

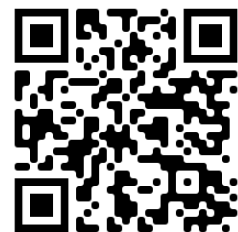


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*Original Research*

# Training and Development Programs in Public, Private, and Foreign Commercial Banks in Bangladesh: an Empirical Inquiry

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## Abstract

Training and development activity is indispensable for the survival of any type of organization especially service-oriented organization where the skills of the workforce should be continuously upgraded for the survival of the cut-throat competition. Unfortunately, this function is not given equal emphasis in the banking sector. The present study attempts to discover any statistically significant perceptual differences among public, private, and foreign banks regarding development and training programs in the selected banking enterprises in Bangladesh. The study reveals that there are statistically significant perceptual differences among public, private, and foreign bank employees regarding different contents of training and development programs in some selected banking enterprises in Bangladesh. The study further investigated that selected foreign bankers' perception of various components of training and development programs is better in comparison to the perception of public and private bankers of Bangladesh. Finally, the study finding implies that private and public banks should put greater emphasis on their training and development programs.

**Keywords:** Training and development, Cut throat competition, Skills up-gradation.

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## Introduction

Training becomes important the moment an organization realizes the need for improvement and growth in the job. But most of the times, organizations commence on job enlargement and enrichment to promote employees' confidence, motivation and satisfaction when in the fact the original problem with work performance lies in sufficiency development. Training is one of the most inevitable and dependable Human Resource Development methods to increase organizational and employee productivity (Bhatti & Kaur, 2009). Training should be developed in such a way that they create a win-win situation for both organization and employees may attain their goals if learning skills are shifted successfully to the workplace (Kauffeld & Lehmann-Willenbrock, 2010). HRD is indispensable in sustaining effective performance and achievement of firm's objectives by introducing training. Training certifies an adequate supply of employees that are technically proficient for management jobs (Mullins, 2007). Trainings conducted at the right time provide big rewards for increased productivity, knowledge, allegiance and benefaction.

Hence, modern employee has to grasp throughout their lives because of enduring changes in requirements for professional proficiency. The trend in business education world concerns with the implementation of creating and problem-based approaches in executive training (Minina & Nikitina, 2012). Training concentrates on the development of logical thinking, the capacity of profound vision of every day routines and apparently simple events (Bordovskaya & Rean, 2004). The central issue on training is to engage employee in effective learning to the maximum utility of training (Nikandrou et al, 2008). Employees value continuous learning as concern for employability, which is linked to demands of knowledge economy (Kuijpers & Scheerens, 2006). Proper training program design and delivery is a major contributor to the transfer of learning that meets the needs of the learner and organization (Montesino, 2002). Program design should therefore include a needs assessment, clear program goals that align training with strategic direction of the organization (Khan & Ali, 2015). A properly designed program has greater success in transferring learning to workplace (Colquitt, LePine, & Noe, 2000). Trainees with a high degree of self-efficacy tend to be more motivated learners and can accomplish more (Chiaburu & Marinova, 2005). Assessing individual performance and providing feedback prior to training can also have a positive impact on motivation.

In doing so, supervisors play a key role in post-training by giving feedback (Kraiger et al., 2004). Career development is a lifelong series of activities (workshops) that contribute to a person's career exploitation, establishment, success and fulfilment. Many employers today have strengthened career focus of their HRD activities. The focus is no longer just, how best can you serve our company. The reality is that, most people will have to change employers several times during their work lives especially among Y-generation. Career development involves concerted efforts directed towards assessing employees' potentials identifying likely career paths for them and designing and implementing various forms of training and experience to prepare that person for job advanced. Career management is a process for enabling employees to develop their career skills and interest and to use these skills and interests most effectively both within the firm and after they leave (Armstrong, 2005).

## **Problem Statement**

In order to address the above issue, there is insignificant number of studies, has so far been made in Bangladesh regarding comparative study among public, private and foreign bank employees concerning different contents of Training program in some selected banking enterprises in Bangladesh. The development of overall skills of the employees, reduction of stress level, development technical skills, need-based training programs, helpful in the long run, and quality of the instructor are vital elements for the efficacy of the employee training in public banks of Bangladesh (Islam, Mridha, Sharna, Rahman, Mosharraf, & Nower, 2019). A study by Zahidul explored the level of proficiency of training among different commercial banks in Bangladesh. But the author didn't throw light on the comparative picture of Public, Private and Foreign banker's perception regarding different contents of training program (Islam, 2015). Another study on selected business enterprises found job training and job orientation are the two most frequently used training method; among the training courses offered by selected enterprises (Quadir, Azad, & Uddin, 2006). Absar, Sikder, and Hossain (2010) also made a study for exploring the differences between the public and private sector enterprises of Bangladesh, which shown that overall status of training and development practices of private sector industrial enterprises is significantly better than that of public sector industrial enterprises (Absar, & Mahmood, 2011; Khan, Hoque, & Shahabuddin, 2019).

But no attempt has been made to explore the differences among public, private and foreign bank employees regarding Development and Training program in some selected banking enterprises in Bangladesh. If the perceptions of Bank employee's regarding Training and Development doesn't consider dully, an organization does not achieve objectives training and development program's objectives. Non-fulfilment of an organization's training and development objectives results in low productivity of organization's workforce, highest wastages of monetary investment which have a greater opportunity cost, highest rate of absenteeism and turnover, Low employee morale. Ultimately, an organization will lose its competitive advantages in the long run.

Individual as well as organisational performances are vitally affected by training. Most of the literature available reports the different aspects of employees training. However, little matter exists on this subject with respect to the perceptions of employees with respect to different contents of training programs in the banking sector and this study aims to fill in this gap.

## **Review of Literature**

Training and development are important components of HRM (Tahir, Yousafzai, Jan, & Hashim, 2014). Thus, it is vital for organization confirming the presence of skilled and capable employees for improved performance and employees will be than eligible when they have the knowledge and skill of performing the task. Training and development would provide opportunities to the employees to make a better career life and get better job position in organization. In doing so, organization's proficiency would be increased. On the other hand, workforces are the resources and blessings of an organization if they are capable and educated would perform better than those who are incapable and untrained.

Employees are conscious of the objectives of training in the organization, the training objectives are clear to them before the training and the selection standard (Ampomah, 2016). Ampomah's study also explored that employee are motivated through training; and training and development results into better performance. The study approved that training and development of all staff should be thoroughly pursued and made obligatory. Training in organizations holds the key to open the potential growth and development opportunities to achieve a competitive margin (Rama & Shaik, 2012). Organizations train and develop their human force to the full extent in order to enhance their productive capacity. Thus, knowledge, skill and capabilities are determinants of employees' performance which organizations need to continuously invest in wisely in order to improve their employees' productivity. As supported by Noe and Peacock (Noe & Peacock, 2008), organizations spend a mentionable amount of money and time on training to aid employee's learning of job-related competencies. Thus, it is important to completely provide the outcomes from training efforts (Dowling, 2004).

Functions of Human resource development (HRD) can be utilized to ensure that organization workforce can successfully confirm their challenges and threats (Werner & DeSimone, 2009) of rapid and non-stop changes. According to Casse and Banahan (2007), the different methods to training and development need to be explored. It has come to their notice by their own preferred model and through large organization's experience. According to Davenport (2006), it is easy to implement strategy with the internet supported software. There is documented evidence that training activities have a positive impact on the performance of individuals and teams. Training activities can also be beneficial regarding other outcomes at both the individual and team level such as attitudes, motivation, and empowerment (Aguinis & Kraiger, 2009). Training as an essential element to an employee for the development of the companies because some of the employees have lack of knowledge skills and competencies and failed to accomplish task on timely basis (Abbas, 2014). Training is important mean to improve the organization performance and effectiveness (Singh & Mohanty, 2012). Trainer makes an effort in achieving training as well as organizational objectives (Mahbuba, 2013).

There is less wastage of time, money and resources if employees are properly trained (Ahmad, Khan, Abdullah, & Rashid, 2017; James, Kumar, Tayal, Chauhan, Wadhawa, & Panchal, 2022). Intangible assets are equally as valuable as financial and physical assets but they are not something that can be touched and they are nonmonetary. Intangible assets have been shown to be responsible for a company's competitive advantage. A study by the American Society for Training and Development of more than 500 publicly traded U.S.-based companies found that companies that invested the most in training and development had a shareholder return that was 86 percent higher than companies in the bottom half and 46 percent higher than the market average. Training and development have a direct influence on human and social capital because they affect education, work-related know-how and competence, and work-life relationships (Uddin, Ali, & Khan, 2020, 2021). Training and development can have an indirect influence on customer satisfaction (Khan & Ali, 2012; Khan, Toy, & Siddique, 2010; Uddin, Ali, & Khan, 2018) and social capital by helping employee's better serve customers by providing them with the knowledge needed to create patents and intellectual property. Intangible assets also contribute to a company's competitive advantage because they are difficult to duplicate.

In view of the above review of literatures, the study intends to explore the differences among public, private and foreign bank employees regarding training and development programs in some selected banking enterprises in Bangladesh. In doing so, the authors also null-hypothesized that there is no statistically significant difference among public, private and foreign bank employees regarding HRD activities of development and training program.

## **Rationale**

So far, no significant study was conducted to explore the differences among public, private and foreign bank employees regarding training and development program in some selected banking enterprises in Bangladesh. Whereas, this is one of the important functions of HRD activity (Uddin, Khan, & Mohammad, 2015; Uddin, Khan, & Farhana, 2014). According to Agrawal (2005), HRD covers the following functions to survive, grow and sustain in the complete financial market. (i) Performance and potential appraisal, (ii) Employees career planning and development. (iii) Development and training programmes. (iv) Organization development. (v) Recognizing and rewarding the contribution (honours and awards) (vi) Employees welfare and quality of work life. (vii) Taking steps for controlling stress. (viii) Planning overall development of the bank and analyzing changing pattern of employees. (ix) Developing Team Spirit. (x) Rendering quality and satisfactory services (quality management). Hoque (1994) investigated 10 industrial enterprises (5 public and 5 private). He found that human resource development (HRD) had positive impact on organizational effectiveness (OE). Ather and Solaiman (1995) assessed human resource development (HRD) practices of 50 public and private industrial enterprises. They found that training needs of the employees of the sample enterprises were identified on the basis of circumstances, corporate objective, new recruitment, introduction of new technology, new assignment by promotion, existing requirement for skill development and improving productivity, requirement for filling present and future vacancies, trend of profit or loss, and comparative study on productivity and output. Khan and Jahur (2007) examined the HRD practices of 38 industrial enterprises of Bangladesh. The study found that the surveyed organizations' HRD programs were not up to date which is in line with stands of research findings (Chowdhury, Othman, Khan, & Sulaiman, 2020; Jahur, Quadir, & Khan, 2014; Khan & Ali, 2014, 2015; Khan, Islam, & Ali, 2014; Khan, Ali, & Arefeen, 2014; Rahman & Khan, 2008). Employee training and development has enormous impact on organizational effectiveness. It is observed that more investment in training and development has led to more profitability of the private sector industrial enterprises of Bangladesh (Hoque, 1994). Ahsan, Abdullah, Fie, and Alam (2009) have studied the effect of training and development, team work, compensation, HR planning, performance appraisal and employee security on business performance. Regression results showed that four variables training and development, team work, HR planning and performance appraisal have positive and significant influence on business performance of Bangladeshi organizations. Quadir et al., (2006) in their study found that in the selected business enterprises, job training and job orientation are the two most frequently used training method; among the training courses offered by selected enterprises. Absar, Sikder, and Hossain (2010) made a study for exploring the differences between the public and private sector enterprises of Bangladesh, which show that overall status of training and development practices of private sector industrial enterprises is significantly better than



that of public sector industrial enterprises (Uddin & Khan, 2017; Uddin, Khan, & Solaiman, 2014; Uddin, Khan, Uddin, & Solaiman, 2015). The study conducted by Kabir, Ullah, & Chowdhury (2013) mainly aimed at finding the relationship between training and productivity as well as to observe the effect of training cost on profitability. The results revealed that the productivity growth after training is significant and shows a positive impact of training cost on profitability. As the previous study did not highlight the responses of Bank Employees towards various Activities of Human Resource Development among selected public, private and foreign banks, the present study attempts to discover the issue.

## **Methodology**

### *Research Hypothesis*

The null hypothesis is that there are no significant differences among public, private and foreign bank employee's perception regarding 'Development and Training program' in some selected banking enterprises in Bangladesh.

### *Population and Sampling*

There are 56 commercial banks operating in Bangladesh. Banks that were started their journey before 1991 is considered as first-generation banks which are 16 in numbers. Second generation banks started their business in between 1991 to 1999 which is 8 in numbers. There are 8 banks which started their operations from 1999 to 2010, are considered as third generation banks. There are 9 banks which started their venture from the year 2011 to the present year which is considered as fourth generation banks. Besides the local banks, there are also 10 foreign banks operating in our country.

On the basis of 25 years banking experience,  $N_0=36$  commercial banks (sample frame). A 95% level of confidence and 5% level of precision ( $e=.05$ ), the sample size for the study by using formulae given by Yamane (1967:886) is 32 Banks. These 32 banks have been selected randomly from 36 banks according to the number of public, private and foreign banks. (According to proportion 5 public, 24 private and 3 foreign banks are selected). Out of 32 banks—5 branches of each banks are selected purposively by the method of Purposive sampling. 2 executives from each bank are selected on the basis of their 5 years banking experience.  $32*5$  (2 respondent from each branch) = 320 respondents. The number and method of sampling techniques of respondents selected are in line with the social science research conducted earlier in Bangladesh (Khan & Ali, 2014, 2015). After sorting the responses, 236 respondents were considered valid and the remaining responses are left out because of incomplete and inconsistent responses. I have collected data from different banking branches of different cities operating in Bangladesh. To ensure representativeness, 175 private banks branch, 55 public banks branch and 6 foreign banks branch are considered for the study.

## **Data Analysis**

The response rate was 80%. The study applied Analysis of Variance (ANOVA) in order to examine the differences among public, private and foreign bank employee's

perception regarding 'Development and Training program' in some selected banking enterprises in Bangladesh through SPSS (Statistical Package for Social Science) version 17. Responses were taken by five-point Likert Scale (Strongly agree=1, agree= 2, Neutral=3, Disagree=4, strongly disagree =5).

### *Analysis and Findings of The Study*

Table 1. Working Areas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Investment, credit and loan	43	18.2	18.2	18.2
	Foreign Exchange	23	9.7	9.7	28.0
	Deposit	2	.8	.8	28.8
	General Banking	73	30.9	30.9	59.7
	Manager	11	4.7	4.7	64.4
	others	84	35.6	35.6	100.0
	Total	236	100.0	100.0	

Table 2. Types of Banks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	private	175	74.2	74.2	74.2
	public	55	23.3	23.3	97.5
	foreign	6	2.5	2.5	100.0
	Total	236	100.0	100.0	

Table 3. Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.843	.854	17

Table 4. Length of Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than one	4	1.7	1.7	1.7
	1-5	119	50.4	50.4	52.1
	6-10	80	33.9	33.9	86.0
	more than 10	33	14.0	14.0	100.0
	Total	236	100.0	100.0	

### 5.1 Testing Hypothesis of finding out significant perceptual differences among the public, private and foreign banker's regarding training and development program:

The objective of the study is to test the null hypothesis of significant differences among the selected public, private and foreign bank employee's perception regarding 'Training and development program' in some selected banking enterprises in Bangladesh. By conducting ANOVA analysis, the following results were obtained:

Table 5. ANOVA Analysis

Development and Training program					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.462	2	1.731	3.951	.021
Within Groups	102.080	233	.438		
Total	105.542	235			

Source: Authors' calculation by using SPSS-20, 2020.

The above ANOVA analysis represents that  $p < .05$ , so Null hypothesis is rejected at 5% level of significance. Therefore, the null hypothesis of "statistically no significant difference among public, private and foreign bank employee's perception regarding HRD activities of 'Development and Training program'" is rejected. So, there is a statistically significant difference among public, private and foreign bank employee's perception regarding HRD activities of 'Development and Training program'.

### 5.2 Different perception of public, private and foreign banker's regarding their training and development program:

Table 6. Descriptive Statistics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Private	175	1.7200	.58369	.04412	1.6329	1.8071	1.00	3.00
Public	55	1.8000	.89028	.12004	1.5593	2.0407	1.00	4.00
Foreign	6	1.0000	.00000	.00000	1.0000	1.0000	1.00	1.00
Total	236	1.7203	.67016	.04362	1.6344	1.8063	1.00	4.00

Source: Authors' calculation by using SPSS-20, 2020.

The above table represents that the bankers of the selected foreign banks perceive that their organization conduct 'Development and Training program' in a better way in comparison to public and private banks in Bangladesh.

### 5.3 Testing hypothesis of finding out significant perceptual differences among the public, private and foreign banker's regarding different components of training need assessment:

Table 7. ANOVA

Components of Training Need Assessment		Sum of Squares	df	Mean Square	F	Sig.	Difference of Sig.
Department doesn't meet goals of the organization, need training.	Between Groups	4.455	2	2.227	2.585	.078	
	Within Groups	200.778	233	.862			yes
	Total	205.233	235				
budget & facilities	Between Groups	5.092	2	2.546	2.746	.066	yes
	Within Groups	216.073	233	.927			
	Total	221.165	235				
Legal, Social, Political and Economic issues are considered	Between Groups	4.866	2	2.433	2.889	.058	
	Within Groups	196.236	233	.842			yes
	Total	201.102	235				
Reward for appropriate learned behaviour	Between Groups	6.217	2	3.109	3.140	.045	
	Within Groups	230.664	233	.990			yes
	Total	236.881	235				
HRD/training be emphasized where objectives are not met and performance problems exist and this type of organizational analysis are performed by for training need assessment	Between Groups	9.243	2	4.622	4.054	.019	
	Within Groups	265.651	233	1.140			Very sig.
	Total	274.894	235				
Training to fill retirement, turnover and age gap	Between Groups	3.529	2	1.764	3.511	.031	
	Within Groups	117.098	233	.503			yes
	Total	120.627	235				
New or changed equipment considered for training	Between Groups	5.875	2	2.937	2.981	.053	
	Within Groups	229.562	233	.985			yes
	Total	235.436	235				

Source: Authors' calculation by using SPSS-20, 2020

*5.4 Measures of Central Tendencies and Standard Deviation regarding different contents of Training Needs Assessment:*



Table 8. Contents of TNA (Training needs assessment)

Contents of TNA	Public		Private		Foreign	
Department doesn't meet goals of the organization, need training.	Mean	2.0545	Mean	2.3371	Mean	1.8333
	Std. Dev.	1.09575	Std. Dev.	Std. Dev.	Std. Dev.	.40825
Amount of budget & facilities for budget is considered.	Mean	2.1091	Mean	2.2343	Mean	1.3333
	Std. Dev.	Std. Dev.	Std. Dev.	.96904	Std. Dev.	.51640
Legal, Social, Political and Economic issues are considered.	Mean	2.2286	Mean	1.9091	Mean	1.8333
	Std. Dev.	.93113	Std. Dev.	.90825	Std. Dev.	.40825
Reward for appropriate learned behaviour.	Mean	2.0545	Mean	2.4343	Mean	2.1667
	Std. Dev.	.98917	Std. Dev.	1.00857	Std. Dev.	.40825
HRD or training emphasis	Mean	2.8727	Mean	2.4229	Mean	2.1667
	Std. Dev.	1.34790	Std. Dev.	.97882	Std. Dev.	.40825
Training to fill retirement, turnover and age gap	Mean	2.1273	Mean	2.3886	Mean	1.8333
	Std. Dev.	1.00101	Std. Dev.	.93948	Std. Dev.	.75277
New or changed equipment considered for training.	Mean	2.2000	Mean	2.4571	Mean	1.6667
	Std. Dev.	1.11222	Std. Dev.	.96320	Std. Dev.	.51640

Source: Authors' calculation by using SPSS-20, 2020

## Discussion and conclusions

In this article, we investigated the effectiveness of training programs in public, private and foreign commercial banks operating in Bangladesh. The study demonstrated that bankers of selected foreign banks almost strongly agreed that their organizations-initiated training/HRD interventions in that area where their organization didn't meet their goals. The study also expressed that foreign banker nearly strongly agreed that available budget, facilities for providing training, materials on hand and the expertise for giving training within the organizations was considered for training need assessment, which is better in comparison to the selected Public and Private Banker's judgement regarding the statement. The study also explored that Foreign and Public banker typically strongly agreed that Legal compliances issues (such as safety training, fire training), Social issues (such as use of Internet, face book in office time etc.), Economic issues (such as motivating the employees when the company falls in economic crisis etc), Political issues (how to handle the different stakeholders of the state such as political parties, Law enforcing agencies etc.) , were considered in conducting the training need analysis which is better in comparison to Private Bankers judgement regarding the issues.

The study further represented that Foreign and Public banker almost agreed that trainee was rewarded on the job for the appropriate learned behaviour acquired through training

which is better in comparison to Private Banker's judgement regarding the statement. Private Banker's judgement regarding the statement was approximately neutral. Their banker's thought that their organization was conducting their training program for exploring opportunities for improvement and problem identification but not in a better way as like as Foreign and Private Banks. The study also revealed that Foreign and Private Banker's nearly agreed that HRD or training emphasis should be placed in that department where objectives were not met and performance problems existed. The study further scrutinized that foreign banker roughly agreed that training was needed to fill up the gap caused by retirement, turnover, age etc. for training need assessment, which is better in comparison to Public and Private Bankers judgement regarding the statement. Public and Private Banker thought in a different way. The study reviewed that foreign banker roughly agreed that grievances, absenteeism, turnover, accidents, observation of employee behaviour, attitude survey of employees, customer complain etc. were considered for conducting training, which is better in comparison to Public and Private Bankers judgement regarding the elements of training. The study expressed that foreign banker practically agreed that new or changed equipment presented HRD or training problems which is better in comparison to Public and Private Bankers Judgement regarding the statement. The study represented that Foreign and Public banker substantially agreed that one of the most common techniques of HRD/training needs determination was management request or management interrogation, which is better in comparison to Private Banker's mentality regarding the topics.

The study explored that foreign bankers absolutely agreed that one of the most common techniques of HRD/training needs determination was exit interviews which is better in comparison to Public and Private Bankers mentality regarding the statement. The study further examined that Public, Private and foreign bankers virtually agreed various levels or participating units in the organization had been involved with developing the training program, initiated with the evaluation of the wanted end results of training. It is to note that the perceptions of selected foreign bankers towards various components of Training and Development program is better compare to the perception of Public and Private Bankers in Bangladesh. Therefore, the authorities of Public and Private Banks should consider the stated contents of Training and Development program passionately and productively as like as foreign banks so that perception of their employees are positively changed towards their various contents of Training and Development program. The ultimate outcome of conducting various contents of Training and Development program passionately and productively is that Productivity of the employees are positively changed which provides a competitive advantage to the organization.

Foreign bankers perceive that their organization conduct 'development and training program' in better ways than public and private banks. Hence, in order to make the programs successful and face the challenges of global competition, public and private sector banks should emphasize their existing development and training program (Khan & Ali, 2014, 2015)

As a final methodological note, we want to emphasize that the analysis presented in this article is primarily based on observed associations and relationships, using descriptive/nonparametric testing procedures. An important question remains how much the observed relationships actually tell us about underlying causal relationships and in

which direction these causal relationships act. We believe that a more extended deterministic model is needed to further test these underlying causal relationships and their direction in future research in this domain. The current study covered only selected sample banks. A wider number of banks in leading cities and in different sectors such as health, transportation, and tourism can also be taken into consideration in the future enquiry.

## References

- Abbas, Z. (2014). Identification of factors and their impact on employees' training and organizational performance in Pakistan. *Kasbit Journal of Management & Social Science*, 7(1), 93-109.
- Absar, M.M.N., & Mahmood, M. (2011). New HRM Practices in the Public and Private Sector Industrial Enterprises of Bangladesh: A Comparative Assessment. *International Review of Business Research Papers* 7(2), 118-136.
- Absar, M.M.N., Sikder, Z.H., & Hossain, M.J. (2010). Training and development practices in industrial enterprises of Bangladesh: A comparative study between the public and private sector. *Dhaka University Journal of Management*, 2(1), 25-38.
- Agrawal, V. H. (2005). *A study of the impact of HRD practices and measures to resolve pertinent challenging issues of HRD in commercial banks in India*. Unpublished Doctoral dissertation: Saurashtra University, India.
- Aguinis, H., & Kraiger, K. (2009). Benefits of training and development for individuals and teams, organizations, and society. *Annual Review of Psychology*, 60, 451-474.
- Ahmad, A., Khan, M.A., Abdullah, A.A.M., & Rashid, M. H. U. (2017). Environmental disclosures: A study on some selected pharmaceutical and chemical companies in Bangladesh. *IIUC Business Review*, 6, 9-24.
- Ahsan, N., Abdullah, Z., Fie, D. Y. G., & Alam, S. S. (2009). A study of job stress on job satisfaction among university staff in Malaysia: Empirical study. *European Journal of Social Sciences*, 8(1), 121-131.
- Ampomah, P. (2016). The Effect of Training and Development on Employee Performance in a Private Tertiary Institution in Ghana. Case Study: Pentecost University College (Puc)-Ghana). *Asian Journal of Social Sciences and Management Studies*, 3(1), 29-33.
- Armstrong, M. (2005). *Human resource management practices* (9<sup>th</sup> Ed). London: Kogan Page.
- Ather, S., & Solaiman, M. (1995). Human resource development practices in Bangladesh - A study on some selected firms in Chittagong. *Chittagong University Studies*, 11(1), 19-37.

- Bhatti, M.A., & Kaur, S. (2009). Factors effecting transfer of training: a fresh review. Paper presented at the 12th International Business Information Management Conference.
- Bordovskaya, N., & Rean, A. (2004). Pedagogics. Available at: [www.gumer.info/bibliotek\\_Buks/Pedagog/Bordo/04.php](http://www.gumer.info/bibliotek_Buks/Pedagog/Bordo/04.php)
- Casse & Banahan (2007). Impact of training and development on the employee performance: A case study from different Banking sectors of North Panjab. *The Russian Federation Publication*.
- Chiaburu, D. S., & Marinova, S. V. (2005). What predicts skill transfer? An exploratory study of goal orientation, training self- efficacy and organizational supports. *International Journal of Training and Development*, 9(2), 110-123.
- Chowdhury, M. M. I., Othman, K. B., Khan, M. A., Sulaiman, I. F. (2020). Role of effective corporate governance and motivational leadership in increasing productivity and efficiency of human resources. *Global Journal of Management and Business Research*, 20(10), 29-39.
- Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: a meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology*, 85(5), 678.
- Davenport, T. H. (2006). Competing on analytics. *Harvard Business Review*, 84(1), 98.
- Dowling, P. (2004). *International human resource management: managing people in a multinational environment* (4<sup>th</sup> Ed). London: Thomson Learning.
- Hoque, M. J. (1994). Human resource development and organizational effectiveness. In R. B. Talukder (Eds.), *Management of Change in South Asia*. Dhaka: UPL, 433-451.
- Islam, M. Z. (2015). Efficiency of training: a comparative study on some selected commercial banks in Bangladesh. *Journal of Asian Business Strategy*, 5(6), 116-124.
- Islam, N., Mridha, E. M., Sharna, J. S., Rahman, M. D., Mosharraf, M., & Nower, N. (2019). An evaluation of the effectiveness of employee training in the government banks of Bangladesh. In 10th International Conference on "Developing Organizations for the Future: Re-Interpreting the Modern Business Landscape" at: ICFAI Business School, Bangalore, Karnataka, India.
- Jahur, M. S., Quadir, S. M. N., & Khan, M. A. (2014). Determinants of stock market performance in Bangladesh. *Indonesian Management and Accounting Research*, 13(1), 16-28.
- James, A. T., Kumar, G., Tayal, P., Chauhan, A., Wadhawa, C., & Panchal, J. (2022). Analysis of human resource management challenges in implementation of



- industry 4.0 in Indian automobile industry. *Technological Forecasting and Social Change*, 176, 121483.
- Kabir, M. R., Ullah, M. M., & Chowdhury, M. M. (2013). Impact of Human Resources Training on the Performances of Banks-An Empirical Study. *China-USA Business Review*, 12(5), 524-531.
- Kauffeld, S., & Lehmann- Willenbrock, N. (2010). Sales training: effects of spaced practice on training transfer. *Journal of European Industrial Training*, 34(1), 23-37.
- Khan, M. A., & Ali, A. J. (2012). Factors affecting customers' intention towards online shopping in Bangladesh. *Indonesian Management and Accounting Research*, 11(1), 21-36.
- Khan, M. A., & Ali, A. J. (2014). The role of training in reducing poverty: the case of the ultra-poor in Bangladesh. *International Journal of Training and Development*, 18(4), 272-281. DOI: 10.1111/ijtd.12041
- Khan, M. A., & Ali, A. J. (2015). Do non-governmental organisations' socio-economic and training programmes improve disaster prevention capacity of their beneficiaries? *International Social Work*, 58(3), 401-420. DOI: 10.1177/0020872815570074
- Khan, M. A., & Jahur, M. S. (2007). Human resource development practices in some selected business enterprises in Bangladesh: An explanatory study. *Indonesian Management and Accounting Research*, 6(1), 16-32.
- Khan, M. A., Ali, A. J., & Arefeen, S. (2014). The impact of training on NGO beneficiaries' education in Bangladesh: The missing link. *Advances in Environmental Biology*, 8(9), 679-88.
- Khan, M. A., Islam, M. A., & Ali, A. J. (2014). Educational development of NGO beneficiaries in Bangladesh: a disjunction between programmes and implementation. *Asian Social Science*, 10(22), 57-69.
- Khan, M.A., Hoque, N., Shahabuddin, A. M. (2019). HRM practices and performance management in public service organizations in Bangladesh: An empirical study. *IIUC Studies*, 16, 9-34.
- Khan, M. A., Toy, M. M., & Siddique, A. (2010). Stimulating factors and justification of the strategic approach applicable for the internationalisation of SMEs in Bangladesh. *Indonesian Management and Accounting Research*, 9(2), 1-14.
- Kraiger, et al. (2004). Collaborative planning for training impact. *Human Resource Management*, 43(4), 337-351.
- Kuijpers, M. A. C. T., & Scheerens, J. (2006). Career competencies for the modern career. *Journal of Career Development*, 32, 303-319.

- Mahbuba, S. (2013). Impact of training in pharmaceutical industry: An assessment on Square Pharmaceuticals Limited, Bangladesh. *International Journal of Science and Research*, 2(2), 576-587.
- Minina, V., & Nikitina, I. (2012). Intellectual competition as technology for professional training of managers: GSOM experience. *Journal of Management Development*, 31(3), 263-274.
- Montesino, M. U. (2002). Strategic alignment of training, transfer- enhancing behaviors, and training usage: A posttraining study. *Human Resource Development Quarterly*, 13(1), 89-108.
- Mullins, L. J. (2007). *Management and organizational behavior* (8<sup>th</sup> ed.). London: Prentice Hall.
- Nikandrou, I., Apospori, E., Panayotopoulou, L., Stavrou, E. T., & Papalexandris, N. (2008). Training and firm performance in Europe: the impact of national and organizational characteristics. *The International Journal of Human Resource Management*, 19(11), 2057-2078.
- Noe, R. A., & Peacock, M. (2008). *Employee training and development*. New York: McGrawHill, Inc.
- Quadir, S. M., Azad, A. S. M., & Uddin, S. M. (2006). Human resource development practices in Bangladesh: a study of selected business enterprises. *Bangladesh Journal of Resources and Development*, 3(1), 45-59.
- Rahman, M. O., & Khan, M. A. (2008). Display unit for Bangla characters. *IIUC Studies*, 4, 71-86.
- Rama Devi, V., & Shaik, N. (2012). Training & development-a jump starter for employee performance and organizational effectiveness. *International Journal of Social Science & Interdisciplinary Research*, 1(7), 202-207.
- Singh, R., & Mohanty, M. (2012). Impact of training practices on employee productivity: A comparative study. *Interscience Management Review*, 2(2), 87-92.
- Tahir, N., Yousafzai, I. K., Jan, S., & Hashim, M. (2014). The impact of training and development on employees performance and productivity a case study of United Bank Limited Peshawar City, KPK, Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 4(4), 86-98.
- Uddin, M. M., & Khan, M. A. (2017). Role of leadership on organizational learning at private universities of Bangladesh. *IIUC Studies*, 14(2), 9-34.
- Uddin, M. M., & Khan, M. A., & Mohammad, K. D. (2015). Interest-free banking in Bangladesh: a study on customers' perception of uses and awareness. *Abasyn Journal of Social Sciences*, 8(1), 1-16.

- Uddin, M. M., Khan, M. A., & Farhana, N. (2014). Banking services and customer perception in some selected commercial banks in Bangladesh. *Indonesian Management and Accounting Research*, 13(1), 1-15.
- Uddin, M. S., Khan, M. A., & Solaiman, M. (2014). Human resource development through training on business teachers in Bangladesh. *International Journal of Business and Technopreneurship*, 4(1), 83-96.
- Uddin, M. S., Khan, M. A., Uddin, M. K., & Solaiman, M. (2015). University-Industry Collaboration (UIC) for developing highly skilled and productive business graduates in Bangladesh. *International Journal of Management and Business Research*, 5(1), 31-41.
- Uddin, M., Ali, K., & Khan, M. A. (2018). Impact of service quality (SQ) on student satisfaction: empirical evidence in the higher education context of emerging economy. *AL- 'ABQARI: Journal of Islamic Social Sciences and Humanities*, 16, 31-67.
- Uddin, M., Ali, K., & Khan, M. A. (2020). Perceived social support (PSS) and work-life balance in a developing country: The moderating impact of work-life policy. *Iranian Journal of Management Studies*, 13(4), 733-761.
- Uddin, M., Ali, K., & Khan, M. A. (2021). Supervisory and co-worker support on the work-life balance of working women in the banking sector: a developing country perspective. *Journal of Family Studies*, 1-21.
- Werner, J. M., & DeSimone, R. L. (2009). Evaluating HRD programs. *Human Resource Development*, 5.

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*Original research*

# The Relation between Gold Price Movement and Bitcoin Investment Sentiment

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## Abstract

Considering the emotional behavior of investors in the cryptocurrency market, this paper comprehensively explores the sophisticated relationship between Bitcoin investor sentiment and gold price movements. The purpose of this study is to examine the impact of the gold price on investor sentiment of Bitcoin market traders and investors using monthly data from August 2020 to August 2022. The impact of oil prices on investor sentiment was examined using the Pooled Mean Group (PMG) method. The PMG approach considers short-term and long-term relationships between series and provides reliable results in the context of dynamic heterogeneous panel models. PMG implementations in all models show the short-term and long-term impact of the gold price on investor sentiment. The results also suggest that gold prices are positive and significant in the long run across all models, and that behavioral factors such as consumer sentiment and global economic stability are important in controlling gold prices at shorter time resolutions. Precious metals have had a positive impact on the Bitcoin market,

**Keywords:** Bitcoin, Gold Prices, Sentiment Analysis.

**JEL Classification:** C58, G12, G14

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## Introduction

As a psychological term, investor sentiment is the reaction to market conditions. In fact, investor sentiment spillover is the process by which investors acquire the sentiment of others in order to achieve interaction and accumulation of opinions between different individuals. Sentiment spillovers have received a lot of attention in recent years, as they are one of the primary sources of investor sentiment for individual investors. Investor sentiment is one of the most important factors influencing investor decision-making, and extensive research has been conducted on investor sentiment in financial markets (e.g. (M Qadan, H Nama, 2018); (Jawad Shahzad, Elie Bouri, David Roubaud, Ladislav Kristoufek, 2019). In 2008, Satoshi Nakamoto introduced the first cryptocurrency called Bitcoin. It promises lower transaction fees than traditional online payment mechanisms, and unlike government-issued currencies, the system runs on a peer-to-peer decentralized network. Bitcoin's market value was less than 5 cents in 2010 and peaked at around \$63,400 in 2021. Bitcoin's current price is \$23,223. Bitcoin is a new and popular phenomenon, but large institutions are not part of the Bitcoin market, especially small businesses and individuals are Bitcoin investors. Some retail investors who hold Bitcoin are cryptocurrency enthusiasts, criminals, and mostly speculative investors. (Sean Foley, Jonathan R Karlsen, Talis Putnins, 2019) found that about 25% of all Bitcoin users are involved in illicit activities. Bitcoin was designed as a digital currency, but (Yermack, 2015) Bitcoin is a speculative investment. (Dirk G. Baur, KiHoon Hong, Adrian Lee, 2018) investigated whether Bitcoin is a medium of exchange or an asset by analyzing the statistical properties of Bitcoin, which is used by stocks, bonds, commodities, and It concluded that there was no correlation with traditional asset classes such as Bitcoin. It is a speculative investment and not as an alternative currency or medium of exchange. One of the most important financial innovations of the last decade is Bitcoin, so it's important to examine the determinants that influence Bitcoin's returns and its volatility. This paper focuses on identifying the impact of investor sentiment from a behavioral finance perspective to understand and identify Bitcoin as a new asset. Due to the speculative use of Bitcoin by lip traders, it is crucial to study the impact on investor sentiment. In existing literature, only one investor sentiment proxy is used to analyze the impact of investor sentiment on Bitcoin returns and return volatility. Since there is no perfect proxy for investor sentiment, we use three different proxies to see if different investor sentiment proxies are similar Result.

- Baker and Stein (2004), as they argued that if a market is unusually liquid and market liquidity can be measured by trading volume, will be available for a relatively long period of time is the Bitcoin trading volume.

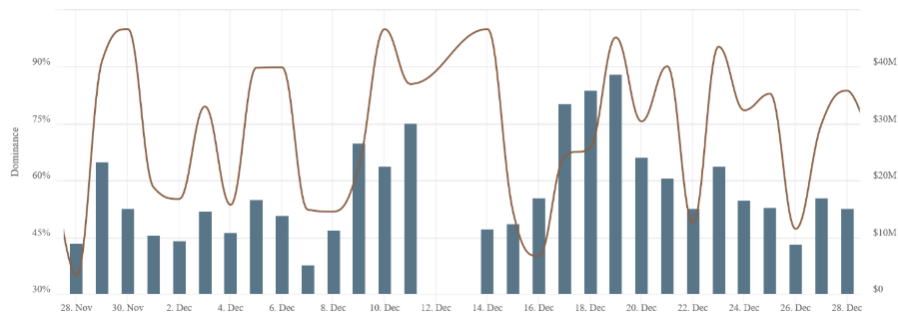


Figure 1. trading volume (Monthly), author computation from:  
<https://bitcoinvisuals.com/market-volume>

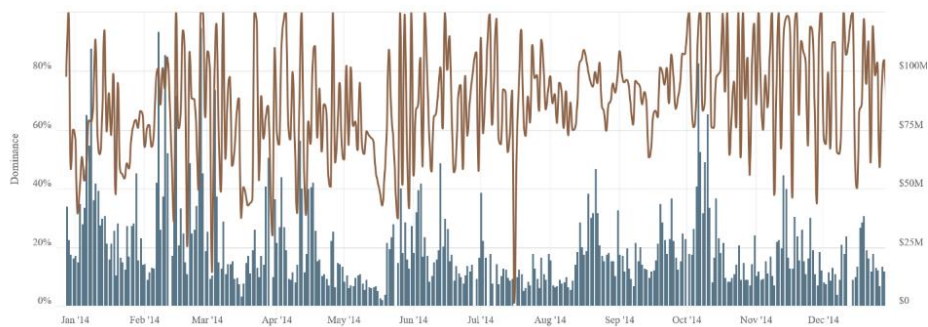


Figure 2. trading volume (Yearly), author computation from:  
<https://bitcoinvisuals.com/market-volume>

- The second indicator is a daily special crypto fear and greed index for crypto investors.

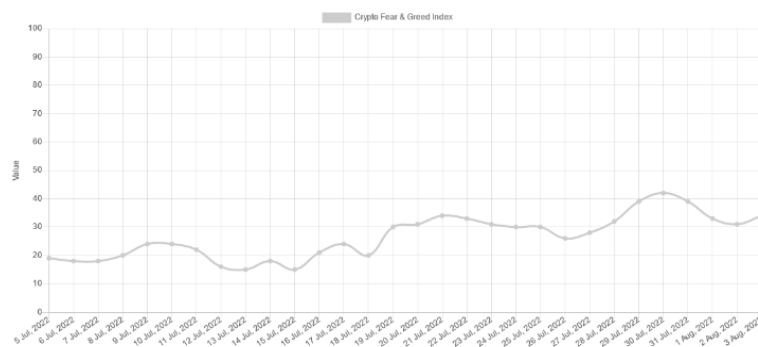


Figure 3. Crypto Fear & Greed Index (Monthly), author computation from:  
<https://alternative.me/crypto/fear-and-greed-index/>

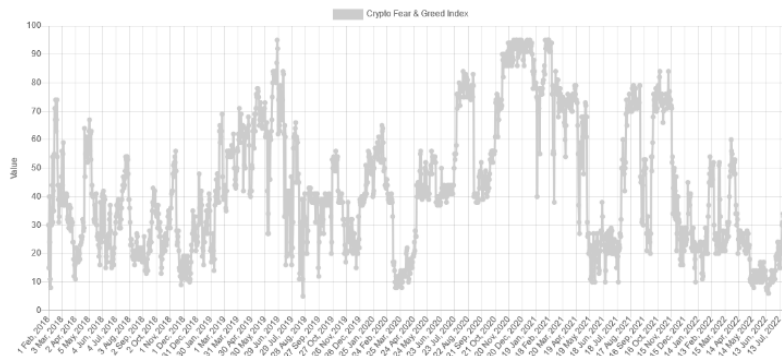


Figure 4. Crypto Fear & Greed Index (From 2018 to 2022), author computation from:  
<https://alternative.me/crypto/fear-and-greed-index/>

• The third index is the weekly American Association of Individual Investors Index. A vector autoregressive (VAR) model examines whether investor sentiment and Bitcoin returns are related in a dynamic environment, distinguishing between rational and irrational investor sentiment used for.

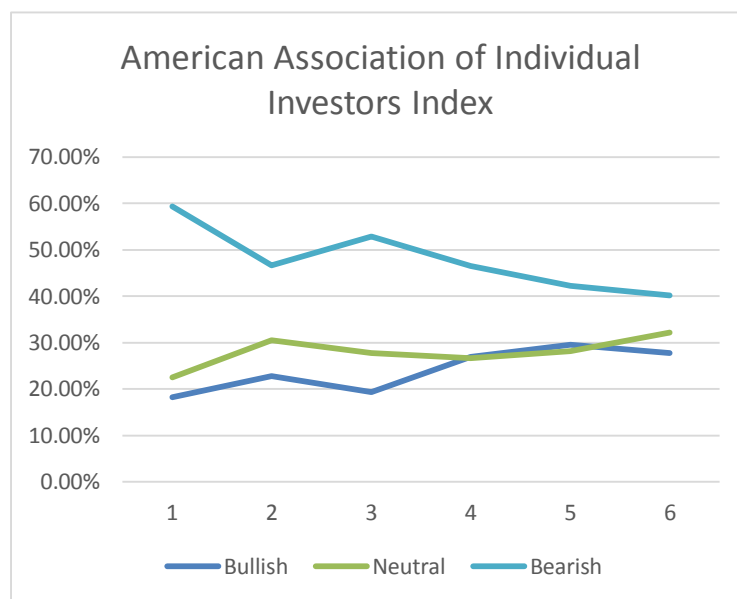


Figure 5. American Association of Individual Investors Index (Monthly), author computation from: <https://www.aaii.com/sentimentsurvey>

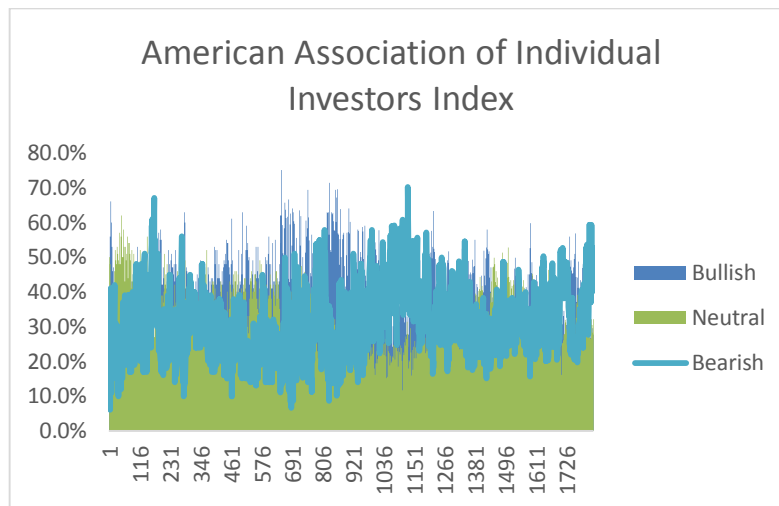


Figure 6. American Association of Individual Investors Index (The Total Data), author computation from: <https://www.aaii.com/sentimentsurvey>

Gold is one of the most malleable, dense, conductive, non-destructive, bright and beautiful metals (Fergal A. O'Connor, Brian M. Lucey, Jonathan A. Batten, Dirk G. Baur, 2015). These unique properties make its intrinsic value nearly impossible to change over time, making it globally accepted as the most representative hedge or haven against volatility in alternative assets. became. According to (Dirk G. Baur, Brian M. Lucey, 2010), hedges are financial assets that are uncorrelated or negatively correlated with alternative assets. Additionally, the asset is considered a haven when used as a hedge in extreme economic conditions. Bitcoin, by contrast, is a highly decentralized digital currency with little intrinsic value. It is considered a highly speculative form of investment and a highly innovative form of payment. Bitcoin is an online communication protocol that enables the use of virtual currencies, including electronic payments. Digital currencies have several characteristics that make them very popular, such as their pseudonymous nature, low costs and fast transaction speeds, leading to serious debates about the digitization of the financial system (Rainer Böhme, 2015).



Figure 7. Gold Price and Bitcoin Price (Monthly), author computation from: <https://tradingeconomics.com>





Figure 8. Gold Price and Bitcoin Price (From 2010), author computation from:  
<https://tradingeconomics.com>

## Literature Review

### *Investor Sentiment*

Investor sentiment has been studied extensively in the academic literature from time to time, with mixed results (Antti Klemola, Jussi Nikkinen, Jarkko Peltomäki, 2016). According to (Eom, 2019), the occurrence of keyword searches indicates the strength of investor interest, and this strength varies over time. Bitcoin's high-handed behavior cannot be explained by conventional economic or financial theory. Searches are linked to Bitcoin prices. Google Trends search queries are analyzed as indicators of investor interest and attention (Kristoufek, 2013). Kristoufek (2013) quantified the relationship between price and search queries. Through his Google Trends using some defined keywords, he found a significant correlation between Bitcoin and his Google queries.

### *Impact of Investor Sentiment*

One of the first papers examining the impact of investor sentiment on Bitcoin volatility was by (Bukovina, J. and Marticek, M., 2016). They use an autoregressive AR (1) model to analyze the impact of sentiment on Bitcoin volatility, and use natural language processing (NLP) techniques to analyze submissions and comments with the Sentdex sentiment index data. selected. NLP techniques are used to extract information from text. The most widely used technique in NLP is sentiment analysis. It is based on customer surveys, reviews, and social media comments where people voice their opinions. Emotion signals are defined from 3 to 6, with 3 being the most negative emotion and 6 being the most positive emotion. The results show that only a small portion of the overall volatility is explained by the sentiment index. However, during periods of high volatility, sentiment has a greater impact.

Another study related to machine learning is provided by (M. Ángeles López-Cabarcos, Ada M. Pérez-Pico, Juan Piñeiro, Aleksandar Sevic, 2019). They used his GARCH and EGARCH models to explore the impact of investor sentiment, S&P 500 returns, and VIX returns on Bitcoin return volatility. They used the Stanford Core NLP

measure for the investor sentiment variable. This variable is defined from -2 to 2, where -2 is the most negative sentiment and 2 is the most positive sentiment. Their results show that all explanatory variables affect Bitcoin's volatility during plateaus, making Bitcoin attractive to speculative investors. (Alessandra Cretarola, Gianna Figà-Talamanca, Marco Patacca, 2019) used autoregressive moving average (ARMA), GARCH, and EGARCH models to explore the impact of investor sentiment on the mean and variance of cryptocurrency returns. A key difference between (Alessandra Cretarola, Gianna Figà-Talamanca, Marco Patacca, 2019) and the study by Lopez-Cebarcos et al. (2019) is a measure of investor sentiment. (Alessandra Cretarola, Gianna Figà-Talamanca, Marco Patacca, 2019) used trading volume and the Google search index as a proxy for investor sentiment. Their results show that this trading volume affects both the average return and volatility of cryptocurrencies, while the search index primarily affects volatility. In short, the results show that investor sentiment has important informational value in explaining changes in Bitcoin's volatility, making Bitcoin look more like an investment than a financial asset.

### *Relation Between Bitcoin and Gold*

#### *High Relationship*

Scientific research by (Dyhrberg, 2015) (Nguyen Phuc Canh, 2019); Shahzad et al. (2019b) and (Jamal Bouoiyour, 2019) provide strong evidence of commonalities between these two highly popular but seemingly disparate assets. Interestingly (Jawad Shahzad, Elie Bouri, David Roubaud, Ladislav Kristoufek, 2019). (Theodore Panagiotidis, On the determinants of bitcoin returns: A LASSO approach, 2018) use the least absolute shrinkage selection operator (LASSO) method for estimation. (Jamal Bouoiyour, 2019) use quantile-by-quantile regression specifications to investigate whether Bitcoin or gold can serve as better diversifiers, hedgers, or safe havens against oil price volatility. The survey period is from September 13, 2011 to August 29, 2017. Empirical results show that both Bitcoin and gold have adequate hedging capabilities against oil market price fluctuations. Still, these skills change over time depending on whether the Bitcoin or gold markets are thriving or stressed. The same is true for oil markets. It concludes that Bitcoin and Gold are safe investment choices in turbulent times. Similar results are extracted by the conditional value-at-risk method.

#### *Weak and Neutral Relationship*

Furthermore, (Eom, 2019) examines the diversification and hedging potential of gold compared to Bitcoin. Perform estimation using dynamic conditional correlation (DCC) and wavelet coherence methods. The survey period is from July 26, 2010 to October 25, 2017. Empirical results show that bubble movements in the gold price can be used in part to hedge bubble movements in the Bitcoin market value. More specifically, volatility, causality, and persistence of change across alternating phases are highlighted in gold futures prices and Bitcoin. The closest connections are tracked for the period 2012-2015 over a frequency band of 8-16 weeks. During the European sovereign debt crisis, the contagion between Bitcoin and gold has become more intense. The academic work by (Irene Henriques, 2018) is representative of the detailed specification of the GARCH method. (Irene Henriques, 2018) use dynamic conditional correlation (DCC), asymmetric

DCC (ADCC), and generalized orthogonal generalized autoregressive Compare the result of replacing with. Bitcoin. Minimum volatile stock portfolios and long and short positions are examined. This data spans the period from January 4, 2011 to October 31, 2017. Empirical evidence suggests that risk-averse investors are willing to pay high performance fees to switch from gold portfolios to Bitcoin portfolios. Bitcoin is favored as an investment instead of gold Portfolios may offer higher risk-adjusted returns. Similarly, (Debdatta Pal and Subrata K. Mitra , 2019) compare optimal hedge ratios for Bitcoin and other financial assets using conditional volatility estimates from various GARCH methods. The investigation period begins on January 3, 2011 and ends on February 19, 2018. Econometric results show that the Generalized Orthogonal GARCH (GO-GARCH) specification has the greatest hedging effect. There is support that a \$1 long bitcoin could be hedged with a 70 cent short 70.5% of gold. Overall, it is argued that gold offers a better hedge against bitcoin.

### Bitcoin Sentiment

(Anamika Anamika, Sowmya Subramaniam, 2021) show that if investors are bullish on Bitcoin, the price of Bitcoin will rise. After considering relevant factors, Bitcoin sentiment has great power in predicting Bitcoin price. The author also used Baker and Wagler and his VIX Sentiment Index, respectively, as measures of stock market sentiment. Their findings show that cryptocurrency prices rise when stock market investor sentiment is bearish, and that cryptocurrencies can serve as an alternative investment vehicle. They also noted that the results remain unaffected even after considering potential factors affecting cryptocurrency prices. (Brahim Gaies, 2021) used a nonlinear autoregressive variance-lag model to analyze the impact of the Bitcoin Misery Index as a measure of investor sentiment on Bitcoin returns. The results show that bearish shocks have a greater impact on Bitcoin returns over the long term than bullish shocks. (Shaen Corbet. Charles James Larkin, Brian Lucey, Andrew Meegan, 2019) created a sentiment index based on post-release news of four macroeconomic indicators. H. GDP, unemployment, CPI, durable goods. The results show that Bitcoin returns respond differently than stock market returns. It has also been argued that cryptocurrencies' reactions to news and announcements may vary depending on the type of digital asset. (Akyildirim, Erdinc & Corbet, Shaen & Lucey, Brian & Sensoy, Ahmet & Yarovaya, Larisa, 2020) note that increased investor anxiety leads to increased volatility in cryptocurrency markets.

### Sentiment Investment and Bitcoin Predictability

(Muhammad Ali Nasir, Toan Luu Duc Huynh, Sang Phu Nguyen, Duy Duong, 2019) Predictability of Returns from Bitcoin Volume and Google Search Volume Using Vector Auto Regression (VAR) Framework, Copulas Approach, and Nonparametric Plots of Weekly Data from 2013 to 2017 I checked. Their results show that increasing search volume has a positive impact on Bitcoin returns and trading volume. (Muhammad Abubakr Naeem, Imen Mbarki and Syed Jawad Hussain Shahzad , 2021) examined the impact of investor sentiment on the returns of six major cryptocurrencies using two proxies: the FEARS index and Twitter happiness. Happiness Index Significantly Predicts Returns for Selected Individuals The predictability of the FEARS index is weak and short-term. In a recent publication, (Anupam Dutta, 2022) examined volatility spillovers across

15 major cryptocurrencies, given the impact of investor sentiment. The Twitter feed was peroxide for investor sentiment with a dynamic conditional correlation generalized autoregressive conditional heteroscedasticity (DCC-GARCH) model to measure the impact of investor sentiment on volatility spillover across cryptocurrencies. Used as a result, we find that highly dissatisfied investors show higher market volatility and greater attachment to the market, whereas very satisfied investors show lower overall attachment. If the excess volatility between assets is low, these assets can be used as mutual hedging tools. The results of this paper suggest that diversification opportunities between cryptocurrencies are possible for satisfied investors. Results from both studies suggest that feelings of euphoria or anxiety have different effects, and that level of happiness also plays a role.

## *Methodology*

### *Econometric Model and Method of Research*

In this work, we use the Pooled Mean Group (PMG) estimator econometric method to investigate both research hypotheses. That model is:

$$\begin{aligned} \text{Sentiment}_{it} = & \sum_{j=1}^p \theta_{ij} \text{sentim}_{i,t-j} + \sum_{j=1}^n \beta_{ij} OP_{i,t-j} + \sum_{j=1}^n \beta_{ij} CPI_{i,t-j} \\ & + \sum_{j=1}^n \beta_{ij} CURR_{i,t-j} + \sum_{j=1}^n \beta_{ij} LIQ_{i,t-j} + \sum_{j=1}^n \beta_{ij} INTERB_{i,t-j} \\ & + \sum_{j=1}^n \beta_{ij} GDP_{i,t-j} + \mu_i + \varepsilon_t \end{aligned}$$

To remove the bias caused by non-uniform gradients in dynamic panel models such as the generalized method of moments (GMM) with long time horizons, (M. Hashem Pesaran, 1995) and (M. Hashem Pesaran, Yongcheol Shin and Ron P. Smith, 1999) proposed two estimates presenting the quantity group (MG) and pooled mean group (PMG). The MG and PMG estimation methods apply the ARDL model to panel data and, like ARDL, include lags in the dependent variable that can indicate the dynamics of the panel model. The MG method first estimates the ARDL model for each intersection and computes the mean of the estimated coefficients. Using this estimator, the intercept, slope coefficient, and variance may differ between groups. In the PMG method, the intercept, short-term coefficients, and residual variances can differ between mean groups, but they are the same across groups because no constraint is applied to the long-term coefficients in this method (e.g., fixed-effects estimate vessel). MG and PMG methods with sufficiently large lags provide super-consistent estimators of long-term parameters even when the regressor is I (1) (Pesaran, Shin, and Smith, 1999). The Hausman test is used to

choose between the two estimators, MG and PMG. The null hypothesis is the use of the PMG method and the alternative is the use of the MG method

### *Research Variables*

Gold and Bitcoin prices were extracted from [www.tradingeconomics.com](http://www.tradingeconomics.com). Various studies have used two types of direct and indirect measures of mood (Malcom Baker, Jeffery Wurgler, 2006). This study uses his four proxies of trade volume, trade value, number of new investor accounts and number of monthly trades using the method given that the study is conducted at the industry level. I extracted the sentiment quotient. The first principal component of principal component analysis (PCA) was used as a sentiment indicator in this study. One advantage of the PCA method is that it indexes and combines variables that exhibit high multicollinearity with each other.

## **Results**

### *Descriptive Statistics*

Table 1. Descriptive statistics

Statistics	GOLD	BTC
Mean	1840.775	1825.969
Median	1830.700	1817.310
Maximum	2063.020	1681.740
Minimum	1682.740	2048.840
Std. Dev.	70.03040	64.43762
Skewness	0.365710	0.354764
Kurtosis	2.653154	2.773871
Jarque-Bera	12.96903	10.97573
Probability	0.001527	0.004137
Sum	874368.2	867335.2
Sum Sq. Dev.	2324618.	1968146.
Observations	475	475

<sup>1</sup> Table 1 shows descriptive statistics for the model variables. The average raw gold price for this period is around \$1678, peaking at \$1840 in March 2020 as the global gold price rises.

### *Correlation between Variables*

Table 2 shows the correlations between study variables. As you can see there is relatively high correlation between the variables and possible multicollinearity between them.



Table 2. Matrix correlation

	GOLD	BTC
BTC	0.1780472667407893	1
GOLD	1	0.1780472667407893

*Investigating the stationary of Variables and Model Co integration*

Table 3. Co integration

	t-statistic	Prob.*	z-statistic	Prob.*
GOLD	-3.686888	0.0201	-20.77794	0.0457
BTC	-3.113236	0.0877	-17.71187	0.0858

Cointegration tests are used to examine long-term relationships between model variables. Panel models use methods like Kao and Pedroni to explore cointegration between variables. In this study, we used the method of Pedroni (2004) to examine the cointegration of the tested models. This procedure allows non-uniformities to exist in the intersections and slopes of the cointegration equations. Pedroni's cointegration test uses residuals from long-term regression estimates and its general equation is defined as:  $Y_{it} = \alpha_i + \theta_i t + \beta_1 X_{1t} + \beta_2 X_{2t} + \dots + \beta_{mi} X_{mit} + \varepsilon_{it}$

Where  $i$  represents the cross,  $t$  denotes the time period, and  $m$  refers to the number of explanatory variables. The variables  $\alpha_i$  and  $\theta_i$  make it possible to study the fixed effects of the section as well as deterministic trends.  $\varepsilon_{it}$  denotes the estimated residuals of the long-term relationships (Pedroni, 2004).

Table 4. Pedroni's cointegration test

		Within-dimension (panel)			Between-dimension (group)		
	v-statistic	p-statistic	PP-statistic	ADF-statistic	p-statistic	PP-statistic	ADF-statistic
GOLD	2.980***	-9.132***	-7.978***	-2.175***	-7.843***	-5.913***	-0.4251
BTC	4.274***	-7.528***	-5.264***	0.126***	-8.196***	-7.181***	0.2942

\*\*\*, \*\* and \* indicates statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4 shows the results of Pedroni's cointegration test between the variables tested in the model. All estimated models have probability levels higher than 0.05%, thus proving the hypothesis of cointegration between model variables. Also, when estimating with the panel ARDL method as described above, it is necessary to select which estimation method, MG or PMG, is more appropriate. A Hausman test performed on all

models show that the p-value for the Hausman test is greater than 0.05%, making PMG a better method for estimating the models.

### *Results of Model Estimation in Long-term and Short-term*

The long-term model estimation results for the various groups reported in Table 5 and the short-term model estimation results are shown in Table 6.

Table 5. PMG long-run estimates

	coefficient	t-statistic
GOLD	0.719640	10.19***
BTC	0.641285	8.763***

\*\*\*,\*\* and \* indicate statistical significance respectively at 1%, 5% and 10% level.

As the long-term relationship results in Table 5 show, there is a positive and significant relationship between the price of gold and investor sentiment, and the impact of the price of gold on investor sentiment Medium, 0.05 percent.

Table 6. PMG short-run estimates

Variable	Coefficient	t-Statistic
GOLD(-1)	0.719640	10.19***
GOLD(-2)	-0.618557	-7.956***
GOLD(-3)	0.411788	5.472***
GOLD(-4)	-0.172500	-3.016***
BTC	0.229752	3.580***
BTC(-1)	0.641285	8.763***
BTC(-2)	-0.439330	-5.405***
BTC(-3)	0.317095	4.296***
BTC(-4)	-0.111711	-2.554***

\*\*\*,\*\* and \* indicate statistical significance respectively at 1%, 5% and 10% level.

Table 6 shows the short-term relationship between 'gold price and other control variables' and 'investor sentiment' for three different models. The delays for these models are automatically chosen based on the Akaike information criterion. For short-term testing, the primary focus is on error correction model (ECM) coefficients. This indicates the speed of adjustment in variable relationships between short and long term. As the results show, gold's adjustment speed is faster and faster than BTC.

### **Conclusion and Suggestion**

This study examines the sentiment spillover dynamics between the gold price and the Bitcoin market over the period 04/08/2020 to 04/08/2022. In particular, variance-resolved spectral plots are used to measure sentiment spillover for the short, medium, and long-term components. The empirical results of this study have several important implications. First, the study shows that the price of gold is a key factor influencing investor sentiment.

Gold price volatility should therefore be taken into account when examining the sources of investor sentiment. Moreover, this finding enables investors to make more effective decisions by using gold market information. In addition, considering that gold prices have significant long-run and short-run effects on investor sentiment, individual and institutional investors should focus more on this linkage and adjust their investment strategies over time and investors may benefit from these insights for hedging activities in the bitcoin market. The effects of gold price changes on investor sentiment at the market and industry level, examining the two-way relationship between gold price and the bitcoin market. By understanding the intensity and frequency components of these spillover effects, investors with different investment horizons can improve their portfolio diversification and hedging strategies when forecasting portfolio market risk exposures among these hedging assets. With regard to policymakers, by closely identifying the major transmitter and receiver of these spillover effects between the gold price and the Bitcoin market over different periods, they can be better prepared to protect against contagion risk and to foster market stability. Further studies should focus on the transmission mechanisms underlying the discovered spillover dynamics and identify the determinants of such spillover effects.

## References

- Akyildirim, Erdinc & Corbet, Shaen & Lucey, Brian & Sensoy, Ahmet & Yarovaya, Larisa. (2020). The relationship between implied volatility and cryptocurrency returns. *Finance Research Letters*.
- Alessandra Cretarola, Gianna Figà-Talamanca, Marco Patacca. (2019). Market attention and Bitcoin price modeling: theory, estimation and option pricing. *Rivista di Matematica per le Scienze Economiche e Sociali*.
- Anamika Anamika, Sowmya Subramaniam. (2021). Do News Headlines Matter in the Cryptocurrency Market? *Journal of Behavioral Finance*.
- Antti Klemola, Jussi Nikkinen, Jarkko Peltomäki . (2016). Changes in Investors' Market Attention and Near-Term Stock Market Returns. *Journal of Behavioral Finance*, 18-30.
- Anupam Dutta, E. B. (2022). Outliers and Time-Varying Jumps in the. *Journal of Risk and Financial Management*, 2-7.
- Brahim Gaies, M. S. (2021). Is Bitcoin rooted in confidence? – Unraveling the determinants of globalized digital currencies. *Technological Forecasting and Social Change*.
- Bukovina, J. and Marticek, M. (2016). Sentiment and Bitcoin Volatility. *MENDELU Working Papers in Business and Economics* , 2016-58.
- Cepni, F. X. (2022). Blockchain and crypto-exposed US companies and major cryptocurrencies: The role of jumps and co-jumps. *Finance Research Letters*.

- Debdatta Pal and Subrata K. Mitra . (2019). Hedging bitcoin with other financial assets. *Finance Research Letters*, 30-36.
- Dirk G. Baur, Brian M. Lucey. (2010). Is Gold a Hedge or a Safe Haven? An Analysis of Stocks, Bonds and Gold. *The Financial Review*, 217-229.
- Dirk G. Baur, KiHoon Hong, Adrian Lee. (2018). Bitcoin: Medium of exchange or speculative assets? *Journal of International Financial Markets, Institutions and Money*, 177-189.
- Dyhrberg, A. H. (2015). Bitcoin, gold and the dollar – A GARCH volatility analysis. *Finance Research Letters*.
- Eom, C. K. (2019). Bitcoin and investor sentiment: Statistical characteristics and predictability. *Physica A: Statistical Mechanics and its Applications*, 511-521.
- Fergal A. O'Connor, Brian M. Lucey, Jonathan A. Batten, Dirk G. Baur. (2015). The Financial Economics of Gold – A Survey. *FIRN Research Paper*.
- Irene Henriques, P. S. (2018). Investor implications of divesting from fossil fuels. *Global Finance Journal*, 30-44.
- Jamal Bouoiyour, R. S. (2019). Bitcoin: competitor or complement to gold? *Economics Bulletin*.
- Jawad Shahzad, Elie Bouri, David Roubaud, Ladislav Kristoufek. (2019). Is Bitcoin a better safe-haven investment than gold and commodities? *International Review of Financial Analysis*.
- Kristoufek, L. (2013). BitCoin meets Google Trends and Wikipedia: Quantifying the relationship between phenomena of the Internet era. *Scientific Reports*.
- M Qadan, H Nama. (2018). Investor sentiment and the price of oil. *Energy Economics*, 42-58.
- M. Ángeles López-Cabarcos, Ada M. Pérez-Pico, Juan Piñeiro, Aleksandar Sevic. (2019). Finance Research Letters. *Finance Research Letters*, 2-7.
- M. Hashem Pesaran, Yongcheol Shin and Ron P. Smith . (1999). Pooled Mean Group Estimation of Dynamic Heterogeneous Panels . *Journal of the American Statistical Association*, 621-634.
- M.Hashem Pesaran, R. S. (1995). Estimating long-run relationships from dynamic heterogeneous panels. *Journal of Econometrics*, 79-113.
- Malcom Baker, Jeffery Wurgler. (2006). Investor Sentiment and the Cross-Section of Stock Returns. *The Journal of Finance*.

- Muhammad Abubakr Naeem, Imen Mbarki and Syed Jawad Hussain Shahzad . (2021). Predictive role of online investor sentiment for cryptocurrency market: Evidence from happiness and fears. *International Review of Economics & Finance*, 496-514.
- Muhammad Ali Nasir, Toan Luu Duc Huynh, Sang Phu Nguyen, Duy Duong. (2019). Forecasting cryptocurrency returns and. *Financial Innovation*, 2-13.
- Nguyen Phuc Canh, N. Q. (2019). Cryptocurrencies and Investment Diversification: Empirical Evidence from Seven Largest Cryptocurrencies. *Theoretical Economics Letters*, 139-144.
- Pedroni, P. (2004). Panel Cointegration: Asymptotic and Finite Sample Properties of Pooled Time Series Tests with an Application to the Ppp Hypothesis. *Econometric Theory*, 597-625.
- Rainer Böhme, N. C. (2015). Bitcoin: Economics, Technology, and Governance. *Journal of Economic Perspectives*, 213-38.
- Sean Foley, Jonathan R Karlsen, Talis Putnins. (2019). Sex, drugs, and bitcoin: How much illegal activity Is financed through cryptocurrencies? *Review of Financial Studies*, 1798-1853.
- Shaen Corbet. Charles James Larkin, Brian Lucey, Andrew Meegan. (2019). Cryptocurrency reaction to FOMC Announcements: Evidence of Heterogeneity Based on Blockchain Stack Position. *Journal of Financial Stability*.
- Theodore Panagiotidis, T. S. (2018). On the determinants of bitcoin returns: A LASSO approach. *Finance Research Letters* .
- Theodore Panagiotidis, T. S. (2019). The effects of markets, uncertainty and search intensity on bitcoin returns. *International Review of Financial Analysis*, 220-242.
- Yermack, D. (2015). Is Bitcoin a Real Currency? An economic appraisal. *The Handbook of Digital Currency* , 31-44.



## Appendix

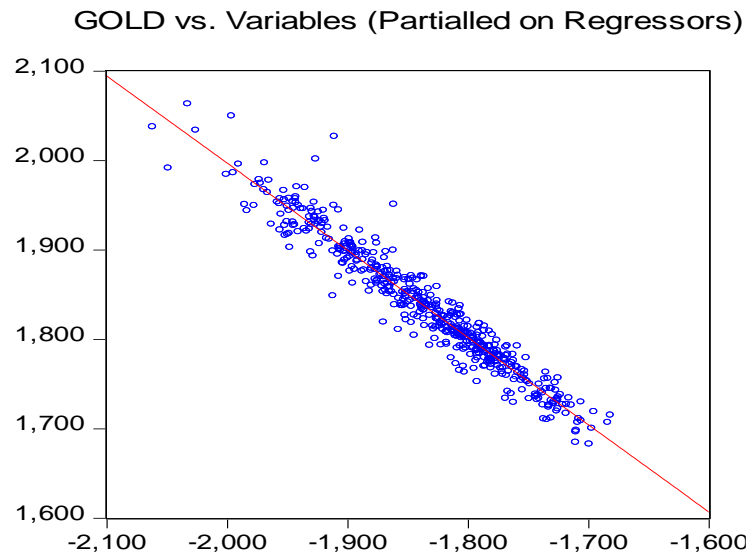


Figure 9. Partialled on Regressors

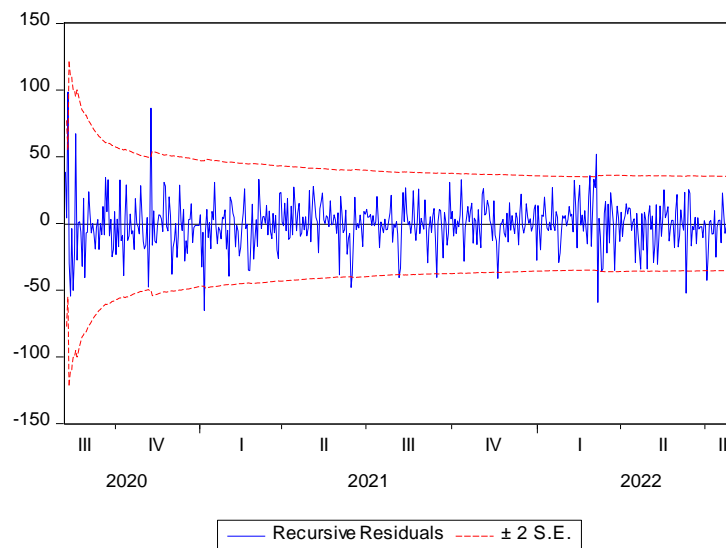


Figure 10. Recursive residuals are independent and identically distributed, and unlike normal residuals, some imperfections in the data don't smear all residuals. Additionally, recursive residuals can be interpreted to show the effect of successively removing observations from the dataset.

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*Original Research*

## Challenges in Recruitment Process: A Study of Non-Government Hospitals in Bangladesh

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### Abstract

Non-government hospitals have to deal with many corporate and individual clients. Therefore, the hospitals require employees of all levels. Recruitment and selection are the process of attracting and hiring the suitable candidates. Hospital authorities are always concerned with selecting the best candidate for vacant positions. Judgment sampling is used and opinions of human resource professionals are recorded. Non-parametric one sample Wilcoxon Signed Rank test is conducted on the data collected from the human resource departments. The study finds that lack of qualified and experienced candidates is a major challenge in employee recruitment. It is realized that misrepresentation of qualities and varying salary expectations of potential employees creates difficulties in selection process. It is also evident that there is deficiency of training for hiring process for the recruiters. The study is limited to kinds of instructions and cannot emphasize the policy of confidentiality of the organizations in some cases. More research about the challenges might help the different organizations regarding hiring process. The study has helped the non-government hospitals to identify major challenges in the recruitment process. It has highlighted the factors that need to be focused on hiring new employees.

**Keywords:** Challenges; Recruitment; Non-Government Hospitals.

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## **Introduction**

Throughout the last few years Bangladesh has been experiencing a rapid and significant change in the health sector. Not only in our country, all over the world the dimension of health service industry has been changing rapidly mainly due to the technological innovation and globalization. But most importantly covid-19 has completely changed the set-up of health service industry. Now the condition is such that hospitals must compete in the marketplace both with local institutions as well as foreign ones.

Hospitals require different kinds of employees to deliver their services properly. They need medical technicians to administrative employees to provide treatment and care to their patients and corporate clients. Delivering medical treatment is a very delicate task and therefore it requires recruitment of proficient employees. Recruitment is a proactive process of sourcing requisite skills and experience (Zinyemba, 2014). Hospital needs to remain vigilant while recruiting employees as they perform duties that may involve risk of lives. Non-government hospitals are very cautious in recruitment as their reputation remains at stake. Private hospitals have to beat government hospitals through quality of service as governments' hospitals deliver services at a relative lower cost as they are funded by the government (Chou et al., 2014). Therefore, non-government hospitals focus heavily on hiring best candidates.

Companies with limited resources face the challenge of competing with bigger companies while hiring highly qualified employees (Zinyemba, 2014). Hospitals face the daunting task of bringing together people of different skills and backgrounds. The recruitment team of hospitals conduct the duty of setting different competencies into a structured system. They design the hiring map to fill the expertise, knowledge and skills required to function properly in healthcare industry. To complete the whole process of building an effective and efficient work-force the recruitment team has to navigate through challenges of attracting, evaluating and on-boarding employees, balancing internal and external pressure and covering up the deficiencies of their own organization.

## **Objective of the study**

The objective of the study is to discern the process of recruitment and to find out the challenges of recruitment faced by the non-government hospitals in Bangladesh.

## **Literature Review**

The term recruitment has been defined from different points of view by researchers (Samwel, 2018). Recruitment has been called as the process of searching the candidates and stimulating them to apply for jobs (Devi & Banu, 2014). It has also been declared as the system of hiring the right kind of candidates for the right job (Kumari, 2012). From another perspective, recruitment has been defined as the procedure of creating a group of qualified candidates for the vacant positions that arise in the organization (Stoilkovska et al., 2015). Recruitment consists of the activities of attracting the candidates, assessing potential candidates and on-boarding the preferred candidates (Turner, 2017).

Recruitment has been identified as one of the most important human resources activities for existence and development of organization (Vardarlier et al., 2014).

Considering the importance of recruitment, research on recruitment has increased dramatically and such attention is definitely warranted (Breagh, 2008). Recruiting suitable candidates is essential for the purposes of satisfying immediate operational needs and fulfilling future long-term strategic objectives (Turner, 2017). Seventy percent of companies pointed-out recruit as one of top priority activities in human resources division (Scullion, 1992). Organizations have been advised to be careful in recruiting employees as they provide the competitive advantage in the race of generating revenues (Devi Bhoganadam & Srinivasa Rao, 2014).

Recruitment in hospitals is quite interesting as they require different kinds of employees. Hospitals recruit five kinds of medical professionals including nurses , physician assistants, doctors, administrative staff and medical technicians (Chou et al., 2014). Doctors, nurses, technicians, administrative staff and even front desk personnel play a role in the complete treatment procedure of patients (Grill, 2015). These days hospitals also need to hire employees for purposes other than just medical activities to remain competitive. Hospitals are urged to recruit candidates who identify with their objectives, goals and missions (Douglas, 1997).

To conduct recruitment efficiently is one of the most challenging and strategic organizational processes (Pessach et al., 2020). The changing technology creates difficulties in recruitment process and there are also problems of lack of transparency and lack of interview skills among employers (Samwel, 2018). Lack of specific information regarding salary makes job advertisements less attractive (Sarpong, 2019). The cost of advertising need to be reduced in developing countries like Bangladesh (Absar, 2012). Recruitment becomes a difficult task due to pressure of recommendations and it has advised that training of recruiters is to be emphasized (Kumari, 2012). Questions have been raised about recruitment policies in the context of gender and nationality discriminations (Centre, 2015). Cost of advertising, misrepresentation of qualifications, nepotism and favoritism, geographical location of a company, change in business model of the organization and political interference pose challenges of recruitment and selection (Zinyemba, 2014). The battle to attract qualified candidates is becoming more and more difficult for small and medium enterprises and their recruitment process may not be systematic as they are mostly conducted by one person which often leads to blunders of selection (Abraham et al., 2015).

## **Methodology**

The study is exploratory in nature. Exploratory method of research has been used as the results are unknown and the target is to find the answers and not just analysis of the known outcomes (Bryman, 2012).

A structured interview is conducted for the study. The questionnaire is developed using five point Likert scale. Judgmental Sampling technique has been used to select the professionals whose opinions and answers are relevant to the study. Primary data has been collected on a four months' time duration in first phase that started on August, 2021 to

December, 2021 and in Second phase, the data has been collected on a two months' time duration that started on January, 2022 to February, 2022.

The population of the study are the Human Resource (HR) professionals working in non-government hospitals and handling the responsibilities of recruitment. A total of 38 HR professionals from 23 different non-government hospitals were interviewed based on convenience and their willingness. The sample size has remained short due to the fact that only one or two personnel from human resource department takes active part in hiring process. But the sample represents majority of HR professionals working in recruitment process of non-government hospitals. Twenty-three respondents are selected from each hospital for in-depth interview with the management level who are directly involved in policy making and implementation at the Human Resource (HR) department.

It is eminent that the reliability test statistics of the study (Cronbach's alpha) is 0.696 as shown in Table 1. This is not less standard than 0.70 (Cho & Kim, 2015) and that means that the alpha is very much acceptable.

Tanble 1. Reliability Statistics

Cronbach's Alpha	No. of Items
0.696	10

## Hypothesis

The study sets the following alternative hypothesis

- i. H<sub>1</sub>: Cost of advertising is a challenging issue in recruitment
- ii. H<sub>2</sub>: Candidates' misrepresentation of qualities is a challenge
- iii. H<sub>3</sub>: Lack of qualified and experienced candidates creates difficulties in recruitment
- iv. H<sub>4</sub>: Over qualified candidates becomes a reason of concern in selection process
- v. H<sub>5</sub>: Meeting salary expectations creates difficulties in hiring the preferred candidate in certain cases
- vi. H<sub>6</sub>: Certain HR policies creates impediments in hiring new employees
- vii. H<sub>7</sub>: Lack of training for specializing in hiring process is a matter of concern in recruitment
- viii. H<sub>8</sub>: Geographical location sometimes poses certain difficulties in recruitment
- ix. H<sub>9</sub>: Political Interference presents problems in recruitment
- x. H<sub>10</sub>: It is a matter of concern whether any option for internal recruitment / promotion or to go external recruitment.



## **Recruitment Process of Non-Government Hospitals in Bangladesh**

Recruitment and selection is a kind of challenging work for human resource management (Blaga, 2020). The goal of recruiting is to increase the number and quality of personnel available to assist the company in achieving its aims and objectives. Selection is referred to as a negative process since it involves eliminating or rejecting as many individuals as possible in order to find the best candidate for the job (Zinyemba, 2014).

Human resource planning, also referred to as "manpower planning and replacement," is placing the appropriate number and kind of people in the appropriate locations at the appropriate times to carry efficient out tasks.

Thus, it is a significant aspect for Non-Government Hospitals. They maintain following procedures for their recruitment and selection process.

### *Reviewing the Applicants*

Tracking candidates with applications and examining resumes are the following phases in the recruitment and selection process. The sample Non-Government Hospitals follow-Applicant tracking systems (ATS). These are becoming very much helpful to employers with such technology aids in the management for every exposed position.

### *Telephonic Interview*

It is crucial to do a preliminary phone interview to learn more about the applicant's background, employment history, and experience. The goal of this phone interview is to ascertain whether or not the candidate possesses the necessary abilities and credentials for the open position. Initial interviews will identify candidates who manifestly do not fulfill the position's minimum standards.

### *Direct Interview and Assortment*

The recruitment process's most crucial step is the interview. Consequently, it's crucial to get ready for the interview in advance. Prepare one or two questions that will let you know if an applicant possesses each ability needed for the position. One can compare more readily later if you ask all applicants the same questions.

Additionally, Private Hospitals also used to add notes on their resumes before any difficulties they wanted to clarify. They used to exclude the resumes of applicants who lacked the necessary credentials after all interviews had been done in order to reduce the number of candidates. Finally, they do a second interview with the finalists or might ask colleagues to conduct interviews with them for a second opinion.

### *Prolonging an Employment*

When they have determined which applicant is most suited for the position, they then extend the employment offer. The Hospitals also let the applicant know about any pre-employment requirements like background checks, drug testing, license information, or any other exams or documents.

## Selected Panel

Hospitals basically try to avoid many complications regarding recruitment & selection part in order to save times, cost along with many other things. They use to create employee panel (selected) after recruitment and selection session. If any selected one does not want to join where placement is needed, then the Hospitals use to call from panel.

A draft employment offer may be passed back and forth from Hospital to the candidate until both parties are satisfied when hiring for positions where it negotiates the terms of employment, pay and benefits, and other matters. To formalize the parameters of the agreement with the prospective employee, an employment offer should always be made in written form.

## *Some Additional Process of Recruitment*

When Hospitals get the desired candidate (s) for any concern position for any department then it goes for the further actions. Actions like negotiating many things such as salary as compensation along with all the benefits from here he or she will get, any further discussing issues like his or her tentative joining for the Hospital. If does not match with the candidate(s) then HRD of different Hospitals use to go for next picking from the panel instead of further recruitment in order to save the time and cost. Before joining it is the core requirements to the candidates to take medical checkup. If there any problem(s) carrying the candidates then Hospitals do not offer the job to that candidate(s).

## In house Progression of Employees

The human resource department (HRD) maintains the precise procedure in order to recruit and select the employees. HRD with the help of the concern department use to take help in order to make plan for seeking right candidates among the numbers. As before mentioned hospitals try to make in-house progression and later fulfill up that vacant position by promoting and then recruiting new candidates if requires.

## Focused Group Discussion (FGD) of HRD with Concern Department

However, in the case of very new position or post it is become challenging for HRD in order to manage and hire the exact candidates from thousands. In order to ensure the replacement of vacant position everything is done through enormous planning. It should be mentioned that to recruit and select it's easier to work for regular or common vacant position instead any very new.

If any new position and post related anything occurs then at very firstly HRD of Non-Government Hospitals make a plan with the concern department. If there are job description(s) and all requirements available that the Hospitals looking for then it is become easier. However, it is become challenging if the entire scenario new for the organization. FGD occurs for any vital or big and important position where precise discussion required very often. It should be mentioned that FGD not only happen in larger phase it can be happened within the department or within the couple of departments.

## Data Analysis and Findings

The data represented is collected from the HR professionals of sample Hospitals regarding the challenges of recruitment process.

HR professionals were requested to rate their extent of agreement towards 10 factors. Table 1 describes their extent of agreement in 5-point Likert-type scale (1= Strongly disagree, 2=Disagree, 3= Neutral, 4= Agree, 5=Strongly agree).

### *Descriptive Statistics*

The effect of some variables on the recruitment challenges have been found in this study. The respondents agree the four statements. On the other hand, neutral and disagreed with six statements.

Table 2. Descriptive Statistics

Variables	Mean	Standard Deviation	Practice level of Challenges
Cost of advertising is a challenge	2.5789	1.0035	Neutral
Quality misrepresentation is a challenge	3.9474	.9284	Agree
Lack of qualified candidates is a challenge	4.2632	.7947	Agree
Over qualified candidates is a challenge	3.4737	.7254	Neutral
Salary Expectations is a challenge	3.7105	.9273	Agree
HR policy is a challenge	2.8158	1.1355	Neutral
Lack of recruitment training is a challenge	3.7895	.9907	Agree
Geographical location is a challenge	2.8947	1.3313	Neutral
Political interference is a challenge	2.7105	1.2060	Neutral
Internal promotion is a challenge	2.8421	1.0007	Neutral

Source: The researchers, Based on analysis of survey data through SPSS software.

From the Table 2., it is found that the Quality misrepresentation, Lack of qualified candidates, Salary Expectations, Lack of recruitment training, are found the challenges of recruitment (respondents agree about the fact, these four factors scored close to 4.00 which supported the challenges in recruitment process) other than cost of advertising, HR policy, Geographical location, Political interference and promotion.

### *Test of hypotheses*

The research hypotheses were tested in the form of alternative hypothesis. Since, the research variables are measured in Likert-scale and sample size is small, so non-parametric one-sample Wilcoxon Signed Rank test was applied.

Table 3. Hypothesis Test Summary

Hypothesis	Significance	Decision
Cost of advertising is a challenge	.000	Not Accepted
Quality misrepresentation is a challenge	.569	Accepted
Lack of qualified candidates is a challenge	.054	Accepted
Over qualified candidates is a challenge	.000	Not Accepted
Salary Expectations is a challenge	.054	Accepted
HR policy is a challenge	.000	Not Accepted
Lack of recruitment training is a challenge	.178	Accepted
Geographical location is a challenge	.000	Not Accepted
Political interference is a challenge	.000	Not Accepted
Internal promotion is a challenge	.000	Not Accepted

Source: The researchers, Based on analysis of survey data through SPSS software.

According to Table 3., the hypothesis median was taken 4 which represents ‘Agree’ in the five-point Likert scale. The p-value of quality misrepresentation of candidates is .569 which is greater than .05. Therefore, the alternative hypothesis has been accepted. Similarly, lack of qualified candidates having p-value of .054 and salary expectation having p-value of .054 have been accepted in the form of alternative hypothesis as they are larger than .05. Lack of recruitment training has p-value of .178 which is again larger than .05. So, it has also been accepted in the form of null hypothesis. But the other alternative hypothesizes of cost of advertising, over qualification, HR policy, geographical location, political interference and internal promotion could not be accepted as their p-value is smaller than .05. Each of those factors have p-value of .000 which is very significant against the logic of null hypothesis being accepted.

## Findings

The challenges mentioned in the previous literature regarding recruitment were tested in the context of non-government hospitals of Bangladesh. Some of the factors have been found to be significantly challenging in the recruitment process of non-government hospital while some others have been proved to have absolutely no effect at all. The non-government hospitals do suffer from a lack of qualified and experienced candidates when it decides to go for recruiting new employees. Candidates are found to state to possess qualities and capacities which they do not actually have. The cut-throat competitive market and delicate socio-economic situations create a challenge of having to satisfy salary expectations for preferred candidates to fill gaps of expertise and skills. And the recruiters themselves feel the need for specialized recruitment training which is not being conducted at present in many organizations.

Some socially prevalent ideas of challenges to recruitment have been proved to be null and void in this study. Problems of geographical location and political interference are found to have no significant impact in recruitment process. Cost of advertising seems to not bother modern non-government hospitals with the advent of modern technologies and new found mediums of communication. While there is a conception that over-qualification creates difficulties in recruitment but in reality, the effect is almost

insignificant in the context of non-government hospitals. The internal policies of non-government hospitals also do not erect any significant challenge in view of the HR professionals.

## Conclusion

Some non-government hospitals are prominent names in the health-service industry of Bangladesh. The reputation of the hospital is dependent on the capability of the employees to provide expected service. Therefore, selection of the best candidate as an employee is one of the most crucial parts of running the organization successfully. Human resources have direct impact on the change, success and development of an organization (Blaga, 2020). Human Resources Department has to identify the misrepresentation of qualities by potential candidates.

Human resources are the greatest assets of an organization. To keep pace in an ever-changing world, the people hired must be accomplished. So far, the literature has not been able to determine all the relevant variables challenging in the recruitment process. But some factors have been proved to be effective. The study found that the factors of salary expectation, lack of qualified employees, lack of training for specializing in recruitment and misrepresentation of qualities by job seekers are real challenges in the recruitment process. On the other hand, the factors mentioning cost of advertising, Human Resource policy, geographical location, over qualified job seekers, political interference and internal promotion do not impose real challenges in the recruitment process.

This study presents only the insight of non-government hospitals. In this context, the limitation of this study can be overcome by additional sectors with a greater number of participants.

## References

- Abraham, M., Kaliannan, M., Mohan, A. V., & Thomas, S. (2015). A Review of Smes Recruitment and Selection Dilemma: Finding a 'Fit.' *The Journal of Developing Areas*, 49(5), 335–342. <https://doi.org/10.1353/jda.2015.0058>
- Absar, M. M. N. (2012). Recruitment & Selection Practices in Manufacturing Firms in Bangladesh. *The Indian Journal of Industrial Relations*, 47(3), 436–449. <http://www.i-scholar.in/index.php/ijir/article/view/41089>
- Blaga, P. (2020). The importance of human resources in the continuous improvement of the production quality. *Procedia Manufacturing*, 46, 287–293. <https://doi.org/10.1016/j.promfg.2020.03.042>
- Bryman, A. (2012). *Social Research Methods (4<sup>th</sup> Edition)*. U.K.: Oxford University
- Breaugh, J. A. (2008). Employee recruitment: Current knowledge and important areas for future research. *Human Resource Management Review*, 18(3), 103–118. <https://doi.org/10.1016/j.hrmr.2008.07.003>
- Cho, E., & Kim, S. (2015). Cronbach's Coefficient Alpha: Well Known but Poorly

- Understood. *Organizational Research Methods*, 18(2), 207–230.  
<https://doi.org/10.1177/1094428114555994>
- Chou, L. P., Li, C. Y., & Hu, S. C. (2014). Job stress and burnout in hospital employees: Comparisons of different medical professions in a regional hospital in Taiwan. *BMJ Open*, 4(2), 1–7. <https://doi.org/10.1136/bmjopen-2013-004185>
- Devi, B. R., & Banu, V. (2014). Introduction to Recruitment. *SSRG International Journal of Economics and Management Studies (SSRG-IJEMS)*, 1(2), 5–10. [www.internationaljournalsrg.org](http://www.internationaljournalsrg.org)
- Devi Bhoganadam, S., & Srinivasa Rao, D. (2014). Issue 10/Article No-5/996-1006 Syamala Devi Bhoganadam et. *International Journal of Management Research & Review \*Corresponding Author*, 4(10), 2249–7196. [www.ijmrr.com](http://www.ijmrr.com)996
- Douglas, S. (1997). *Bolan*1997 (1).
- Grill, E. (2015). Role of the mental health professional in education and support of the medical staff. *Fertility and Sterility*, 104(2), 271–276.  
<https://doi.org/10.1016/j.fertnstert.2015.05.027>
- Kumari, N. (2012). A Study of the Recruitment and Selection process: SMC Global. *Industrial Engineering Letters*, 2(1), 34–43.  
[https://dlwqtxts1xzle7.cloudfront.net/49035225/HR\\_PROJECT\\_RECUTMENT\\_ND\\_SLECTION\\_INFO-with-cover-page-v2.pdf?Expires=1639239682&Signature=Gf7VsAB2dfYT5OnN7oFcnsE6K02E1cuFOC-YdNN6dhM3JTynif6cUOqUGOmdtq~MnIuwq~lkt4xEhvfIEeyGUFpiZnmf-fJAanpRG0MOK2FzTS6I51L4FJ](https://dlwqtxts1xzle7.cloudfront.net/49035225/HR_PROJECT_RECUTMENT_ND_SLECTION_INFO-with-cover-page-v2.pdf?Expires=1639239682&Signature=Gf7VsAB2dfYT5OnN7oFcnsE6K02E1cuFOC-YdNN6dhM3JTynif6cUOqUGOmdtq~MnIuwq~lkt4xEhvfIEeyGUFpiZnmf-fJAanpRG0MOK2FzTS6I51L4FJ)
- Pessach, D., Singer, G., Avrahami, D., Chalutz Ben-Gal, H., Shmueli, E., & Ben-Gal, I. (2020). Employees recruitment: A prescriptive analytics approach via machine learning and mathematical programming. *Decision Support Systems*, 134(March), 113290. <https://doi.org/10.1016/j.dss.2020.113290>
- Samwel, J. O. (2018). An Assessment of the Challenges Facing Recruitment, Selection and Retention Process in Small Industries in Mwanza Region. *International Journal of Business and Management Invention (IJBMI) ISSN*, 7(3), 35–41. [www.ijbmi.org](http://www.ijbmi.org)35%7CPage
- Sarpong, S. (2019). The challenges of job hunting and recruitment in Ghana: Opportunity for improvement. *Global Business and Organizational Excellence*, 38(3), 35–42. <https://doi.org/10.1002/joe.21921>
- Scullion, H. (1992). Strategic Recruitment and Development of the ‘International Manager’: Some European Considerations. *Human Resource Management Journal*, 3(1), 57–69. <https://doi.org/10.1111/j.1748-8583.1992.tb00302.x>
- Stoilkovska, A., Ilieva, J., & Gjakovski, S. (2015). Equal Employment Opportunities in



the Recruitment and Selection. *UTMS Journal of Economics*, 6(2), 281–292.

Turner, P. (2017). Talent management in healthcare: Exploring how the world's health service organisations attract, manage and develop talent. In *Talent Management in Healthcare: Exploring How the World's Health Service Organisations Attract, Manage and Develop Talent*. <https://doi.org/10.1007/978-3-319-57888-0>

Vardarlier, P., Vural, Y., & Birgün, S. (2014). Modelling of the Strategic Recruitment Process by Axiomatic Design Principles. *Procedia - Social and Behavioral Sciences*, 150, 374–383. <https://doi.org/10.1016/j.sbspro.2014.09.031>

Zinyemba, A. Z. (2014). The Challenges of Recruitment and Selection of Employees in Zimbabwean Companies. *International Journal of Science and Research*, 3(1), 29–33.

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## Case Study

# Examining the Relationship between Organizational Characteristics, Knowledge Management Infrastructure and Entrepreneurial Orientation with Job Communication Satisfaction

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## Abstract

This study investigates the effect of organizational characteristics, knowledge management infrastructure and entrepreneurial orientation on job communication satisfaction in Atieh Sazan Hafez Company. The research was conducted by selecting 102 employees as the statistical sample. The analysis of the present study was performed using the structural equation modeling technique. The results of the analysis of the hypotheses indicated that organizational characteristics help positively and directly with the dimensions of knowledge management infrastructure and entrepreneurial orientation and job communication satisfaction. Efficient and motivated human resources play an important and fundamental role in increasing the effectiveness of any organization. Many factors need to be considered when it comes to human resource welfare. One of the key factors in this area is job satisfaction. Government agencies operate in a complex environment with increasing demand. In such an environment, many factors can increase or decrease people's job communication satisfaction. Today, organizations find themselves in situations where the tendency toward entrepreneurial activities is essential. Therefore, organizations should create conditions in which the atmosphere and spirit of entrepreneurship prevails and individuals can engage in entrepreneurial activities of the organization individually and in groups. Entrepreneurial orientation is a strategic advantage that is realized in the study of opportunities and organizes these affairs in order to take advantage of these opportunities.

**Keywords:** Organizational characteristics, knowledge management infrastructure, job communication satisfaction, entrepreneurial orientation.

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## Introduction

Job communication satisfaction is a vital scope in organizational characteristics. Government agencies operate in a complex environment with increasing demands. In such an environment, many factors can increase or decrease people's job communication satisfaction (Yilmaz et al., 2014). The management should consider the individuals' job communication satisfaction with regard to the important role of this issue in determining employees' behavior, defining their individual performance and their overall performance. Job communication satisfaction is therefore an essential factor in organizational behavior that must be understood and monitored. Organizations, in turn, must consider their employees' job communication satisfaction, because only satisfied employees will be motivated and productive. To this end, organizations should provide the necessary organizational resources and support for them (Bakotic, 2012).

(Lambert & Paoline, 2008) examined the effect of organizational characteristics on employees' job communication satisfaction and organizational commitment. Organizational characteristics in their studies included communication, formality, decision inputs, and promotion opportunities. In addition, the discussion on the determinants of employee job satisfaction in the literature revolves around three broad factors, namely, organizational, environmental and personal factors (Oluwunmi et al., 2017). The organizational factors examined in this research include salary, reward, promotion, Job security and organizational policies.

Knowledge management is often about creating, providing, strengthening and supporting appropriate knowledge environments in the organization to motivate and empower knowledge people to use and share their knowledge and create new knowledge (Kianto et al., 2016). In addition, those known in government organizations as knowledge employees, are those whose work is based on knowledge gained through formal education or work experience. Relying on their competencies and abilities to solve challenging problems and offer new solutions, they contribute to the growth and development of their organizations. This is where the knowledge management infrastructure comes into play.

Knowledge management infrastructure is the basis of knowledge management and reflects the culture and the structure of an organization, information technology infrastructure of the organization, shared knowledge and its physical environment (Pannu, 2017). Unfortunately, many organizations are not able to extricate knowledge and share it, because inefficient methods and inadequate infrastructure are used for knowledge management. Creating an appropriate infrastructure by adopting an appropriate culture and structure that improves interaction, creates a closer relationship among employees and encourages them to share and disseminate knowledge, and promotes the level of knowledge sharing and dissemination in organizations (Chow & Chan, 2008). (Gupta & Dutta, 2018) emphasized that the entrepreneurial characteristics and entrepreneurial culture of the organization (which are characterized by organizational values, unique concepts, and key organizational characteristics) constitute its entrepreneurial orientation. This issue has two aspects: a new way to implement and think and explore opportunities; and organizing resources to offer new prices to the market.

The present study attempts to investigate the effect of organizational characteristics, knowledge management infrastructure and entrepreneurial orientation on job communication satisfaction among employees of Iran's Atieh Sazan Hafez Company. Job communication satisfaction among the employees of this company is a must because it ultimately leads to higher levels of performance and increased productivity. On the other hand, knowledge management has not been seriously considered in this organization. This study helps the organization in planning knowledge management strategies and maximizing its benefits by identifying the impact of knowledge management infrastructure on employee's job communication satisfaction. Considering that the present study has been studied and analyzed in Atieh Sazan Hafez Insurance Company, the results of studies conducted with regard to the theoretical foundations and empirical background of the research show that so far, such a study has not been conducted in insurance companies. Therefore, considering the importance of the existence of this type of companies in Iran, it is possible to distinguish this issue from other studies, as well as the new and innovative aspect of this study.

In the knowledge-based economy, intellectual capital plays a vital role in increasing the value of organizations so that they will be able to be successful if they manage intellectual capital, effectively. In addition, one of the important capabilities of an organization that can greatly help other organizations in creating and dividing knowledge and create a "sustainable organizational advantage" for them compared to other organizations, is social capital. Today, knowledge is becoming a decisive factor in businesses' success. Since knowledge is considered as the most strategic organizational resource, organizations are faced with the basic question of how they can manage efficiently and effectively organizational knowledge in order to benefit from its advantages to advance the strategic goals of that organization. Its knowledge and management will be completely meaningless and without value apart from the strategic goals of the organization. Therefore, the knowledge management of the organization should be aligned and coordinated into consideration in line with the strategic actions of the organization in recent decades, knowledge has been known as one of the most crucial, vital, and strategic organizational resources, that lead to creative and effective method to increase innovation, reduce costs, improve decision-making, and create sustainable competition for organizations. Knowledge management refers to all efforts to obtain and use knowledge resources as much as possible. The successful accomplishment of knowledge management depends on choosing the best processes and determining the appropriate implementation strategy.

Our purpose is to provide a phase system to determine the strategy of knowledge management implementation in the organization according to the prioritized processes effective on the organization's knowledge management.

The basis of the proposed solution is based on the alignment of knowledge management processes and strategies to determine the appropriate strategy for implementing knowledge management in the organization. Considering that the values of some factors affecting the organization's knowledge management strategy formulation are qualitative.

In the unstable environmental conditions of organizations and the intensification of competitive methods, achieving new practical advantages and creating special capabilities is the main condition to overtake competitors, and this issue depends on the quality of knowledge and innovative capital of organizations. Knowledge management in customer-oriented companies and organizations is becoming a prerequisite that is necessary to create competition. Considering the importance of customers in today's competitive world, especially in industrial marketing, companies must have a correct understanding of customer needs. Today, more attention is paid to the created knowledge, relying on the understanding of the customer's needs, as an important factor of competitiveness in the global economy. Therefore, companies are looking for the main element of understanding the customer. On the other hand, since the customer is a key member in achieving the organization's goals, it is necessary to give more importance to the customer's knowledge. Therefore, the need to manage customer knowledge is a challenge that the organization must face. Customer knowledge management is related to acquiring, sharing and expanding customer knowledge with the ultimate goal of increase subscription between customers and the organization.

In this article, the approach of knowledge management and understanding customer needs and its relationship with knowledge management and customer relationship management have been discussed.

One of the important strategies of knowledge management is creating work spaces that create and share knowledge, learning, and change in organizations. On the one hand, the expansion of information and communication technology tools and web 2 tools has provided a platform for the formation of a new type of work space, as a virtual work space, which causes collaboration and sharing of best practices and proficient advancement in the organization. The speed of changes and transformations, competition, informed and wise customers and increasing innovations, challenges and uncertainties are facing organizations in the future, which proves the necessity of paying special attention to the subject of knowledge management and its adaptation to future conditions. If we do not have a forward-looking view in the progress of knowledge management in an organization, the developmental measures of knowledge management will not be beneficial based on the knowledge needs of the future, in addition to the inability to solve the problem.

Both concepts of future research and knowledge management are about identifying the complexity and dynamics arising from the internal and external environment of organizations and address the knowledge requirement of managers to make decisions in such environments.

## Literature Review

Job communication satisfaction has attracted a lot of attention over the years, because employees are the main determinants of an organization's productivity. However, employees face various problems due to the changing and complex conditions of their environment. Employees with anxiety, depression or dissatisfaction show less quality and productivity at work (George & Zakkariya, 2015). By considering technology, culture and structure as knowledge management infrastructures, (Laupase, 2003) adopted a three-factor approach in order to assess capabilities of knowledge management and organizational effectiveness through data collected from senior executives.

(Lee & Choi, 2003) defined technology as the presence of information technology support in the organization. Technology capability refers to the basic structure of an organization's information technology, which includes hardware, software, network and internal and external databases (Pandey & Dutta, 2013). (Limbu et al., 2014) showed that there is a considerable relationship between technology and job satisfaction.

Organizational structure is the formal assignment of tasks and management mechanisms to maintain the alignment and integrity of work activities (Ghani et al., 2002). Organizational structure plays an important role in determining knowledge sharing and consequently employees' behavior and satisfaction and has a great impact on the use of technology, communication networks, facilitating participation and knowledge sharing in organizations (Pandey & Dutta, 2013). Assuming the presence of knowledge, (Hurley & Green, 2005) showed that reward, which is a critical structural factor, affects employees' behavior and decisions. Based on this, it is evident that the relationship between knowledge management structure and job communication satisfaction is significant.

Culture refers to the values, beliefs, principles, and behaviors that exist in an organization (Chou et al., 2011). According to (Farrell & Mavondo, 2004), the individuals' behavior in an organization is formed and controlled by organizational culture. (Lund, 2003) shows culture and job communication satisfaction have a positive and strong relationship.

In another study, (Magnier- Watanabe & Senoo, 2009) investigated the effect of culture and organizational characteristics on knowledge management. This study proved that the relationship between organizational characteristics and knowledge management is stronger than the relationship between organizational characteristics and culture. Therefore, there is a meaningful relationship between organizational characteristics and knowledge management and consequently knowledge management infrastructure.

According to (Delgado-Castro & Sánchez, 2019), entrepreneurial orientation is an innovative process in which new product and service opportunities are approved and created to produce more capabilities in order to provide new capital. The types of entrepreneurial activities that an organization pursues are often influenced by internal organizational factors (Burgelman, 1983). As a result, there is a positive and direct relationship between organizational characteristics and entrepreneurial orientation. Many studies have shown that employees' performance increases as their satisfaction improves.



However, little research has been done on the effect of entrepreneurial orientation on employees' job communication satisfaction. Nevertheless, (Adonisi, 2005) showed that relationship between entrepreneurial orientation and job communication satisfaction is significant.

### *Hypotheses and Conceptual Framework*

#### *Research Hypotheses*

- H<sub>1</sub>:** There is a relationship between organizational characteristics and technology.
- H<sub>2</sub>:** There is a relationship between organizational characteristics and structure.
- H<sub>3</sub>:** There is a relationship between organizational characteristics and culture.
- H<sub>4</sub>:** There is a relationship between organizational characteristics and entrepreneurial orientation.
- H<sub>5</sub>:** There is a relationship between technology and job communication satisfaction.
- H<sub>6</sub>:** There is a relationship between structure and job communication satisfaction.
- H<sub>7</sub>:** There is a relationship between culture and job communication satisfaction.
- H<sub>8</sub>:** There is a relationship between entrepreneurial orientation and job communication satisfaction.
- H<sub>9</sub>:** There is a relationship between organizational characteristics and job communication satisfaction

Figure 1. shows the conceptual model of present study, which presents the relationship between the research's variables.

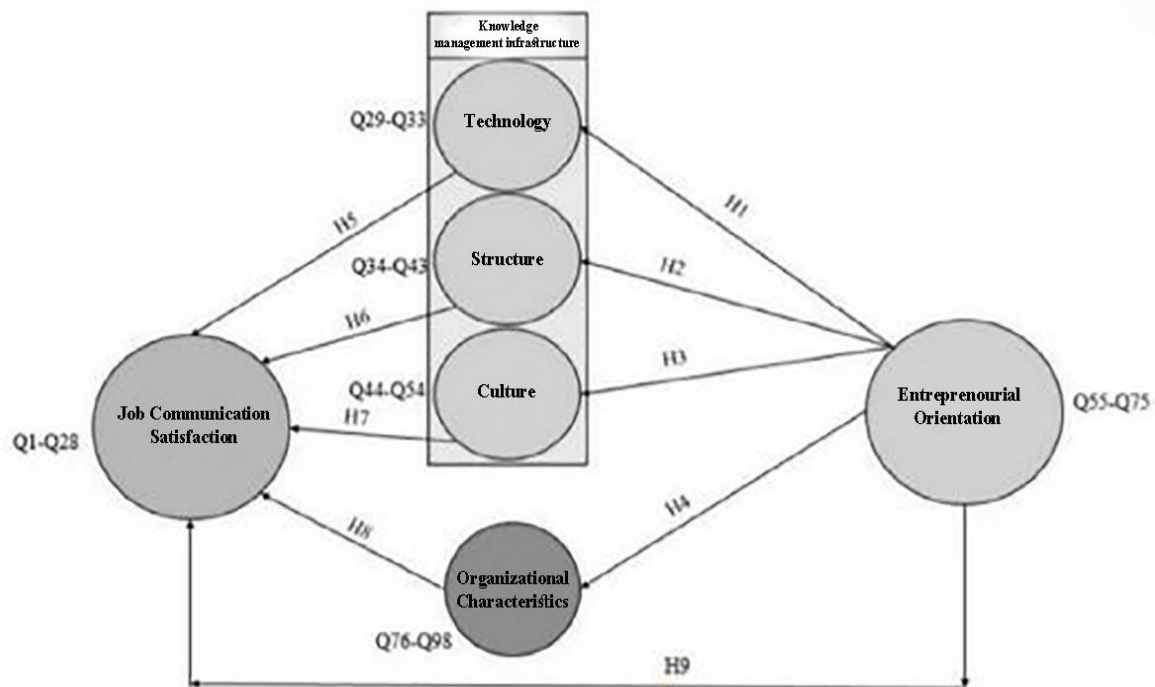


Figure 1. Conceptual Model of the Research

## Methodology

This research is a case study conducted at Iran's Atieh Sazan Hafez Company, which was purposefully selected and has 102 employees. This organization consists of 4 offices in Tehran. All 102 employees were selected for the study. Questionnaires were distributed offline among respondents. Given the support of the organization's management from this research, it was expected that this approach could achieve the maximum number of respondents. In order to avoid lost data, all questions were considered mandatory, so that all received answers could be used for analysis. The questionnaire generally included 98 questions in 7 main areas: 1) personal and organizational information, 2) organizational characteristics 3) technology, 4) structure, 5) culture, 6) entrepreneurial orientation and 7) job communication satisfaction. Questions related to each of these areas can be seen in Figure 1. Respondents also followed up to improve the response rate in order to ensure the generalizability of the research findings (Rea & Parker, 2005). A summary of the results regarding the demographic information of the participants is given in Table (1).

Table 1. Frequency and Percentage of Frequency of Demographic and General Information

Demographic and General Information	Category	Frequency	Percentage of Frequency
Gender	Male	35	34.4
	Female	67	65.6
Age	Less than 25	23	22.6
	25 to 35	57	55.8
	More than 35	22	21.6
Education	Diploma or lower	11	10.8
	Bachelor	54	52.9
	Master	28	27.5
	PhD	9	8.8
Job Title	Employee	91	89.2
	Manager	11	10.8
Working Experience	Less than 10 years	28	27.4
	10 to 20 years	59	57.9
	More than 20 years	15	14.7

The test tools as well as the relevant metrics used in this study were taken from previous studies. Organizational characteristics structural testing tools were taken from the article by (Hornsby et al., 1999). This structure consisted of 21 options. On the other hand, the test tools of (Covin & Slevin, 1989) and (Seibert et al., 2001) used for measurement the structure of entrepreneurial orientation, and the total number of options used for this structure was 23. Test tools and metrics developed by (Lee & Choi, 2003) utilized to measure the structure of knowledge management infrastructure. This structure used 26 options that covered the entire dimension of this structure. A Questionnaire was used to measure job communication satisfaction, which was developed by (Sharma, 2015) and included 28 questions in this area. Because behavior measurement can be best measured with a point Likert spectrum (Baker et al., 2010), respondents' answers to the test options were scored from 1 (very disagree) to 5 (very agree).

This study uses the partial least squares method (Wold, 1975) Structural Equation Modeling, and Smart PLS software is used according to the sample size and number of variables. The main idea of the partial least squares method is to first estimate the weight relations connecting a latent variable to its components and then to calculate the factor loads of each latent variable using weight relations based on the weighted average of its components and finally to use these factor loads to estimate parameters for structural relationships in sets of regression equations (Chin, 1998). Thus, first, the relationships between the existing measurement models are ensured using the reliability and validity criteria, and then the relationships in the structural part are examined and interpreted.

## Results

After collecting data for a month, almost all employees of the organization answered the questionnaires completely. Due to the mandatory response to all questions, no

questionnaire was deleted due to missing data. After data collection, a response rate of more than 98% was obtained. This response rate was sufficient for statistical analysis (Krejcie & Morgan, 1970).

The reliability of test tools should be considered to improve the validity of research findings. According to (Borg & Gall, 1979), the transparency of questions in the data collection process must be ensured. To ensure the reliability of the test instruments, a reliability test was performed for all the structures under study. Cronbach's alpha for each area of the questionnaire and the whole questionnaire was a above 0.7 that was sufficient to support the reliability of the test instruments and to ensure the validity of the research findings (DeVellis, 1991). Table (2) lists Cronbach's alpha values for each of the questionnaire areas separately.

Table 2. Reliability Indicators

Variables	Cronbach's Alpha Values
Entrepreneurial Orientation	0.907
Job Communication Satisfaction	0.957
Structure	0.772
Culture	0.913
Technology	0.875
Organizational Characteristics	0.907

First, the conceptual model of the research was fully implemented and according to the results, the indicators that had a factor load of less than 0.5 or a t-statistic of less than 1.96 were removed, and the modified model was re-implemented. Results are indicated in Figures (2) and (3).

In order to analyze the structure of the questionnaire and discover the factors that make up each structure, factor loads have been used. The results of factor loading of research variables are summarized in the above figures. All values of factor loads are greater than 0.5, and the calculated values of t for each of the factor loads are more than 1.96 (at a significance level of less than 0.05). Therefore, the alignment of the questionnaire questions to measure the concepts can be shown at this point. The results of factor analysis showed that all indicators related to each of the areas of the questionnaire have acceptable t values (more than 1.96) and factor loads (more than 0.5) and were considered suitable indicators for job satisfaction.

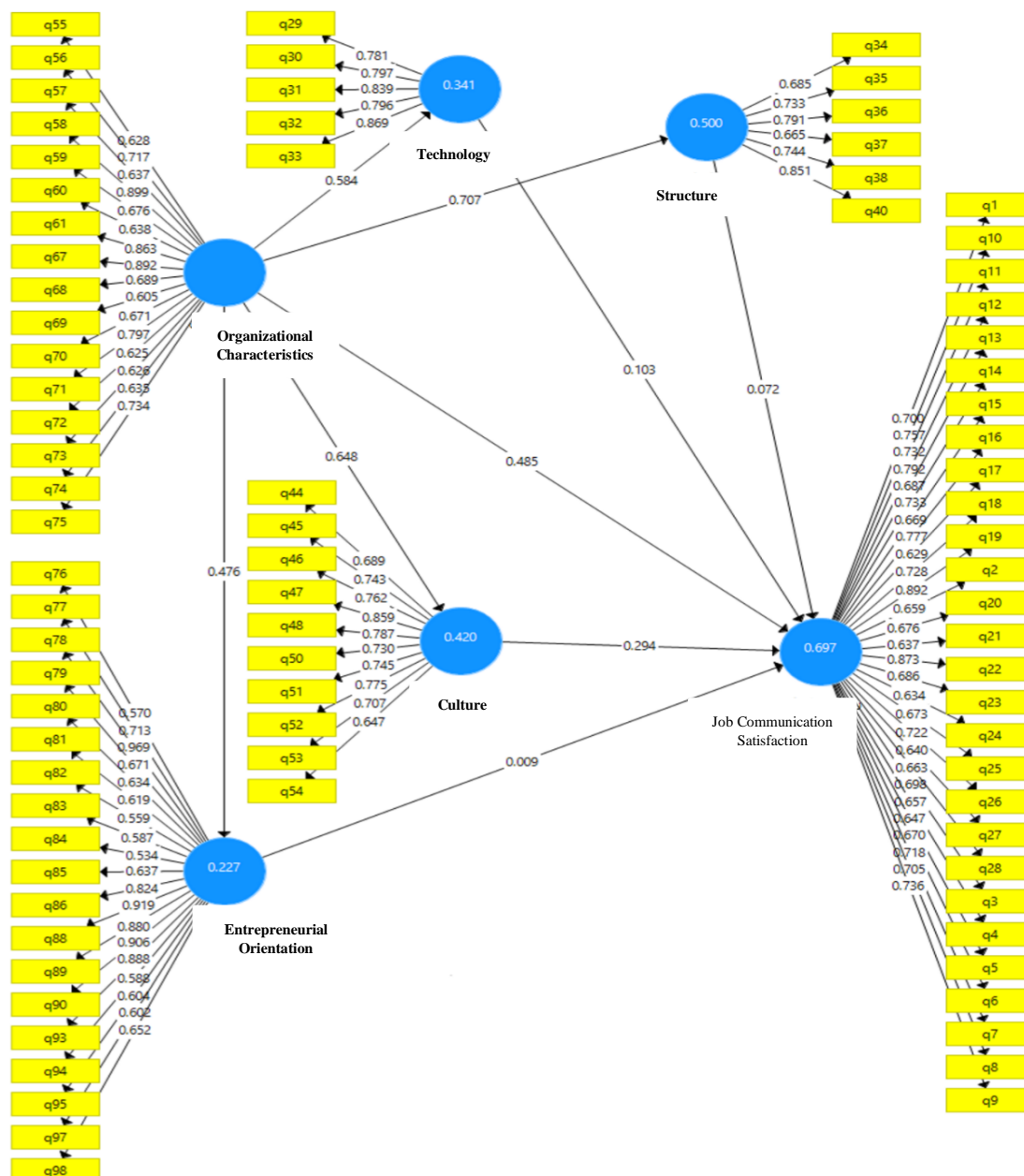


Figure 2. The Structural Equation Model in Path Coefficient Estimation

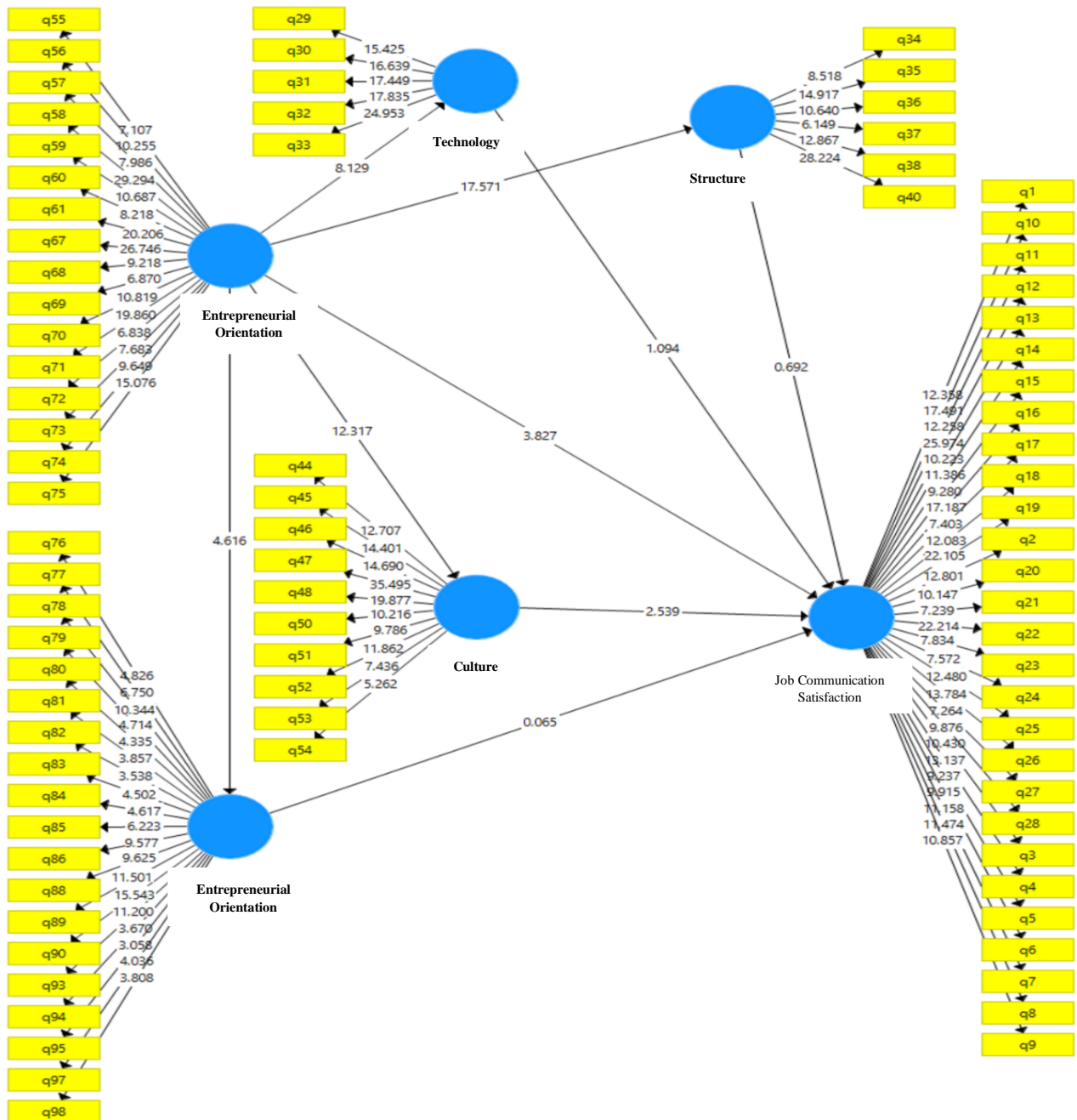


Figure 3. The Structural Equation Model in the Significant State of Coefficients



Table 3. Path Coefficients and T-statistics (Predictive Variable: Organizational Characteristics)

Dependent Variables	Path Coefficients	t-statistics
Technology	0.584	8.129
Structure	0.707	17.571
Culture	0.648	12.317
Entrepreneurial Orientation	0.476	4.616

According to Table (3), based on the amount of path coefficient, which is 0.584 and the amount of t-statistic with a value of 8.129, it is evident that there is a positive and significant relationship between organizational characteristics and technology at 99% confidence level. Therefore, hypothesis H1 is significant and is confirmed.

According to the amount of path coefficient (0.707) and the amount of t-statistic with a value of 17.571, there is a positive and meaningful relationship between organizational characteristics and structure at 99% confidence level. Therefore, the second hypothesis is confirmed. Considering the path coefficient of 0.648 and t-statistic with a value of 12.317, it can be said that there is a positive and significant relationship between organizational characteristics and culture at 99% confidence level. Therefore, hypothesis is confirmed. Considering the path coefficient of 0.476 and t-statistic with a value of 4.616, it can be said that there is a positive and significant relationship between organizational characteristics and entrepreneurial orientation at 99% confidence level. Therefore, hypothesis H4 is significant and is confirmed.

Table 4. Path Coefficients and T-statistics (Dependent Variable: Job Communication Satisfaction)

Predictive Variables	Path Coefficients	t-statistics
Technology	0.103	1.094
Structure	0.072	0.692
Culture	0.294	2.539
Entrepreneurial Orientation	0.009	0.065
Organizational Characteristics	0.485	3.827

According to Table (4), by considering the path coefficient of 0.103 and t-statistic with a value of 1.094, it is evident that at 95% confidence level, there is no significant relationship between technology and job satisfaction. Therefore, hypothesis 5 is not significant and is not confirmed. According to the amount of path coefficient, which is at 0.072 and the amount of t-statistic with a value of 0.692, there is no significant relationship between structure and job satisfaction at 95% confidence level. Therefore, hypothesis H6 of the research is not significant and is not confirmed.

The amount of path coefficient ,0.294, and the mount of t-statistic with a value of 2.539, there is a positive and significant relationship between culture and job satisfaction at 95% confidence level. Therefore, hypothesis H7 is significant and is confirmed. Based on the path coefficient, which is 0.009 and t-statistic with a value of 0.065, the results

indicate that at 95% confidence level, there is no meaningful relationship between entrepreneurial orientation and job communication satisfaction. Therefore, hypothesis H8 is not significant and is not confirmed. Considering the path coefficient of 0.485 and t-statistic with a value of 4.827, it can be said that there is a positive and significant relationship between organizational characteristics and job communication satisfaction at 99% confidence level. Therefore, hypothesis H9 is significant and is confirmed.

Table 5. The Results of the Criterion  $R^2$

Structures	$R^2$
Entrepreneurial Orientation	0.227
Job Communication Satisfaction	0.697
Structure	0.500
Culture	0.420
Technology	0.341

Table 6. The Results of the Criterion  $Q^2$  of the Endogenous Structures

Structures	$Q^2$
Entrepreneurial Orientation	0.137
Job Communication Satisfaction	0.307
Structure	0.208
Culture	0.205
Technology	0.210

### *Criteria $R^2$ and $Q^2$*

The criterion  $R^2$  is used for examining the fit of a structural model in a research, and the coefficients of  $R^2$  are related to endogenous (dependent) latent variables of the model.  $R^2$  is a criterion that shows the impact of an exogenous variable and an endogenous variable, and the values of 0.19, 0.32 and 0.67, respectively, are considered as the owner for the weak, medium and strong for it (Chin, 1988). The results of the criterion  $R^2$  for the structures of this research are indicated in the table (5).

The Criterion  $Q^2$  also determines the predictive power of a model and if the value for an endogenous structure achieves three values of 0.02, 0.15 and 0.35, it indicates the weak, medium and strong predictive power of the related exogenous structures. The results of Table 6 show the appropriate predictive power of this model regarding the endogenous structures of the research and confirm the appropriate fit of the structural model.

### *Redundancy Criterion*

The redundancy criterion is an indicator of the quality of a structural model for each endogenous variable according to its measurement model. This criterion analyzed through multiplying the common values of the structures by their corresponding  $R^2$  values and indicates the amount of variation of the indicators of an endogenous structure that is

influenced by one or more exogenous structures. The higher the amount of redundancy is, the better the structural part of the model in a study is compatible.

Table 7. The Results of the Redundancy of the Endogenous Structures

Structures	R <sup>2</sup>	Communality	Redundancy
Entrepreneurial Orientation	0.227	0.505	0.114
Job Communication Satisfaction	0.697	0.504	0.351
Structure	0.500	0.559	0.279
Culture	0.420	0.557	0.233
Technology	0.341	0.668	0.227
The Total Amount of Redundancy			0.241

### *Goodness of Fit Criterion*

The goodness of fit criterion (GoF) depends on the general part of the structural equation models. This means that by examining the fit of the measurement and structural part of the research, the fit of the general part can also be controlled through this criterion (Tennhaus et al., 2004). For this criterion, the values 0.01, 0.25 and 0.36 are represented as weak, medium and strong, respectively. Considering that the value obtained for the goodness of fit index (0.490) is greater than 0.36 so that the present model has a strong fit.

Table 8. The Results of R<sup>2</sup> and Communality

Structures	R <sup>2</sup>	Communality
Entrepreneurial Orientation	0.227	0.505
Job Communication Satisfaction	0.697	0.504
Structure	0.500	0.559
Culture	0.420	0.557
Technology	0.341	0.668
Organizational Characteristics	-	0.511
GoF	0.437	0.437
	0.490	

### **Discussion and Conclusion**

This research tested four hypotheses to examine the relationship of organizational characteristics and knowledge management infrastructure with entrepreneurial orientation, four hypotheses to examine the relationship of knowledge management infrastructure and entrepreneurial orientation with job communication satisfaction and one hypothesis to examine the relationship between organizational characteristics and employees' job communication satisfaction. Based on the statistical analysis, six hypotheses were confirmed, but the hypotheses related to technology and job communication satisfaction, structure and job communication satisfaction, as well as entrepreneurial orientation and job communication satisfaction were not confirmed.

The first, second and third hypotheses of the study were confirmed. These hypotheses were about the correlation between organizational characteristics and knowledge management infrastructure. (Baskaran, 2018) indicated that organizational characteristics affect technology, structure and culture as knowledge management enablers, positively. (Zahra & Nielsen, 2002) also showed that technology can improve group coordination because it leads employees to solve problems collaboratively.

The fourth hypothesis of the study (the relationship between organizational characteristics and entrepreneurial orientation) was confirmed. This issue is also in line with Baskaran's (2018) research which shows the relationship between organizational characteristics and entrepreneurial orientation mediated by knowledge management enablers.

The fifth hypothesis (the relationship between technology and job communication satisfaction) was not confirmed. Contrary to the results of this study, the results of previous research show that providing such tools to employees makes their tasks easier in the organization and increases communication satisfaction. When the organization invests in technology, it affects the employees' perception of the organization and improves their job communication satisfaction. The reason for the contradiction between the results obtained in this study and previous research is the lack of knowledge of the managers of the organization under study about the relevant technologies and, as a result, the lack of attention to employees familiar with those technologies, which discourages them from using the technology.

The sixth hypothesis of the study (the relationship between structure and job communication satisfaction) was not confirmed, though studies conducted by (Willem et al., 2007) and (Kessler, 2007) showed the opposite and concluded that organizational structure has a positive effect on employees' job communication satisfaction. The reason for the alignment of these results with the results of other similar research is that they have been conducted in the developing countries. Like the present research, these researches have also been done in a hierarchical structure, while the studies that are inconsistent with the present study have been conducted in an organization with a non-hierarchical structure.

The seventh research hypothesis (the relationship between culture and job communication satisfaction) was confirmed. This is also consistent with the results of some previous research. Researchers such as (Silverthorne, 2004), (Bellou, 2010), (Boerebach et al., 2012) and (Masum et al., 2015) obtained similar results. On the other hand, some other research found that there is no relationship between culture and job communication satisfaction (Sabri et al., 2011). This may be due to the cultural differences among the countries studied by the researchers.

The eighth research hypothesis (the relationship between entrepreneurial orientation and job communication satisfaction) was not confirmed. This is contrary to the findings of previous research such as those conducted by (Giordani, 2008), (Callaghan, 2009), (Sriprasert, 2013) and (Sajeva & Rybakovas, 2011) which showed that entrepreneurial orientation has a positive effect on job communication satisfaction. This contradiction is also due to the level of importance given by the organizations to the entrepreneurial spirit

in performing tasks. Previously studied organizations paid special attention to this issue, but the organization studied in this research only emphasizes on performing defined tasks and does not give much value to entrepreneurial orientation.

The ninth hypothesis (the relationship between organizational characteristics and job communication satisfaction) was confirmed. This issue was also confirmed in the research by (Lambert & Paoline, 2008). In addition, (Currivan, 1999), (McGivern & Tvorik, 1997) and (Lund, 2003) demonstrated the existence of a meaningful relationship between the various dimensions of organizational characteristics and job communication satisfaction. Finally, the final model of the research after rejecting the relevant hypotheses is as follows:

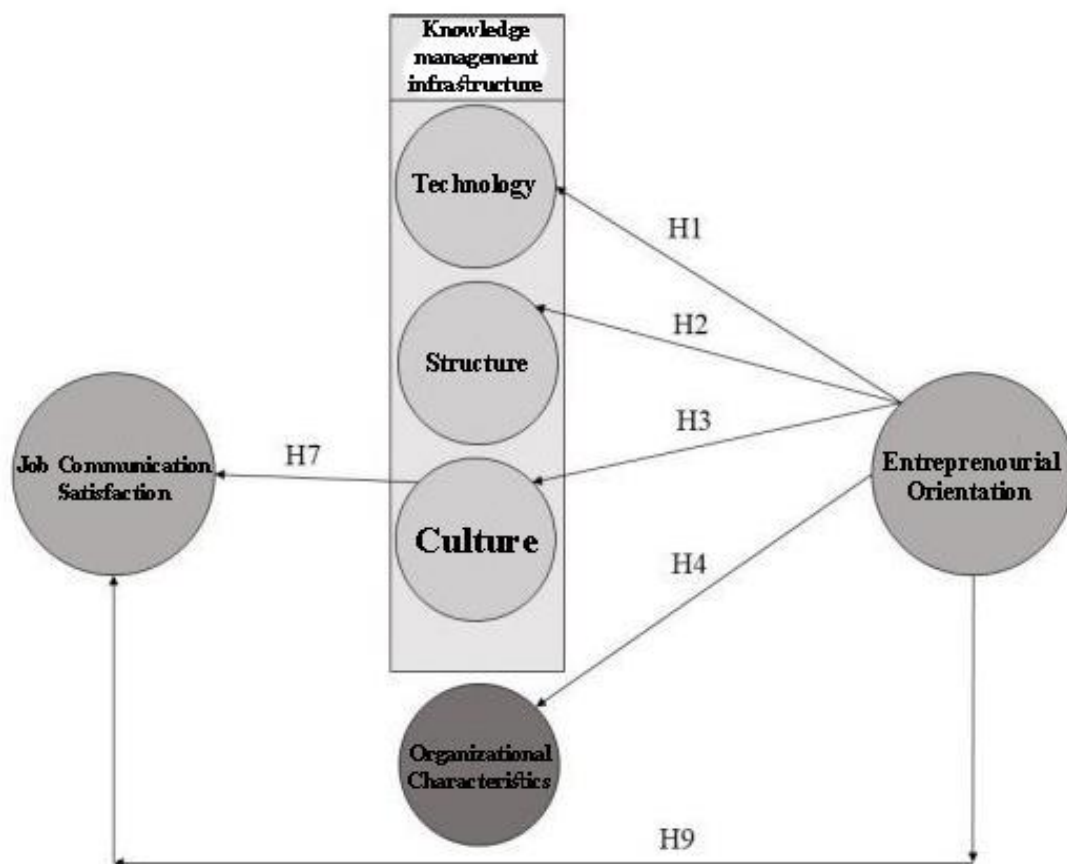


Figure 4. The Final Conceptual Model of Research

In short, organizational characteristics improve the quality of all aspects of knowledge management infrastructure in the organization and also increase the entrepreneurial orientation in the behavior of employees. Dimensions of knowledge management infrastructure can also affect employee's job communication satisfaction. Satisfaction with business relationships is important at all levels of an organization. However, providing such satisfaction to employees depends on the availability of various dimensions of knowledge management infrastructure and the organization's capability to provide such satisfaction to employees. Based on the studies performed and empirical evidence presented in this study, cultural aspect of knowledge management infrastructure is very important to create job communication satisfaction in employees. In addition, organizational characteristics themselves are effective in increasing job communication satisfaction, though entrepreneurial orientation does not play an effective role in increasing job communication satisfaction based on the results of the present study.

Due to time constraints, this study focused only on Iran's Atieh Sazan Hafez Company. Applying the results of this research in the strategy of knowledge management promotes evaluation and improvement of job satisfaction of experts and managers of Atieh Sazan Hafez Company and ultimately improves the evaluation of the whole organization. Data analysis using structural equation method measures all knowledge management infrastructures, employees' job satisfaction and entrepreneurial orientation of the organization and presenting such indicators and methods improves the attitude of managers in evaluating the organization's knowledge management and employees' job satisfaction.

According to the framework and findings of this study, the following suggestions are presented as guidelines for future research:

1- Knowledge management infrastructure is considered one of the effective factors in promoting job satisfaction and job communication. Thus, in future research, appropriate knowledge management infrastructure can be examined to properly lead to increased job satisfaction and job communication;

2- In future research, we can consider the neglected variables in the study of organizational characteristics, knowledge management infrastructure, entrepreneurial orientation and job communication satisfaction, and examine their interaction with each other in detail. This may lead to the discovery of more findings;

3- The model presented in this research can be tested in other environments such as private offices or even other countries to ensure the generalization of the findings.

In the continuation of this research, some suggestions can be presented in the applied fields:

1- In order to create a suitable environment for the accomplishment of knowledge management system and thus improve the performance of the organization, it is suggested to provide the necessary conditions for continuous training and learning of employees. Creating the culture of organizations that encourages creativity and innovation of



employees will also improve the performance of knowledge management and thus improve job satisfaction.

2- Considering that the implementation of knowledge management in the organization is significantly dependent on the support from senior managers in providing its infrastructure such as culture and technology, it is therefore suggested that the managers of the organization consider this seriously through various methods, including active participation in various stages of the knowledge management implementation process, supporting the distribution and sharing of knowledge in the organization and involving the level of knowledge performance of individuals in performance evaluation systems.

3- Considering that technology is an important component in the knowledge management infrastructure, developing and strengthening the necessary technical infrastructures such as network communication, citation management, search engines and information retrieval databases and, integrating and updating the organization's information systems, facilitating employees' access to knowledge and information related to their field of work by using new information and communication technologies, etc. are among other suggestions that can improve the process of implementing knowledge management and thus improve organizational performance and increase job communication satisfaction.



## References

- Adonisi, M. (2005). *The relationship between corporate entrepreneurship, market orientation, organisational flexibility and job satisfaction* University of Pretoria].
- Baker, L. R., Stephens, F., & Hitchcock, L. (2010). Social work practitioners and practice evaluation: How are we doing? *Journal of Human Behavior in the Social Environment*, 20(8), 963-973.
- Bakotic, D. (2012). Job satisfaction of knowledge workers in Croatian companies. *The Journal of International Management Studies*, 7(2), 53-60.
- Baskaran, S. (2018). Mediation effect of knowledge management enablers on the relationship between organizational characteristics and entrepreneurial orientation. *Gadjah Mada International Journal of Business*, 20(1), 1-32.
- Bellou, V. (2010). Organizational culture as a predictor of job satisfaction: the role of gender and age. *Career development international*.
- Boerebach, B. C., Lombarts, K. M., Keijzer, C., Heineman, M. J., & Arah, O. A. (2012). The teacher, the physician and the person: how faculty's teaching performance influences their role modelling. *PloS one*, 7(3), e32089.
- Borg, W. R., & Gall, M. (1979). Educational Research: An Introduction to Research. In: London: Longman.
- Burgelman, R. A. (1983). Corporate entrepreneurship and strategic management: Insights from a process study. *Management science*, 29(12), 1349-1364.

- Callaghan, C. W. (2009). *Entrepreneurial orientation and entrepreneurial performance of central Johannesburg informal sector street traders* University of the Witwatersrand].
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
- Chou, Y.-C., Fu, L.-y., Kröger, T., & Ru-Yan, C. (2011). Job satisfaction and quality of life among home care workers: a comparison of home care workers who are and who are not informal carers. *International Psychogeriatrics*, 23(5), 814-825.
- Chow, W. S., & Chan, L. S. (2008). Social network, social trust and shared goals in organizational knowledge sharing. *Information & management*, 45(7), 458-465.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic management journal*, 10(1), 75-87.
- Curry, D. B. (1999). The causal order of job satisfaction and organizational commitment in models of employee turnover. *Human resource management review*, 9(4), 495-524.
- Delgado-Castro, C. G., & Sánchez, H. V. V. (2019). Social Innovation and social entrepreneurship: Bibliographic Review. *Revista Científica FIPCAEC (Fomento de la investigación y publicación en Ciencias Administrativas, Económicas y Contables)*. ISSN: 2588-090X. *Polo de Capacitación, Investigación y Publicación (POCAIP)*, 4(4), 486-509.
- DeVellis, R. (1991). Scale development. Newbury Park. In: CA: Sage.
- Farrell, M., & Mavondo, F. T. (2004). The effect of downsizing strategy and reorientation strategy on a learning orientation. *Personnel Review*.
- George, E., & Zakkariya, K. (2015). Job related stress and job satisfaction: a comparative study among bank employees. *Journal of Management Development*.
- Ghani, K. A., Jayabalan, V., & Sugumar, M. (2002). Impact of advanced manufacturing technology on organizational structure. *The Journal of High Technology Management Research*, 13(2), 157-175.
- Giordani, L. G. (2008). Entrepreneurial Orientation and Subjective Well-being: a Comparison of Employed and Self-Employed Motivation and Commitment (Summary). *Frontiers of Entrepreneurship Research*, 28(4), 8.
- Gupta, V. K., & Dutta, D. K. (2018). The rich legacy of Covin and Slevin (1989) and Lumpkin and Dess (1996): A constructive critical analysis of their deep impact on entrepreneurial orientation research. In *Foundational research in entrepreneurship studies* (pp. 155-177). Springer.

- Hornsby, J. S., Kuratko, D. F., & Montagno, R. V. (1999). Perception of internal factors for corporate entrepreneurship: A comparison of Canadian and US managers. *Entrepreneurship Theory and Practice*, 24(2), 9-24.
- Hurley, T. A., & Green, C. W. (2005). Knowledge management and the nonprofit industry: A within and between approach. *Journal of Knowledge Management Practice*, 6(1), 1-10.
- Kessler, S. R. (2007). The effects of organizational structure on faculty job performance, job satisfaction, and counterproductive work behavior.
- Kianto, A., Vanhala, M., & Heilmann, P. (2016). The impact of knowledge management on job satisfaction. *Journal of knowledge management*.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Lambert, E. G., & Paoline, E. A. (2008). The influence of individual, job, and organizational characteristics on correctional staff job stress, job satisfaction, and organizational commitment. *Criminal Justice Review*, 33(4), 541-564.
- Laupase, R. (2003). The process of converting consultants' tacit knowledge to organisational explicit knowledge: Case studies in management consulting firms. In *Knowledge Management: Current Issues and Challenges* (pp. 212-225). IGI Global.
- Lee, H., & Choi, B. (2003). Knowledge management enablers, processes, and organizational performance: An integrative view and empirical examination. *Journal of management information systems*, 20(1), 179-228.
- Limbu, Y. B., Jayachandran, C., & Babin, B. J. (2014). Does information and communication technology improve job satisfaction? The moderating role of sales technology orientation. *Industrial Marketing Management*, 43(7), 1236-1245.
- Lund, D. B. (2003). Organizational culture and job satisfaction. *Journal of Business & Industrial Marketing*.
- Magnier- Watanabe, R., & Senoo, D. (2009). Congruent knowledge management behaviors as discriminate sources of competitive advantage. *Journal of Workplace Learning*.
- Masum, A. K. M., Azad, M. A. K., & Beh, L.-S. (2015). Determinants of academics' job satisfaction: Empirical evidence from private universities in Bangladesh. *PloS one*, 10(2), e0117834.
- McGivern, M. H., & Tvorik, S. J. (1997). Determinants of organizational performance. *Management Decision*.

- Oluwunmi, A., Emeghe, I., Oluwadamilola, A., Fulani, O., Peter, N., & Akinjare, O. (2017). Gender inequality and women discrimination in real estate firms in Lagos State, Nigeria.
- Pandey, S. C., & Dutta, A. (2013). Role of knowledge infrastructure capabilities in knowledge management. *Journal of knowledge management*.
- Pannu, H. (2017). The impact of knowledge management infrastructure on organizational performance in SMEs. *International Journal of Human Resource & Industrial Research*, 4(2), 26-31.
- Sabri, P. S. U., Ilyas, M., & Amjad, Z. (2011). Organizational culture and its impact on the job satisfaction of the University teachers of Lahore. *International Journal of Business and Social Science*, 2(24).
- Sajeva, S., & Rybakovas, E. (2011). The relationship between social entrepreneurship and subjective well-being. *Proceeding of EBRF*.
- Seibert, S. E., Kraimer, M. L., & Liden, R. C. (2001). A social capital theory of career success. *Academy of management journal*, 44(2), 219-237.
- Sharma, P. R. (2015). *Organizational communication: Perceptions of staff members' level of communication satisfaction and job satisfaction* [East Tennessee State University].
- Silverthorne, C. (2004). The impact of organizational culture and person- organization fit on organizational commitment and job satisfaction in Taiwan. *Leadership & Organization Development Journal*.
- Sriprasert, P. (2013). The effect of entrepreneurial orientation on the success of community enterprise: A study of Nakhon Si Thammarat, Thailand. *International Proceedings of Economics Development and Research*, 59, 158.
- Willem, A., Buelens, M., & De Jonghe, I. (2007). Impact of organizational structure on nurses' job satisfaction: A questionnaire survey. *International journal of nursing studies*, 44(6), 1011-1020.
- Wold, H. (1975). Path models with latent variables: The NIPALS approach. In *Quantitative sociology* (pp. 307-357). Elsevier.
- Yilmaz, S. M., Çelebi, Ç. D., & Çakmak, E. (2014). Job satisfaction level of academicians in faculty of education. *Procedia-Social and Behavioral Sciences*, 116, 1021-1025.
- Zahra, S. A., & Nielsen, A. P. (2002). Sources of capabilities, integration and technology commercialization. *Strategic management journal*, 23(5), 377-398.

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