

## The effect of talent management on competency development of public-sector universities: The buffering role of organizational culture

Sher Zaman Khan<sup>1</sup>, Mahad Jehangir<sup>2</sup>, Muhammad Haseeb Qureshi<sup>3</sup>

### Abstract

In the contemporary era, scholars are engaged in extensive debate regarding the influence of talent management on the quality of education and research in universities. Modern institutions face significant pressure to adapt, remain competitive, and address the scarcity of talent management, particularly in non-western countries such as Pakistan. As a result, the concept of talent management has gained prominence. This research aims to assess the impact of talent management on competency development in public sector universities of Khyber Pakhtunkhwa (KP) province, Pakistan. To this end, 475 questionnaires were distributed, of which 378 were deemed usable, resulting in a response rate of 79.57%. Correlation, regression, and multiple regression analyses (with a moderation effect) were conducted to test the hypotheses. The results demonstrate a positive relationship among the variables. Regression analysis confirms that talent management significantly influences employee competency development. Furthermore, the results of multiple hierarchical regression indicate a positive and significant impact of talent management on competency development. However, the moderating impact of organizational culture on the relationship between competency development and talent management was found to be insignificant. These findings hold implications for researchers and academics in terms of aligning talent management strategies with organizational strategic goals and establishing employee engagement standards to address the challenges of implementing talent management techniques in public universities of KP.

**Keywords:** *Talent management, Organizational culture, Competency development.*

**JEL Code:** M54, J19

### 1. Introduction

In this age of knowledge economy, talent management (TM) is one of the talking points and basic tools to invest in developing human capital rather than the acquisition of massive tangible assets like land, buildings, plants, etc. (Khan, et al., 2019; Dhanalakshmi and Gurunathan, 2014; Taamneh et al., 2021).

<sup>1</sup>IBA, Gomal University Khan

<sup>2</sup>Department of Business and Management Sciences University of Lakki Marwat, K.P.K, Pakistan <sup>3</sup>PhD scholar, Qurtuba University of Science and Information Technology. Department of Management Science Khan, KP, Pakistan

Principal Author: [Shkhan@gu.edu.pk](mailto:Shkhan@gu.edu.pk) Corresponding Authors: [mahad@ulm.edu.pk](mailto:mahad@ulm.edu.pk), [qhaseeb1989@gmail.com](mailto:qhaseeb1989@gmail.com)



Universities, in particular, and business firms, in general, have been forced to compete with one another for highly skilled workers around the world as a direct result of globalization and the opening of new markets. A prominent 'McKinsey consulting firm declared talent management as a 'war of talents, at the start of the year 2000 (Chambers et al., 1998; Hartmann et al., 2010; Omotunde and Alegbeleye, 2021). After that, TM became a primary solution for handling many of the critical challenges that are currently faced by businesses and has gained massive attention from scholars around the globe (Yeung and Berman, 1997; Chen et al., 2019; Abeuova and Muratbekova-Touron, 2019; Abdullahi et al., 2022). Universities and other higher education institutions are important from a strategic perspective (Gilal et al., 2019a; 2019b; Gilal et al., 2020), and there is evidence that research-based education pays off in areas close to the technological frontier of the world's (Aghion et al., 2010; Kwon and Jang, 2022). Khattak (2012) argued that nations and governments prioritize education in their public policies which leads to economic growth of the nations. Most importantly, they generate highly skilled personnel through higher education. As it becomes one of the organization's key competencies. Talent management serves as a strategic differentiator for the organization in comparison to its counterparts (Ashton and Morton, 2005). For instance, an organization can undertake much more effective, innovative, and profitable initiatives, if it has the right people in key roles at the right time. In spite of, the significance of talent management, a number of educational institutions lack people both in terms of quantity and quality (Fabunmi and Isah, 2004; Abdullah and Abubakar, 2017; Mohamed Jais et al., 2021), which lead towards the much-discussed decline in educational standards at many universities (Abdullah and Abubakar, 2017).

Money, men, and machines are the crucial means that increase the capital of universities in order to achieve their goals effectively and efficiently. People are the main resources of organizations which play an important role (Kahinde, 2012). Human resources of the institutions are referred to as factors of production because men working in the institution have different values to perform their particular tasks. Concurrently, firms give more value to talented workers (Gilal et al., 2022; Kahinde, 2012). Intellectual capital regards the human resource as an intangible resource that is associated with the people (Gong et al., 2022; 2023). These tangible and intangible resources like money, markets, men, and physical assets together boost up total value of the business in the market (Armstrong, 2011). Expertise in talent management means putting the right people in the right jobs (Devine, 2008; Gilal et al., 2022). Also, this guarantees that personnel are using their abilities to the fullest for the institution's greatest chance of success. Talent management means selecting, attracting, retention, and developing employee organizations. Both the private and public sector organizations acquire the right staff for the right job which meets the relatively new area to establish their priorities (Baheshtiffar, 2011). As organizations like universities increase talent management is more critical and gains importance

across countries in both business practices and literature. Since it is claimed that to gain institutional strategic success, talent management is the top priority for fast-growing economies (Hartmann et al., 2010). Simultaneously, Innovation affects all the internal and external factors of institutions, beginning from the methodology of operations to the objectives of strategy and execution actions plan (Ortega et al., 2015; Ye et al., 2015; Talonen and Hakkarainen, 2014; Chen et al., 2021; Pandita, 2021). It also explains the fundamentals of methodology for the development and long survival of individuals as well as for organizations (Raytcheva and Hermel, 2010) and played an important role as one of the drivers of development and economic growth significantly, creation of employment and improvement of life (Banerjee and Thakurta, 2013; Maghsoudi et al., 2015; Thunnissen, van Arensbergen, van den Brink, 2021). It also revamps the base of knowledge and reasonable differentiation results (Singh and Aggarwal, 2017).

According to the research conducted by Bedi (2019) decision-making management is under the umbrella of innovation. Based on the findings of existing research Saunila (2017) measurement of innovation performance of direct connection with the service of operational performance. The definition of innovativeness stated by De Leede and Looise (2005) is a radical and conscious change in current products and processes to achieve competitors. Becker and Matthews, (2008) indicated the innovativeness of an organization as the novelty creation, which when implemented and exploited, turns out as viable value. Over the past few decades, non-western countries have emerged as remarkable innovation hubs (Jain et al., 2012). Contrarily, the chance is not showed up by innovation. The existing intent management of intangible resources, such as intellect and knowledge, eases innovation introduction and right development (Varis and Littunen, 2010; Odugbesan, 2022). Hence, the current and future institutions' capabilities are also connected with the employees' learning collectively (Khandekar and Sharma, 2005; Vosburgh, 2022). Chaturvedi et al. (2022) attempt to explain innovation as a talent-management outcome in a non-western country, as an organization comprises around 45% substantial proportion of our talented energy and an important component of the economic development of the country. According to the work of Deloitte (2010) non-western countries mainly face difficulty, specifically, the organizations belonging to the upstream sector led to an increase the talent management practices activity and exploration, low organizational awareness, lack of entry-level talent, low attraction towards organization, good foreign possibilities, bad government insight, cyclical organization, workforce aging, etc. It is frequently believed in HR practices, that the competence and development of all important organizations is to hire competitive talents. But this belief is a mistake. Indeed, to bridge the gap there is a need for strategic talent management (STM) (Schreuder and Noorman, 2019). Chaturvedi et al. (2022) describes the validity scale by constructing talent management and also understand its association with the innovation of organization, creativity, context, and innovation skill practices and considering key

talent management and found that the study showed the significant impact of talent management practices on HR outcomes. In this study, the researcher employs the process of the moderation model as explained and developed by (Hayes, 2013). The moderation influence is explained by Hayes (2013) as “an interaction effect of two variables, the independent X and the moderating M, on a third dependent variable Y”. The purpose of this study is to investigate the impact of talent management practices on HR outcomes and to examine the moderation effect of organizational culture on the HR outcomes of the public-sector universities in Khyber Pakhtunkhwa Pakistan. In addition, the study also determines whether public-sector universities of Khyber Pakhtunkhwa Pakistan promote talent management practices or not.

## **2. Literature Review**

As a result of social evolution, the word TM now encompasses a wide range of connotations that are reflected in significant HR trends in contemporary societies. Selecting and attracting the most intelligent and talented individuals, as well as identifying and evaluating criteria indicative of managerial success, were early areas of concentration in the process of hiring, especially for top-management leadership positions (Gong et al., 2021; Miner, 1973; Taamneh et al., 2021). As the overtime HR sector has evolved, however, more exact definitions have emerged. Collings and Mellahi (2009) provide a typical definition of TM as “actions and procedures that systematically identify key positions that differently contribute to the organization's long-term competitive advantage, the creation of a talent pool of high-performing incumbents and high-potential to fill these roles, as well as the creation of a unique human resource architecture to make it easier to find qualified candidates for these positions, as well as to guarantee that they will maintain their dedication to the organization” (p. 304). The same authors acknowledge that the first step in the implementation of TM systems should be to identify essential organizational positions or roles that are mission-critical. This presupposes that there is a readiness to recognize the existence of strategic positions inside organizations as opposed to ones that are not strategic. A presumption behind this strategy is the need to cultivate talent pools from which to fill these roles. Management of recruiting, then, is driven by the needs of the position at hand and is carried out via a mix of “external recruitment and internal development” (p. 308). To get the most out of their potential and reduce employee turnover, firms should encourage employee job motivation, extra-role performance, and organizational commitment as stressed by the authors.

A more 'global' dimension of talent management (also known as Global Talent Management, or GTM) has arisen in tandem with the increasing globalization of enterprises. According to Vaiman, et al. (2012) GTM refers to organizational initiatives that contribute to cultivating, selecting, attracting, and retaining the best individuals in the most crucial roles across the globe and enable them to become

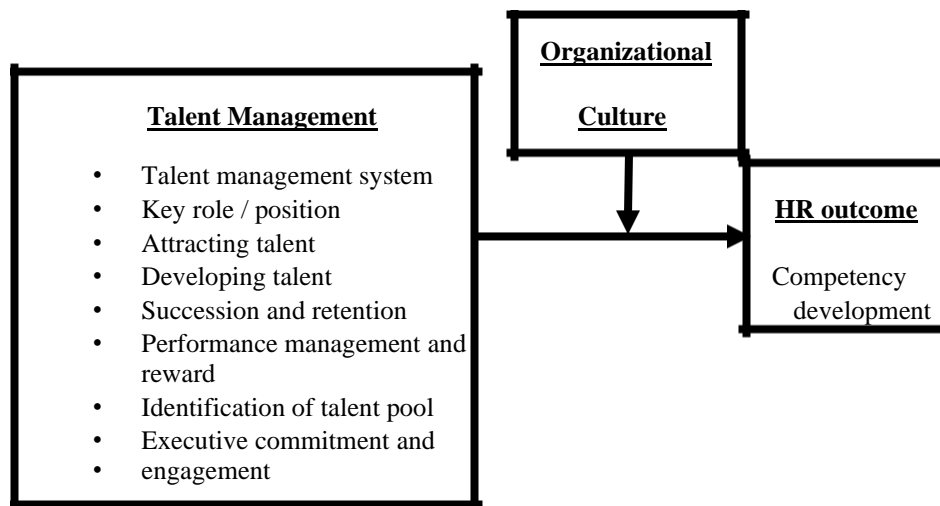
leaders (Nawaz et al., 2022; 2023; Li et al., 2021). In their study, Stahl et al. (2012) aimed to determine which GTM principles ought to be established and implemented in order to guarantee the most effective organizational growth and success. The authors gathered information from 33 MNCs with headquarters in 11 countries and conducted in-depth analyses of 18 of them. The writers chose their targets based on the organizations' stellar track records in both business and employment. In their research, the authors distinguished between the inclusive approach and differentiated approach i.e., available to all employees and limited to high-potential employees respectively. As a general conclusion, the findings recommend that businesses refrain from blindly imitating the strategies employed by successful competitors. Instead, businesses should make sure their TM practices are in line with their overall ethos and strategy. The authors highlight six guiding principles for effective GTM: (1) a balancing of global and local demands; (2) employer branding through distinction; (3) cultural embedding; (4) internal consistency; (5) management engagement; and (6) alignment with strategy (Chaturvedi et al., 2022).

Consequently, it is clear that both concepts and practices are converging, but it is still crucial for businesses to adopt "best" practices according to the circumstances in which they operate. Although "best practices" are helpful, in the end, it is up to each individual company to implement GTM strategies that are the "best fit." The significance of expatriation is another important aspect of GTM to remember. In this regard, Shen and Hall (2009) GTM defined as the process of coordinating the deployment of skills and the management of talent for employees stationed abroad. However, no less importantly, it is imperative that the repatriation process that is not underestimated be managed in a way that is beneficial to both the individual and the organization (Gong et al., 2020; Yahaya, and Ghani, 2021).

In conclusion, the concept that maximizing people's skills is a source of ongoing competitive advantage has been the driving force of TM theories (Scullion et al., 2010). Because of this, TM has become closely associated with HRM practices in businesses with the goal of improving company output (Farndale et al., 2010). While many large corporations have implemented TM tactics, medium and small businesses have been slower to do so. The depicted conception of TM is consistent with such results-oriented tendencies. We believe it is our opinion that HR managers, senior managers, and line managers, of their firms all of whom may have different views on the sources of competitive advantage—need to reach a consensus on what constitutes "talent," in agreement with (Dries and Pepermans, 2012).

Human resource outcomes of talent management are a primary focus of the present research since they are a key enabler of outcomes at the organizational level (Chaturvedi, 2021). To remain creative and competitive, organizations should make a concerted effort to develop, acquire, and retain creative people (Cook, 1998; Mehmood et al., 2020). Brand (1998) suggests that Organizations recognize the importance of attracting and developing their intellectual capital, which means they

should seek out and hire people who are well-versed in their fields, creative in their problem-solving approaches, and committed to working tirelessly to achieve their goals. He contends that organizations should hire people who are smart, know a lot, can think of new ways to do things, and are willing to work hard to reach their goals. Talent management has been shown to have a positive and vital correlation with worker and organizational level outcomes like creative thinking and originality, competency development, flexible workplaces, financial results, and organizational culture, best employers in Asia study (Hewitt Associate's, 2003). Similarly, Bounfour and Miyagawa (2015) noted that the primary driver of innovation expansion i.e. intangibles like talent management have emerged as a key accelerating factor (Mehmood et al., 2020). Effective talent management results in superior output, which in turn encourages the development of fresh talent and facilitates the establishment of a system to recognize and reward its members enabling employees to become future ethical leaders (Zhang et al., 2018; 2019; 2021). It's a boon to innovation, too. As quoted by Rezaei et al. (2018) "Knowledge management has a positive correlation with organizational innovation." This research aims to clarify the meaning of Hewitt's (2003) quoted terms "creativity," and "innovation," in the context of talent management. Research model of present study is depicted in Figure.1.



**Figure 1 Present study research model**

### 3. Problem Statement

There are three realities that fueled the interest among universities. For conducting this research there are additional motives along with the preceding. First, In nonwestern countries there is a scarcity of research on TM (Abdalla and Al-homoud,

1995; Al-Athari and Zairi, 2002; Aladwan et al., 2014), and the fact that the majority of TM research has been undertaken in Western nations (Cappelli, 2008; McDonnell et al., 2011; Jones et al., 2012; Collings et al., 2015; Mousa and Ayoubi, 2019), relatively few research concentrating on non-Western contexts such as Pakistan (Cooke et al., 2014; Taamneh et al., 2021). Second, universities are consistently improving their reputations and try to gain a competitive edge over counterparts by attracting and retaining bright academicians who play an important role in increasing the overall quality of education and research (Gilliot et al., 2002; Lorange, 2006; Edwards and Smith, 2010; Al-Sada et al., 2017; Lombardi et al., 2017; Neri and Wilkins, 2019). Third, teaching faculty never remain in fewer universities for longer times but always tries for better opportunity in other institutions (Clunies, 2007).

### **3.1. Research Objectives**

1. To analyze the relationship among talent management, organizational culture, and competency development, in the public universities of KP Pakistan.
2. To identify the effect of talent management on competency development in public universities of KP Pakistan.
3. To measure the moderating role of organizational culture in the relationship of talent management with competency development in public universities of KP Pakistan.

### **3.2 Research Questions**

1. How talent management and organizational culture is related to competency development?
2. How does talent management influence competency development?
3. How would organizational culture act as a moderator in the relationship of talent management with competency development?

### **3.3 Research Hypotheses**

**H1:** There is a positive significant relationship between talent management, organizational culture, and competency development.

**H2:** There is a significant positive effect of talent management on competency development.

**H3:** There is a significant effect of organizational culture as a moderator in the relationship of talent management with competency development.

## **4. Research Methods**

### **4.1. Data Collection Method**

The primary data was collected through a questionnaire. The geographical area of the KP is 101,741 km<sup>2</sup> / (39,282 sq mi). Distributed questionnaires were 475, of which 378 were usable questionnaires, and a 79.57% response rate was calculated for the required study.

#### **4.2. Research Population**

The population of the study include all the elements of the research study through which all the researchers draw their conclusions (Blumberg et al., 2014). The population of the study contains all the faculty members of KP, of 32 universities.

#### **4.3. Sample Size**

According to source HEC statistics (2017-2018), the total number of faculty members is 4915 which is less than 5000 so the appropriate sample size was 378.

#### **4.4. Sampling Technique**

In order to gather data, the current investigation utilized a convenient sampling method which is a non-probability technique. The sample size i.e., 378 determined through the formula given by (Yamnee, 1967). The nature of this investigation is quantitative. Quantitative research is that which attempts to answer a query by analyzing quantitative data, i.e., data presented in the form of figures and numbers (Hashim, 2013; Taylor, 1998). The questionnaire was constructed using the Likert 5-Point Scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree). To determine the effect of the variables, SPSS was used to analyze the data.

#### **4.5 Instrument Design**

For the independent variable (Talent Management), facets are included, 05 items are related to the Talent management system, 05 items are related to Key roles or Positions, 05 items are related to Attracting Talent, 05 items are related to Developing Talent, 06 items are related to Succession and Retention, 06 items are related to Performance Management and Reward, 06 items are related to Identification of talent Pool, 06 items are related to Executive commitment and engagement and adapted from (Yuniati et al., 2021; Vermeeren, 2014; Al Aina and Atan 2020; Abdollahbeigi et al., 2017; Tiwari and Shrivastava, 2013; Mngomezulu et al., 2015; Ibrar and Khan, 2015; Albrecht and Marty, 2020). On the other hand, Moderating variable (Organizational Culture) and dependent variables HR outcomes (Competency development), 07 items are related to Organizational Culture, and 05 items are related to Competency development (Younas and Waseem Bari, 2020).

### **5. Data Analysis**



SPSS-25 and factor analysis were employed to analyze the data, as they are the most powerful and widely used methods for doing so. The questionnaires used to compile the data for the present investigation were distributed in a survey format. In the present quantitative research, Validity, Reliability, Normality, Hierarchical Multiple Regression, and Pearson's Correlation are among the most important Analysis tools, that were utilized for interpreting the results i.e., talent management, organizational culture, and competency development.

## 5.1. Results

Table 1: Data Normality

	N	Min	Max	Mean	Std. Devi:	Skewness		Kurtosis	
Talent management	378	3.32	4.98	4.1150	.38707	.308	.125	-.984	.250
Organizational Culture	378	3.57	5.00	4.3711	.40157	.219	.125	-1.094	.250
Competency Development	378	3.50	5.00	4.3197	.36845	.528	.125	-1.012	.250
Valid N (Listwise)378									

The normality results are depicted in Table 1, the variable with the lowest Skewness (-1.012) is Competency Development (M=4.3197, SD=0.36845), whereas the variable organizational culture with the highest Skewness (.219) and their (M = 4.3711, SD=0.40157). On the other hand, talent management has the lowest Kurtosis (-.984) and their (M = 4.1150, SD =.38707). So, Skewness and Kurtosis are reported in the given range and are normal (Field, 2013).

## 5.2. Validity of The Instrument

Table 2: Exploratory Factor Analysis (EFA)

Variables	KMO	BTS	Sig	Total No: of Factors
				Based on Eigen Values
Talent Management	.773	16357.290	0.000	13
Organizational culture	.849	669.199	0.000	1
Competency development	.822	632.792	0.000	1

Results in Table 2 depict that all of the variables' KMO values exceeded the 0.5 threshold with the BTS mentioned above, all of the variables' p-values were below the 0.05 threshold, and the total variance explained elaborated results depicted a total of

for talent management has 13 factors, organizational culture has 1 factor, for creativity and innovativeness has a 1 factor, based on their Eigen values. Also, all the items' results depicted that factor loadings were greater than the threshold for the factor analysis (Pallant, 2010; Field, 2013).

Table 3: Data Reliability

Variables	Cronbach's Alpha	No of Items
Talent Management	.923	44
Organizational culture	.790	7
Competency development	.769	6

For further data analysis reliability or consistency is ensured by the data reliability (Field, 2013). In social sciences, investigating the reliability of parametric data Cronbach's alpha is employed for internal consistency of the data. Refer to Table 3 where Cronbach's alpha has a threshold value of ".6 or.7," which means that if the value of Cronbach's alpha is ".6 or.7" or higher, the instrument is said to be reliable (Gaur and Gaur, 2006; Pallant, 2010). The data depicted that Cronbach's alpha values for the variable's talent management, organizational culture, and competency development are "0.923, 0.790, and 0.769" for 44 items, 7 items, and 6 items, respectively. So, it is evident that the scale used to assess organizational culture, talent management, and competency development will provide reliable results (Gaur and Gaur, 2006; Pallant, 2010).

Table 4: Correlation Analysis

Correlations				
		TM	OC	CD
TM	Pearson Correlation	1	.349**	.781**
	Sig. (2-tailed)		.000	.000
	N	378	378	378
OC	Pearson Correlation	.349**	1	.512**
	Sig. (2-tailed)	.000		.000
	N	378	378	378
CD	Pearson Correlation	.781**	.512**	1
	Sig. (2-tailed)	.000	.000	
	N	378	378	378

### 5.3. Correlation Analysis

The variables in the current investigation are bivariate, and Pearson's Correlation was applied. The correlation values are positive which is revealed by the results, and threshold results for the probability are less than 5%. Results in Table 4 elaborated that the correlation value of talent management and competency development is maximum. In a nutshell, the results elaborated that talent management is directly and significantly proportional to competency development and organizational culture, hence, H1 of the study is accepted.

Table 5: Simple linear regression (Model-I)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.781 <sup>a</sup>	.610	.609	.23048	587.438	.000 <sup>b</sup>

#### 5.4. Regression Analysis

Prior to conducting moderation analysis, simple linear regression statistics are used. The results in Table 5 showed that there is a 61.0% change in competency development due to talent management, and the whole model is significant as the probability statistics satisfy the threshold at a 95% confidence interval. Hence, H2 is supported by the study.

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.261	.127		9.949	.000
	TM	.743	.031	.781	24.237	.000

The results of the model coefficient depicted that talent management has a beta value of 0.743. This means that when talent management changes by one unit, competency development changes by 0.743 units, with  $t = 24.237$  and  $p < 0.05$ . see Table 6

Table 7: Multiple Hierarchical Regression (Model-II)

Variables	Coeff:	SE(B)	R <sup>2</sup>	R <sup>2</sup> Change	Model Summary(P)	T	P
Constant	4.3129	.0116	.6773	.0021	.0000	370.6021	.0000
Organizational culture	.2598	.0294				8.8468	.0001

Talent Management	.6418	.0306				20.9399	.0000
(Organizational culture*Talent Management) Int	.1243	.0799				1.5569	.1203

The results in Table 7 depicted that  $R^2 = .6773$  with  $p < 0.05$ , which means that talent management causes a 67.73% variation in competency development. The model as a whole is statistically significant at the 95% confidence level.

### 5.5. Moderation Analysis

Organizational culture is used in the present study as a moderator on the relationship between talent management and competency development. Support for Hypothesis H3 was found by using the reported change in  $R^2$  as a basis for evaluating the moderating effect, as stated by (Jaccard et al., 1989). The results of the study of moderation depict that the value of  $R^2$  change = 0.0021, with  $p < 0.05$ . The beta score of talent management (independent variable) is 0.6418 with  $p < 0.05$ , beta score of organizational culture (moderator) is 0.2598 with  $p < 0.05$  explained by the model coefficient. Results explained that with the one-unit change in talent management, there will be a 0.6418 unit variation in competency development, the beta score of organizational culture revealed that with the one unit change in moderator, there will be 0.2598 unit variation in competency development, and at last, the beta value of interaction term (talent management \*organizational culture) explained that with the one unit change in interaction term, there is 0.1243 unit variation in the dependent variable. Here the study results also confirm the moderation criteria given by (Aiken and West, 1991). As a compulsory part of the moderator to act as moderator, significant interaction by the same authors. The results also shed light or depict the nature of the effect that occurs when a moderator is included in the model, which has a buffering effect. i.e., the inclusion of organizational culture as a moderator decreases the effect of talent management on competency development.

According to Aiken and West (1991) researchers need to classify the moderator into one of three groups before examining the conditional effects of the moderator on the dependent variable (Low organizational culture, Moderate organizational culture, and High organizational culture). The conditional effects of groups showed that a low organizational culture is shown by the blue line, a moderate one by the green line, and a low one by the yellow line. The low organizational culture had an  $R^2$  value of 0.669, and it's under root revealed a correlation of 0.817 between talent management and competency development. The  $R^2$  value for a moderate organizational culture is 0.603, with a correlation of 0.776 between talent management and competency

development, and the value for a high organizational culture is 0.627, with an elaborated under root correlation of 0.719. The effects are illustrated in Figure 2.

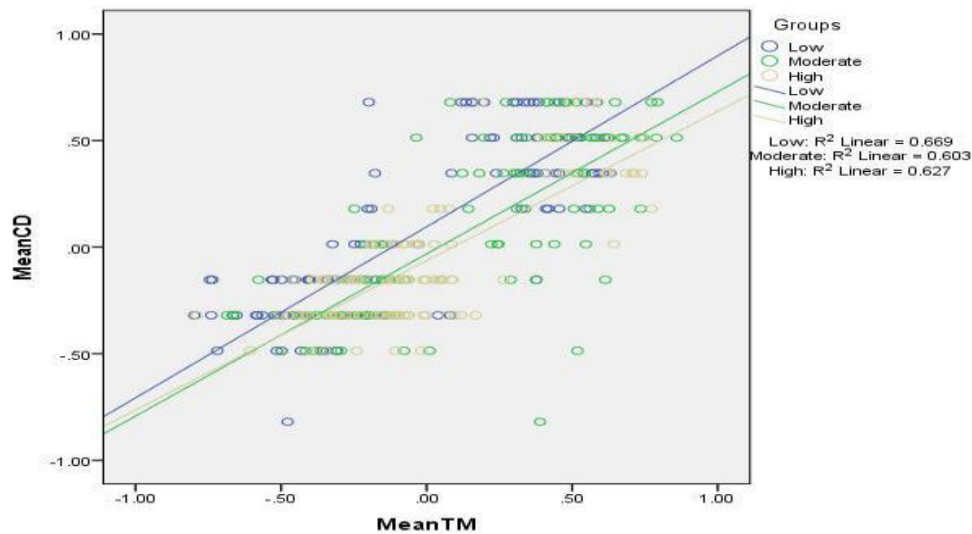


Figure 2: Effects of moderator on the model

## 6. Discussion

The knowledge economy emphasizes the value of talent management (TM) one of the talking points about basic tools of institutions like tangible and intangible assets to manage employees and focuses on human capital rather than physical capital (Dhanalakshmi and Gurunathan, 2014).

Researchers moved on to inferential statistics once all the assumptions of descriptive statistics had been met. In the current research, a parametric test called Pearson's Correlation is used to check the relationship between the study variables and meet the first research objective. Because the R-value is positive and  $p < 0.05$ , the results showed that there is a positive and significant relationship between talent management, competency development, and organizational culture. Based on these findings' hypothesis one "H1" is accepted. This means that the effective use of talent management along with a supportive culture will enhance the university's competitive advantage and retain their seniors to build up quality education and research and to show the separate entity from the other universities. So, higher education institutions should have to focus on investing the talent management by changing their HR policies regarding the importance of talent management, organizational culture, and its positive influence on competency development that brings a significant change in the

institutions to achieve their competitive advantage. The study's findings are in line with (Rezaei et al., 2018; Hewitt Associate's 2003; Chaturvedi et al., 2022) and support the theory i.e., the Theory of Miner, (1973).

The study's second objective was to evaluate the impact of talent management on competency development. The researcher used simple linear regression to examine the impact of talent management on competency development. The results showed that talent management has a significant influence on competency development, with  $R^2 = 61.0\%$  and  $p < 0.05$  level of confidence. The beta value revealed a positive influence because  $\beta = 0.743$ , which means that for every unit change in talent management, there is a "0.743" unit change in competency development. Hypothesis two "H2" is accepted based on the findings. The research's findings corroborated with (Hewitt Associate's 2003; Chaturvedi, 2021; Bounfour and Miyagawa, 2015; Srivastava and Chaturvedi 2014; Rezaei et al., 2018; Chaturvedi et al., 2022).

The third purpose of this study was to determine the moderating effect of organizational culture on the relationship between talent management and competency development. Multiple hierarchical regression was performed and the process file (Model-1) in the present investigation (Hayes, 2013).  $R^2 = 67.73\%$  and  $p < 0.05$  indicated that the whole model strongly influences competency development. Results of moderation analysis indicated that organizational culture acts as a moderator (buffering effect) on the relationship between talent management and competency development because  $R^2$  change = 0.0021 with  $p < 0.05$  for the variable talent management,  $\beta$  value = 0.6418 with  $p < 0.05$  for the variable organizational culture, and  $\beta$  value = 0.2598 with  $p < 0.05$  for the interaction term (talent management\*organizational culture) also confirm moderation (Aiken and West, 1991). The findings demonstrated that the presence of organizational culture as a moderator mitigated the impact of talent management on competency development. Based on current evidence, the third hypothesis, H3, is unaccepted.

The conditional effects of the moderator and independent variable on the dependent variable are also examined by the researcher. Aiken and West (1991) employed an interaction plot to study conditional effects, and their findings showed that organizational culture had high, moderate, and low organizational culture effects. The present study also identifies that organizational culture acts as a buffering moderator in between talent management and HR outcomes i.e., Competency development, but showed the insignificant moderation effect with competency development, having the insignificant supportive culture changes competency development which results in losing their seniors teaching faculty members.

## **7. Theoretical Implications**

Overall, the study's findings contribute to a better understanding of talent management, corporate culture, and competency development. These findings hold significant implications for scholars, higher education institutions, and academicians.

The current paper examines the moderating effects of organizational culture on the relationship between talent management and HR outcomes in public-sector universities in emerging economies such as Pakistan. The study introduces the theory proposed by Miner (1973) and the underlying theories to support the analysis. Furthermore, a comprehensive review of relevant literature highlights how the behaviors and capabilities of organizational members, along with human resource development practices, contribute to improving HR outcomes in public-sector universities in developing economies. However, there is still a need to establish a clear understanding of how human behaviors and organizational HR-related practices promote the enhancement of HR outcomes, particularly when considering the context of public-sector organizations in developing countries.

## **8. Managerial Implications**

The performance and competitiveness of an organization are enhanced through the cultivation of a supportive culture. In the context of universities in Pakistan, the implementation of consistent talent management techniques can elevate standards, serve as a repository of enterprise knowledge, and contribute to improved performance and research outcomes both nationally and internationally. It is concluded that talent management practices, encompassing HR outcomes, HRM policies, and a supportive culture, effectively enhance an organization's competitiveness, performance, and senior staff retention. In order to thrive in the knowledge economy, higher education institutions (HEIs) must prioritize performance to meet both short-term and long-term objectives. This necessitates valuing knowledge, fostering a conducive learning environment, nurturing a supportive culture, and recognizing talent management practices as a vital asset that surpasses the resources of all institutions. This research paper further suggests that the top management and administration of public universities should acknowledge the diverse possibilities that emerge from the network of relationships among institution members. The study encourages the top management, administrators, managers, and policymakers of public-sector universities to embrace the various scenarios that arise from the relationships between organizational members, as these networks have significant potential. It is important for organizations to proactively respond to a wide range of information and social stimuli from both internal and external sources, as this is essential for the adoption of innovative talent management practices, which, in turn, contribute to enhanced HR outcomes.

## **9. Future Directions**

Future research could benefit from incorporating qualitative techniques to gain a deeper understanding of the problem, as this study has primarily employed quantitative methods. A mixed methods approach, such as an explanatory sequential research design, could be employed in future studies. Additionally, it is important to

consider the role of external and internal factors, such as environmental turbulence and corporate size, as moderator variables in future research. Building on the work of Chaturvedi et al. (2022) and Bishwas (2015) exploring the relationship between innovation and flexibility within the suggested model would be valuable for future studies. It may also be worthwhile to investigate other service industries, such as the oil and gas industry, in relation to the aforementioned concerns. Longitudinal data collection is a potential avenue for further research, and comparative studies can also provide valuable insights.

## **10. Conclusion**

Universities worldwide are facing the challenge of talent management scarcity, impacting the quality of education and research and leading to the loss of senior faculty members. Talent management practices offer effective solutions to address these issues and achieve better HR outcomes through skilled employees.

The first objective of this study was to examine the relationship between talent management, competency development, and organizational culture. Correlation analysis was conducted, revealing a positive and significant association among these factors. Thus, the first objective has been successfully accomplished based on the data. To fulfill the second objective, which aimed to determine the influence of talent management on competency development, simple linear regression was utilized. The conclusive findings demonstrated that talent management has a substantial impact on competency development, thereby achieving the second objective.

The researcher further investigated the moderating role of organizational culture in the link between talent management and competency development. A moderation analysis using Hayes' process file was conducted, revealing that organizational culture plays a significant role as a moderator in the interaction between talent management and competency development. This accomplishment fulfills the third objective of the research. The completion of the first and second objectives leads to the conclusion that talent management plays a vital role in harnessing the skills of faculty members in public-sector institutions in KP. Managers, administrators, policymakers, and academics are encouraged to prioritize talent management operations both in practice and academia. Furthermore, the results of the third objective indicate that the presence of skilled employees in universities contributes to increased innovation, creativity, and competency development in academic work, research, and overall university performance. It is evident that university cultures do not hinder or weaken the effect of talented employees and that the retention of senior faculty members and adequate replacements remain crucial areas for universities to address.

### **Author Contributions:**

1. Dr. Sher Zaman Khan (Principal Author) Assistant Professor Institute of Business Administration, Gomal University, Khan. The principal author initiated the idea via



available models on papers, identified the gap, and developed a scale for the purpose of data collection and interpretations of findings.

2. Dr. Mahad Jehangir (Corresponding Author) Lecturer Deptt: of Business and Management Sciences, University of Lakki Marwat. The author made a valuable contribution in designing the methodology i.e., population, sample size, techniques, data collection methods, data analysis tools as well as the conclusion of the study.

3. Muhammad Haseeb Qureshi PhD scholar (Corresponding Author), Qurtuba University of Science and Information Technology, Department of Management Sciences Khan, KP, Pakistan. The author made a valuable contribution in writing a literature review of the paper, analysis of the data, and data Collection.

**Data Availability Statement:** Yes, collected data is available in the shape of the data set.

**Conflict of Interest:** There is no conflict of interest.

**Funding Information:** There is no internal or external funding source for conducting this study.

## References

- Abdalla, I.A. and Al-homoud, M. (1995), "A survey of management training and development practices in the State of Kuwait", *Journal of Management Development*, Vol. 14 No. 3, pp. 14-25.
- Abdollahbeigi, B., Salehi, F., and Jayashree, S. (2017). The effect of recruitment, selection and development on talent management in IKCO company in Iran. *International Journal of Advanced Engineering and Management*, 2(3), 69-77.
- Abdullah, H. H., and Abubakar, A. (2017). Strategic talent management and university performance: A theoretical perspective. *European Journal of Business and Management*, 9(4), 35-40.
- Abdullahi, M. S., Raman, K., and Solarin, S. A. (2022). Talent management practices on employee performance among academic staff of Malaysian private universities: employee engagement as a mediator. *Journal of Applied Research in Higher Education*, 14(1), 135-158.
- Abeuova, D. and Muratbekova-Touron, M. (2019), "Global talent management: shaping the careers of internationally educated talents in developing markets", *Thunderbird International Business Review*, Vol. 61 No. 6, pp. 843-856.
- Aghion, P., Dewatripont, M., Hoxby, C., Mas-Colell, A., and Sapir, A. (2010). The governance and performance of universities: evidence from Europe and the US. *Economic Policy*, 25(61), 7-59.
- Aiken, L. S. and West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage.
- Al Aina, R., and Atan, T. (2020). The Impact of Implementing e Talent Management Practices on Sustainable Organizational Performance. *Sustainability*, 12(20), 8372.

- Aladwan, K., Bhanugopan, R. and Fish, A. (2014), "Managing human resources in Jordanian organizations: challenges and prospects", *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 7 No. 1, pp. 126-138.
- Al-Athari, A. and Zairi, M. (2002), "Training evaluation: an empirical study in Kuwait", *Journal of European Industrial Training*, Vol. 26 No. 5, pp. 241-251.
- Albrecht, S. L., and Marty, A. (2020). Personality, self-efficacy and job resources and their associations with employee engagement, affective commitment and turnover intentions. *The International Journal of Human Resource Management*, 31(5), 657-681.
- Al-Sada, M., Al-Esmael, B. and Faisal, M.N. (2017), "Influence of organizational culture and leadership style on employee satisfaction, commitment and motivation in the educational sector in Qatar", *EuroMed Journal of Business*, Vol. 12 No. 2, pp. 163-188.
- Armstrong, M. (2011). *A handbook of Human Resource Management practices* (10th ed). London and Philadelphia: Kogan Page Limited.
- Ashton, C., and Morton, L. (2005). *Managing talent for competitive advantage: Taking a systemic approach to talent management*. Strategic HR review.
- Baheshitiffar, M. (2011) *Role of Career Competencies in Organization*. *European Journal of Economics Finance and Administrative Sciences*, 42(1) pp 201-221.
- Banerjee, K. and Thakurta, R. (2013) 'Inadequate investment impacting India's innovation returns – a perspective', *International Journal of Innovation Science*, Vol. 5, No. 3, pp.153–158.
- Becker, K.L. and Matthews, J.H. (2008) 'Linking HRM and innovation: formulating the research agenda', in 22nd ANZAM Conference 2008: *Managing in the Pacific Century*, Auckland, New Zealand, 2–5 December.
- Bedi, H.S. (2019) 'Innovativeness, business performance and environmental uncertainty: a multivariate configuration', *International Journal of Business Innovation and Research*, Vol. 18, No. 3, pp.328–345.
- Beechler, S. and Woodward, I.C. (2009), "The global 'war for talent'", *Journal of International Management*, Vol. 15 No. 3, pp. 273-285.
- Blumberg, B., Cooper, D., and Schindler, P. (2014). *Business Research Methods*. McGraw-Hill Education.
- Bounfour, A. and Miyagawa, T. (Eds.) (2015) *Intangibles, Market Failure and Innovation Performance*.
- Brand, A. (1998) 'Knowledge management and innovation at 3M', *Journal of Knowledge Management*, Vol. 2, No. 1, pp.17–22.
- Cappelli, P. (2008), "Talent management for the twenty-first century", *Harvard Business Review*, Vol. 86 No. 3, pp. 74-82.
- Chambers, E.G., Foulon, M., Handfield-Jones, H., Hankin, S.M. and Michaels, E.G., III (1998), "The war for talent", *The McKinsey Quarterly*, No. 3, p. 44.
- Chaturvedi, S. (2021) 'Evaluating the critical enablers of upward influence tactics using DEMATEL framework in Indian Iron and steel Industries', *International Journal of Business Excellence*, Vol. 24, No. 2.
- Chaturvedi, S., Bahuguna, P. C., and Raman, U. (2022). Developing innovativeness and competency through talent management in Indian oil and gas sector. *International Journal of Business Innovation and Research*, 27(2), 223-241.

- Chen, C. X., Zhang, J., and Gilal, F. G. (2019). Composition of motivation profiles at work using latent analysis: theory and evidence. *Psychology Research and Behavior Management*, 811-824.
- Chen, S. Y., Lee, A. Y. P., and Ahlstrom, D. (2021). Strategic talent management systems and employee behaviors: the mediating effect of calling. *Asia Pacific Journal of Human Resources*, 59(1), 84-108.
- Chugh, S. and Bhatnagar, J. (2006), "Talent management as high performance work practice: emerging strategic HRM dimension", *Management and Labour Studies*, Vol. 31 No. 3, pp. 228-253.
- Clunies, J. P. (2007). Benchmarking succession planning and executive development in higher education: Is the academy ready now to employ these corporate paradigms? Retrieved June 28, 2008 from [http://www.academicleadership.org/emprical\\_research/Benchmarking\\_Succession\\_Planning\\_Executive\\_Development\\_in\\_Higher\\_Education.shtml](http://www.academicleadership.org/emprical_research/Benchmarking_Succession_Planning_Executive_Development_in_Higher_Education.shtml).
- Collings, D. G., Mellahi, K. (2009). Strategic talent management: A review and research agenda. *Human resource management review*, 19(4), 304-313.
- Collings, D.G., Scullion, H. and Vaiman, V. (2011), "European perspectives on talent management", *European Journal of International Management*, Vol. 5 No. 5, p. 453.
- Collings, D.G., Scullion, H. and Vaiman, V. (2015), "Talent management: progress and prospects", *Human Resource Management Review*, Vol. 25 No. 3, pp. 233-235.
- Cook, P. (1998) 'The creativity advantage – is your organization the leader of the pack?', *Industrial and Commercial Training*, Vol. 30, No. 5, pp.179–184.
- Cooke, F.L., Saini, D.S. and Wang, J. (2014), "Talent management in China and India: a comparison of management perceptions and human resource practices", *Journal of World Business*, Vol. 49 No. 2, pp. 225-235.
- De Leede, J. and Looise, J.K. (2005) 'Innovation and HRM: towards an integrated framework', *Creativity and Innovation Management*, Vol. 14, No. 2, pp.108–117.
- Deloitte (2010) *Talent Edge (2020): Blueprints for the New Normal*.
- Devine, M.P. (2008) *Talent Management in Public Sector*. Ashridge business School. Retrieved on 22nd May 2013 from <Http://www.ashridge.org.UK>.
- Dhanalakshmi, R. V., and Gurunathan, K. B. (2014). A study on talent management as a strategy to influence employee engagement and its affect on the organizational outcome. *International Journal of Business and Administration Research Review*, 2(4), 183-186.
- Dries, N., and Pepermans, R. (2012). How to identify leadership potential: Development and testing of a consensus model. *Human Resource Management*, 51(3): 361–385.
- Edwards, D. and Smith, T.F. (2010), "Supply issues for science academics in Australia: now and in the future", *Higher Education*, Vol. 60 No. 1, pp. 19-32.
- Fabunmi, M., and Isah, E. A. (2004). Determinant factors for planning students records retrieval in Nigerian Universities. *Revitalization of African Higher Education*, and, 365-375.
- Fardale, E., Scullion, H., and Sparrow, P. (2010). The role of the corporate HR function in global talent management. *Journal of World Business*, 45(2): 161–168.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. sage.
- Gaur, A. S., and Gaur, S. S. (2006). *Statistical methods for practice and research: A guide to data analysis using SPSS*. Sage.

- Gilal, F. G., Ashraf, Z., Gilal, N. G., Gilal, R. G., and Channa, N. A. (2019a). Promoting environmental performance through green human resource management practices in higher education institutions: A moderated mediation model. *Corporate Social Responsibility and Environmental Management*, 26(6), 1579-1590.
- Gilal, F. G., Ashraf, Z., Gilal, R. G., Dakhan, S. A., and Gilal, N. G. (2022). Employee engagement and extra-role service behaviour in the retail banking industry: a moderated mediation model of job autonomy and job passion. *International Journal of Information Systems and Change Management*, 13(1), 73-92.
- Gilal, F. G., Channa, N. A., Gilal, N. G., Gilal, R. G., and Shah, S. M. M. (2019b). Association between a teacher's work passion and a student's work passion: a moderated mediation model. *Psychology Research and Behavior Management*, 889-900.
- Gilal, F. G., Gilal, N. G., Channa, N. A., Gilal, R. G., Gilal, R. G., and Tunio, M. N. (2020). Towards an integrated model for the transference of environmental responsibility. *Business strategy and the environment*, 29(6), 2614-2623.
- Gilal, F. G., Ashraf, Z., Gilal, R. G., Dakhan, S. A., and Gilal, N. G. (2022). Employee engagement and extra-role service behaviour in the retail banking industry: a moderated mediation model of job autonomy and job passion. *International Journal of Information Systems and Change Management*, 13(1), 73-92.
- Gilliot, D., Overlaet, B. and Verdin, P. (2002), "Managing academic personnel flow at universities", *Tertiary Education and Management*, Vol. 8 No. 4, pp. 277-295.
- Gong, Z., Gilal, F. G., Gilal, N. G., Van Swol, L. M., Gilal, R. G. (2022). A person-centered perspective in assessing career adaptability: Potential profiles, outcomes, and antecedents. *European Management Journal*. <https://doi.org/10.1016/j.emj.2022.03.009>
- Gong, Z., Gilal, F. G., Gilal, R. G., and Jahanzeb, A. (2023). Protean career orientation and job search: investigating the mediating role of career optimism in mentoring relationships. *Global Knowledge, Memory and Communication*. <https://doi.org/10.1108/GKMC-11-2022-0267>
- Gong, Z., Liu, M., Xin, D., Gilal, F. G., Yin, K., and Zhang, N. (2019). Coworker feedback seeking and feedback environment in China: An expectation states theory approach. *Social Behavior and Personality: An International Journal*, 47(9), 1-10.
- Gong, Z., Van Swol, L. M., Li, F., and Gilal, F. G. (2021). Relationship between nurse's voice and self-leadership: A time-lagged study. *Nursing Open*, 8(3), 1038-1047.
- Gong, Z., Yang, J., Gilal, F. G., Van Swol, L. M., and Yin, K. (2020). Repairing police psychological safety: The role of career adaptability, feedback environment, and goal-self concordance based on the conservation of resources theory. *Sage open*, 10(2), 2158244020919510.
- Hartmann, E., Feisel, E. and Schober, H. (2010) 'Talent management of western MNCs in China: balancing global integration and local responsiveness', *Journal of World Business*, Vol. 45, No. 2, pp.169-178.
- Hashim, M. (2013). Change management. *International Journal of Academic Research in Business and Social Sciences*, 3(7), 685.
- Hayes, A. F. (2013). Mediation, moderation, and conditional process analysis. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach* edn. New York: Guilford Publications, 1-20.

- Hewitt Associates (2003) Best Employers in Asia: Regional Results – 2003 [online] <http://was4.hewitt.com/bestemployers/asia/english/results2003/index.htm> (accessed 10 January 2005).
- Ibrar, M., and Khan, O. (2015). The impact of reward on employee performance (a case study of Malakand Private School). *International letters of social and humanistic sciences*, 52, 95-103.
- Jaccard, J., Turrisi, R. and Wan, C. K. (1990). *Interaction Effects in Multiple Regression*. Newbury Park, CA: Sage.
- Jain, H., Mathew, M. and Bedi, A. (2012) ‘HRM innovations by Indian and foreign MNCs operating in India: a survey of HR professionals’, *The International Journal of Human Resource Management*, Vol. 23, No. 5, pp.1006–1018.
- Jones, J.T., Whitaker, M., Seet, P.S. and Parkin, J. (2012), “Talent management in practice in Australia: individualistic or strategic? An exploratory study”, *Asia Pacific Journal of Human Resources*, Vol. 50 No. 4, pp. 399-420.
- Kahinde J. S. (2012). Talent management effect on organization performance. *Journal of management research* volume 4 (2) 76-88.
- Khan, S. Z., Yang, Q., and Waheed, A. (2019). Investment in intangible resources and capabilities spurs sustainable competitive advantage and firm performance. *Corporate Social Responsibility and Environmental Management*. <https://doi.org/10.1002/csr.1678>, 26, 285–295
- Khandekar, A. and Sharma, A. (2005) ‘Managing human resource capabilities for sustainable competitive advantage: an empirical analysis from Indian global organisations’, *Education and Training*, Vol. 47, Nos. 8–9, pp.628–639.
- Khattak, N. U. R. (2012). The contribution of education to economic growth: evidence from Pakistan. *International Journal of Business and Social Science*, 3(4),145-151.
- Lewis, R. E., and Heckman, R. J. (2006). Talent management: A critical review. *Human resource management review*, 16(2), 139-154.
- Li, M., Gong, Z., Gilal, F. G., Van Swol, L. M., Xu, J., and Li, F. (2021). The moderating role of ethical leadership on nurses’ green behavior intentions and real green behavior. *BioMed Research International*, 1-7.
- Lombardi, R., Lardo, A., Cuzzo, B. and Trequattrini, R. (2017), “Emerging trends in entrepreneurial universities within Mediterranean regions: an international comparison”, *EuroMed Journal of Business*, Vol. 12 No. 2, pp. 130-145.
- Lorange, P. (2006), “The later, the more deceptive? A Patagon dated 1628 from Chateau-Regnault with a Brabantian obverse”, *Human Resource Management*, Vol. 45 No. 4, pp. 649-658, doi: 10.1002/hrm.
- Maghsoudi, S., Duffield, C. and Wilson, D. (2015) ‘Innovation evaluation: past and current models and a framework for infrastructure projects’, *International Journal of Innovation Science*, Vol. 7, No. 4, pp.281–297.
- McDonnell, A., Hickey, C. and Ginnigle, P. (2011), “Global talent management: exploring talent identification in the multinational enterprise Catriona Hickey Patrick Gunnigle”, *Human Resource Management*, Vol. 5 No. 2, pp. 174-193.
- Mehmood, M. S., Jian, Z., and Gilal, F. G. (2020). Entrepreneurial leadership and employee innovative behavior: intervening role of creative self-efficacy. *Human Systems Management*, 39(3), 367-379.

- Miner, J. B. (1973). Management consulting firm as a source of high-level managerial talent. *Academy of Management Journal*, 16(2): 253–264.
- Mngomezulu, N., Challenor, M., Munapo, E., Mashau, P., and Chikandiwa, C. T. (2015). The impact of recognition on retention of good talent in the workforce. *Journal of Governance and Regulation*, 4(4), 372-379.
- Mohamed Jais, I. R., Yahaya, N., and Ghani, E. K. (2021). Talent Management in Higher Education Institutions: Developing Leadership Competencies. *Journal of Education and e-Learning Research*, 8(1), 8-15.
- Mousa, M. and Ayoubi, R.M. (2019), “Talent management practices: perceptions of academics in Egyptian public business schools”, *Journal of Management Development*, Vol. 38 No. 10, pp. 833-846.
- Nawaz, A., Gilal, F. G., Channa, K. A., and Gilal, R. G. (2022). Going deep into a leader's integrity: A systematic review and the way forward. *European Management Journal*. <https://doi.org/10.1016/j.emj.2022.11.001>.
- Nawaz, A., Gilal, F. G., Soomro, M. I., Gilal, R. G., and Channa, K. A. Driving innovation through servant leadership in higher education: Unveiling the serial mediating mechanisms of subjective well-being and knowledge sharing. *Knowledge and Process Management*. <https://doi.org/10.1002/kpm.1761>
- Neri, S. and Wilkins, S. (2019), “Talent management in transnational higher education: strategies for managing academic staff at international branch campuses”, *Journal of Higher Education Policy and Management*, Vol. 41 No. 1, pp. 52-69.
- Odugbesan, J. A., Aghazadeh, S., Al Qaralleh, R. E., and Sogeke, O. S. (2022). Green talent management and employees' innovative work behavior: the roles of artificial intelligence and transformational leadership. *Journal of Knowledge Management*, (ahead-of-print).
- Omotunde, O. I., and Alegbeleye, G. O. (2021). Talent management practices and job performance of librarians in university libraries in Nigeria. *The Journal of Academic Librarianship*, 47(2), 102319.
- Ortega, S., Furr, N., Liman, E. and Flint, C. (2015) ‘The science of social impact innovation: how to deliver more impact through innovative business models’, *International Journal of Innovation Science*, Vol. 6, No. 2, pp.73–82.
- Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS*. Maidenhead. Open University Press/McGraw-Hill.
- Pandita, D. (2021). Innovation in talent management practices: creating an innovative employer branding strategy to attract generation Z. *International Journal of Innovation Science*, 14(3/4), 556-569.
- Raytcheva, S. and Hermel, P. (2010) ‘Does human resource management based on creativity enhance the innovation capability? An exploratory study of French firms’, *International Journal of Engineering*, Vol. 40, No. 2, pp.231–238.
- Rezaei, A., Allameh, S.M. and Ansari, R. (2018) ‘Impact of knowledge creation and organisational learning on organisational innovation: an empirical investigation’, *International Journal of Business Innovation and Research*, Vol. 16, No. 1, pp.117–133.
- Ruppe, L. (2006), “Tools and dialogue set the stage for talent management at Johns Manville”, *Journal of Organizational Excellence*, doi: 10.1002/joe.

- Saunila, M. (2017) 'Is innovation performance measurement beneficial for performance in services?', *International Journal of Business and Globalisation*, Vol. 18, No. 1, pp.27–41.
- Schreuder, R. and Noorman, S. (2019), "Strategic talent management: creating strategic value by placing top talents in key positions", *Development and Learning in Organizations*, Vol. 33 No. 1, pp. 1-4.
- Scullion, H., Collings, D. G., and Caligiuri, P. (2010). Global talent management. *Journal of World Business*, 45(2): 105–108.
- Shen, Y., and Hall, D. T. (2009). When expatriates explore other options: Retaining talent through greater job embeddedness and repatriation adjustment. *Human Resource Management*, 48(5): 793–816.
- Singh, V. and Aggarwal, A. (2017) 'Impact of business environment on balancing innovation process in Indian SMEs', *International Journal of Business Innovation and Research*, Vol. 12, No. 2, pp.224–239.
- Srivastava, A.K. and Chaturvedi, S. (2014) 'Negative job experiences and employees job attitudes and health in high-performance work organizations', *Metamorphosis*, Vol. 13, No. 2, pp.22–28.
- Stahl, G. K., Bjorkman, I., Farndale, E., Morris, S. S., Paauwe, J., Stiles, P., et al. (2012). Six principles of effective global talent management. *Mit Sloan Management Review*, 53(2): 25–42.
- Taamneh, A. M., Taamneh, M., Alsaad, A., and Al-Okaily, M. (2021). Talent management and academic context: A comparative study of public and private universities. *EuroMed Journal of Business*.
- Talonon, T. and Hakkarainen, K. (2014) 'Elements of sustainable business models', *International Journal of Innovation Science*, Vol. 6, No. 1, pp.43–54.
- Taylor, S. J., and Bogdan, R. (1998). In-depth interviewing. *Introduction to qualitative research methods: a guidebook and resource*, 87-116.
- Thunnissen, M., van Arensbergen, P., and van den Brink, M. (2021). Talent Management in academia. In *The Routledge companion to talent management* (pp. 215-226). Routledge.
- Tiwari, U., and Shrivastava, D. (2013). Strategies and practices of talent management and their impact on employee retention and effectiveness. *The International Journal of Management*, 2(4), 1-10.
- Varis, M. and Littunen, H. (2010) 'Types of innovation, sources of information and performance in entrepreneurial SMEs', *European Journal of Innovation Management*, Vol. 13, No. 2, pp.128–154.
- Vermeeren, B. (2014). Variability in HRM implementation among line managers and its effect on performance: A 2-1-2 mediational multilevel approach. *The International Journal of Human Resource Management*, 25(22), 3039-3059.
- Vosburgh, R. M. (2022). Closing the academic-practitioner gap: Research must answer the "SO WHAT" question. *Human Resource Management Review*, 32(1), 100633.
- Yamane, T. (1967). Elementary sampling theory.
- Ye, C., Jha, S. and Desouza, K.C. (2015) 'Communicating the business value of innovation', *International Journal of Innovation Science*, Vol. 7, No. 1, pp.1–12.

- Yeung, A.K. and Berman, B. (1997), "Adding value through human resources: reorienting human resource measurement to drive business performance", *Human Resource Management*, Vol. 36 No. 3, pp. 321-335.
- Younas, M., and Waseem Bari, M. (2020). The relationship between talent management practices and retention of generation 'Y' employees: mediating role of competency development. *Economic research-Ekonomska istraživanja*, 33(1), 1330-1353.
- Yuniati, E., Soetjipto, B., Wardoyo, T., Sudarmiatin, S., and Nikmah, F. (2021). Talent management and organizational performance: The mediating role of employee engagement. *Management Science Letters*, 11(9), 2341-2346.
- Zhang, N., Bu, X., Xu, Z., Gong, Z., and Gilal, F. G. (2021). Effect of Ethical Leadership on Moral Sensitivity in Chinese Nurses: A Multilevel Structural Equation Model. *Advances in Nursing Science*, 44(3), 78-92.
- Zhang, N., Gong, Z. X., Xu, Z., and Gilal, F. G. (2019). Ethical climate and service behaviours in nurses: The moderating role of employment type. *Journal of Advanced Nursing*, 75(9), 1868-1876.
- Zhang, N., Li, J., Bu, X., Gong, Z., and Gilal, F. G. (2018). Bridging the gap between ethical climate and nurses' service behaviors: the critical role of professional well-being. *International Journal of Mental Health Promotion*, 20(3), 99-110.