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THE ROLE OF HUMAN RESOURCES MANAGEMENT IN THE SUCCESS OF CONSTRUCTION PROJECTS : THE CASE OF IRAQ

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Abstract:
Project management specialists are divided into two camps : those that emphasize the significance of HRM practices in the overall achievement of building projects, and others who doubt the existence of any connection between the two. The objective of our study is to contribute to this ongoing discussion by seeking to validate or refute the presence of a correlation between HRM and the achievement of construction projects in Iraq. Conducting a study in Iraq, which has distinct economic, sociological, political, and religious conditions compared to industrialized countries, will allow us to determine if the connection between Human Resource Management (HRM) and the success of construction projects differs based on the country in which the project is situated. The selection of this study issue is particularly warranted given the scarcity of studies examining the success elements of projects in Iraq, specifically the correlation between human resource management (HRM) and the outcomes of construction projects in Iraq. The findings of our study indicate that HRM is significantly related to the success of construction projects in Iraq. However, compared to the other characteristics examined, HRM exhibits the lowest association with project success. The unexpected outcome can be mostly attributed to the distinctive features of Iraq that impact project management and human resource management within this particular context. Additionally, this could be attributed to the distinct attributes of Human Resource Management (HRM) inside the project setting. To gain a deeper understanding of the correlation between HRM practices and the success of construction projects in Iraq, future study should focus on the unique aspects of HRM within the project context, with a specific emphasis on the project context within developing countries.

Keywords: Human Resources Manage, Success, Construction Projects, Iraq.

INTRODUCTION

In the 21st century, organizations experience a dynamic environment characterized by constant, swift, and uncertain changes that impact their economic, technological, social, and political surroundings (Knoke, 2018). Given these transformations, the contemporary organization is being more challenged to enhance its agility and bolster its capacity to adjust, with the aim of preserving its competitiveness and securing its long-term viability (Ramadan et al., 2023). Competent and adaptable human resources are essential performance variables that organizations depend on to enhance their capacity to adjust and sustain their competitiveness (Otoo, 2019). Organizational management experts and professionals concur that effective and strategic management of HR (human resources) can enhance organizational performance (Anwar & Abdullah, 2021). Amidst the overall trend, there is a debate about the significance of HRM (Human Resources Management) in organizational performance, sparked by studies conducted by Ren, Tang and Jackson (2018) and Davidescu et al., (2020) in the field of project management. Concluding that it lacks a substantial influence on the project's success. The ongoing discussion over the correlation between HRM and project success is yet to reach a conclusion. The findings of these research challenge the significance of HRM in organizational performance and prompt the inquiry of whether HRM would be relevant in achieving project success within the specific context of project management (Cooke, 2018). The most renowned and definitive empirical research on the determinants of project performance and the role of human resource management (HRM) within these determinants have been conducted in developed nations such as the United States, Canada, and Europe (Khassawneh, 2018). Conducting a study in nations with diverse features and situations, such as the Developing nations (LDCs), appears to be highly useful for gaining a deeper understanding of the connection between HRM and project performance (Cooke et al., 2019).

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RESEARCH QUESTION

Our research topic focuses on the relationships between the success factors of projects (identified in the literature) and the success of projects carried out in Iraq. In particular, we are interested in the relationship between the HRM factor and the success of this project category. With this in mind, our research question is:
What are the relationships between the main factors of project success and the actual success of construction projects in Iraq? In particular, are there any links between the HRM factor and the success of construction projects in Iraq?

PROBLEMATIC

HRM techniques are nearly universally recognized as crucial to organizational performance in organizational management and performance literature.
This literature suggests that HRM is essential to organizational performance, but empirical studies on project management, such as those by Anwar and Abdullah (2021) and Keegan Ringhofer, and Huemann (2018), argue that HRM does not affect project success. These contentious findings warrant additional project success factor study. We'll attempt to answer:
Would HRM affect project success in project management?
Industrialized countries have done the most definitive empirical studies on project success variables, notably Nanthagopan (2022) and Amoah, Berbegal-Mirabent and Marimon (2021). By conducting another study on project success determinants in poor nations, we hope to further understanding on this research topic. Despite projects' vital role in developing countries' economic and social development and the funds and efforts invested in their implementation, a literature review shows that these projects have high failure rates and disappointing results. According to the literature, project management in these nations is plagued by many issues that make project delivery challenging. This raises questions about why developing country projects fail. This study examines the correlations between important success variables and project outcomes in this category, as well as HRM's role in these factors. We believe that answering these questions will help identify the causes of success and failure, which will assist identify the elements of good project management and promote their success and achievement. Project success factor literature is extensive and varied. The causes of this accomplishment are inconsistently discussed in this literature. Indeed, literature review shows that authors disagree on project success elements and success definition. The literature on initiatives in poor nations is scarce and rarely discusses their success elements. While project management literature in developing countries is rare, HRM literature in the context of projects in developing nations is even scarcer, since documents and research on this topic are essentially non-existent.Given these factors, our study seeks to deepen the debate over HRM's involvement in project success and enhance knowledge of its function in organizational performance. Our research will focus on project management in Iraq. Thus, we have studied the relationships between literature success factors and project success to determine the importance of HRM in Iraq.

NATURE OF THE RESEARCH

The study focuses on management sciences (project management), human resource management, and organizational sciences because we want to know how they affect project success. We conducted a comparison study. Relational research questions ask about the concurrent or cause-and-effect link between two or more states of reality (dependent variable and independent variable), according to Thomann and Maggetti (2020). The comparative approach is best for relational questions because it establishes and proves a relationship between the dependent and independent variables by comparing their states. Our study follows this comparative and relational logic by relating independent variables (important success components, particularly HRM) with a dependent variable (project success in developing nations). Explanatory quantitative research is likewise our strategy. Quantitative approaches "detect the influence of an explanatory variable on a variable to be explained," according to Nanéma, Nassè and Ouédraogo (2021). In most explanatory methodologies, influence is drawn from relationships, especially correlations, with the theory explaining the relationship." Our study aims to 'detect' the impact of HRM practices on project success in underdeveloped countries. These authors plan to demonstrate this influence using a quantitative method based on correlation analyses of questionnaire data. Additionally, our study is deductive. Radosiński and Radosiński (2018) says "From a deductive and confirmatory perspective, the problem is developed from concepts from the scientific literature to be concretized in a specific research question that makes it possible to confront this theoretical construction with a particular reality". Our study follows the deductive approach by starting with the Belout and Gauvreau model (2004) of project management and success variables. We use this literature to establish our problematic and analysis model to answer our research questions by applying this "theoretical construction" to developing Iraq projects.
Finally, our study employs secondary data from a questionnaire administered at a certain period, making it cross-sectional. The Belout (1998) study obtained these data.

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ANALYSIS MODEL

Belout (1998-2004) inspired our analytical model. The P.I.P.19 (Project Implementation Profile) by Slevin and Pinto (1986) presents 10 independent variables for project performance, which inspired Belout's model (1998). Belout and Gauvreau (2004) maintained just nine factors after the P.I.P. pre-test because only two of the ten success factors, "client consultation" and "communication", displayed substantial multicollinearity. We integrated these two factors into "customer communication" (the "communication" variable in our study). Belout and Gauvreau's (2004) model also includes three moderating variables: project life cycle, organizational structure, and business area.

CONCEPTUAL MODEL

The study adapts Belout and Gauvreau's (2004) approach to the project context in Iraq. Belout and Gauvreau's (2004) nine project success factors—including HRM—will be our conceptual model's explanatory variables. Our explanation variable is Iraqi project success. Our model will include three moderating variables: the project's life cycle, organizational structure, and business area, similar Belout and Gauvreau (2004).

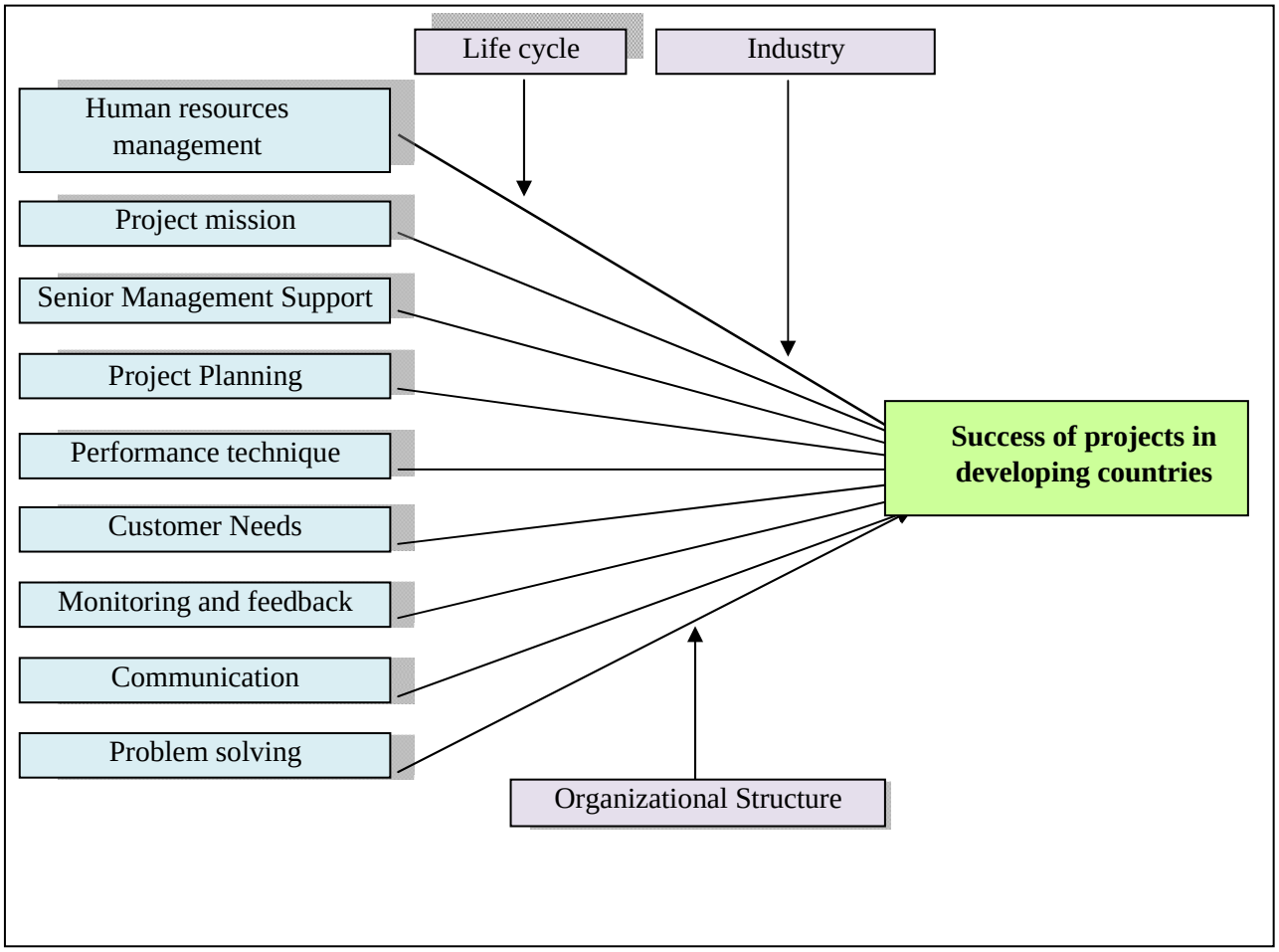
PROJECT ORGANIZATIONAL STRUCTURE:

Organizational structure is the "architecture" that governs the interactions between divisions of labor and their tasks and activities (Joseph & Gaba, 2020). This concept defines the organizational structure of the project as the "design" of all project activities that determines communication, task and responsibility distribution, and power interactions between project participants. Englund and Graham (2019) is a key study on project organizational structure. These authors believe that each organizational structure has pros and cons and impacts project success differently. The organizational structure affects the project manager's roles, activity coordination, and conflict intensity, which indirectly affects project management and project success. Functional, team-project, matrix-functional, matrix-project, and balanced matrix structures were discovered as project organizational structures.

PROJECT ACTIVITY AREA:

The literature implies that the project's business sector affects HRM importance. Elahi, Ahmad and Aamir (2020) found that the business domain affects the relative importance of project success elements, including HRM. Other empirical research have shown that the field of activity moderates the relationship between independent variables and project success (Belout and Gauvreau, 2004). This study will use sector of activity as a moderating variable in the HRM-project success relationship. Project sectors are the business or activity in which the project is conducted. These include construction, IT, engineering, etc. Figure 6 shows our study's conceptual model.

Figure 1 : The conceptual model



HYPOTHESIS

In order to answer the study question, we put forward four hypotheses covering on the one hand the relationships between the factors of our model and the project success in Iraq, and on the other hand the variation of these relationships according to the life cycle, the organizational structure and the sector of activity of the project. Several other research and empirical studies share this view and argue for a positive relationship between HRM and construction projects success (Chadwick & Flinchbaugh, 2021; Jong, Sim & Lew, 2019; Keegan, Ringhofer & Huemann, 2018). Based on this literature, we suggest that HRM will have a significant relationship with the success of projects in Iraq. Thus, our first hypothesis will be the following:

H1: There is a significant relationship between the nine key factors and the success of projects in the developing countries. In particular, the HRM factor will have a positive correlation with the success of

projects in the developing countries.
H2: The relationship of the nine factors (in particular HRM) to the success of projects in Iraq will vary depending on the phase of the project life cycle.
H3: The relationship of the nine factors (in particular HRM) to the success of projects in Iraq will vary depending on the organizational structure adopted.
H4: The relationship of the nine factors (in particular HRM) to the success of projects in Iraq will vary depending on the sector of activity.

METHODOLOGY

Data collection

In this study, we will discuss the method used to collect the data from our research as well as the sampling method.

Data Collection Method

This study employed secondary data. These data were acquired for Faeq, Garanti, Sadq (2021) and Ali and Anwar (2021) project management studies at Universite Iraqi.

Secondary data provides benefits (Ruggiano & Perry, 2019). We used this secondary data to understand the breadth of initiatives in general and in developing nations without having to spend money on new research. Secondary data help researchers to verify their findings, according to Rassel et al.,(2020). In this logic, our study seeks to validate or deny Pinto et al. (1988) and Belout and Gauvreau (2004), who found that HRM did not affect project success. Our study applies their conceptual model to projects in developing countries, not repeating the same studies. Using secondary data also saves.

A database is needed to eliminate primary data collection issues. However, the measuring equipment will be tested for validity. Our study collected data using a Belout (1998)-validated self-administered questionnaire. This survey is based on Slevin and Pinto's (1986) P.I.P. Project managers use the P.I.P. questionnaire.

This questionnaire is composed of the following four sections:

1. Socio-demographic characteristics of the respondent: gender, age, seniority, education.
2. Descriptive data about the project: life cycle phase, business sector, organizational structure, country, cost.
3. Project success factors: The questions in this section refer to indicators to measure the presence or absence of activities or practices related to the model's success factors.
4. Overall success of the project: the questions in this section allow us to check the presence or absence of the project success criteria (which is the dependent variable of our model).

The independent variables and the dependent variable, in Sections 3 and 4, are composed of 5 to 11 indicators (formulated in terms of questions) that are measured on a 7-level Likert scale. A Likert scale is an interval scale that "suggests respondents express their opinion through a degree of agreement with a proposition" (Gavard-Perret et al., 2008). In our questionnaire, response 1 corresponds to the "strongly disagree" opinion, while response 7 refers to the "strongly agree" opinion, with 4 being a neutral opinion (neither agree nor disagree). Answer 0 is chosen when the question does not apply to the respondent.

The questionnaires, used to collect the data for our study, were administered by two distribution methods: mail-out to resource persons and hand-delivered. The distribution of the questionnaires was carried out 100 questionnaires were sent to companies (Hammurabi Company - for construction contracting, Al-Khairan General Contracting Company, Taha and Partners Group, Al Khaleej Al Amra Company for General Contracting, and Middle East Engineering Company). 80 questionnaires of which were completed by project managers in Iraq.

Sampling

Iraqi enterprises, mainly in Baghdad, comprise our sample. Using the Ministry of Planning's company/project lists, this sample's projects were randomly picked. This database uses non-proportional stratified sampling. First, activity sector stratification. IT, construction, engineering, technological development, organization, and social or humanitarian are the six areas chosen. Company selection was random within each section. After merging questions from the final step of questionnaire administration, our research included 51 projects. To do this, we used questionnaires from Iraqi initiatives. Using the "Select case if" tool in SPSS, a subsample of Iraqi data was obtained.

Validity of the research

Validity guidelines should govern all scientific research. We assessed the internal and external validity of the study.

1. Internal validity

The definition given by Sürücü and Maslakci (2020) "Internal validity corresponds to the fact of ensuring that the researcher, through the measurement instruments chosen and the method implemented, has been able to measure what he wanted to measure... it is a question of being certain that the measurements have been carried out correctly, without introducing bias, and that the phenomenon under study has been properly grasped and not another, and that it has been grasped in its entirety". Moskal and Leydens (2019) indicates validity and reliability as evaluating instrument quality requirements. Since this study uses numerous variables to measure a notion, internal consistency is the most popular empirical reliability metric. Cronbach's Alpha measures this. Each variable's coefficients exceeded 0.70, suggesting acceptable measurement accuracy. We'll use Cronbach's Alpha to verify measurement accuracy. It involves two key criteria: content validity (covering all parts of the measured idea) and construct validity (measuring the concept effectively, which involves indicator construction and choosing). Our measurement instrument uses indicators from

previous empirical studies (Pinto et al., 1988 and Belout, 1998) by recognized authors that have great scientific value in project management. These scholars rigorously validated models based on solid theory. It appears that our measurement tool meets content validity requirements.

2. External validity

Extensive generalization of outcomes is external validity (Maxwell, 2021). This is to apply study results to all comparable situations. This casts suspicion on samples. The sole assurance for generalization is probability samples, according to Baltes and Ralph (2022). Mistakes in sampling and measuring limit generalization, he says. According to Bound, Brown, and Mathiowetz (2001), "bias"—measurement errors—can occur from poor sampling frame, inquiry instrument architecture, interviewer, experimental setting, non-response issues, etc. For this study, the Belout (1998) questionnaire will be employed. Participants received standardized questionnaires. Standardized questions and response alternatives. A probability sample with an appropriate size reduces sampling error (Gauthier, 2003). Bressoux (2008) asserts that a sample's representativeness depends on its probabilistic character and diversity, not quantity. Despite sampling restrictions, the sample's "wide range" of demographic groups can detect variable relationships in small samples. Sample size only affects precise variable association estimates. Author believes larger sample sizes produce more accurate estimates. Our statistical technique and results are limited by our small sample size (n=51). Our sample includes projects in different phases (initiation, planning, execution, control), from different business areas (IT; engineering; construction; technological development; organizational projects (e.g. restructuring); social or humanitarian projects), and with different organizational structures. However, we use a Belout (1998) "subsample". Probability samples are non-proportional stratified. Guathier (2003, p.236) calls this sampling method the "most refined" probabilistic method. Randomly sample strata of the population. A stratified non-proportional sample overrepresents underrepresented groups. A probability sample with error control. All external validity standards appear met in our sample.

Standardized questions and responses.

Our hypotheses were tested using SPSS statistical analysis. First, we checked variable homogeneity with Cronbach's alpha. Pearson correlation was employed to test the first hypothesis assuming a relationship between independent factors and dependent variable. For hypotheses 2, 3, and 4, Spearman correlation analyses were used to see if HRM and project success vary by "project life cycle", "organizational structure", and "business domain". The moderator variables' categories were controlled one by one for these correlation analyses.

RESULTS

Descriptive analysis of the sample

Before this descriptive analysis, we examined the minimums, maximums, and missing values in each indicator's frequency table (question or item). Maximums and minimums were normal in this check. Indicators for the dependent variable 'Project success' and the independent variables 'HRM', 'Communication', and 'Technical performance' had several missing values. This analysis comprises 50 Iraqi projects. Aside from project details (kind, cost, location, etc.), the questionnaire collected data on respondents' age, education, and years of service in the organization. According to the database, 56% of responders are between 30 and 47 years old. Seniority in the organizations where they worked during questionnaire administration ranged from three to 20 years, with an average of 10.08 years. With 87.7% university degrees and 30.9% Master's and Ph.D. degrees, most respondents were well educated. 70% of our sample is for projects under $2,000,000. 60.5% of the sample's projects are under management, while 39.5% are contract projects performed by the organization under a contract with a client promoter. The majority of projects (86.22%) were in the Execution phase when data was collected for this study (Table 5). We also have few projects under Design (4), Planning (5), and Close-out (1 project).

Table 1: Distribution of the sample by project phase

Phase	Number of cases (n)	Valid percentages %
Conception	4	8%
Planning	4	8%
Execution	38	76%
Fence	2	4%
Missing values	2	4%
Total	50	100%

About the organizational structure, it was observed that 40.50% of the projects in the sample utilized a functional organizational structure. Additionally, 36.25% of the projects each adopted the project structure and the matrix structure (refer to Table 1).

Table 2: Distribution of the sample by organizational structure

Structure	Number of cases (n)	Valid percentages %
Functional	20	40%
By project	14	28%
Dot matrix	14	28%

Missing values	2	4%
Total	50	100%

Upon examining the table displaying the distribution of the sample based on the variable "Sector of activity", it is evident that this variable includes items with a significantly small number of cases, rendering our analysis unreliable (refer to Table 3).

Table 3: Distribution of the sample by sector of activity

Industry	Nombre de cas (n)
Computer science	15
Construction	16
Engineering	3
Technological development	2
Organizational	2
Other	10
Missing values	2
Total	50

To address this issue, we reprogrammed this variable by consolidating items with negligible "ns". Therefore, inside the category labeled "other fields," we have organized the subcategories of "engineering," "technological development," "projects of an organizational nature," and "other" (with "other" being the primary subcategory within "other fields"). This categorization allowed for a reduction in the number of items from 7 to 3, specifically: "IT" at 31%, "construction" at 34%, and "other" at 35%. Table 8 displays the distribution of the sample based on the variable 'Sector of activity' following a transformation.

Table 4: Distribution of the sample by post-processing industry

Industry	Number of cases (n)	Valid percentages %
Computer science	15	30%
Construction	16	32%
Other	16	32%
Missing values	3	6%
Total	50	100%

Homogeneity of scales

This section provides an analysis of the internal consistency of each variable included in our model. The assessment of internal consistency allows us to determine the degree to which each indicator (or question) represents an equivalent measure of the same idea. Cronbach's Alpha coefficient is utilized for measurement (Taber, 2018). The coefficient allows for assessing the homogeneity of each construct by examining the average correlation between the indicators of the construct. The utilization of this measure is advised for analyses that employ Likert scales (Cheah et al., 2018). In the realm of social research, it is acknowledged that variables can be deemed homogeneous if the Cronbach's Alpha coefficient exceeds 0.70 (Taber, 2018). The table labeled as Table 5 displays the values of Cronbach's Alpha coefficient for each of the constructs in our model.

Table 5: Cronbach's Alpha coefficients

Variables	Cronbach's Alpha Standardized	Number of cas valides (n)	Name D'items
Human resources management	0,869	15	9
Project mission	0,766	32	10
Senior Management Support	0,813	30	10
Project Planning	0,882	37	8
Performance technique	0,803	24	10
Customer Needs	0,845	41	5
Monitoring and feedback	0,916	34	10
Communication	0,941	25	11
Problem solving	0,842	38	10
Success of projects in developing countries	0,769	18	9

All of our variables have Cronbach's alpha coefficients more than 0.70, indicating a high level of homogeneity in our conceptions.

Creating Constructs

Before commencing the building of the variables, it was crucial to verify that all the questions in the questionnaire were properly aligned in a consistent manner.Within our database, the only construct that required reversing the scale of its questions to coincide with the other questions was "Success of construction projects in Iraq."
The two issues that required such a transformation are:

1. Question 3: "the project's cost objectives were not met";
2. Question 6: "The project was not managed in a way that satisfied the interests and challenges of the project team members".

After aligning all questions, we collected indicators for each independent and dependent variable. Our sample is tiny and has many missing values, so we used the built-in SPSS function to indicate the number of missing values accepted while generating the construct. This SPSS method is called MEAN and is in the Transform-Compute menu. We set an acceptability criteria of at least 50% of valid replies from each responder for all construct questions. Optimization of valid situations at the created variable level is possible using this method. For each variable (dependent or independent), the scores for each indicator (or question) are compiled to calculate an average score for each respondent and construct. The built variable distribution is described next.

Characteristics of the distribution of variables

To ascertain the characteristics of the distribution of the generated variables, we performed a study of this distribution using the means of measures associated with each of the constructed variables (Table 6), as well as graphical representations of their distribution.

Table 6: Means and Standard Deviations of Model Variables

Variables	Average	Standard deviation (STD-DEV)
Human resources management	4,80	0,883
Project mission	5,66	0,739
Senior Management Support	5,49	0,844
Project Planning	5,29	1,108
Performance technique	5,47	0,869
Customer Needs	5,58	1,086
Monitoring and feedback	5,67	0,842
Communication	5,41	1,083
Problem solving	5,40	0,798
Success of projects in developing countries	4,99	0,936

Table 6 displays the mean values of the measures or scores that participants linked to all the indicators for each variable. The HRM variable has an average measure of 4.80. The data indicates that most respondents agree with the assertions regarding the indicators of this HRM variable, however their agreement is rather limited. A score of 4 represents a "neutral opinion," while a score of 5 signifies a "weak agreement, but not disagreement." Put simply, most participants (scoring 4.80 out of 7) agreed that the nine HRM practices mentioned in the survey, which are the indicators for the HRM variable, were appropriately implemented in their projects. Regarding the other variables, most respondents agree, although to a limited extent, with the different assertions associated with each of these variables. Therefore, the averages of the independent variables range from 5.29 to 5.67. The mean score for the dependent variable 'Success of initiatives in developing nations' is 4.99. The majority of respondents concur, albeit to a limited degree, that the criteria or dimensions of success for their projects are being fulfilled.

Hypothesis Testing

First, we analyzed the correlations between the independent variables and the dependent variable (for the first hypothesis), then we performed correlation studies under control (for the other three hypotheses).

1. Verification of the first hypothesis

Our initial hypothesis posited a correlation between the success variables and the success of programs in developing countries. In order to examine this hypothesis, we conducted a bivariate correlation study utilizing the Pearson correlation coefficient, taking into consideration the sufficiently large sample size ($n>35$) and the normal distribution of our variables. This test is particularly appropriate for assessing the linear correlation between two variables that are assessed using metric scales (Schober, Boer & Schwarte, 2018; Norman, 2010). The bivariate correlation study (Table 8 below) reveals that all independent variables exhibit positive and statistically significant correlations with the success of projects in developing nations, with a level of statistical significance below 0.05 ($p<0.05$). The correlation analysis reveals that HRM has the lowest correlation with project success in developing countries, as indicated by a correlation value of $r=0.373$ and a significance level of $p=0.039$. The independent factors that exhibit the most robust associations with project success are "Project Mission" ($r=0.603$; $p<0.001$), "Monitoring and Feedback," and "Problem Solving" ($r=0.628$; $p<0.001$). Furthermore, the variable "HRM" has noteworthy associations with all other independent variables. The success variables that have the highest correlates with HRM are "Customer Needs" ($r=0.684$; $p<0.001$), 'Technical performance' ($r=0.681$; $p<0.001$), and "Project planning" ($r=0.684$; $p<0.001$).

Table 7: Correlation Matrix (Pearson)

	Success	GRH	Mission	Support	Planning	Tech.	Needs	Control	Comm.	Problem
Success	1 -33									
GRH	,374 (*) ,03931	1 -37								
Mission	,604 (**) ,00032	,391 (*) ,01936	1 -50							
Support	,552 (**) ,00133	,471 (**) ,00435	,772 (**) ,00047	1 -48						
Planning	,487 (**) ,00532	,581 (**) ,00036	,314 (*) ,02750	,352 (*) ,01547	1 -50					
Tech.	,590 (**) ,00032	,682 (**) ,00036	,581 (**) ,00048	,663 (**) ,00047	,690 (**) ,00048	1 -49				
Needs	,529 (**) ,00232	,685 (**) ,00035	,495 (**) ,00047	,425 (**) ,00445	,427 (**) ,00347	,564 (**) ,00045	1 -47			
Control	,629 (**) ,00033	,529 (**) ,00137	,689 (**) ,00050	,750 (**) ,00048	,578 (**) ,00050	,774 (**) ,00049	,515 (**) ,00047	1 -51		
Comm.	,456 (*) ,01230	,523 (**) ,00234	,660 (**) ,00046	,430 (**) ,00444	,442 (**) ,00246	,572 (**) ,00044	,728 (**) ,00044	,592(**) ,00046	1 -46	
Problem	,629 (**) ,00033	,452 (**) ,00537	,466 (**) ,00149	,590 (**) ,00047	,516 (**) ,00049	,651 (**) ,00048	,438 (**) ,00247	,715(**) ,00050	,479(**) ,00145	1 -50

** The correlation is significant at the 0.01 level (bilateral).

* The correlation is significant at the 0.05 level (bilateral).

1. Verification of the second hypothesis

To test our second hypothesis, which states that the connections between the independent variables and the dependent variable change depending on the project life cycle, we performed correlation analyses. These analyses examined the relationships between the nine independent variables and the dependent variable during each of the project phases: the design phase, the planning phase, the execution phase, and the closing phase. We employed Spearman's correlation due to its suitability for datasets with a limited number of instances (n<35). The control of each project phase was conducted using the Select cases-if function, facilitated by the SPSS software, enabling the selection of the specific phase to be monitored at each instance. Consequently, correlation studies were conducted for each of these four periods. It is crucial to highlight that during this stage of the study, the three phases of Design, Planning, and Closure have a minimal number of instances (4, 5, and 1 case, respectively). This hinders our ability to consider the results of the correlation analysis pertaining to each of these phases. In addition, the SPSS software does not provide the

execution of correlation analysis for the closure phase, as it is exclusive to a single project involved in the study. The analysis can only be carried out and its conclusions accepted during the execution phase, which consists of a respectable number of examples (n=38). The correlation analyses results for the execution phase are presented in Table 8 below.

Table 8: Correlations (Spearman) under control of the execution phase

	GRH	Mission	Support	Planning	Tech.	Needs	Control	Comm.	Problem
Success	,416(*) ,050 23	,654(**) ,001 23	,661(**) ,000 24	,624(**) ,001 23	,692(**) ,000 23	,704(**) ,000 23	,657(**) ,001 24	,568(**) ,006 22	,707(**) ,000 24

** The correlation is significant at the 0.01 level (bilateral).

* The correlation is significant at the 0.05 level (bilateral).

The Spearman correlation table indicates that throughout the implementation phase, all variables exhibit a positive and statistically significant link with the success of initiatives in Iraq. In this phase, the HRM variable has the lowest correlation with project performance, with a correlation coefficient of 0.415 and a p-value of 0.050. The factors that exhibit the highest correlations are "Problem Solving" (r=0.707; p<0.001), "Customer Needs" (r=0.704; p<0.001), and "Technical Performance" (r=0.692; p<0.001).

2. Verification of the third hypothesis

To determine if the connection between human resource management and project success in developing countries differs based on the organizational structure, we conducted correlation analyses. We examined the relationship between nine key factors (independent variables) and the success of projects in developing countries (dependent variable) for each type of structure. In order to verify the second hypothesis, we conduct Spearman's correlation studies while systematically controlling for each of the organizational structures individually. The findings of these studies are displayed in Table 9 below.

Tableau 9: Corrélation (Spearman) sous contrôle de la structure organisationnelle

	GRH	Mission	Support	Planning.	Tech.	Needs	Control	Comm.	Problem
Success	,164 ,596 13	-,024 ,940 13	,215 ,483 13	,373 ,212 13	,274 ,391 12	,482 ,097 13	,411 ,165 13	,176 ,587 12	,491 ,090 13
Success	,772 ,073 6	,858(*) ,014 7	,787(*) ,036 7	,287 ,536 7	,930(**) ,004 7	,787(*) ,037 7	,902(**) ,007 7	,658 ,157 6	,858(*) ,015 7
Success	,248 ,465 11	,668(*) ,025 11	,655(*) ,022 12	,857(**) ,001 11	,662(*) ,020 12	,675(*) ,024 11	,657(*) ,021 12	,634(*) ,038 11	,695(*) ,013 12

** The correlation is significant at the 0.01 level (bilateral).

* The correlation is significant at the 0.05 level (bilateral).

The correlations between the independent factors and the dependent variable differ across different types of structures, as indicated in Table 9. Therefore, in the case of the functional organization, there appears to be no factor that exhibits a noteworthy correlation with project success. In terms of project structure, all variables, except for "Project planning", "HRM", and "Communication", are substantially connected with project success at a threshold of p<0.05. The variables that exhibit the most robust relationships with success are "Technical Performance," "Control and Feedback," "Project Mission," and "Problem Solving." Regarding the matrix structure, the only variable that does not exhibit a noteworthy link with project performance is "HRM". All the other criteria have a substantial link with success at a significance level of p<0.05. The most significant connections within this structure were observed between project performance and the variables "Project Planning", "Problem Solving", "Client Needs", and "Project Mission".

3. Verification of the fourth hypothesis

Our third assumption posited that the associations between the independent variables (factors contributing to success) and the dependent variable (project success) would vary based on the industry of the project. The validation of this hypothesis was conducted using the identical methodology employed to examine hypotheses 2 and 3. Consequently, we conducted correlation analyses between the success variable and each independent variable, while controlling for one of the business areas examined (IT, construction, and other fields encompassing engineering, technological development, organizational projects, and all other fields) in each analysis. The findings of these analyses are summarized in Table 11 below. The analysis of correlations, conducted while controlling for business domains, revealed that HRM did not exhibit a significant link with project success in developing nations, irrespective of the specific business domain being examined. Indeed, within the field of information technology, human resource management (HRM) is the sole aspect that lacks a substantial link with project success. All the other parameters have a moderate to significant link with the success of the project. The most significant associations in this business domain are "Project Planning" (r=0.907; p<0.001), "Problem Solving" (r=0.810; p<0.001), and "Monitoring and Feedback" (r=0.907; p=0.005). In

the sector of building, the only component that has a significant link with the success of projects in developing nations is 'Communication' (r=0.732; p=0.05). In the context of other business areas, only four factors show a significant correlation with the success of projects in developing countries. These factors are "Communication" (r=0.919; p=0.005), "Control and feedback" (r=0.871; p=0.003), "Customer needs" (r=0.826; p=0.012), and "Project mission" (r=0.718; p=0.045). The link between the HRM component and project success is weak (r=0.501; p=0.18). The component of "Communication" appears to be the sole factor that is strongly connected with the success of initiatives in developing countries, irrespective of the project's industry.

Table 10: Correlations (Spearman) under the control of the sector of activity

	GRH	Mission	Support	Planning	Tech.	Needs	Control	Comm.	Problem
Success	,416 ,141 14	,545(*) ,037 15	,644(**) ,011 15	,907(**) ,000 15	,676(**) ,006 15	,597(*) ,020 15	,703(**) ,005 15	,587(*) ,023 15	,810(**) ,001 15
Success	-,144 ,737 8	,571 ,110 9	,386 ,307 9	-,160 ,684 9	,152 ,699 9	,554 ,123 9	,415 ,270 9	,732(*) ,041 8	,604 ,087 9
Success	,501 ,171 9	,718(*) ,045 8	,612 ,082 9	,636 ,092 8	,357 ,388 8	,826(*) ,013 8	,871(**) ,003 9	,919(**) ,005 7	,662 ,054 9

** The correlation is significant at the 0.01 level (bilateral).

* The correlation is significant at the 0.05 level (bilateral).

DISCUSSION

We will ascertain the constraints of our investigation and analyze their consequences for our findings.

1. Human resource management and construction project success in Iraq

The first hypothesis of our research is that the nine success components of our model, particularly HRM, affect project success in developing nations. Bivariate studies (Pearson correlations) verified our prediction by indicating a positive and significant association between each of our model's major components and project success in developing nations (Table 8). Thus, HRM affects developing country project success. In developing countries, 'Mission of the project', 'Control and feedback', and "Problem solving" correlated most with project success. Interestingly, HRM has the weakest association with success. In correlation studies, our results match Belout and Gauvreau (2004) and Pinto and Prescott (1988). Both studies indicated that all main components in their models, including the "Personal" factor, positively and significantly affect project performance. These studies also indicated that "Personnel" had the smallest association with project performance. Our results also support studies in developing countries that show HRM has a positive effect on project success by confirming the positive and significant relationship between these two variables. Thus, in the developing countries, HRM and project success are similar to those found in Belout and Gauvreau (2004) and Pinto and Prescott (1988). Thus, our findings support previous research on HRM's impact on project success in developing nations and globally. HRM had the poorest link with project performance in our analysis, but it is still statistically significant. There are several possibilities. The first explanation is that HRM indirectly affects organizational performance and project success. We think this is one of the most plausible explanations for why HRM and project success are hard to link. Thus, the majority of respondents to our research questionnaire (and to other research on HRM and project success) do not identify HRM's significance because they are unaware of its indirect effect. Irfan, Hassan and Hassan (2019) validate this premise and show that project success is indirectly linked to human project management. These authors suggest that the project manager's team management skills are crucial to meeting budget and addressing issues during project delivery. Leadership abilities are crucial for a project manager to manage resources, distribute powers and tasks, develop and encourage team members, etc. These authors found that these skills are linked to problem-solving and project budget compliance. The most problem-solving project managers can delegate authority, motivate, improve team capabilities, and efficiently manage resources. Having a professional manager lead a successful project team is the outcome of good HRM practices (staffing, remuneration, training, incentive, retention, etc.). Our analysis found that most project managers have university degrees (87.7%) and an average of 5.5 years of experience in their projects' parent organizations. According to Møttus et al. (2020), the study found "surprising" results, including the presence of human characteristics in nearly all of the twelve categories evaluated. Møttus et al. (2020) says it's not clear that some elements involve only procedures and others require human resources. Each process's relevance depends on human resources. He says that "human resources" underpins all other success elements. Our correlation analysis of additional success indicators support this notion. The second reason may be the difficulty of understanding the human resources function in projects. Anwar and Abdullah (2021) argue that organizational change, particularly in project management, decentralizes HRM practices at the manager level. The HR function is fragmented and disseminated throughout the organization to allow rapid adjustments and individualization of HRM choices. This highlights operational hierarchies' growing role in HRM. As per the writer: "The line manager is then invited to assume the human resources function in all its dimensions, whether it is the mastery of the legal framework, the training and mobilization of employees, or even social negotiation." (Huault 1999, 76). HRM is one of the most significant project manager duties, especially in

international projects, according to Welch et al. (2008). Since HRM is now part of the project director's duties, project management professionals and team members who have not received project management training may overlook it. This decentralization would cause project staff to view the physical absence of an HRM entity (an HR department or department) as a complete absence of HRM and its involvement in project success. In the project environment, the HR function's involvement is not evident enough, especially when it comes to implementing HR programs like training, employee assistance, career management, etc. Thus, because project HRM is different from standard HRM, project management professionals are ignorant of its presence and importance in project success.

Finally, the particular characteristics of project management and HRM in developing countries explain the limited correlation between HRM and project success relative to other parameters. The research shows that HRM is lacking in many developing countries' enterprises, especially in the informal sector, which dominates the economy. Labor laws and HR management norms are completely ignored in this informal sector (Narula, 2019). However, developing countries are often characterized by a cultural factor that causes human resources to lack commitment to the project, a lack of project management knowledge, and a lack of qualification and expertise for project implementation. Cultural differences in developing countries make conventional management methods and practices inadequate, since HR in these countries has different motivations and work commitments (Dorta-Afonso et al., 2021). According to literature on HRM in developing countries, almost 80% of companies (SMEs) in these countries lack an HR function, and even when one is set up, it lacks decision-making power and does not reach the strategic rank recommended to effectively participate in the organization's performance. It becomes a simple administrative service that handles payroll and social declarations (Rosenbloom, Kravchuk & Clerkin, 2022). Thus, Iraqi human resource management lacks forward-looking workforce management, sufficient training, adequate staffing, adequate evaluation, and bureaucratic frameworks (Al-Ali, 2011). This may explain why project managers in these nations believe HRM weakens project success. Future study should account for the indirect effect of HRM on project success by utilizing more appropriate measures and indicators. Decentralization and absence of HRM in projects should also be considered in future studies. To do this, HRM should be measured using markers that reflect this reality. Additionally, the unique characteristics of HRM and project management in Iraq must be considered to establish more relevant measures to examine the relationship between HRM and project success in these countries. Please note that our conclusions about HRM and project success in Iraq are based purely on correlation analysis. Despite a significant correlation between HRM and project success, Unegbu Yawas and Dan-Asabe (2022) and Akbar and Shahid (2023), who conducted regression analyses, found that the "Personnel" factor or HRM does not affect project success. Inferentially, regression studies are more robust than correlation analyses for evaluating the effect of an explanatory variable on a variable to be explained. Regression analyses were impossible in our study due to sample size. We cannot assess the impact of HRM on project success in developing nations, which limits our study. Thus, it will be impossible to compare the results of Keegan, Ringhofer, and Huemann (2018) and Moustaghfir, El Fatihi, and Benouarrek (2020) or to prove or disprove that HRM practices affect project success. These authors acknowledge methodological constraints that may explain their regression analysis results. The variables used to quantify the built environment "Personal" could explain Pinto and Prescott (1988)'s findings that HRM does not affect project success. In their study, Belout and Gauvreau acknowledged that the construct used to quantify HRM's impact on project success is not sufficiently elaborate to provide conclusive results. Their study's sample size (compared to regression analyses' comparatively large number of independent and moderator factors) may also explain regression studies' startling results on HRM's impact on project success. They explain the challenge of measuring HRM's impact on organization performance in all studies in this sector. Various studies found the lack of consensus on a clear definition of HRM effectiveness, fragmentation of the human resources function, ambiguity in some HRM objectives, and evaluator arbitrariness as problems.

2. Project lifecycle

According to our second hypothesis, model parameters affect Iraqi project success differently across the life cycle. Unfortunately, our sample size prevented us from running correlation studies under project phase control to test this hypothesis. The number of valid cases (valid responses) for Design, Planning, and Closure is insufficient for valid correlation studies. The correlation analyses for the "Execution" phase were presented to compare with Niyafard et al. (2024) and Oh, Lee, and Zo (2021). Pace (2019) design and closing stages had insufficient sample sizes, hence the results were invalid. During the Execution phase, all variables were substantially correlated with Iraqi project success. Program success is most correlated with "Problem Solving", "Customer Needs", and "Technical Performance". "HRM" has the poorest link with project success but is still substantial. These results match Mohamed, Hanafi, and Bin Ahmad (2019) and Pinto and Prescott (1988) investigations. In reality, these two studies found that all nine criteria, including "HRM", significantly predict project success throughout execution. During the Design phase, Zakaria and Ahmadian (2019) observed that all aspects affect project success except "Personnel", "Senior Management Support", "Technical Tasks", and "Problem solving". In the Planning phase, Zhai, Zhu, and Zhang (2023) found that all elements except "Personal" and "Problem Solving" are strongly associated with success. Mosca (2020) found that all factors substantially affect success during this phase. The closing step yielded the same outcome. The Belout and Gauvreau study's correlation analysis during planning found no significant association between HRM and project success, which is surprising. Vesalainen and Uotila (2022) observed no correlation between HRM and project success at this phase, contrary to Viitala. The authors call this conclusion "surprising" because the planning phase involves crucial HRM procedures such project HR planning, job evaluation, recruitment, selection, HR assignments, and training. They say

that utilizing specialist software and audit simulations, human resources planning for the entire project is designed to avoid surpluses or shortages during project execution. This unanticipated conclusion is due to the difficulties of monitoring the impact of human resources strategies while they are being implemented during planning. Only during implementation can their results be observed and a link between these practices and success established. Inadequate HRM indicator data was also cited as an explanation. They recommend developing indicators that are more specific to HR activities for each project phase for future research. Regression analysis from Ahmadabadi and Heravi's 2019 investigations. sought to find the key characteristics that explain project performance by measuring the impact of the components analyzed, which showed substantial relationships with success. Their regression analysis demonstrated that project success determinants change by phase, supporting their premise that the project life cycle moderates success. Regression analysis show that HRM is not a key component in any project cycle phase, which is surprising. These research found the contrary of what was expected-HRM to affect project management performance and success. Our key rationale for these outcomes is methodological. These studies' authors, confident that HRM should be a key success element for at least one project phase, "blame" their methodological approach for these outcomes. Mohammed, Hanafi, and Bin Ahmad (2019) explain regression analyses on HRM's impact on project success by stating that the "Personnel" construct indicators are not adequately matched to the project context. The authors' second explanation is that project-based organizations no longer need traditional HRM practices (recruitment, training, etc.) because the staff hired already has the expertise and qualifications needed to complete the project and is often involved in the parent company's projects. This second theory was challenged by Elahi, Ahmad, and Aamir (2020), who noted that various research have demonstrated that qualified project staff are rare. Our research shows that project staff, especially in developing countries, often lack training. Belout (1998) offers other methodological explanations for the Pinto and Prescott (1988) study's surprising results, pointing out that they lacked rigor in solving the multicollinearity problem between success factors. More recently, Ahmadabadi and Heravi (2019) found that the project life cycle moderates the link between the characteristics analyzed and project success, finding that the essential criteria for project success in developing nations change by phase. In addition, their study reveals that HRM is linked to project success across the project life cycle. Project staff abilities are crucial for success in all phases, including design, planning, execution, and close-out phases, according to these writers. These scholars say project management actors' competency factor is their capacity to accomplish their duties. Thus, HRM should offer the project with competent human resources. According to the studies in this section, the project life cycle moderates the association between HRM (and other parameters) and project success. Our study's sample size prevented us from testing this moderating influence hypothesis. However, studies have revealed that project success determinants vary by phase. Future research should include a larger sample size to do correlation and regression analyses at each project phase.

3. Organizational Structure

Our study's third hypothesis states that organizational structure affects the link between the nine independent variables (success factors) and project success in developing countries. Correlation analyses validate this theory by showing that the strength of the relationships between success determinants and project success in developing nations varies by structure. In a functional framework, no factor predicted project success. On a project-by-project basis, all elements except "Planning" "HRM" and "Communication" correlated with project success. Finally, only "HRM" does not correlate with success in a matrix framework. HRM's lack of correlation with success in any organization surprises us. HRM is a crucial determinant in project success, at least in a functional structure, according to the research. According to Ferraris, Erhardt, and Bresciani (2019) and Storey, Ulrich, and Wright (2019), HRM is important in a functional structure. Since HR is omnipresent in a functional organization and its purpose and actions are clear, we believe HRM should be one of the elements affecting project success. Our analysis also suggests that "Project planning" is not significantly associated to project-based organizational success. This contradicts Hayat et al. (2022), who found that this element was highly connected with project success in both project-based and matrix organizational structures. As mentioned in the previous sections, project planning takes up one of the four phases of the project life cycle. The literature on project success in developing nations also shows that poor planning is a factor in project failure (Yap, Chow & Shavarebi, 2019). Due to the quantity of projects in our sample, we cannot have enough cases for each organizational structure. Our sample size is likely the main reason of these surprise outcomes. A higher sample size would make the analysis more interesting for future research.

4. Industry

In that project success determinants differ by industry, our study supports this idea. In IT, all aspects except "HRM" affect project success. Only the "Communication" component is associated with success in building. In the other areas of activity, "Communication", "Control and feedback", "Client needs" and "Project mission" greatly affect project success. Our results support Belout and Gauvreau (2004) and Pinto and Covin (1989) findings that sector of activity moderates project success factors. Unlike Belout and Gauvreau (2004), HRM did not correlate with success in any of our sample locations. Belout and Gauvreau (2004) discovered a different outcome. HRM is linked to IT project success, according to the latter. HRM did not predict success in other areas. In computer science, Dolan (2005) found the same result as Belout and Gauvreau (2004). This study on IT project success determinants found that HRM and other model components are strongly correlated with project success. Regression analysis also indicated that HRM is crucial to project performance in this domain. The author argues that HRM is crucial in information technology since the human aspect (project team competency and makeup) determines success or failure in complex technical initiatives. Thus, in IT, HRM

should affect project success. The lack of projects in the sub-samples for each industry may explain our result, which differs from earlier studies. The analysis may be skewed by the low number of projects per industry (16 for IT, 17 for building, and 17 for other disciplines). We should repeat the experiment with a larger sample for each area in future studies. To acquire more valid results, sector-specific studies like Dolan K. (2005) with big samples would be interesting.

CONCLUSION

Most organizational management theorists and practitioners agree that human resource management is crucial to organizational performance (Alshammari, 2020; Otoo, 2019). While this almost generalized trend supports the importance of human resource management (HRM), some project management studies, such as Keegan, Ringhofer, and Huemann (2018), have found that HRM does not affect project success or failure, creating a great controversy about HRM's impact on organizational performance. It was justified to focus our research on developing countries (LDCs) because most empirical studies on project success factors and HRM practices on project outcomes have been conducted in industrialized countries, particularly North America and Europe. Many projects in these countries, which have many economic, political, and social issues, are not reaching schedules, budgets, or quality standards. Thus, studying projects in underdeveloped nations provides a more full picture of project success variables and HRM practices' impact on project results. This subject of research is justified since there are few studies on the success elements of projects in underdeveloped nations and few on HRM's impact on project implementation. The goal of this master's thesis was to prove that HRM affects project success in underdeveloped countries. To answer this research issue, we expected that HRM and other model components would be significantly related to project success in developing nations. It was proven by bivariate analysis that all parameters, including HRM, positively and significantly correlate with project success in developing nations. These research found that HRM had the smallest association with project success in poorer nations. The indirect effect of HRM on organizational performance (Taamneh, Alsaad, & Elrehail, 2018; Rasool et al., 2019) and the lack of visibility of the HR function in project contexts (Boon & Verhoest, 2018; Nesheim, 2021) may explain this result. These traits may cause project managers and managers to disregard HRM's value. This effect can also be explained by developing country characteristics that affect project and human resource management. Unfortunately, the limited size of our sample (50 projects) compared to the vast number of variables in our model prevented us from performing regression analyses to quantify the impact of HRM practices on project results. Future studies should use a larger sample to analyze the impact of HRM on project success and confirm or refute Belout and Gauvreau (2004) and Pinto and Prescott (1988) findings. Our other three assumptions predicted that the correlations between our model's components and project success would vary by project life cycle phase, organizational structure, and business line. Controlled correlation analyses of each of these variables (moderator variables) generally confirm these hypotheses because project success factors vary by sector and organizational structure. The insufficient number of projects in the design, planning, and closure phases prevented verification of the life cycle's role in the relationship between model parameters and project success in developing nations. We found that HRM, along with other factors, affects project success during execution. However, HRM did not significantly affect project success in any structure or sector. Our study contradicts Elahi, Ahmad, and Aamir (2020) and Wang, Li, and Li (2021)'s findings on HRM and project success in functional structures. As before, the small sub-samples (one for each sector of activity and organizational structure) justified our surprising results. Thus, to validate or dispute our findings, future studies should use a representative sample for each sector of activity and organizational structure. This study only examined if the correlations between model parameters and project success in Iraq vary by 'life cycle','sector of activity', and "organizational structure". The moderating character of these three variables could not be tested without regression studies. Further research should include regression analysis at each project phase, organizational structure, and business line. The surprise results of Belout and Gauvreau (2004) and Pinto and Prescott (1988) regression analysis on HRM and project success would be confirmed or refuted by these analyses. Additionally, Iraqi features should not be disregarded in HRM measuring instrument development and project success in this group of nations. Our research has limitations that limit its scope, but we are confident that it will enrich the theoretical and practical knowledge of human resources management's role in organizational performance. Theory-wise, organizational performance specialists agree that project-based management benefits organizations in an environment of rapid change, fierce competition, and demanding customers. Project-based management allows organizations to respond "just-in-time" to changes in their environment to seize business opportunities and meet customer needs without being hampered by bureaucratic structures and procedures. Human resource management in this project context is still developing and requires more research to understand and develop its HRM practices and their impact on project management and project success. Our work supports this ambition by opening new research pathways and enriching the debate on HRM's role in construction project success. Our results demonstrate that this relationship between HRM and project success is complex and difficult to assess, requiring additional research and more sophisticated measurement methods than we utilized. Our study also advances knowledge of construction project success variables and the relationship between HRM and project success in Iraq, a neglected area of research. As HRM and project success studies in developing countries are rare, this research is important because it identifies the various studies on project success factors, project management, and HRM in Iraq. Additionally, our study found that HRM improves Iraqi construction project success. On a practical level, this study shows that strong HRM practices improve building project success. Practitioners and project managers concerned with the successful delivery of their building projects must pay more attention to human resource management. They will also have to implement HRM

techniques that are better tailored to the building projects and their external environment, especially in Iraq. Our findings also support Belout and Gauvreau (2004) and Pinto and Covin (1989)'s findings that life cycle, sector, and organizational structure moderate project success factors. Project managers must examine these elements to identify which factors to focus on based on the project phase, organizational structure, and type of activity. Moderating variables like 'project time' and 'project complexity' should be considered to better comprehend this issue. Construction project managers in Iraq must also consider external factors influenced by the country's environment (economic, political, legal, cultural, social, etc.). Our study reveals that Iraqi construction project HR managers consider the cultural aspect to implement more appropriate HRM methods that are easily adaptable.

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