

The Thesis of the PhD dissertation

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HUNGARIAN UNIVERSITY OF
AGRICULTURE AND LIFE SCIENCES

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AND LIFE SCIENCES**

**The Development of the Human Resource Competency Model
And
HR Effectiveness in Mongolia**

Doctoral (PhD) Dissertation

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I. INTRODUCTION

1.1. Background of the Study

It might be the most difficult time for everyone in the world, especially those in charge of interacting with people and dealing with problems relating to human relations in organizations, because all levels of managers have been challenged by the situations that were brought on by COVID-19 pandemic and the man-made war in Europe. Because of those challenges, the global population is engaged in a struggle to overcome economic issues everywhere. Individual contributions to this global economic problem need to be acknowledged and promoted at this point in history.

AI requires us to compete with it at a more advanced level and demands us to upgrade ourselves by acquiring certain sets of technical and non-technical competencies at any level of jobs in many different industries. The decisions human beings make in the forthcoming two or three decades may shape the future of our and our children's lives. Therefore, the most crucial question arising today is to prepare ourselves as well as the next generations.

The market has become considerably more challenging than it was in the past. Many countries, specifically developing nations, attempt to identify their unique competitive advantages as well as the special characteristics in order to sustain themselves and enter the global market successfully. Among them, Mongolia is one typical example as it has increased a steady growth in the economy in recent years. However, very few studies have been conducted to reveal the business situations of this country, especially in the Human Resource Management (HRM) field.

In order to capture the streams of changes and developments created by technical, economic, financial and health problems all around the world, defining the most needed and demanded knowledge, skills and abilities

should be disregarded nowadays as problems that all levels of managers confront in this era, are enormous and require them to adapt a new set of competencies. Therefore, this research aims to contribute to a solution of this problem by reviewing the relevant literature on the topic, collecting a group of the most important HR competencies from the previously constructed competency models, and developing a reliable and valid HR competency model in Mongolia.

1.2. Statement of the Problem and Motivation

The original research idea was formulated based on the researcher's interest and ambition on the labor market and its participants within private as well as public sectors, particularly in Mongolia. The topic of this whole research idea was generated as the development of Human Resource competency model perceived by its internal clients in Mongolia: the relationship between HR competencies and the individual effectiveness of Human Resource practitioners is of great interest as it is fundamental of HR practices among businesses in the private as well as public sectors in Mongolia. The similar studies on the topic of the development of HR competency model and its relationship with individual performance outcome variables is very limited in Mongolia, therefore, this lack of research area caught the attention of the researcher with great passion that contributed to the development of the research topic as well as the research framework.

Definitely, well-defined skill competencies for a position encourage individuals to function more effectively (TAS, LABRECQUE & CLAYTON, 1996). In the case of Mongolia, there is no officially localized and identified competency model for HR people while employers make hiring, define the job scope, promote, and evaluate HR managers in their organizations.

In the literature, the HR competency models which were created and formulated by Ulrich and his teams (HRCS 1987, 1992, 1997, 2002, 2007, 2012 and 2016), LAWSON (1990), SCHOONOVER (1997) together with SHRM, CIPD, (2015), AHRI (2014), BOYATZIS (1982), SPENCER & SPENCER (1993), LO, MACKY & PIO (2015) and others are agreed to be practical and applicable, guiding and mapping HR professionals to add value to the outcome of organizations by performing their roles effectively and successfully. However, most of these models developed in the Western countries may not fully fit in the Asian countries such as in Mongolia where family oriented and collectivistic culture dominates, and the labor market of this nation is heavily influenced by nomadic lifestyle. Additionally, these principles and competency models have not been tested and validated during a time in our history as dramatic and challenging as this one. Hence, it appears to be a necessity and scarcity of more empirical studies in the development and creation of the country-based local HR competency model in Mongolia.

Also, this is, to the best of the researcher's knowledge, one of the first studies to attempt to establish a link between the development of an HR competency model and human capital theory (BECKER, 1964).

Numerous global HR competency models are constructed by carrying out qualitative studies, therefore, it appears to be a lack of an empirical study to be performed using both quantitative and qualitative research approaches in order to develop a reliable and valid HR competency model in Asian context, particularly in Mongolia.

1.3. Objectives of the Study

Research objective 1: to develop the locally validated and generally applicable HR competency model for HR managers in Mongolia by

exploring the key competencies that HR managers need to possess in order to perform their job effectively by conducting qualitative research.

Research objective 2: to examine whether each competency domain of the newly constructed and freshly validated HR competency model in Mongolia has a positive correlation with the individual effectiveness of HR managers by carrying out quantitative research.

1.4. Research Questions and Hypotheses of the Study

In order to reach the objectives of this study, the following research questions, as well as research hypotheses, are formed and tested by performing several qualitative (NVivo) and statistical analyses (Smart-PLS 4) after collecting qualitative data from 24 interview participants and quantitative data from 310 survey respondents between the beginning of June and the end of July 2022 in Mongolia.

Research Question 1(RQ1): Which competency domains have been determined to be the most significant to be included in Mongolia's recently developed HR competency model?

Hypothesis 1(H1): Business related competency, personal competency, HR tool, practices and process related competency, HR information system and analytics, change competency, organization and culture related competency and entrepreneurial competency can be found and defined as the components of Mongolia's newly developing HR competency model in the public and the *private sectors*.

Research Question 2(RQ2): Is there any statistically significant relationship between HR competencies and HR effectiveness?

Hypothesis 2(H2): I assume that all the HR competencies of Mongolia's newly developed HR competency model have a positive effect on HR effectiveness in Mongolian private and public sectors.

Hypothesis 3(H3): I assume that all the HR competencies of Mongolia's newly developed HR competency model are strong and significant predictors of HR effectiveness *in Mongolian private and public sectors.*

Research Question 3(RQ3): Is there any significant relationship between each employee's perceived domain of the newly developed HR competency model in Mongolia and individual effectiveness of the Mongolian HR managers?

Research Question 4(RQ4): Is each HR competency domain of the newly constructed HR competency model statistically significant and positive predictor of individual effectiveness of HR professionals in Mongolia?

Hypothesis 4(H4). I assume that business competency, as one of the competency domains of Mongolia's newly developed HR competency model, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.

Hypothesis 5(H5). I assume that personal competency, as one of the competency domains of Mongolia's newly developed HR competency model, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.

Hypothesis 6(H6). I assume that HR tools, practices and process related competency as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.

Hypothesis 7(H7). I assume that HR information systems and analytics, as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.

Hypothesis 8(H8). I assume that change related competency, as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.

Hypothesis 9(H9). I assume that organization and culture related competency, as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.

Hypothesis 10(H10). I assume that entrepreneurship competency, as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.

The independent variable in this study was the discovery of seven primary HR competency categories around the globe, which was collected and created using a summary and synthesis of the previously validated and commonly implemented twelve various kinds of HR competency models that were found and examined by the researchers (as presented in Table 4 and Table 29/Appendix A). Individual effectiveness of HR managers was chosen to be a dependent variable of the quantitative research of this study shown in Figure 1. ‘Levels of HR position’ and ‘number of HR manager’ are proposed to be a control variable due to the recommendations of literature.

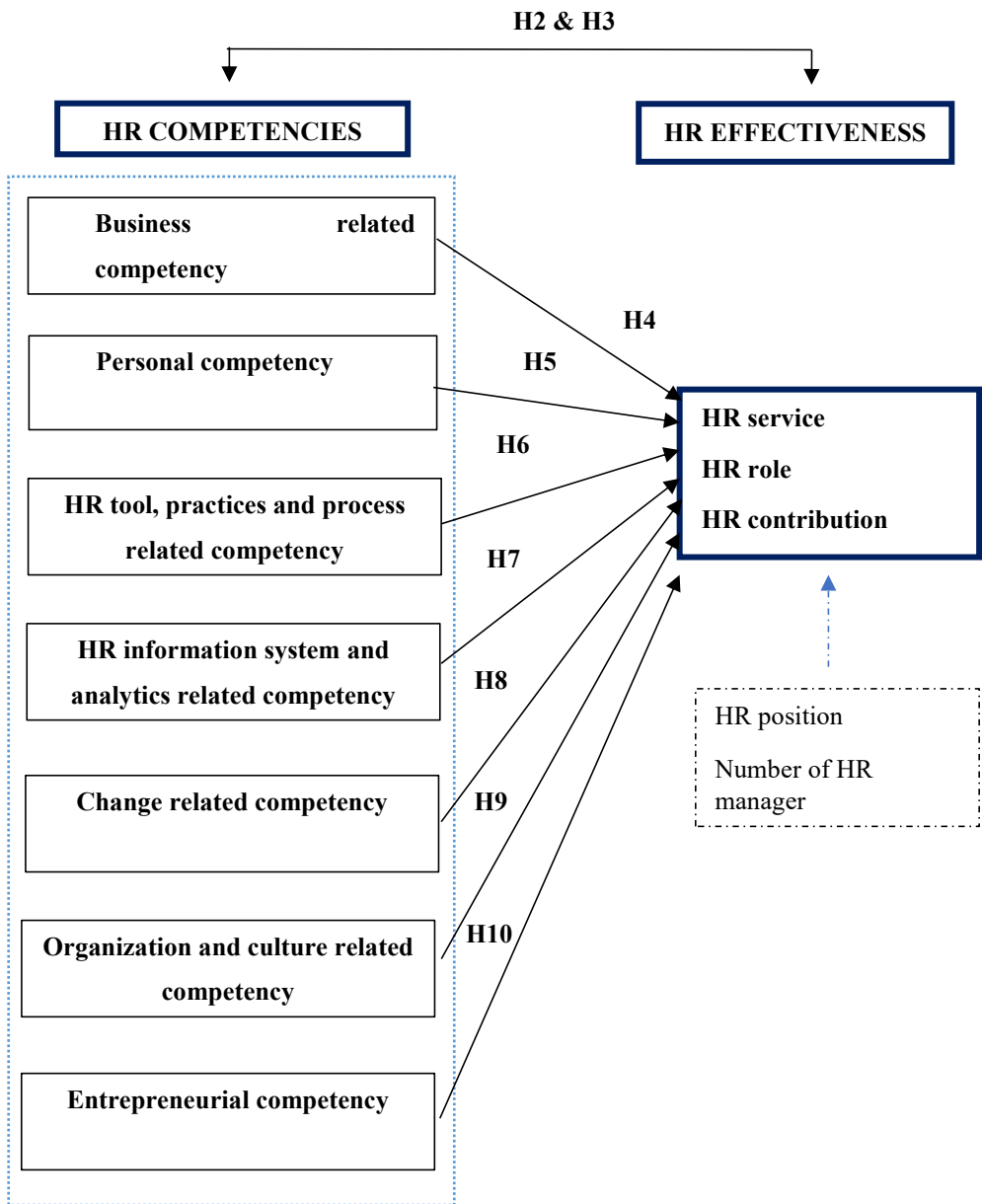


Figure 1. The Proposed Research Framework

Source: The author's own construction

II. MATERIALS AND METHODS

This chapter gives the detailed information about the research methodology for the qualitative and quantitative research of this study by outlining the research procedure, the research design, and the description of how the survey and interview questions were created. Also, the sample population, sampling technique, and size in relation to the research instruments are introduced. Figure 2 shows the research procedure used in order to carry out this study.

2.1. Qualitative Research

The objective of the qualitative research of this study is to develop a universally applied HR competency model for HR professionals across various private and public sectors in Mongolia. The thematic analysis was used to construct and validate the components of a newly developed HR competency model in Mongolia by conducting semi-structured interviews with top-level managers, middle and junior level managers as well as HR professionals from the various private and public sectors in Mongolia. The qualitative data was gathered between June 6 and July 10, 2022.

2.1.1. *Thematic Analysis*

For this study, the researcher used a purposive sample technique based on the following criteria: participants (1) have some work experience as a top-level or mid-level manager and (2) have a strong understanding of HRM. The convenient sampling was used until get a sufficient number of interview participants.

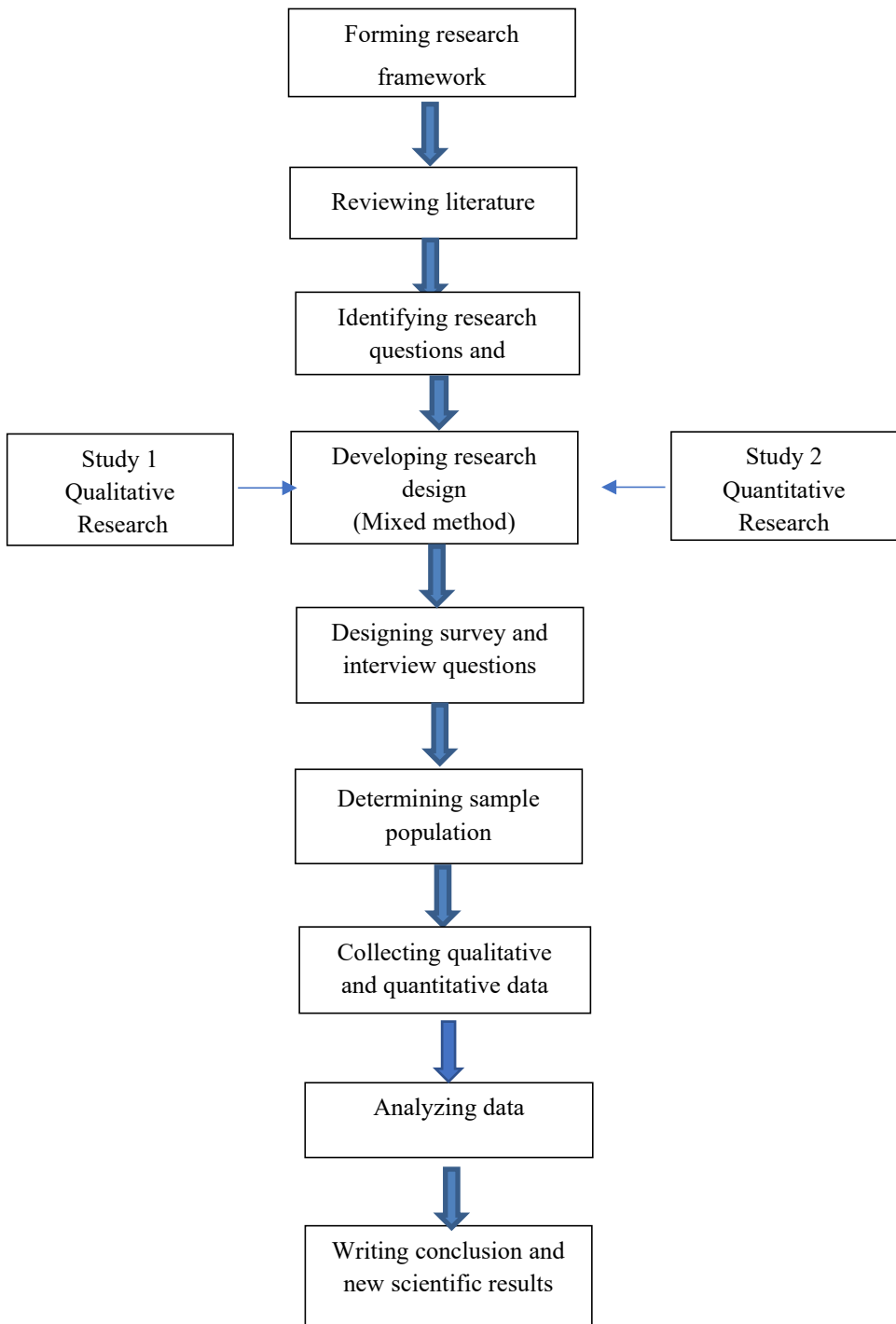


Figure 2. Research procedure

Thematic analysis is used and each transcript was uploaded into the NVivo software. Thirteen questions (Appendix J) were included in the semi-structured interviews. The first five interview questions were originated and developed based on research conducted by MCCARTNEY et al., (2021), while the final thirteenth interview question was developed based on research carried out by VAN DEN BERG, STANDER & VAN DER VAART (2020). The remaining interview questions from 6th to 12th were formulated based on the result of the literature that has been reviewed by the researcher.

The semi-structured interviews were carried out online and all interview questions were formed in English and translated by the researcher from English to Mongolian. The back-translation process was done by applying a peer review as well as expertise review process. The interviews took around 15 to 30 minutes.

2.2. Quantitative Research

The objective of the quantitative research of this study is to test the relationship between HR competencies and individual effectiveness of HR professionals by applying a descriptive research design.

2.2.1. The Research Design and Sample

The quantitative research method is used to test the proposed hypotheses between independent and dependent variables. In particular, the final list of HR competencies derived from the literature review, along with the measurement items of individual effectiveness of HR managers, was placed in the Google forms platform as an online questionnaire and distributed to internal clients of HR professionals. Participants were asked to evaluate the individual effectiveness of their HR managers by answering 30

questions (Appendix H) related to three sub-dimensions of dependent variables: HR services (15), HR roles (5) and HR contribution (10). Also, all survey participants were requested to assess and confirm whether they think that HR managers in their organizations need to possess each competency domain of the recently developed HR competency model in the qualitative research of this study namely (1) business competency, (2) personal competency, (3) HR tool, practices and process related competency, (4) HR information system and analytics related competency, (5) change related competencies, (6) organization and culture related competency, and (7) entrepreneurial competency by responding to seven questions (Appendix H) using a 5-likert scale.

Google forms, the internet, and the researcher's network was used as platforms to distribute survey questionnaires to the target population in Mongolia. Non-probability sampling methods such as convenience and snowball sampling were employed. All data gathered will be kept strictly confidential and used solely for the purposes of this study.

2.2.2. The Research Measurements

HR effectiveness was composed of three dimensions and the sub-scales named HR service and HR contribution are originated by WRIGHT et al., (2001) and a seven-point Likert scale were employed. The last dimension of HR effectiveness is HR role measured using the scale generated by MCMAHAN, MOHRMAN & LAWLER, (1996) and a ten-point Likert scale was applied. All original scales of HR effectiveness have been widely utilized and validated.

The seven dimensions that made up HR competencies were derived from the study and conclusions of the previously existing literature of HR competency models in Chapter 2, which were developed and validated by

several research organizations as well as academics from all over the world. Those seven sub-scales of HR competencies were tested and validated by the result of the qualitative research in this study.

Since the targeted population are not native English speakers, the back-translation procedure was performed. The Google survey form was used. A total of 310 individuals from various different industries in public and private sectors in Mongolia participated in the online and self-administered questionnaire voluntarily between June 6th and July 31, 2022. The researcher provided two types of non-financial incentives to all potential candidates in order to encourage and motivate them to participate in the online survey.

III. RESULTS AND DISCUSSION

The results of both statistical and thematic analysis were presented in this chapter. In the qualitative research of this study, the crosstab, hierarchy chart, cluster, and word frequency analyses were carried out using the NVivo program (windows trial version) after gathering primary data by interviewing 24 participants from a range of specialties in the private and public sectors of Mongolia. The bootstrapping test analysis and multiple linear regression analyses were carried out after evaluating the lower and higher order construct model of the quantitative research of this study, which involved gathering the raw data from 310 survey respondents in both the public and private sectors of Mongolia.

QUALITATIVE RESEARCH

3.1. Results of Thematic Analysis

The interviews were conducted in Mongolia and imported to a new NVivo project once each transcript of the interviews was translated from Mongolia to English by the researcher. A total of 12 different code categories (Appendix L) were created, and three case classifications- named sector, industry, and position were formed in order to run the matrix coding query analysis in NVivo software.

3.1.1. Demographic Profile of the Participants

Out of 24 interview participants, 20 were from the private sector which is around 83.3%, and the participants who belonged to the public sector constituted around 16.6% when the interview data were being collected. All 24 interviewees were employed in eleven different sorts of business industries in Mongolia namely banking and Finance (5), trade and commerce (4), construction and mining (3), and agriculture and education (2). The rest were from 5 different industrial categories. Eight of the 24 interviewees, or roughly 33.3% of the participants, stated that they were employed as HR managers in their organizations. Four of the participants reported that they were top-level managers, appointed as a head of department or chief executive officer of their companies. The remaining participants identified themselves as middle-level managers, mainly being employed as managers, accountants, or specialists in their organizations.

3.1.2. Word Frequency Query Analysis

The word frequency query analysis was performed in order to check what are the most 100 frequently repeated words that have been stated or mentioned by interviewees in the qualitative research. Based on Figure 3, it can be summarized that *managers*, *competency*, *skill*, and *organization* were

‘professional competency in HRM’ is a sub-theme that is displayed in much larger size than others are. This suggests that the interviewees valued and emphasized the value of having professional expertise in HRM over the other skills included in the theme of ‘the most important HR competencies today by interviewees.’”



Figure 4. The result of the Hierarchy chart analysis on the theme ‘the most important HR competency today by the interviewees’

Source. The author’s own work based on NVivo results

Furthermore, a half of the participants (12) contributed certain specific points to the conceptualization of the node named as ‘the most significant HR competency today by interviewees’ by stating and commenting on ten different functional areas of HRM namely (1) recruitment and hiring; (2) training and development; (3) performance; (4) HR analytics skill; (5) work environment; (6) retention; (7) HR practices; (8) Organizing events and other activities; (9) Preparing official documents and (10) others.

3.1.4. Crosstab Analysis

Cross tabulation is used in statistical analysis to find patterns or trends within raw data, allowed the researcher to build a crosstab table (Table 1) to investigate how many interview participants supported and rated the ‘yes’ option on each HR competency domain of the newly constructing HR competency model that was examined in the qualitative research of this study. More than half (from 70% to 92%) of the 24 participants agreed that each of the HR competency areas identified and examined in the qualitative research of this study should be regarded as one of the most important skills that their HR manager(s) must possess in Mongolia.

Table 1. The result of crosstab query analysis on the proposed domains of the newly developing HR competency model in Mongolia by sector

Demographic information	Sector =		Total (24)
	Private sector (20)	Public sector (4)	
Business related competency	3	1	4
I do not know	0	0	0
No	1	0	1
Yes	19	3	22
Personal competency	12	4	16
I do not know	0	0	0
No	0	0	0
Yes	19	3	22
HR tool, practices, and process-related competency	3	1	4
I do not know	2	0	2
No	0	0	0
Yes	18	3	21

Table 1 (continued)

Demographic information	Sector = Private sector (20)	Sector = Public sector (4)	Total (24)
HR information system and HR analytics-related competency	10	2	12
I do not know	1	1	2
No	2	0	2
Yes	15	2	17
Change-related competency	5	1	6
I do not know	0	0	0
No	0	0	0
Yes	19	3	22
Organization and culture-related competency	5	1	6
I do not know	0	0	0
No	0	0	0
Yes	19	3	22
Entrepreneurial competency	3	1	4
I do not know	2	1	3
No	1	0	1
Yes	17	2	19
Total (unique)	20	4	24

Source: The author's own work based on Nvivo results

In order to visualize the result of the cross-case analysis, the project map was used as it is a way of visually exploring or presenting the data in NVivo software. Based on the results of the word frequency query analysis, hierarchy chart analysis, and crosstab analysis, the project map in qualitative data was drawn and illustrated in Figure 5.

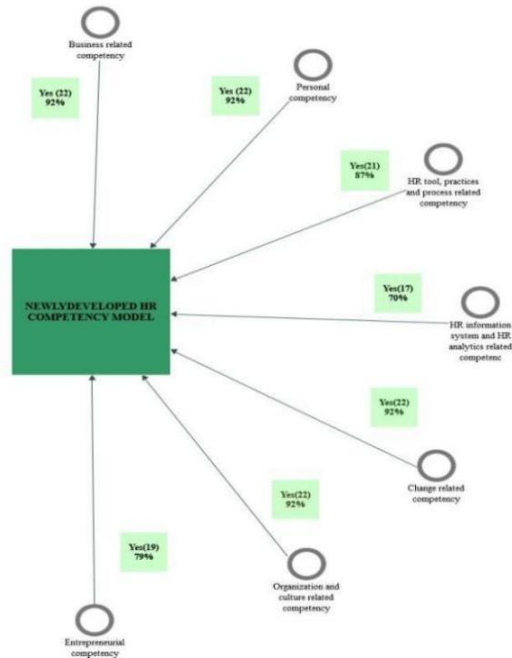


Figure 5. The result of project map visualization of each component of the newly developing local HR competency model in Mongolia

Source. The author’s own work based on NVivo results

Business competency

According to the results of the crosstab query analysis in Table 1, business competency was rated and evaluated by 92% (22) of interview participants as one of the crucial components of the newly established HR competency model in Mongolia (Figure 5).

Personal competency

According to the results of the crosstab query analysis in Table 1, personal competency was assessed and classified as one of the essential domains of the newly constructed HR competency model by 92% (22) of interview participants (Figure 5). Moreover, HR managers are expected to demonstrate various aspects of personal competency, according to interviewees. For example, participants 9 and 20 emphasized “teamwork”

during the interview; participant 12 added “HR managers need to be well-organized individuals”; but participant 22 contributed “HR managers are supposed to be creative and proactive individuals at workplaces”.

HR tool, practices, and process-related competency

According to the findings of the crosstab query analysis in Table 1. HR tools, practices, and process-related competency were assessed and regarded by 87% (21) of interview participants as one of the important areas of the newly formed HR competency model in Mongolia (Figure 5).

HR information system and analytics related competency

According to the crosstab query results in Table 1, HR information system and analytics related competency was rated and perceived as one of the key components of the recently developed HR competency model by 70% (17) of interview participants in Mongolia (Figure 5). *Furthermore*, HR managers are expected to demonstrate various aspects of HR information systems and analytics related competency, according to interviewees. For example, one of the comments made by participant (14) was that *"HR professionals need to master how to use Microsoft Excel first then they should learn how to use HR analytics programs."* The next participant, number 19, said, *"It is crucial for them to use certain HR tools or software to make their job easier."* Aside from them, participant 16 stated that *"having sufficient skills to analyze quantitative data is very crucial for HR managers to perform their job."*

Change-related competency

According to the result of the crosstab query analysis in Table 1, change competency was evaluated and rated as one of the critical areas of the newly constructed HR competency model by 92% (22) of interview participants (Figure 5). *Additionally*, participant 24 stated that *"HR managers must inspire and prepare employees to embrace organizational changes."*

Organization and culture-related competency

According to the result of the crosstab query analysis in Table 1, organization and culture-related competency was assessed and rated as one of the critical components of the newly constructed HR competency model in Mongolia by 92% (22) of interview participants (Figure 5). In addition, participant 24 said, *"HR managers can accurately represent company culture while interacting with a variety of applicants or candidates, but they need help from the management team of a corporation in order to be succeeded in accomplishing and achieving more"*

Entrepreneurial competency

According to the result of the crosstab query analysis in Table 1, entrepreneurial competency was assessed and perceived as one of the critical areas of the newly built HR competency model in Mongolia by 79% (19) of interview participants (Figure 5).

QUANTITATIVE RESEARCH

3.2. Statistical Analysis

This chapter presents the findings of the quantitative research conducted for this study along with an overview of the main analytical stages, including the evaluation and validation of the measurement and structural model of the higher and lower order constructs. The bootstrapping test analysis in Smart-PLS 4 and the multiple linear regression analysis in SPSS 20 were used to test the hypotheses from H3 through H10.

3.2.1. Sample Characteristics for Survey respondents

The data was gathered from 307 Mongolians working in both the private and public sectors. 164 (53.4%) are from the Mongolian private sectors, while 143 (46.6%) are from the Mongolian public sectors. Out of 307 survey participants, 136 (44.3%) stated that their organization has 2 to 5 HR managers, but 117 (38.11%) responded by saying that their organization only has one HR manager who handles all HRM issues. The majority of respondents (56.7%) work as staff, 30.6% as supervisors, and 12.7% as department heads. Concerning career seniority, 35 % of the survey respondents (35.5%) stated that they had 3-5 years of work experience, 18.9% had 1-2 years, 18.2% had 6-10 years, and 10.4% had less than one year. 176 (57.3%) survey participants identified as male, while 131 (42.7%) identified as female. In terms of educational level, the majority of participants (54.4%) have a bachelor's degree, and 21.2% have a master's degree.

3.2.2. Structural Equation Model

Data was cleaned by running descriptive analysis in SPSS 20 before assessing the measurement model as well as the structural model of the quantitative research of this study. More specifically, (1) minimum and maximum values were checked; (2) outlier test was performed, and extreme outliers (245, 257 and 256) were removed from the data; (3) the standard deviation of answers for each specific respondent was examined in order to conduct the further analyses of the quantitative research of this study.

3.2.2.1. Measurement Model Assessment of the Lower Construct Model

The measurement model of this quantitative study is composed of the reflective lower order constructs model (Figure 6) and the formative higher

order construct model (Figure 7). The dis-joint two-stage approach for reflective-formative type higher order constructs model is applied. The first stage of the disjoint two-stage approach focuses on only the lower-order components of the higher order construct of the measurement model. It means that the lower order construct model must be validated in the first round of the calculation in smart PLS (Ch 4.3.2.1) then the higher order construct model must be created and examined using latent variable score of the lower order components of a study.

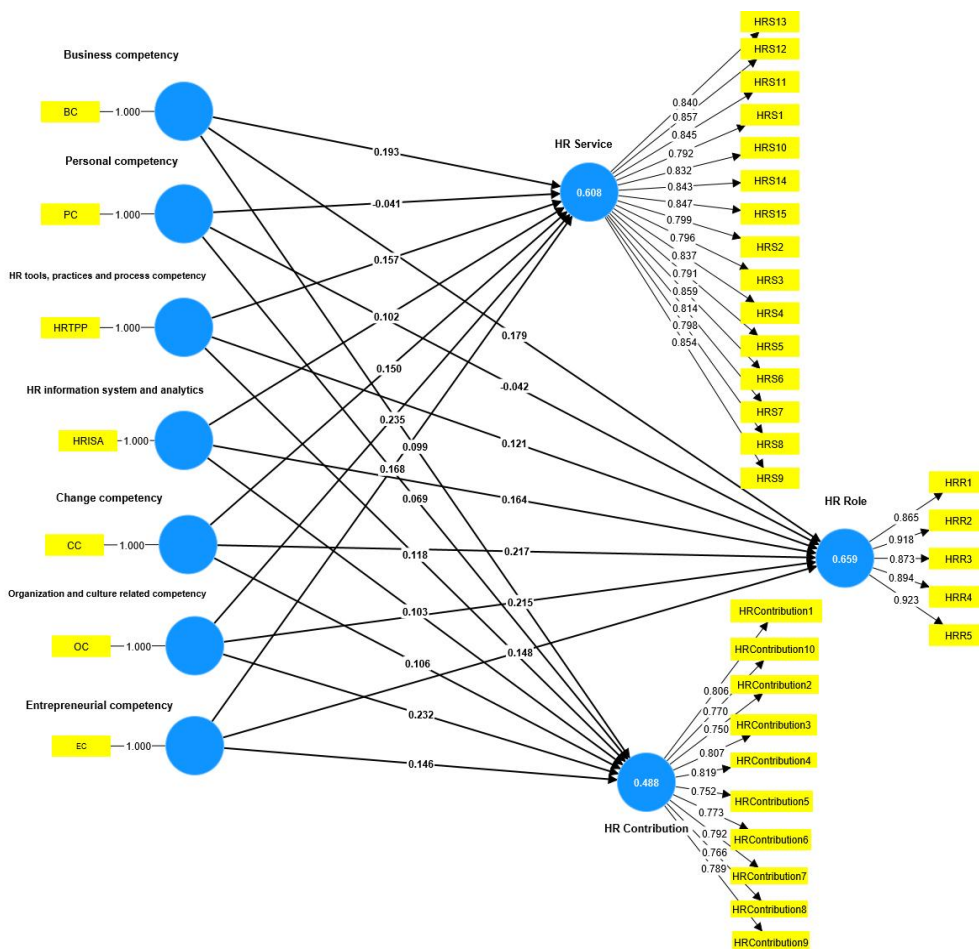


Figure 6. Lower order construct model of the quantitative research in smart-PLS 4

Source. The author's own work based on Smart PLS results

First, each value of factor loading and multicollinearity were evaluated. Second, the construct reliability as well as construct validity of the lower order construct model were assessed by checking the value of cronbach's alpha, rhoa, composite reliability (*construct reliability*) and value of convergent and discriminant validity (*construct validity*). Based on the results of all assessment calculations, the lower order construct model of quantitative research in this study is validated because all criteria of each assessment for the construct model met the satisfactory level.

3.2.2.2. Measurement Model Assessment of the Higher Order Reflective-Formative Construct Model

The dis-joint two-stage approach for reflective-formative type higher order constructs model is applied. As indicated in Figure 7, the higher order construct named HR competency was built up with the latent variable scores of business competency, personal competency, HR tools, practices and process, HR information system and analytics, change competency, organization and culture related competency and entrepreneurial competency. As for the second higher order construct named HR effectiveness was created by the latent variable scores of HR Service, HR Role and HR effectiveness.

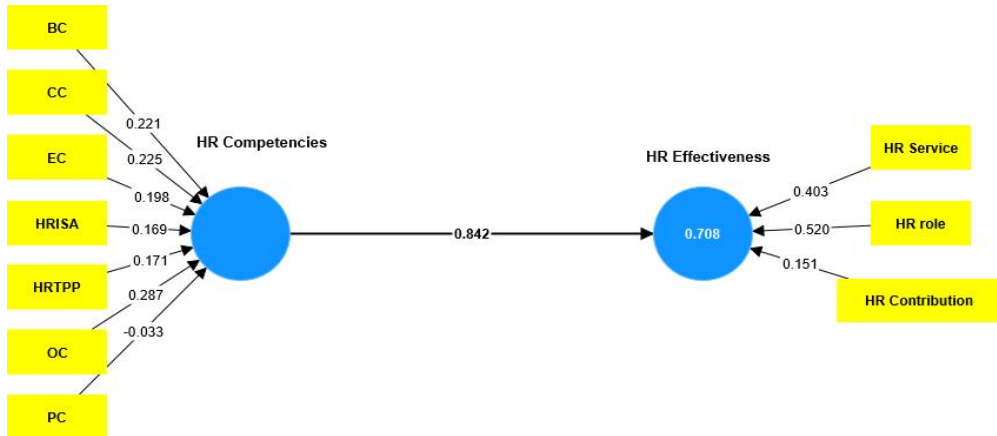


Figure 7. Higher order construct model of the quantitative research in smart PLS 4

Source. The author's own work based on Smart PLS results

Values of path coefficient, collinearity and outer loading values (p value) were assessed in order to evaluate the higher order construct model of the quantitative research of this study. Based on the results of all assessment calculations, the higher order construct model of quantitative research in this study is validated because all criteria of each assessment for the construct model met the satisfactory level.

3.2.2.3. Hypotheses Testing and Bootstrapping Test Results

To test hypothesis 2, the higher order construct model of this study was run through an analysis of the two-tailed bootstrapping test calculation in smart-PLS 4.

Table 2. Bootstrapping Results for the Relationship between HR Competencies and HR Effectiveness (HOCS)

H#	Path coefficient	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
H2	HR Competencies -> HR Effectiveness	0.842	0.847	0.02	43.033	0.000

Source: The Author's own work based on Smart PLS results

Figure 7 and Table 2 shows HR competencies have 84.2% of the impact on HR effectiveness. Therefore, H2 of this study was accepted since HR competencies has a positive and significant impact on HR effectiveness ($\beta=0.842$, $t=43.033$, $p=0.000$).

To test hypothesis 3, multiple linear regression analysis was performed in SPSS 20 in order to examine the effect of control variables namely 'HR position', and 'number of HR manager' on dependent variable of the quantitative research of this study, which is HR effectiveness.

Table 3. Summary of the Effects of Control Variables on the Relationship between HR Competencies and HR Effectiveness

Variables	Model (1)	Model (2)	Model (3)
Position	.154**	.153**	.036
Number of HR manager		-.004	.021
HR competencies			.822**
R^2	.024**	.024	.684**
$Adj R^2$.020**	.017	.680**
ΔR^2	.024**	.000	.660**
F	7.260**	3.620*	214.651**
ΔF	7.260**	.004	621.683**

Note. Dependent variable=HR Effectiveness, Values other than R^2 and F statistic are standardized regression coefficients. ** $p < .01$, * $p < .05$.

Source: The Author's own work based on SPSS results

Table 3 shows that 'position of HR manager' and 'number of HR manager in an organization' do not have any effect on the relationship between HR competencies and HR effectiveness. However, 'position' as the first control variable in this study is found to have a significant and positive effect on HR effectiveness ($\beta = .154$, $p < .01$) but this control variable does not have any effect on the relationship between independent and dependent variable of this study. In contrast, the second control variable in this study, 'number of HR managers in an organization,' has no significant impact on HR effectiveness ($\beta = -.004$, $p > .05$). As for HR competencies, it has a statistically significant and positive relationship with HR effectiveness ($\beta = .822$, $p < .01$) with an R^2 of .684. In other words, HR competency is a statistically significant predictor of HR effectiveness. Approximately 68% of HR effectiveness can be predicted and explained by HR competencies. Thus, based on the results of the multiple linear regression analysis in SPSS 20,

hypothesis H3 of this study was accepted because HR competencies can predict and explain about 68% of effectiveness of HR manager in Mongolia.

Table 4. Bootstrapping Results for the Relationship between Seven Sub-Dimensions of HR Competencies and Three Sub-Dimensions of HR Effectiveness (LOCs)

H#	Path coefficient	Original	Sample	Standard	T statistics	P values
		sample	mean	deviation		
		(O)	(M)	(STDEV)	(O/STDEV)	
H4	BC -> HR Service	0.193	0.194	0.048	4.009	0.000
	BC -> HR Role	0.179	0.179	0.048	3.748	0.000
	BC -> HR Contribution	0.099	0.099	0.056	1.759	0.079
H5	PC -> HR Service	-0.041	-0.041	0.051	0.809	0.419
	PC -> HR Role	-0.042	-0.042	0.053	0.800	0.423
	PC -> HR Contribution	0.069	0.069	0.062	1.103	0.270
H6	HRTPP -> HR Service	0.157	0.159	0.053	2.944	0.003
	HRTPP -> HR Role	0.121	0.123	0.049	2.483	0.013
	HRTPP -> HR Contribution	0.118	0.117	0.060	1.983	0.047
H7	HRISA -> HR Service	0.102	0.100	0.058	1.750	0.080
	HRISA -> HR Role	0.164	0.162	0.051	3.229	0.001
	HRISA -> HR Contribution	0.103	0.102	0.056	1.836	0.066
H8	CC -> HR Service	0.150	0.150	0.061	2.466	0.014
	CC -> HR Role	0.217	0.218	0.053	4.066	0.000
	CC -> HR Contribution	0.106	0.108	0.066	1.600	0.110
H9	OC -> HR Service	0.235	0.235	0.052	4.486	0.000
	OC -> HR Role	0.215	0.215	0.063	3.388	0.001
	OC -> HR Contribution	0.232	0.233	0.059	3.946	0.000
H10	EC -> HR Service	0.168	0.166	0.052	3.265	0.001
	EC -> HR Role	0.148	0.147	0.059	2.518	0.012
	EC -> HR Contribution	0.146	0.148	0.059	2.481	0.013

Source: The Author's own work based on Smart PLS results

All seven competency domains of the locally developed HR competency model in Mongolia were discovered to be positively and significantly related to at least one sub-dimension of HR effectiveness, with the exception of personal competency, which made this finding interesting to be discussed further because 60% of HR service ($R^2=0.608$), 65 % of HR Role ($R^2=0.659$) and 48% of HR contribution($R^2=0.488$) can be explained and predicted by all seven competency domains of the locally developed HR competency model even if personal competency does not have any significant and positive correlation with all three sub-dimensions of HR effectiveness namely HR Service, HR Role and HR contribution.

As shown in Table 4, business competency is reported to have a statistically significant and positive impact on HR Service ($\beta=0.193$, $t=4.009$, $p=0.000$) and HR Role ($\beta=0.179$, $t=3.748$, $p=0.000$). More specifically, 19% of change on HR Service and 17% of change on HR role can be brought by business competency. The similar results were discovered by TUMENTSETSEG & CHANG (2018). According to the authors, business competency can contribute 29.3% of the overall change in HR effectiveness in Mongolia. Similar to their findings, ULRICH et al., (2011) claimed that business-related competency can explain 17% of HR effectiveness. Furthermore, this competency domain received the highest supporting rate by 92% of the interview participants of the qualitative research of this study. The key word '*Business*' was one of the highlighted words that was emphasized and discovered by the word frequency query analysis in NVivo software as a part of the findings of the qualitative research of this study.

Personal competency (Table 4) is found to be not statistically related to HR Service ($\beta=-0.041$, $t=0.809$, $p=0.419$), HR Role ($\beta=-0.0042$, $t=0.800$, $p=0.423$) and HR contribution ($\beta=0,069$ $t=1.103$, $p=0.270$) even if this domain was discovered to have 22% of the positive impact on HR

effectiveness in Mongolia in 2018 by TUMENTSETSEG & CHANG (2018). Additionally, the findings of the qualitative research of this study indicated that this competency domain is suggested as one of the key components of Mongolia's recently formed and locally applicable HR competency. On top of that, additionally, 280 out of 307 respondents who participated in the online survey of the qualitative research of this study indicated that personal competency ought to be a key element of the competency model for HR professionals in Mongolia.

HR tools, practices, and process related competency (Table 4) has been found to be positively and significantly correlated with HR Service ($\beta=0.157, t=2.944, p=0.003$), HR Role ($\beta=0.121, t=2.483, p=0.013$), and HR Contribution ($\beta=0.118, t=1.983, p=0.0047$). It means that this competency domain may have an impact on 15% of HR Service, 12% of HR Role, and 11% of HR contribution. Similar findings were found in the Mongolian study by TUMENTSETSEG & CHANG (2018), which discovered that 23% of the influence on HR effectiveness may be related to HR tools, practices, and process-related competency. Additionally, 286 participants of the online survey of the quantitative research of this study agreed that this competency domain should be included in the competency model for HR managers in Mongolia.

The statistically significant relationship between the HR information system and analytics related competency and HR service ($\beta=0.164, t=3.229, p=0.001$) has been found (Table 4). More specifically, competencies in HR information and analytics can have an impact of 16% on HR service. Although this competency domain has a strong correlation with one sub-dimensions of HR effectiveness, the association between HRISA and HR Role ($\beta=0.102, t=1.750, p=0.08$) as well as HR contribution ($\beta=0.103, t=1.836, p=0.066$) is shown to be statistically insignificant. However, a total

of 294 online survey participants of the quantitative research of this study agreed that this competency domain ought to be a crucial component of the competency model for HR practitioners in Mongolia. Generally, this finding is supported by the results of the previous studies ULRICH et al., (2011) and TUMENTSETSEG & CHANG (2018). Also, MCCARTNEY et al., (2021) stated that HR managers can increase performance by using data-driven decisions when they are skilled in HR analytics.

Change related competency has been found to have a positive and significant relationship with HR Service ($\beta=0.150$, $t=2.466$, $p=0.014$) and HR Role ($\beta=0.217$, $t=4.066$, $p=0.000$) (Table 4). To be more specific, this competency domain has a 15% influence on HR services and a 21% impact on HR roles. However, the quantitative analysis of this study revealed there is no statistically significant relationship between change competency and HR contribution ($\beta=0.106$, $t=1.600$, $p\geq 0.05$). Additionally, 290 online survey participants in the quantitative research of this study agreed that it is essential for change competency to be included in the Mongolian HR competency model. The general conclusions of this study are consistent with those of earlier studies, including those by ULRICH et al., (2011) and TUMENTSETSEG & CHENG (2018). More significantly, TUMENTSETSEG & CHENG's (2018) study in Mongolia found that change competency accounts for 27.4% of the effect on HR effectiveness. POBA-NZAOU et al., (2020) further stated that one of the most anticipated qualities for HR managers is the ability to be a change agent.

Organization and culture related competency have been found to be significantly and positively correlated with all three sub-dimensions of HR effectiveness (Table 4). More specifically, this competency domain directly affects 23% of HR Service ($\beta=0.235$, $t=4.486$, $p=0.000$), 21% of HR Role ($\beta=0.215$, $t=3.388$, $p=0.001$), and 23% of HR Contribution ($\beta=0.232$,

$t=3.946, p=0.000$). This general finding is supported by the study which has been conducted in Mongolia by TUMENTSETSEG & CHANG (2018). According to the authors, organizational and cultural competency has a 28% influence on overall HR performance. In addition, 287 of the online survey participants in the quantitative research of this study agreed that this competency needed to be a crucial component of the newly emerging HR competency model in Mongolia.

Entrepreneurship competency has been found to be significantly and positively correlated with three sub-dimension of HR effectiveness (Table 4). Furthermore, the quantitative research of this study revealed some intriguing results, one of which was that entrepreneurship competency has a 16% impact on HR service ($\beta=0.168, t=3.265, p=0.001$), a 14% impact on HR role ($\beta=0.148, t=2.518, p=0.012$), and a 14% impact on HR contribution ($\beta=0.146, t=2.481, p=0.013$). Also, the majority of survey respondents (283) also concurred and reported that this competency area must be included in the competency framework for HR people in Mongolia. Most importantly, this is only the competency domain that has been inserted into the HR competency model as the last component by the researcher in order to test whether there is any significant and positive relationship between entrepreneurship competency and HR effectiveness because the literature reviewed by the researcher supports that possessing specific essential competencies can help HR managers to be more effective (TAS et al., 1996; LUCIA & LEPSINGER, 1999; MAKULOVA et al., 2015).

3.3. Summary of the Analysis Results

In order to test the proposed hypotheses of the quantitative research of this study, PLS-SEM algorithm calculation and bootstrapping test analysis in smart-PLS4 were carried out and produced the results, shown in Table 5, but

H3 was tested by performing the multiple linear regression analysis in SPSS 20.

All other hypotheses from H2 through H10 were accepted with the exception of hypothesis H5. Additionally, Hypothesis H4, H7, and H8 were only partially supported.

Hypothesis H1 was tested by performing crosstab and hierarchy test analyses in NVivo software and based on the overall results of the analyses for the qualitative data of this study, hypothesis H1 was accepted.

Table 5. Results of the Qualitative and Quantitative Research of This Study

RO	RQ	Literature	Relationship	Hypothesis	Research Sample	Research Method	Interview Questions	Analysis	Results
Descriptive Study									
1. Qualitative research									
RO1	RQ1	Ch 2.2 Table 1 Ch 2.3 Table 2 Ch 2.4; 2.5; 2.6 Table 3;4,5 & 6 2.6.4	To develop a newly applicable and local HR competency model	H1: ‘Business related competency’, ‘personal competency’, ‘HR tool, practices and process related competency’, ‘HR information system and analytics related competency’, ‘change competency’, ‘organization and culture related competency’ and ‘entrepreneurial competency’ can be found and defined as the components of Mongolia’s newly developing HR competency model in the public and the private sectors.	Top-level managers Middle-level managers HR managers	Qualitative research design Thematic analysis Semi structural Interview	Appendix J: Interview questions (From 1 to13)	(NVivo) Word frequency Hierarchy chart Cluster by word similarity Crosstab	H1: Accepted More than half (from 70% to 92%) of the 24 interviewees concurred that each of the HR competency categories defined and investigated in the qualitative research of this study should be regarded as one of the most crucial competencies that their HR manager(s) in Mongolia must possess.
2. Quantitative research									
RO2	RQ2	Table 8	HRC ↔ HRE	H2: I assume that all the HR competencies of Mongolia’s newly developed HR competency model have a positive effect on HR effectiveness in Mongolian private and public sectors.	Executives Managers Employees	Quantitative research Online survey	FHOModel (BC+CC+EC+HRIS A+HRTPP+OC+PC) + (HRS+ HRR+ HRC)	(SmartPLS 4) PLS-SEMCA Bootstrapping TA	H2: Accepted A statistically significant correlation between HRC and HRE is found (=0.842, t=43.03, p=0.000).

Table 5 (continued)

RO	RQ	Literature	Relationship	Hypothesis	Research Sample	Research Method	Interview Questions	Analysis	Results
2. Quantitative research									
RO2	RQ2	Table 9	HRC ↔ HRE	H3: I assume that all the HR competencies of Mongolia's newly developed HR competency model are strong and significant predictors of HR effectiveness in Mongolian private and public sectors.	(Internal clients of HR managers) Executives Managers Employees	Quantitative research Self-administrated online survey	Mean score (BC+PC+HRTTP+HRIS A+CC+OC+EC) (Appendix H: Part 1: Q1-Q6) + Mean score (HRS+ HRR+ HRC)	(SPSS 20) Multiple Linear Regression analysis	H3: Accepted The control variables "Position of HR manager" and "Number of HR manager" have no effect on the relationship between HRC and HRE ($\beta=-.004, p>.05$). The relationship between HRC and HRE was statistically significant ($\beta=.822, p.01$) with an R^2 of .684.
RO2	RQ3 RQ4	Table 10	BC ↔ HRS, HRR, HRC	H4: I assume that business competency, as one of the competency domains of Mongolia's newly developed HR competency model, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors			RLOCM odel (BC=Appendix H: Part1: Q1) + (HRS+ HRR+ HRC)	(Smart PLS 4) PLS-SEMCA Bootstrapping TA	H4: Partially accepted 1. BRC has a positive relationship with HR service ($\beta=0.193, p=0.000$, and HR Role ($\beta=0.179, p=0.000$). 2. BRC does not have a significant influence on HR contribution ($\beta=0.099, p=0.079$).


Table 5 (continued)

RO	RQ	Literature	Relationship	Hypothesis	Research Sample	Research Method	Interview Questions	Analysis	Results
2. Quantitative research									
RO2	RQ3 RQ4	Table 11	PC ↔ HRS, HRR, HRC	H5: I assume that personal competency, as one of the competency domains of Mongolia's newly developed HR competency model, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.	(Internal clients of HR managers) Executive Managers Employee	Quantitative research Self-administrated online survey	RLOCModel (PC=Appendix H: Part1: Q2) + (HRS+ HRR+ HRC)	(Smart PLS 4) PLS-SEMCA Bootstrapping TA	H5: Rejected PC does not have a positive relationship with HR service ($\beta=-0.041$, $p=0.419$), HR role ($\beta=-0.0042$, $p=0.423$), and HR contribution ($\beta=0.069$, $p=0.270$).
RO2	RQ3 RQ4	Table 12	HRTTP ↔ HRS, HRR, HRC	H6: I assume that HR tools, practices and process related competency as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.			RLOCModel (HRTTP=Appendix H: Part1: Q3) + (HRS+ HRR+ HRC)		H6: Accepted HRTTP has a positive relationship with HR Service ($\beta=0.157$, $p=0.003$), HR Role ($\beta=0.121$, $p=0.013$), and HR contribution ($\beta=0.118$, $p=0.0047$).
RO2	RQ3 RQ4	Table 13	HISA ↔ HRS, HRR, HRC	H7: I assume that HR information system and analytics related competency as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.			RLOCModel (HISA=Appendix H: Part1: Q4) + (HRS+ HRR+ HRC)		H7: Partially accepted 1. HISA has a positive relationship with HR service ($\beta=0.164$, $p=0.001$). 2. HISA does not have a significant influence on HR Role ($\beta=0.102$, $p=0.08$), and HR contribution ($\beta=0.103$, $p=0.066$)

Table 5 (continued)

RO	RQ	Literature	Relationship	Hypothesis	Research Sample	Research Method	Interview Questions	Analysis	Results
2. Quantitative research									
RO2	RQ3 RQ4	Table 14	CC ↔ HRS, HRR, HRC	H8: I assume that change, as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.	(Internal clients of HR managers) Executives Managers Employee	Quantitative research Self-administrated online survey	<u>RLOCMModel</u> (CC=Appendix H: Part1: Q5) + (HRS+ HRR+ HRC)	(Smart PLS 4) PLS-SEMCA Bootstrapping TA	<u>H8: Partially accepted</u> 1. CC has a positive relationship with HR Service ($\beta=0.150$, $p=0.014$), and HR Role ($\beta=0.217$, $p=0.000$). 2. CC does not have a significant influence on HR contribution ($\beta=0.106$, $p \geq 0.05$)
RO2	RQ3 RQ4	Table 15	OC ↔ HRS, HRR, HRC	H9: I assume that organization and culture related competency, as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.			<u>RLOCMModel</u> (OC=Appendix H: Part1: Q6) + (HRS+ HRR+ HRC)		<u>H9: Accepted</u> OC has a positive relationship with HR service ($\beta=0.235$, $p=0.000$); HR Role ($\beta=0.215$, $p=0.001$); and HR contribution ($\beta=0.232$, $p=0.000$).

Table 5 (continued)

RO	RQ	Literature	Relationship	Hypothesis	Research Sample	Research Method	Interview Questions	Analysis	Results
2. Quantitative research									
RO2	RQ3 RQ4	Table 16	EC  HRS, HRR, HRC	H10: I assume that entrepreneurship competency, as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors.	(Internal clients of HR managers) Executives Managers Employee	Quantitative research Self-administrated online survey	<u>RLOCMModel</u> (EC=Appendix H: Part1: Q7) + (HRS+ HRR+ HRC)	(<u>Smart PLS 4</u>) PLS-SEMCA Bootstrapping TA	<u>H10: Accepted</u> EC has a positive relationship with HR Service ($\beta=0.168$, $p=0.001$); HR Role ($\beta=0.148$, $p=0.012$); and HR contribution ($\beta=0.146$, $p=0.013$).

Source: author’s own editing, 2023

- (Business competency=**BC**, personal competency=**PC**, HR tool, practices and process related competency= **HRTPP**, HR information system and analytics=**HISA**, change competency=**CC**, organization and culture related competency=**OC**, entrepreneurial competency=**EC**)
- (Human Resource Role=**HRR**, Human Resource Service=**HRS**, Human Resource Contribution=**HRC**)
- (Formative Higher Order Construct Model=**FHOCModel**, Reflective lower order construct model=**RLOCMModel**)
- (PLS-SEM calculation analysis= PLS-SEMCA, Bootstrapping test analysis= **Bootstrapping TA**)
- (**HRS**= Appendix I: Part 2: Q1-Q15, **HRR**= Appendix I: Part3: Q1-Q5, **HRC**= Appendix I: Part 4: Q1-Q10)

3.4. New Scientific Results

Based on the findings and discussions, the following are the new scientific findings derived from the qualitative as well as quantitative research of this study.

1. The major theoretical contribution of this study is the creation and development of an HR competency model with seven significant constructs (competency domains) namely: '*business competency*,' '*personal competency*,' '*HR tools, practices, and process-related competency*,' '*HR information system and analytic-related competency*,' '*change related competency*,' '*organization and culture related competency*,' and '*entrepreneurship competency*.' After examining and reviewing the available literature, each competency domain of the model was drawn and formed based on previously validated and widely used HR competency models around the world. Furthermore, each domain of the competency model for HR people has been tested and validated to have certain levels of statistically significant and positive impact on the effectiveness of HR managers in Mongolia. Considering the theoretical and practical contribution of this study, this newly constructed and validated HR competency model is one of the first pioneering frameworks that has been developed locally and empirically in Mongolia, which can be applied locally in the private and public sectors in Mongolia since the data for both qualitative as well as quantitative studies were compelled from various sectors in the country.
2. The next major contribution to the existing literature is the inclusion of a new construct (competency domain) namely '*entrepreneurship competency*' into the research framework. Based on the qualitative and quantitative research of this study, this construct has been found and supported to have a statistically significant and positive relationship with

HR Service, HR Role, and HR contribution. Therefore, this construct can be included in the measurement model while developing and testing a local HR competency model.

3. The quantitative research design of this study allowed the researcher to test the effect of the control variables 'HR position' and 'number of HR managers' on the relationship between independent and dependent variables in this study. According to the results of the multiple linear regression analysis, the variables chosen as a control variable in this study have no statistically significant impact on HR competencies and HR effectiveness. In other words, regardless of the number of HR managers or the position of any HR professional in an organization, the newly developed local HR competency model in Mongolia can explain the effectiveness of HR managers in both the private and public sectors in Mongolia.
4. The competency model for HR managers was created and validated by the researcher using a total of 13 new assessment items (Appendix J), which were developed and employed in the qualitative research of this study. The semi-structured interview method was applied and data saturation was reached after collecting data from 24 interview participants in Mongolia.
5. The results of the qualitative research of this study reveal 13 different types of the most important basic HR competencies below:
 - *Ability to recognize and identify people*
 - *Ability to understand other*
 - *Problem-solving skill*
 - *Active listening skills*
 - *The bridge between employer and employees*
 - *Professional knowledge in HR*

- *Psychological knowledge*
- *Industry knowledge*
- *law and other regulations*
- *Leadership skill*
- *Communication skill*
- *Logical thinking*, were highlighted and perceived as the most essential basic skills for HR managers to obtain in the perception of the interview participants in Mongolia. This finding can be considered to be one of the empirical contributions of this study to the academic and business community.

Generally, the following seven competency domains—'business-related competency,' 'personal competency,' 'HR tools, practices, and processes-related competency,' 'HR information system and analytic-related competency,' 'change related competency,' 'organization and culture related competency,' and 'entrepreneurship competency'—were confirmed and validated as being a considerable and meaningful integral component of the recently developed HR competency model in Mongolia. Based on the overall findings of this study, the new competency model is believed to be applicable and adaptable in both the private and public sectors of Mongolia because the data for both the qualitative and quantitative research of this study was gathered from a variety of business sectors in both the private and public sectors in Mongolia and the results of text and statistical analyses revealed that each domain of the competency model could have an impact on the success and efficiency of HR managers in Mongolia.

IV. CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions

The main objective of this study was to attempt to develop a local HR competency model by testing and validating each competency domain of the newly constructed model for HR managers in Mongolia. Based on the summary of the literature that has been reviewed by the researcher on the topic of competency and individual effectiveness of HR people, seven constructs were drawn and formed as components of the competency model namely '*business competency*', '*personal competency*', '*HR tools, practices, and process related competency*', '*HR information system and analytics related competency*', '*Change competency*', '*Organization and culture related competency*', and '*entrepreneurial competency*', which are taken as independent variable of this study. The qualitative study was carried out in order to build and validate each domain of the competency model, and data containing responses from a total of 24 interview respondents were loaded into NVivo 12 (trial version). The descriptive statistics of the qualitative research presenting the characteristics of the interview respondents revealed that the majority of the interview respondents are from the private sectors in Mongolia, who were employed as an HR manager, top-level manager or middle-level manager in their organizations. Word frequency query analysis, hierarchy chart analysis, cluster analysis by word similarity, and crosstab analysis were performed in NVivo to confirm and validate each competency domain of the model, and the results of those analysis produced that each component of the model are supported and indicated to be vital element of the newly constructing HR competency domain in Mongolia. In the qualitative research of this study, the acceptance percentage of the interview

participants on each competency domain of the model ranged from 70% to 92%.

Another main objective of this study was to test the significance of the relationship between the independent and dependent variables of the study. More specifically, testing whether each component of the newly developed HR competency model is statistically and positively correlated with individual effectiveness of HR managers in Mongolia was the second objective of the study. According to the literature reviewed on the topic of HR competencies and its individual effectiveness of managers, HR competencies are very pivotal indicators in determining the effectiveness of HR managers as well as business performance. Three sub-dimensions of HR effectiveness were discovered to be chosen as dependent variables of the quantitative research of this study. After assessing the measurement model as well as the structural model of this study using Smart-PLS 4 (trial version), the bootstrapping test analysis revealed that the relationship between HR competencies and HR effectiveness is statistically significant and positive. The most notable findings of the quantitative research of this study are that 84% of HR effectiveness as a dependent variable can be explained or predicted by HR competencies, and that all seven competency domains taken together as an independent variable have 70% of the positive impact on HR effectiveness. It implies that the HR competency model investigated in this study is statistically proven to assist Mongolian HR managers in becoming more effective managers at workplace. Therefore, it can be concluded that the purposes of this study are fulfilled based on the results of the qualitative as well as quantitative research of this study after performing various kinds of qualitative and statistical analyses in NVivo and Smart-PLS 4 software.

To address the first research question (RQ1), hypothesis 1 (H1) was tested by conducting using various types of qualitative analyses in NVivo.

The findings of the qualitative analyses showed that all seven competency-domains tested as an independent variable in this study were found to be significant enough to be included in Mongolia's recently developed local HR competency model. To address research question 2 (RQ2), Hypothesis 2 (H2) and Hypothesis 3 (H3) were tested using data from 307 survey respondents in Smart-PLS 4 software by carrying out the bootstrapping test analysis after creating the higher order construct model. The analysis of statistical data revealed that in Mongolia, there is a statistically significant association between HR competences and HR effectiveness.

As for Hypotheses from H4 to H10, the bootstrapping test analysis was conducted after formulating and assessing the lower order construct model of this study. The results of the statistical analysis in Smart-PLS 4 produced that six out of the seven competency-domains evaluated in this study were found to have a full or partial relationship with HR effectiveness. Hypothesis 4 was partially accepted since business competency is found to have a positive effect on HR role, and HR Service, but it does not have any significant relationship with HR contribution in the Mongolian private and public sectors. It means that acquiring skills related to business competency, such as *'knowing the business'*, *'having business driven acumen'*, *'having commercial awareness'*, *'being future oriented'*, and *'having financial perspective and strategic positioner'* can assist HR managers in carrying out their responsibilities more effectively and in providing higher-quality HR services

Concerning Hypothesis 5, it is rejected according to the results of the bootstrapping test analysis; however, the results of the qualitative research of this study found and confirmed that personal competency should be treated as one of the integral components of the model. Therefore, the researcher decided to keep this competency domain in the model since all competency

domains of the model tested in this study were derived from the existing literature as well as the summary of the previously validated HR competency models. As for Hypothesis 6, this competency domain was fully accepted because HR tools, practices and process related competency as one of the competency domains of the newly developed HR competency model in Mongolia is found to have a statistically positive effect on HR Service, HR Role and HR contribution. It implies that possessing HR tools, practices and process related competency such as *'being an HR expertise and human capital curator'*, *'being an analytical designer and interpreter'*, *'being a compliance, resource and talent planning manager'*, *'being a training and talent development manager'*, *'being performance and reward manager'*, *'being an employee engagement and relations manager'*, *'being a workforce designer and solution driven manager'*, and *'having good knowledge about employee rights and labor law'*, can assist HR managers in Mongolia become effective managers at work by offering better HR services, fulfilling their roles effectively and making a positive contribution to the businesses.

Regarding Hypothesis 7, this hypothesis was partially accepted because HR information system and analytics related competency as one of the competency domains of the newly developed HR competency model in Mongolia is found to have a statistically positive effect on HR service in Mongolia, but it has no significant relationship with HR Role and HR contribution. It means that obtaining HR information systems and analytics related competency such as *'being a technology and media integrator'*, *'having good communication skills'*, *'providing good service delivery'*, *'having data driven mindset'*, *'supporting decisions with analytics'*, *'providing consulting'*, and *'having research and discovery mindset'*, can assist Mongolian HR managers in providing more efficient HR services to

the internal clients of their organizations in Mongolia. For Hypothesis 8, it is partially accepted since change related competency as one of the competency domains of the newly developed HR competency model in Mongolia is found to have a positive effect on HR Role and HR Role. However, it is not statistically correlated with HR contribution. Therefore, it can be interpreted that change related competency such as *'being a change leader, and influencer'*, *'being collaborative and resolver of issues'*, *'having execution excellence'*, *'having a good understanding of knowledge and networking management'*, *'leveraging ideas to move faster'*, *'being business psychologists'*, and *'teaching people to take action'* can assist HR managers in Mongolia to deliver better service and carry out their roles effectively at organizations. Concerning Hypothesis 9, this competency domain is fully accepted because organization and culture related competency, as one of the competency domains of the newly developed HR competency model in Mongolia, is found to have a positive effect on HR Service, HR Role and HR contribution in the Mongolian private and public sectors. It means that organization and culture related competency such as *'having the ability to navigate paradoxes'*, *'having global and cultural effectiveness'*, *'being a good organization designer and development manager'*, and *'having good knowledge of restructuring organizations'* may assist HR managers in being more effective managers at work by providing better services, performing their jobs successfully, and positively contributing to the organizations.

The last but not least, Hypothesis 10 which is fully accepted since entrepreneurship competency, as one of the competency domains of the newly developed HR competency model in Mongolia, has a positive effect on HR role, HR service and HR contribution in Mongolian private and public sectors. It implies that mastering *entrepreneurship related competency such as 'having the ability to recognize opportunities in one's*

life, *'having the ability to pursue opportunities by generating new ideas and finding the needed resources'*, *'having the ability to create and operate a new firm'*, and *'having the ability to think in a creative and critical manner'* may help HR managers perform their tasks effectively by offering better HR services, fulfilling their roles successfully, and making some meaningful contribution to organizations. As a result, all of the proposed research questions were addressed after testing a total number of ten hypotheses in this study.

Overall, based on all discussions and results of the qualitative as well as quantitative analyses of this study, it can be concluded that the Mongolian local HR competency has been established and its effectiveness has been verified. Additionally, the human capital theory is applied, and the overall results of this study supports and corroborate the basic concept of the theory. Regarding the novelty of this study, it can be regarded as one of the pioneering research-works which is able to be used as a reference or guidance for future works by practitioners, researchers or academicians. More specifically, the findings of this study can be applied practically in order to support businesses in Mongolia through triggering and boosting the individual effectiveness of HR managers. For instance, this recently developed competency model can be applied to the recruitment, training, promotion, and evaluation of HR managers in the private and public sectors in Mongolia.

4.2. Recommendations

Based on the results of this study, a few recommendations are made for future management researchers.

Each competency domain of the newly developed HR competency model in Mongolia is validated based on the overall results of this study and

the new model is considered to be applicable and feasible in both private and public sectors since the data of the qualitative as well as quantitative research of this study was gathered from the various business sectors in Mongolia. Additionally, a very high level of variation in HR competencies might have an impact on the efficacy of individual HR managers in Mongolia. As a result, a moderate level of practicality and adoption of the concept is anticipated in both the private and public sectors. Therefore, the stakeholders from various sectors in Mongolia can apply and use the model as a tool for hiring, training, assessing, promoting and compensating HR managers in their organizations. In return, the individual performance outcome of HR managers in their organization is expected and anticipated to be higher.

As for HR managers, this newly validated competency model can be used to evaluate their professional skills and abilities in order to take advantage of opportunities to grow and boost their competencies, because the overall findings of this study revealed that each component of the new HR competency model in Mongolia has a different level of positive impact on HR service, HR role, and HR contribution, which are three sub-dimensions of HR effectiveness. For instance, if HR managers in Mongolia are able to possess and develop the following HR competencies, such as ‘HR tools, practices and process related competency,’ ‘change related competency,’ ‘organization and culture related competency,’ and ‘entrepreneurship competency,’ their effectiveness at work will probably be better and higher by offering better services, carrying out their duties effectively, and making a meaningful contribution to their organization. Therefore, for example, each competency domain included in this study can help HR managers advance their careers and skill sets. They can use the model as guidance to lead and prepare themselves in order to find a better

job, be promoted, or have their pay boosted by possessing each component of the model and having a positive impact on the organizations they work for.

As for educators, they can use this recently developed competency model to design a course for HR students at universities by considering each competency domain of the model as the part of the course's objectives in the curriculum. In this case, HR students are expected to be equipped with the right tools and right set skills to be effective HR managers at their future organizations in Mongolia. More specifically, since the newly validated HR competency model of this study was developed based on data from internal clients of HR managers in Mongolia such as CEOs, HR professionals, top, and middle management, if young HR students have been properly prepared by being taught and acquiring all components of the newly developed HR model constructed by the result of this study, it may be much smoother and easier for them to find a job after graduating from their degree programs in HRM. It implies that they will have a better chance of fulfilling the needs of employers in the job market.

As for employees, this newly designed and validated HR competency model can be used as an assessment tool for them to evaluate the performance of their HR managers at organizations. In other words, employees anticipate HR managers to possess all seven competency domains outlined in the model and effectively carry out their duties at work. For instance, the majority of the competency domains of the model have been evaluated and it has been concluded that they have some positive effects on HR Services in Mongolia.

4.3. Limitation and Future Directions of the Study

Despite the fact that the relationship between each competency domain of the newly developed HR competency model and its individual

effectiveness of HR managers has been tested and reported to be statistically and positively correlated at a certain level, this study did not examine whether the relationship between each competency domain of the newly developed model and its impact on business performance. As a result, more research into how the seven components of this newly developed HR competency model relate to and affect business performance may be beneficial.

Despite the fact that the data for the qualitative research of this study was compelled from 24 individuals who work in various types of manager positions at their organizations, the majority of them (19) were from the private sectors in Mongolia. This means that data from 5 participants cannot represent the entire research population who work in the public sector in Mongolia; thus, collecting more data from managers who are employed in the public sectors is recommended while conducting similar research to test the validity of the HR competency model developed by this study.

Even if the data of qualitative as well as quantitative research of this study were gathered from a variety of private and public industries in Mongolia, it is still important to test and validate each competency domain's applicability in diverse industries by carrying out more studies in the labor market.

Finally, the researcher is strongly driven to carry out comparable studies by gathering both qualitative and quantitative data on this subject and studying it in other nations to see if there are any similarities and differences compared to the findings of this study. More fascinatingly, it is exciting to investigate and check any uniqueness and peculiarities in the Mongolian case compared to cases from other countries.

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