



Majid Mumtaz \*

Wisal Ahmad †

Yousaf Khan ‡



## Determinants of Corporate Cash Holdings in Hospitality Sector of United States of America: Using Two-Step System GMM

**Abstract** *This study investigates the determinants of cash holding in the Hospitality sector in the USA for the period of 14 years from 2005-to 2018. The selection of 2005 as a base year was due to Thomson Reuter Data Stream registered with International Classification Benchmark (ICB). Determinants i.e. LVG, CF-V, and LQTY, have a positive impact, while SZE, CP-EXP, GR\_OPP, CACF, A-INT, DDD, and SX have a negative impact on cash holding. Furthermore, model 2 shows a sub-sector where Restaurant & bar is taken as a reference year. Airlines companies retain excess for their operating activities while Hotel is found significant but prevail a negative coefficient. So, they may easily access to financial market easily. Unfortunately, other sub-sector, i-e, gambling, recreational activities, and tours & Travels, are found insignificant. The estimated sign prevails that there is no issue of autocorrelation. While Ho of Hansen's test indicates that there is no issue of explanatory variable and error terms.*

**Key Words:** Determinants, Hospitality Sectors, GMM

### Introduction

Due to the collapse of the economy, all corporations' involvement in the Second World War in the United States plummeted. The majority of men and women were unemployed, with unemployment reaching a rate of 25%. The government is still attempting to recover from the Great Depression and lower the unemployment rate. The terms "bankruptcy" and "liquidation" of firms were commonly used by the United States government. In this tense circumstance, the US government's offers in the US have a huge influence. However, following then, most financial institutions give low-interest rates to corporations in order to ensure their survival for day-to-day operations, debt repayment, and financing for technology advancement initiatives. The hospitality sector (HS) in the United States of America (USA) is one of the most important industries for increasing host country income. With the passage of time, its income increased in comparison to other sectors, and its booking value was 116 billion in US

dollars in 2009, and was 125 billion in 2017 in US dollars. Furthermore, the region-wise recorded 280 billion US dollars in 2018, which was double its revenue in the early 2000s. The regions wise recorded high growth fluctuation in revenue, but suddenly, it dropped to 152 US dollars in 2008 and 133 US dollars in 2009 due to global recession periods. Following that, as a result of the advancement of technology and the digitization of their services, they draw tourists from all over the globe, both domestically and internationally. These companies are more attractive, competitive, capital-intensive, and risk-bearing companies because these enterprises provide substantial income and refreshment for the government; the US government is also playing a dynamic role for these companies, giving different facilities for their expansion and other facilitation services, However, because too low barriers to entry and exit for businesses, as well as competitors, ongoing expansion and up-gradation are essential to deal with dangerous

\* PhD Candidate, Institute of Business Leadership, Abdul Wali Khan University, Mardan, KP, Pakistan.

Email: [majidphd8049@gmail.com](mailto:majidphd8049@gmail.com)

† Assistant Professor, Abdul Wali Khan University, Mardan, Kpk, Pakistan.

‡ National University of Modern Languages (NUML).

scenarios. If a corporation wishes to last a long time, it will embrace a variety of conditions, such as laws and regulations, process, taste, culture, and customs. HS is characterized by fierce rivalry, high debt, and capital-intensive and risk-taking businesses. The degree of competition is rising day by day as a result of low barriers to entry and existence for any investment. Furthermore, with the advent of new technologies, the globe becomes more interconnected, increasing competitiveness, and those that win the race have surplus reserve cash for operating their financial and non-financial businesses or can readily access the capital market at the lowest transaction cost. HS is a high leverage company, especially for a large size. Due to extensive and up-to-date operating activities, enterprises contact the financial market for access funds, particularly in the airline and travel and tourism sectors, because their operating activities span borders and require cash for survival. Debt financing is sometimes less expensive than equity financing, and its maturity date returns the principal amount as well as the interest amount, improving profitability efficiency. HS also refers to firms that require a large amount of capital; the availability of land and buildings helps companies increase their sales volume. It may be mortgaged for a period of time in order to have access to the financial market. Attracting customers from all around the world is dependent on providing up-to-date service. When a country has excessive volatility, it affects the financial capability of capital market institutions, making it harder for him to maintain his holdings. As a result, keeping certain reserve cash is advantageous for the company's survival in a market.

## Objectives

- To explore the determinants of holding cash that might positively or negatively influence in Hospitality sector of the USA.
- To investigate subsectors in the Hospitality sector of the USA and display the consequence of determinants on relevant cash holdings.

- Additionally, explore the involvement of these determinants consistent with the pertinent theories in a trend that will contribute to the financially in literature?

## Research Questions

- What are the effect of determinants of holding cash that may positively or negatively influence in the Hospitality sector of the USA?
- What are the subsectors in the Hospitality sector of the USA?
- What is the effect of determinants in cash holding consistent with the pertinent theories in trend which will contribute to them financially in the literature?

## Underline Theories

### Trade-Off-Theory

This theory is concerned with optimizing the level of cash holding to gain the opportunity cost and lessen the transaction cost ([Al-Najjar & Belgitar, 2011](#) [Martinez et al., 2013](#). [Ferriera & Vilela \(2004\)](#) argued that companies might gain three advantages if they reserve cash according to the law of Trade-off theory. Firstly, it's trim down the bankruptcy and liquidation, Secondly, it removes the barrier for investment in advanced projects and gain economies of scale, and the third one is to diminish the transaction cost when receiving money from an outside source. [Opler \(2011\)](#) analyzed two motives from this theory two transaction motives and precautionary motives. Under the transaction motive, a company retains cash for the operation of day-to-day activities while retaining cash as a precautionary motive for the unseen situation.

### Pecking Order-Theory

This theory is put forward by [Myers & Majluf \(1984\)](#) affirmed that Companies investing in any advanced projects should utilize their retained earnings with top priority, in case of emergency, divert the vessels towards other sources. To Following the hierarchal model, companies' priority is retained earnings, secondary priority

is the access of capital with ease conditions (Safety debts if not available, then approach to the financial institutions with difficult conditions (Risky debts), and the last option is acquiring funds issuing of share and debenture to the general public through the primary and secondary financial market. Due to fluctuation in the USA, sometimes rates of interest are very high to access financial institutions, so, in this regard, utilization of reserve funds may gain the opportunity cost or economies of scale (Ferreira & Vilela, 2004). The USA is matched up with multiple continents with huge investment prospects. For instance, Restaurants, Airlines & Entertaining activities require extraordinary capital to access the financial market. Obviously, an increased profit margin prefers an internal source of funds instead of an external source Vatavu (2012).

### **Free Cash-Flow Theory**

This theory is presented by [Jensen \(1986\)](#) stated that there are two parties involved, one is called the investor of capital, and the other one is called the business operator (Manager) who's runs the business. If the Investor and Manager's Cause of action are the same, then the value of firms increases day by day, and they utilize the cash reserve to improve the production capacity as well as invest in advanced, sophisticated technology, while if there are conflict between the aforesaid two parties. The Manager uses the reserve funds for their own benefits, which damages the norm of business in Industries. They invest the reserve funds for useless projects which less profit or even zero percent profit received to these firms. So, in this regard, the investor keen to observe the activities of the Manager to reduce the control of management in various tactics (Abbas Ali, 2013).

### **Literature and Hypotheses**

Firm sizes identify the overall structure of the business. It covers small-scale businesses to multinational companies. [Kim et al. \(1998\)](#) describe that most companies working in the economy of the USA retain less cash and may easily access the capital market. Hospitality

Sector retains less cash because they have an approach toward multiple countries and easy access to the capital market. Various scholars found an Inverse relationship between Firm size and Cash holding. Such as (Olper et al, 1999; Ferrira & vilela, 2004; [Al-Najjar & Balghitar, 2011](#); [Nyborg & Wang, 2014](#); [Bashir, 2014](#); Chooouhan, 2018, [Mumtaz, 2020](#)), while some found insignificant associations b/w cash holding and firm size. Guney et al, 2007; [Ozkan & Ozkan 2004](#); Teruel et al, 2008). The hypothesis is generated given below:

**Hypo 1:** Cash holding & firm size have a negative relationship.

Higher leverage-oriented companies are riskier as compared to a generated internal source of funds because a very bit mistake divert the profitable company towards bankruptcy and liquidation. So, in this regard, holding of cash is compulsory. [Ali & Yusaf \(2013\)](#) analyzed that registered companies in the German stock exchange reserve more cash for advance projects and the purchase of raw materials. Different scholars have found a positive relationship between cash holding and leverage, for instance ([Bashir, 2014](#); [Gill & Shah, 2012](#); [Islam, 2012](#); [Mumtaz, 2020](#)), while some other empirical result found an inverse relationship between cash holding and leverage because they may easily access to the capital market with least cost of interest ([Ferreira and Vilela, 2004](#); and D'Mello et al., 2008). The Hypothesis is generated as given below.

**Hypo 2:** The association between found Cash holding and relevant Leverage is Positive/Negative.

Capital expenditure is one of the crucial parts of the business. For survival in the market, constant investment is required, such as the Purchase of Raw Material in peak seasons, a gain of economies of scale, Improvement in existing machinery and yards, Adoption of new sophisticated technology equipments, Renovation of existing business. [Singal \(2005\)](#) describes that capital Expenditure is the main

part of the business. [Maheshwari and Rao, \(2017\)](#) stated that the Hospitality sector retains less cash and may easily approach towards capital market. So, there is a negative relationship between cash holding and capital expenditure, while Airlines and Recreational companies retain excess cash because they operate on multiple continents, and liquid cash is used in an emergency situation which supports the precautionary of cash. So, in this situation, there is a positive relationship between cash holding and capital expenditure. A fooling hypothesis has been thought:

**Hypo 3:** Cash holding and Capital expenditure are negatively associated.

The strategy of USA Companies is to retain excess cash for growth opportunities because of their activities across the border. As per the trade-off theory, reserve funds save the opportunity cost with investing in advanced growth opportunities (Kuzey, 2014). As per pecking order theory, reserve and massive cash offer the opportunity in various projects. So, there is a positive relationship between cash holding and growth opportunity, validated the following authors ([Kim et al, 2011](#); kuzay, 2014). Furthermore, As per free cash flow theory found an inverse relationship between cash holding and growth opportunity. Most manager reserve fund utilizes for less useful project, which reduce retain earning capacity. Ferriera & Vilela (2004) found an inverse relationship between Growth opportunity and cash holding. The hypothesis generated as given below:

**Hypo 4:** Growth opportunity and cash holding are positively associated.

Liquidity is used an alternate solution of cash. In case of an emergency, the company may sold the liquid asset in easily. [Bates et al. \(2009\)](#) define liquidity as an alternate source that may be easily converted into cash without waste of time. Most scholars found an inverse association between cash holding and liquidity. The hypothesis is generated as given below.

**Hypo 5:** There is a negative association between cash holding and Liquidity

Cash flow is generated from three measures: Cash flow (CF) from operating activities, cash flow from financing activities, and cash flow from investment activities. But the most important is cash flow from operating activities. The influx of cash a firm may easily operate its a day to day activities and save the opportunity cost. Furthermore, it supports the transaction motives. Trade-off theory postulates that cash flow negatively supports ([Hardin et al, 2009](#); [Kim et al, 2013](#)) while pecking order theory postulate positive, So, in this regard, firms retain more cash (Ferriera & Vilela, 2004; [Drobetz & Graninger, 2007](#); [Ozkan & Ozkan, 2004](#)). The hypothesis is generated as given below

**Hypo 6:** There is a negative/Positive association between cash holding and Cash-flow

The hospitality sector is one of the most risk-oriented sectors because a little bit mistake in their cash flow activities may damage the value of the firms. Therefore, such types of companies retain more cash. In case of an emergency, they may use the funds to save the additional cost ([Ozkan & Ozkan, 2004](#)). The various researcher focuses on retaining more cash to avoid for unpredictable situation, which supports the Precautionary motive of cash holding ([Al-Najjar & Balghitar, 2004](#); Bigelli & Vidal, 2012; Less & Powell, 2011). In the contrary, the inverse result is found by ([Paskelian et al 2010](#)). The hypothesis is generated as given below

**Hypo 7:** cash holding and Cash flow Volatility are associated negatively.

Intangible asset are those asset which have no physical existence but the firms added in its asset side of the balance sheet. The intangible asset includes copyright, patent, trademark, and intellectual propriety. Most companies retain massive cash for hiring the brands name. There is a positive relationship between cash holding and asset intangibility (Antonioni et al, 2013). In adverse is found by (Teruel et al, 2011). Firms are

trying to acquire more finance to gain a competitive position in the Hospitality sector. So, in this reason, they acquired more cash from capital markets. The Hypothesis is generated as given below.

**Hypo 8:** There is a negative relationship is found between cash holding and Asset intangibility

Companies are paying a constant dividend to investors to retain less cash in hand because they may easily access to the financial market ([Al-Najjar & Belghitar, 2011](#)). While on the other hand, some researchers warned the company's management team to retain more cash for survival in Industry due to the constant payment of dividends. Even if a company sustains a loss in a particular year, then have precautionary funds to pay its dividend and protect the value of the firm. A positive relationship is found by the following researcher ([Bates et al, 2009](#); [Kim et al, 2011](#); [Maahishwari and Roa, 2017](#)). The hypothesis is generated as given below

**Hypo 9:** There is a positive/Negative relationship is found between cash holding and Dividend payments.

Stock Exchange is a house to attract the highest competitor for offering their shares. Those companies registered in Stock Exchange retain less because they may easily approach toward the financial market for acquired of funds ([Ahmad & Adaoglu, 2018](#)). The hypothesis is generated as given below

**Hypo 10:** Cash holding and Stock Exchange are negatively associated.

### Criterion Variable (Dependent Variable)

Liquid cash or its same source is the back bone of any firm because it covers the transaction, precautionary and speculative motives in the Hospitality Sector of the USA. If a firm does not have aforesaid liquid cash in hand then it is possible a firm very soon later goes into liquidation or bankruptcy. So, in this regard it is very crucial part of business to retain excess cash for survival in market otherwise, some of your competitor takes your position in the market place. The same source includes (Commercial and Treasury bills). The proxy is used for liquid cash, and its same source is (Cash plus its equivalent source divided by Total Assets).

### Methodology

#### Sample Data and Descriptive Statistics

Sample data has been collected From Hospitality Sector in the USA for the period from 2005-2018 from the Thomson Reuters Datastream. Chosen of 2005 is a base-year was due to Registered Thomson Reuter Datastream with Industrial Classification Benchmark (ICB). Industrial Classification Benchmark (ICB) is a standard symbol for the segregation of Industry and Sub-Sector wise firms. Furthermore, cover the time stated effect (2008-09) incorporated the worldwide financial crises, which are mentioned the core aim of capturing the time consequence of USA companies.

**Table 1.** Descriptive Statistics

Variable	Obs	Mean	Median	Std. Dev.	Min	Max
CS	1426	0.105	0.043	0.161	0.000	1.014
SZE	1426	5.565	5.75	1.424	0.477	8.060
LVG	1426	0.999	0.631	2.832	-0.689	67.963
CP-EXP	1426	0.068	0.496	0.071	0.000	0.799
GR-OPP	1426	8.341	2.165	40.769	-2.740	830.7
CACF	1426	0.218	0.110	0.584	-0.537	10.415
CF-V	1426	0.151	0.081	0.407	0.000	7.364
LQTY	1426	-0.283	-0.065	1.470	-12.691	0.472



Variable	Obs	Mean	Median	Std. Dev.	Min	Max
A-INT	1426	0.195	0.108	0.243	0.000	2.211
DDD	1426	0.529	1.000	0.499	0.000	1.000
SX	1426	0.342	0.000	0.474	0.000	1.000

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

Regressed, i.e., cash holdings is Cash or its Same/TA whereas repressors, i.e., SZE is measured as Log of TA, LVG is computed as TL/TA, CP-Exp is measured as Cap. Exp to TA, GR-OPP is measured as MTB Value, LQTY is measured as Net WC minus (-) Cash to TA, CACF is scaled as OCF to TA, CF-V is scaled as Std D. of CF to TA. A. INT is measured as firm Intangibles asset to TA. DDD denotes a dummy variable if a firm pay its dividend to the concerned at a regular basis, should be noted equal to one (1) otherwise zero (0), likewise, if a company is listed in NYSE would be considered one (1) otherwise zero (0).

In table 1 portray descriptive statistics,

which includes a total 1426 observation, Means, Median, Standard Deviation, Minimum and Maximum. The hospitality sector in the USA retain 10% in the form of liquid cash out of Total asset for their activities. Other empirical results clarify that Russian firms retain 5 % of liquid cash over Total Assets. Chinese Companies retain 3.5 % of liquid cash over the total asset. Companies in Indian hold 3 percent of their liquid of Total asset, 2 percent are held by firms in Brazilian, 13 % is retained by UK Travel companies ([Ahmad & Adaoglu, 2018](#)), and 10% is retained by companies in the US ([Al-Najjar 2013](#)). Afza & adnan (2006) retain 13.5 % of liquid cash from total assets in Pakistan.

**Table 2.** Pairwise Correlations

Variables	CS	SZE	LVG	CP-EXP	Go-Opp	CSFLW	CFV	LQTY	A.INT	DDD	SX	VIF
CS	1.000											
SZE	-0.339	1.000										1.32
LVG	0.060*	-0.234	1.000									3.23
CP-Exp	-0.134	0.021	-0.011	1.000								1.04
GO-Opp	0.080*	-0.022	-0.008	-0.009	1.000							1.01
CSFIW	0.202	-0.304	0.573	0.002	0.073	1.000						1.99
CF-V	0.141	-0.252	0.516	-0.013	0.058	0.882	1.000					1.79
LQTY	-0.121	0.318	-0.808	-0.009	0.011	-0.547	-0.550	1.000				3.29
A-Int	-0.084*	0.083	-0.075	-0.148	0.008	-0.056	-0.023	0.038	1.000			1.08
DDD	0.002**	0.148	-0.010	-0.028	0.030	-0.008	0.004	-0.012	0.021	1.000		1.07
SX	0.036**	0.302	-0.091	-0.040	0.040	-0.029	-0.057	0.109	-0.150	0.218	1.000	1.21

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

Table 2 portrays the Pearson Correlation matrix among the Dependent and Independent variables. If VIF is less than 8, means (Gujrati, 2004) indicate that is no concept of multicollinearity issue in matrix table. Furthermore, validate the result inside the value of variable in the matrix indicate that value are lying below 0.8 which mentioned that there is no issue of multicollinearity. The relationship

between cash and Leverage, Go-Opp, CSFLW, CF-V, DDD, and SX is found to be positive, while SZE, CP-Exp, LQTY, and A-INT is found Negative.

### Econometric Model

GMM put forward by Arellano & Bond (1995) and more improved by [Roodman \(2009\)](#). I the

present study [Roodman \(2009\)](#) has been assumed `xtabond2` measure in Stata for reliable appraisal outcome. The purposive theme of GMM estimation is to resolve the issue of endogeneity detected during a diagnostic test of Durbin-Wu-Hausman test. The GMM methodology trampled the endogeneity issue by correcting tools. In estimation, steps lagged of cash & its relevant equivalent was considered “criterion variable” as an instrument. Additionally, positive lagged cash reveals that past year cash holding has a significant positive influence on present years. Other cores features of GMM comprise resolving the issue of autocorrelation by achievement-controlled result (Wooldridge, 2001).

### Estimation Model

$$CS_{i,t} = \alpha + \delta_0 CS_{i,t-1} + \delta_1 SZE_{i,t} + \delta_2 LVR_{i,t} + \delta_3 CP-EXP_{i,t} + \delta_4 GR-OPP_{i,t} + \delta_5 LQTY_{i,t} + \delta_6 CACF_{i,t} + \delta_7 A.INT_{i,t} + \delta_8 CF-V + \delta_9 DDD_{i,t} + \delta_{10} SX_{i,t} + \gamma_i + \mu_t + \varepsilon_{i,t}, \dots \text{(Equation 1)}$$

### Empirical Results

Two approaches in the TWO-STEP SYSTEM GMM estimation is incorporated, including Model 1 estimate the result, which have no Dummy variable (Time Plus sub-sector effect) while Model 2 is estimated the result for together with both the dummy variables, including sub-sector dummy and time-oriented dummy variables. Time oriented dummy is considered to indicate the financial crises era i-e 2008-09 though a sub-sector dummy is employed to show the subsector’s cash holdings outcome.

The firm size mentioned a negative relationship with cash holding, means that in the Hospitality sector in the USA does not retain excess liquid because they may easily access to the financial market. This estimated is the same with Chohan et al (2018), Hou et al (2018), Niyborg & Wang (2014), and [Bashir \(2014\)](#).

Companies with a higher volume of leverage in the Hospitality Sector maintain maximum cash in liquid form to avoid insolvency, liquidation, and economic distress. This Estimated outcome is

validating by [Gill & Shah \(2012\)](#), [Islam \(2012\)](#), and [Bashir \(2014\)](#).

Cap. Expenditure depicts a negative (-ve) association with the variable cash holding. Pertinent Firms with more profit have a calm and economical approach to debt markets require to maintain far minimum cash ([Maheshwari and Rao, 2017](#)). Also supporting the trade-off theory, more capita-expenditure would expose the corporation to financial crises and bankruptcy; therefore such type of companies ought to keep spare cash reserves (Riddick and Whited, 2009). This result is more relevant with [Kim et al. \(2011\)](#).

Liquidity is used as an alternate solution of cash. In case of an emergency company may sell the liquid asset in easily. [Bates et al, \(2009\)](#) define liquidity as an alternate source which may easily converted into cash without waste of time. The result is consistent with ([Gill & Shah, 2012](#); [Jamil et al, 2016](#))

The growth relevant opportunity influences negatively the cash-holdings and thoroughly supports the FCF theory. Ferriera & vilela (2004) explored that management inclines to stock batch funds and devote in hopeless developments which discourage firms as well as investments.

As per Free cash flow theory, excess cash utilize the Top management for useless project which damage the value of firms. So, Mostly companies may approach towards financial market access of funds. After scrutinizing the financial position then they offer to companies. The outcome is constant with ([Hardin et al, 2009](#); [Kim et al 2013](#)).

This estimation is also found a positive link between cash holding and cash flow volatility, which consistent with [Bates et al, \(2014\)](#). According to the estimation result it is clearly mentioned that Hospitality sector in USA are bearing high risk, therefore, they retain excess cash to avoid the bankruptcy and financial distress. They support trade off theory with precautionary motives.

A.Int is found adverse with cash holding. The estimation result is consistent with (Teruel et al, 2011). Firms are trying to acquire more finance

to gain a competitive position in the Hospitality sector. So, in the reason they acquired more cash from capital markets.

Companies is paying a constant dividend to investor retain less cash in hand because they may easily access to the financial market (Al-Najjar & Belghitar, 2011). This estimation result is found a negative association between cash holding and dividend payments. So, It is clear

that Companies registered in New York Stock Exchange in the USA retain less cash as compared to NASDAQ Stock Exchange.

Stock Exchange Dummy is also found a negative association with cash holding. It is clear registered companies New York Stock Exchange retain less cash because they easily access to financial market with least cost of interest.

**Table 3.** Empirical Result

Independent variable	Estimated Sign	Coefficient	Model 1	Sig	Coefficient	Model 2	Sig
L. CASH	+	0.222	0.000	***	0.237	0.000	***
CS	+	-0.077	0.000	***	-0.155	0.000	***
LVR	+	0.007	0.000	***	0.024	0.000	***
CP-EXP	-	-0.203	0.000	***	-0.179	0.000	***
GR-OPP	-	-0.001	0.000	***	-0.001	0.000	***
LQTY	+	0.032	0.000	***	0.051	0.000	***
CACF	-	-0.076	0.004	***	-0.166	0.002	***
CF-V	+	0.086	0.018	**	0.158	0.043	**
A INT	-	-0.280	0.000	***	-0.316	0.000	***
DDD	-	0.153	0.000	***	0.134	0.000	***
S.EX	-	-0.030	0.002	***	-0.006	0.895	
AIRLINES	+				0.566	0.003	
GAMBLING	-				-0.019	0.895	***
HOTELS	+				0.617	0.000	
REC	+				0.155	0.194	
TOUR & TRAVEL	-				-0.081	0.563	
YEAR DUMMIES		No			YES		
AR (1)		0.008			0.01		
AR(2)		0.072			0.069		
HENSUN		0.131			0.420		

AR (1) and AR (2) indicate autocorrelation first (i) order serial correlation & second (ii) order serial correlation. Estimated sign prevail that there is no issue of autocorrelation in the model. While the  $H_0$  of Hensen test indicates that there is no issue of explanatory variable and error terms. Distributed as chi-square.10 percent, 5 percent and 1percent statistical significance is revealed by \*\*\*, \*\* and \* respectively.

Additionally, in model 2 shows Sub-sector where Restaurant & bar is taken as a reference year. Airlines companies retain excess for their operating activities while Hotel is found

significant but prevail a negative coefficient that Hotels companies remain the same area for long-lasting time. So, they may easily access to financial market with easy conditions. Unfortunately, other sub-sector i-e gambling, recreational activities and Tour & Travels is found insignificant.

AR (1) and AR (2) indicate autocorrelation first-order serial correlation and second-order serial correlation. The estimated sign prevails that there is no issue of autocorrelation in the model. While the null hypothesis of Hensen test



indicates that there is no issue of explanatory variable and error terms.

### **Conclusion**

This study explores the determinants of cash holding in Hospitality Sector in USA 14 years from 2005-2018. Selection of 2005 as a base year was due to Thomson Reuter Data Stream registered with International Classification Benchmark (ICB). Determinants consist of CS, SZE, LVG, CP-EXP, GR-OPP, CACF, CF-V, LQTY, A-INT, DDD and SX. LVG, CF-V, and LQTY have positive impact on cash holding while SZE, CP-EXP, GR\_OPP, CACF, A-INT, DDD and SX have negative impact cash holding. Furthermore, in model 2 shows Sub-sector where Restaurant & bar is taken as a reference year. Airlines companies retain excess for their operating activities while Hotel is found significant but prevail a negative coefficient that Hotels companies remain the same area for long-lasting time. So, they may easily access to

financial market with easy conditions. Unfortunately, other sub-sector i-e gambling, recreational activities and Tour & Travels is found insignificant. AR (1) and AR (2) indicate autocorrelation first-order serial correlation and second-order serial correlation. The estimated sign prevails that there is no issue of autocorrelation in the model. While the Ho of Hensen test indicates that there is no issue of explanatory variable and error terms.

### **Recommendation**

This study is only concerned with the Hospitality sector in the United State of America (USA). These determinants can be extended/ tested in other countries worldwide in order to ascertain more appropriate findings. Moreover, some other determinants such as interest rate, macroeconomics, and market capital and so on may be employed to expose their influence on relevant cash holding.

## Reference

- Ahmad, W., & Adaoglu, C. (2018). Cash management in the travel and leisure sector: evidence from the United Kingdom. *Applied Economics Letter*, 26(7), 618-621.
- Ali, A., & Yousaf (2013). Determinants of cash holding in German Market, *Journal of Business and Management*, 12(6), 28-34.
- Al-Najjar, B., & Belghitar, Y. (2011). Corporate cash holdings and dividend payments: evidence from simultaneous analysis. *Managerial and Decision Economics*, 32(4), 231-241. <https://doi.org/10.1002/mde.1529>
- Bashir, M. M. S. (2014). Determinants of Corporate Cash Holdings: Panel Data. Analysis: Pakistan. *International Journal of Current Research*, 6(2), 5316-5318
- Bates, T., Kahle, K. & Stulz R., (2009). Why do U.S. firms hold so much more Cash than they used to? *The Journal of Finance*. LXIV(5).
- Chauhan, Y., Pathak, R., & Kumar, S. (2018). Do bank-appointed directors affect corporate cash holding? *International Review of Economics & Finance*, 53, 39-56
- Drobetz, W., & Grüninger, M. C. (2007). Corporate cash holdings: Evidence from Switzerland. *Financial Markets Portfolio Management*, 21, 293-324. <https://doi.org/10.1007/s11408-007-0052-8>
- Ferreira, M. A., & Vilela, A. S. (2004). Why do firms hold cash: Evidence from EMU countries? *European Financial Management*, 10 (2), 295-319.
- Gill, A., & Shah, C. (2012). Determinants of corporate cash holdings: Evidence from Canada. *International Journal of Economics and Finance*, 4(1), 70-79.
- Hardin, W. G., Highfield, M. J., Hill, M. D., & Kelly, W. (2009). The determinants of REIT cash holdings. *Journal of Real Estate Financial Economics*, 39 (1), 39-57. <https://doi.org/10.1007/s11146-007-9103-1>
- Hu, Y., Li, Y., & Zeng, J. (2018). Stock liquidity and corporate cash holdings, *Finance Research Letters*.
- Islam, S. (2012). Manufacturing firms' cash holding determinants: Evidence from Bangladesh. *International Journal of Business and Management*, 7 (6), 172-184. <https://doi.org/10.5539/ijbm.v7n6p172>
- Jamil, S., Anwar, A., Afzaal, N., Tariq, A., & Asif, M. (2016). Determinants of 67 Corporate Cash Holdings: Empirical Analysis of Pakistani Firms. *Journal of Economics and Finance*. 7(3), 29-35.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review*, 76,323-339.
- Kim, J., Kim, H., & Woods, D. (2011). Determinants of corporate cash-holding levels: An empirical examination of the restaurant industry. *International Journal of Hospitality Management*, 30, 568-574. <https://doi.org/10.1016/j.ijhm.2010.10.004>
- Lee, E., & Powell, R. (2011). Excess cash holdings and shareholder value. *Journal of Accounting & Finance*, 51, 549-574. <https://doi.org/10.1111/j.1467-629x.2010.00359.x>
- Maheshwari, Y., & Rao, K. V. (2017).Determinants of corporate cash holdings. *Global Business Review*, 18 (2), 416-427. <https://doi.org/10.1177/09721509166686>
- Martínez- Sola, C. Garcia-Teruel, P. J. & Martínez-Solano, P. (2011). Corporate cash holding and firm value. *Applied Economics*, 45(2), 161-170.
- Minton, B. A., & Schrand, C. (1999).The impact of cash flow volatility on discretionary investment and the costs of debt and equity financing. *Journal of Financial Economics*, 54 (3), 423-460. [https://doi.org/10.1016/s0304-405x\(99\)00042-2](https://doi.org/10.1016/s0304-405x(99)00042-2)
- Mumtaz, M., Ahmad, W., & Shah, S. A. A. (2020): Determinants of Corporate Cash Holding in Hospitality Sector of France, Spain and United State of America, *Global Economic Review*, V (III) 55-66.
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do

- not have. *Journal of Financial Economics*, 13,187–221. <https://doi.org/10.1016/0304-405x>
- Nyborg, K. G., & Wang, Z. (2013). Stock liquidity and corporate cash holdings: Feedback and the Cash as Ammunition Hypothesis, Swiss Finance Institute Research Paper No. 13-36
- Opler, T., Pinkowitz, L., Stulz, R., & Williamson, R. (1999).The determinants and implications of corporate cash holdings. *Journal of Financial Economics*, 52 (1), 3–46. [https://doi.org/10.1016/s0304-405x\(99\)00003-3](https://doi.org/10.1016/s0304-405x(99)00003-3)
- Ozkan, A., & Ozkan, N. (2004). Corporate cash holdings: An empirical investigation of UK companies. *Journal of Banking and Finance*, 28 (9), 2103–2134. <https://doi.org/10.1016/j.jbankfin.2003.08.003>
- Paskelian, O. G., Bell, S., & Nguyen, C. V. (2010). Corporate governance and cash holdings: a comparative analysis of Chinese and Indian firms. *The International Journal of Business and Finance Research*, 4, 59-73.
- Roodman, D. (2009). XTABOND2: Stata module to extend xtabond dynamic panel data Estimator .In *Statistical software components* S435901. Boston College Department of Economics.
- Singal, M. (2015). How is the hospitality and tourism industry different? An empirical test of some structural characteristics. *International Journal of Hospitality Management*, 47, 116-119. <https://doi.org/10.1016/j.ijhm.2015.03.006>
- Upenja, A., & Dalbor, M. C. (2001).An examination of capital structure in the restaurant industry. *International Journal of Contemporary Hospitality Management*, 13(2), 54-59. <https://doi.org/10.1108/09596110110381825>
- Uyar, A., & Kuzey, C. (2014). Determinants of corporate cash holdings: Evidence from emerging market of Turkey. *Applied Economics*, 46 (9), 1035-1048. <https://doi.org/10.1080/00036846.2013.866203>