.E.
Excellence	4.00	1.26	High
Honesty & Integrity	4.18	1.28	High
Innovation	3.91	1.22	High
Teamwork	4.05	1.24	High
Program Educational Objectives (PEO)	3.98	1.30	High

Depicted in Kendall's tau-b is a significant moderate positive association between licensure examination passed and core values ( $\tau_b = 0.475$ ,  $p = 0.014$ ) and PEO ( $\tau_b = 0.474$ ,  $p = 0.018$ ). There is a significant moderate positive association between professional practice related to the program and the time to get the first job ( $\tau_b = 0.443$ ,  $p = 0.035$ ). A significant strong positive association between core values and PEO ( $\tau_b = 0.821$ ,  $p < .001$ ).

**Table 6. Kendall's Tau Pairwise Correlations in Licensure Examination, Core Values, PEO, and Time to Get first job**

		Kendall's Tau B	p	VS-MPR <sup>†</sup>
Core values	- Licensure	0.475 *	0.014	5.995
PEO	Examination/s passed	0.474 *	0.018	5.072
Professional practice related to the program	- Length of time to get the first job	0.443 *	0.035	3.154
Core values	- PEO	0.821 ***	< .001	2012.157

*Note.* All tests were one-tailed for positive correlation. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , one-tailed  
<sup>†</sup> Vovk-Sellke Maximum  $p$  -Ratio: Based on the  $p$ -value, the maximum possible odds in favor of  $H_1$  over  $H_0$  equals  $1/(-e p \log(p))$  for  $p \leq .37$  (Sellke, Bayarri, & Berger, 2001).

The Vovk-Sellke maximum  $p$ -ratio test indicates strong evidence against the null hypothesis that there is no association between licensure examination passed and core values (VS-MPR = 5.005,  $p = 0.014$ ). This indicates a rejection of the null hypothesis in favor of the alternative hypothesis that a significant association exists between licensure examination passed and core values. Similarly, the Vovk-Sellke maximum  $p$ -ratio test obtained indicates strong evidence against the null hypothesis. There is an association between licensure examination passed and PEO (VS-MPR = 5.072,  $p = 0.018$ ). The Vovk-Sellke maximum  $p$ -ratio test obtained signifies strong evidence against the null hypothesis. This shows a rejection of the null hypothesis in favor of the alternative hypothesis that a significant association exists between licensure examination passed and PEO. Also, the Vovk-Sellke maximum  $p$ -ratio test indicates strong evidence against the null hypothesis that there is an association between professional practice related to the program and the length of time to get the first job (VS-MPR = 3.154,  $p = 0.035$ ). The result denotes a rejection of the null hypothesis in favor of the alternative hypothesis that there is a significant association between professional practice related to the program and the length of time to get the first job. Further, the Vovk-Sellke maximum  $p$ -ratio test indicates strong evidence against the null hypothesis that there is an association between core values and PEO (VS-MPR = 2012.157,  $p < .001$ ). This specifies a rejection of the null hypothesis in favor of the alternative hypothesis that a significant association exists between professional practice related to the program and the length of time to get the first job.

HCT can describe the career growth of REM graduates. Based on the HCT, investing in education and training increased human capital, income, productivity, and career growth (Gillies, 2015; Hooley, 2021). The REM program increases graduates' knowledge and skills, making them valuable real estate professionals whom they attributed to getting a job and career opportunities quickly. The HCT suggest that REM graduates believe with their higher level of human capital, they are more productive and earn higher wages.

The significant association between the number of licensure exam and the program's educational objectives manifest that the curriculum is appropriately designed to meet the need of the real estate industry. Hence, career growth opportunities starting with passing the licensure exams are more likely for REM graduates. They are convinced that investing in

education and training develops the necessary knowledge and skills for them to assume professional responsibilities in real estate development.

A college education makes individuals more productive, so graduates invest in higher education. Thus, the expectation of the labor market and the expectation of college graduates are reasonably close. Generally, graduates secure suitable employment immediately while earning more on average compared to those with no college credentials. This is the reason for the motive and expectations for investing in college education, which is implicitly based on the belief that potential employers also consider that higher education improves productivity.

### Conclusion and Recommendations

More than two-thirds of the graduates passed the Real Estate Brokers Licensure Exam. Almost half are independent real estate practitioners, and more than half find their job in less than six months, and the top two reasons for staying and leaving their job are due to salaries and benefits and career challenges. The top three competencies graduates learned from the program applicable to the practice of the profession are communication skills, problem-solving skills, and human-relation skills. Graduates rated high the core values and PEO related in their professional practice.

The human capital theory manifested in the career growth of real estate graduates because they stressed the importance of education and training in improving human capital resulting in increased career growth opportunities. They believe in investing in education and training, which enhance their value in the industry and lead to career growth, such as increasing their chance of passing the licensure exams and securing employment. Moreover, the tracer study demonstrates the significant association of licensure exams passed with the core values and PEO, proving the curriculum's relevance with industry practice.

On the other side, there are specific gaps between the real estate curriculum and the needs of the industry, such as technology (i.e., PropTech) used in the professional practice of real estate. Technology should be integrated into the REM PEO and will add to the strong foundation skills and knowledge applicable to various professional roles in the real estate industry. Similarly, inadequate response in technology as a competency is coherent in the graduates' rating of innovation as ranked lowest among the four core values they believe related to their professional practice. Introducing innovation such as information technology in PEO, which would eventually include in the curriculum, help real estate professionals stay updated with the latest trends and best practices.

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