URL: http://dx.doi.org/10.31703/ger.2021(VI-I).14 **DOI:** 10.31703/ger.2021(VI-I).14
p-ISSN: 2521-2974 **e-ISSN:** 2707-0093 **L-ISSN:** 2521-2974
Citation: Khan, H. A., Ahmad, W., & Rahman, I. U. (2021). Determinants of Corporate Cash Holdings in Textile Sector of Pakistan. *Global Economics Review*, *VI*(I), 182-199. https://doi.org/10.31703/ger.2021(VI-I).14

Determinants of Corporate Cash Holdings in Textile Sector of Pakistan

Hira Ali Khan * | Wisal Ahmad † | Ihtesham Ur Rahman ‡

Abstract *This study analyzes the impact of tools used for cash holding in the textile sector of Pakistan for the period of 14 years (2005-2018). The tools consist of firm dimension, influence, capital expenditure, expansion opportunity, liquidity, cash stream and cash stream instability and extra expenditure. Unbalanced dynamic panel data is engaged for empirical estimation. For estimation of consistent result active panel information i-e Two-step scheme widespread process of moments is used. System generalized method of moments (GMM) design estimation reveals that compact dimension control, capital expenses, cash stream, cash stream instability and extra dummy affect cash holdings positively while liquidity and growth opportunities affect cash holdings negatively. Lagged cash is used as an instrumental variable and its positive implication (coefficient) reveal that the prior year reserve of cash have a significant impact on the current year and, suggesting these companies have a target level of cash. The academic implication indicates that larger companies in the textile sector retain more cash and easy access to diversify and advance sophisticated technology projects and furthermore will compete in the open market economy..*

Pages: 182 – 199
Vol. VI, **No.** I (Winter 2021)
Key Words:
Cash Holding, Generalized Method of Moments, Textile Sector, Pakistan
JEL Classification:

Introduction

Cash is a fundamental part of each organization's monetary record. Albeit the illustration: "Cash is the lifeblood of every company", this has been utilized practically escalation by different course readings also scholastics inside the business area, it's yet a decent expression by feature significance of this idea. Therefore discussing cash, a primary focal inquiry that arises is: "The thing that is the explanations behind an organization to hold cash?" This inquiry has been stimulating the best of researchers for quite a long time, and it is as yet a point of convergence of conversation in current monetary writing. This might be because of the dubious idea of the subject on the grounds that in a universe of wonderful capital business sectors, where capital would consistently be accessible to subsidize new undertakings, there will not be in existence any advantages linked

* MS Scholar
† Assistant Professor, Institute of Business Studies and Leadership, Abdul Wali Khan University Mardan, KP, Pakistan. Email: wisalahmad@awkum.edu.pk
‡ Lecturer, Abdul Wali Khan University, Mardan, KP, Pakistan.

with holding cash. Notwithstanding, in reality, with financing contacts, data deviations and exchange costs, the story turns out to be more muddled. Accordingly, specialists have given a lot of consideration to research the factors for organizations to hold cash. One well-known clarification is that money gives minimal expense financing to companies (Ozkan and Ozkan, 2004). As indicated by the view, the presence of data lopsidedness among organizations and outside financial backers upraise the expenses of outer financing and subsequently, the utilization of inner assets is liked (Myers and Majluf, 1984). There are exchange costs, close to this, and other monetary limitations, just like problems of organization and resource replacement(Dittmar and smith, 2003). Obviously, every one of these variables supports holding cash; in this manner, administrators in defective capital business sectors would just attempt to limit these expenses by continually keeping an adequate measure of money close by. Nonetheless, there are additionally potential antagonistic impacts that are connected with holding cash. A focal contention that supports this point is that the never-ending office struggle among chiefs and investors in a firm turns out to be more extreme when companies have a lot of free income (Jensen, 1986). Investors might fear the danger that supervisors will look after speculation openings, taking advantage of plenty of cash, which serve their own revenue instead of the best of investors.

The uncertainty given; that's natural in these theoretical expectations, that stays as an exact inquiry if cash property could be explicated on absolute monetary organizing along with prudent goals fairly than by managerial advantage (Drobetz and Grüninger, 2007).

A few observational papers have been endeavoring to recognize organizational factors for holding cash. For the most part, specialists used marker factors starting from three fundamental speculative replicas, especially the substitution design, the pecking-order hypothesis and the open cash stream assumption. The following hypotheses enfold the previously mentioned possible determinants that may drive a company's choice to hold pretty much cash. While thinking about the distributions of top-notch monetary diaries, the inclusion of exploration on cash holdings in German organizations is somewhat scanty, particularly beginning from the year 2000. As for how as this paper analyzes an example period from 2005 to 2013, it tends to be viewed as a significant commitment to the scholarly community as it were that it would convey refreshed discoveries on the factors of cash holdings in German-recorded organizations, a test of factors that were proposed in the previous article. Besides, apparently, there are a couple of papers that recorded

in the time of the financial crisis.

In the world of growing capital market competition, holding of cash is at times become least important because organizations may easily raise capital to invest in any advanced projects at a very less cost of interest. But concurrently, the research found that in stiff competition, holding cash is very compulsory because cash provides an opportunity to invest in advanced projects. Moreover, cash helps in meeting day to day transactions and also to overcome the menace arising of unpredictable events. For example, kacheva et al. (2007) describe that firm might retain 16% of cash reserve out of total assets. Ozkan and Ozkan (2004) found that ordinary cash reserve is 14% in UK companies. While studying a sample of 15 developed countries, Ferreira &Vilela

(2004) found that the cash ratio is 15%, respectively. Moreover, Ditmar et al. (2003) determined that level of cash reserves is 13% in 45 sample countries, while Al-Najjar&Belghtar (2011) accomplished that firm should maintain 9% in liquid cash out of total assets. Holding cash protects the companies from financial distress(Ferreira and Vilela, 2004). Cash is retained by companies for different issues such as enhancement of existing infrastructure, distribution of company income to investors, repurchase of other companies share and other valuable instruments and also to deal with unpredictable events (Mohsin, 2016). Several researchers found that holding cash provides an inexpensive way of financing for the organization due to expensive external financing (Myers and Majluf, 1984). The manager should retain sufficient inner financial adaptability to decrease the expense connected to outside financing**.** According to Basely and Bagham (2005), organizations retain cash for three benefits, i.e., transaction motives, which helps companies to meet day to day transactions; secondly, precautionary motives, in which companies hold cash for unpredictable events and thirdly, the investment motives, which says that a company invest in a profitable projects to avail the opportunities.

In this study, we investigate the cash management of textile sector companies registered on the Pakistan Stock Exchange (PSX). In our analysis, organizations participating in the textile sector were divided into three categories. In the first category, companies working in spinning, weaving and finishing groups of textile were taken, which participated significantly about 87.63 percent share in the textile sector. The second category contained companies related to made-up textile articles and contributed about 4.89 percent share in the overall textile sector. The third category contained companies attached with the production of wool, silk, polyester, artificial fibre and Synthetics items etc. and named as other textiles, whose contribution in the textile sector remained around 7.48 percent in the year 2018. Category wise participation in different aspects of the textile sector is given in the graph below.

Sales of the sector moved up by 15.43 percent in 2018 and remained Rs 99.50 billion more than total sales of the previous year. Total sales of the textile sector increased to Rs 744.53 billion in 2018 from Rs 645.04 billion in 2017, of which 84.47 percent of total sales related to spinning, weaving and finishing category of the textile sector in 2018. Share of export sales in overall sales remained larger than local sales, and this share improved from 50.14 percent in 2017 to 51.01 percent in 2018. Moreover, export sales showed a significant increase of Rs 56.34 billion in 2018, which is 17.42 percent more than that of 2017. It is to be noted that export sales of the textile sector are the backbone of Pakistan economy as it contributes 68.14 percent share of overall exports receipts of all non-financial companies listed at PSX for the year 2018. Local sales contributed 49.86 percent share, and export sales contributed 50.14 percent share of overall sales during 2018, which were increased with a growth of 13.42 percent and 17.42 percent respectively in 2018 over 2017. Sector's profit before taxation also increased by 11.32 percent in 2018, which is Rs 2.92 billion larger than that of the previous year. Similarly, profit after taxation increased to Rs 22.19 billion in 2018 from Rs 21.20 billion in 2017.

This research is to determine the effect of attributes on textile-Sector cash holdings in Pakistan, which will enable us to understand the behavior of cash

holdings in this sector. The underlying theories of the study include tradeoff theory, pecking order theory and cash flow theory. Monetary years from 2005 to 2018 have been utilized to research the cash holding ascribes. Supposedly, this is the first study to investigate cash holdings criteria in the textile sector of Pakistan.

In Pakistan, there exists very little literature on the textile sector of cash holdings. The current aim of the study is to cover the gap in the literature in these countries by identifying cash holding companies carrying unique attributes. The reason for choosing Pakistan as a sample country is that total sales of the textile sector increased to Rs 744.53 billion in 2018 from Rs 645.04 billion in 2017, of which 84.47 percent of total sales related to spinning, weaving and finishing category of the textile sector in 2018. Moreover, export sales showed a significant increase of Rs 56.34 billion in 2018, which is 17.42 percent more than that of 2017. Local sales contributed 49.86 percent share, and export sales contributed 50.14 percent share of overall sales during 2018, which were increased with a growth of 13.42 percent and 17.42 percent respectively in 2018 over 2017. Sector's profit before taxation also increased by 11.32 percent in 2018, which is Rs 2.92 billion larger than that of the previous year. Similarly, profit after taxation increased to Rs 22.19 billion in 2018 from Rs 21.20 billion in 2017.

The textile sector is contributing huge sums of cash to the respective economy, coming from international and national tourism receipts, which provides the basic reason for analyzing cash management issues in the textile sector of Pakistan. The investigation expects to analyze the determinants of holding money in textile sector organizations to address the inquiry on how various determinants in these organizations react to the colossal measure of money receipts, accordingly making the examination novel.

A large portion of the organizations keeps the choice of money holding in their spending plan. Organizations are attempting to keep up the authoritative degree of money with points that holding suitable money would be useful for the progression just as for the expansions of the organizations. Existing exploration is giving a significant understanding to scientists who help to investigate further the textile sector of Pakistan as far as the impact of determinants on holding money. This investigation will expand the earlier work in these regions.

Cash Holdings

Cash is a significant part of the regular assignments of every association. This ensures the company's liquidity, and it works with performing various duties. Without adequate fluid resources, an organization won't meet those commitments, and henceforth, it will be compelled to default on some loans, sometimes. As indicated by the writing, cash possessions are usually characterized as currency and attractive protections or cash reciprocals (Ferreira, M. A., and Vilela, A. S. (2004). Cash correspondings are existing resources, which might be altered into cash in an exceptionally short period, and these lines are depicted by a serious level of liquidity. They incorporate, for example, U.S. depository charges, declarations of stores, broker's acknowledgements and then on to foreign exchange market instruments. Those protections have a generally safe, low-impact profile. On the off chance that there were amazing capital business sectors, the company would like to save money, but they want to be successful, be

prepared to raise money from all over the world.

As this is not the circumstance truly, it was expected that monetary gratings are responsible for creating such dubious forecasts regarding the holding of funds i-e cash(Drobetz and Grüninger, 2007). Subsequently, there are a few fundamental speculative designs that ascent up out of the surviving group of scholastic writing and take a look at the description of the assortment at the degree of money property across organizations. There were for sure a few advantages linked with holding cash, yet there were likewise inconveniences when they hold cash.

The first is the exchange cost intention, and the subsequent one is the prudent rationale. As per the exchange cost thought process, there are constant and inconsistent expenses linked with increasing outside assets, which brings about the presumption of a perfect degree of money/property and brings about organizations to grip cash as a cushion (Opler, T., Pinkowitz, L., Stulz, R., and Williamson, R. (1999). Conversely, here is the preparatory rationale, which focuses on the occurrence of topsy-turvy data, organization costs and the chance expenses of renounced speculations. Here, the thought is that if the costs of unfriendly determination of outer account are unnecessarily high, organizations will normally amass cash or other liquid resources as counteraction components to fence against future inadequacies in real money being pressurized to exceed on sure net current worth speculations. In this way, from those two thought processes, one can infer three primary classifications with particular fundamental hypothetical suspicions. This may be a result of the way that the speculations enfold partially with respect to their design explanations.

Literature Review

Underline Theories

This segment presents three theories i-e pecking order theory, tradeoff theory and free cash flow theory, which helps to investigate the impact of determinants on cash holdings of the textile sector of Pakistan.

Tradeoff Philosophy

As indicated by the tradeoff theory, which expects that the organization of a firm is stressed over the increase in financial backer regard, the objective is to arrive at an ideal degree of cash holdings by gauging the negligible expenses and welfares of allotment cash (Ferreira and Vilela, 2004). Organizations might profit by cash on their accounting reports by saving exchanges costs identified with lifting assets (Opler, T., Pinkowitz, L., Stulz, R., and Williamson, R. (1999). Set all the additional forth plainly, the holding of cash can fill in as a support between the association's interior assets and the assets that will need to be created remotely, which subsequently limits costs. At last, adequate cash holding can guarantee the compatibility of an ideal venture strategy, particularly when the organizations' admittance to outside capital business sectors is restricted (Ferreira, M. A., and Vilela, A. S. (2004).

Firm size

The Miller and Orr design of request hypothesizes that huge organizations can profit by frugality of scale as for cash organization. Along these lines, enormous organizations would grip lower currencies than little companies. An additional reason for this example is that it is normal that there is no relationship between the charges of acquiring and the size of a credit, which demonstrates that such expenses are a fixed sum(Ferreira, M. A.,

and Vilela, A. S. (2004). Moreover, bigger organizations do have less chance of financial distress due to an elevated degree of diversification (Rajan, R.G., Zingales, R., 1995).

Leverage

It is, for the most part, acknowledged that exceptionally turned companies involve a greater danger of insolvency because of the way that the unbending idea of amortization designs by leasers oppresses the depository the board of organizations(Ferreira, M. A., and Vilela, A. S. (2004). To diminish this connected danger, exceptionally turned organizations are required to grasp bigger measures of cash. Nonetheless, there is another thought, which challenges this assumption. For the most part, the degree to which an organization is financed by debt gives a sign of a company's capacity to uprise debt. Along these lines, companies with increased influence proportions are additionally anticipated to have a superior admittance to debt capital and consequently, they will be holding lesser cash, appropriately. Thus, from a static tradeoff design viewpoint, the determinant that influence would have to some level uncertain links with cash holdings because of the stated contending suspicions.

Cash Flow

As indicated by Kim et al. (2011), cash flow acts as a second choice of liquidity and helps to mitigate the level of keeping the useful cash and thus, a negative link is established.

Cash Flow Instability

By and large, the increased unpredictable the incomes of an organization are, the lower conviction there is about their future event. Thusly, organizations with profoundly unpredictable incomes are bound to confront financial trouble later on. Henceforth, those organizations would be slanted to hold bigger cash saves instead of companies with more steady incomes to lessen the related danger of financial distress. Therefore, it is normal that income unpredictability-e-cash flow instability and cash holdings, have a positive connection (Ozkan, A., and Ozkan, N. (2004).

Liquid Assets Substitutes

Ferreira and Vielela (2004) have put forward that all liquid resources other than money can be viewed as replacements since their speedy liquidation can give prepared financing in the midst of hardship. Liquid resources other than money might be, for example, networking capital, and for certain kinds of organizations, even stock can fill in as a liquid resource when it is rapidly changeable into cash.

Investment Opportunity Set

Because of the way that exorbitant outer financing uplift the likelihood of an organization to hand over significant venture openings, companies, hold adequate liquid resources (for example, like money) to have the option to exploit the majority of the beneficial speculation openings that current themselves at one point later on, at most minimal expenses (Opler, T., Pinkowitz, L., Stulz, R., and Williamson, R. (1999) & Ozkan, A., and Ozkan, N. (2004).

Dividend Payments

Ferreira and vilela (2004) propose a negative link as companies get finances cheaply when payment of the dividend is not exercised.

Pecking Order Theory

Myers and Majluf (1984) place that data

imbalances among administrators and investors make outer financing expensive. Consequently, within sight of unbalanced data, supervisors will, in general, incline toward the utilization of inside produced assets to educational delicate outer capital and that they follow a supposed chain of command of financing strategies.

Size

Huge companies apparently have been more effective, and in this way, they ought to have more cash accessible, subsequent to controlling for venture (Ferreira, M. A., and Vilela, A. S. (2004).

Cash Flow

Companies with high incomes would hold a lot of cash and the other way around (D'Mello. R., Krishnaswami. S., & Larkin. P. J., 2008).

Investment Opportunity Set

As per (Ferreira, M. A., and Vilela, A. S. (2004), .within the sight of a huge arrangement of speculation openings, companies require enormous loads of cash since cash shortages would suggest that the organizations would need to do without those chances, henceforth, one would anticipate a positive connection. This forecast fundamentally lines up with the expectations of the trade-of design, be that as it may, the understanding varies a piece.

Leverage

Accordingly, from a pecking-order theory's point of view, the connection between influence and holding cash would likewise be negative (Ferreira, M. A., and Vilela, A. S., 2004).

.

Free Cash Flow Theory

This theory is introduced by Jensen in 1986 which express that executive in the organization hold cash to increase their power over the asset and also be in command of investment decisions of a firm, thus using it for the personal motives. Moreover, the free cash flow theory reflects that managers need to amass cash to pursue empire-building interests, which reduce the value of the companies.

Investment Opportunity Set

More idle cash availability leads to poor investments (Ferreira, M. A., and Vilela, A. S. (2004). Ultimately, this would prompt an annihilation of investor esteem. Henceforth, as per this viewpoint, the connection between investment openings and cash holdings would be negative (Ferreira, M. A., and Vilela, A. S. (2004).

Leverage

Companies with a low measure of leverage have a more prominent room in dynamic since they are less liable to observing, and consequently, their optional force is bigger and holds more cash (Ferreira, M. A., and Vilela, A. S. (2004).).

Size

Ferreira theory places that bigger companies, by and large, have a more serious level of investor's scattering. Thus this would bring about unrivalled administrative caution (Ozkan, A., and Ozkan, N. (2004). Close to that, chiefs of enormous companies can all the more effectively advantage from the utilization of the political field (Opler, T., Pinkowitz, L., Stulz, R., and Williamson, R. (1999).

Hypothesis Development

The effect of determinants on cash holdings are summarized in Table 1 and Table 2, respectively.

Table 1. Expected Sign

Firm Features Precise	Transaction Representation	Pecking Hypothesis Arrange	Free of charge cash stream supposition
Firm Dimension	-	+	+
Influence	-/+	-	-
Bank Liability	-/+	-	-
Currency Stream	-	+	n.a.
Cash stream Instability	+	n.a.	n.a.
Runny belongings	-	n.a.	n.a.
Savings prospect	+	-	-
Bonus expense	-	n.a.	n.a.

Table 2. Empirical Studies

Firm specific factors	Ozkan and Ozkan 2004	D' mello et al. 2008	Olper et al. 1999	Ferriera and Vilela 2004	Drobetz and Gruinger 2007	Harford et al. 2008	Kim et al. 2011
Firm size	n.s	-	-	-	-	n.s	
Leverage	-	-	-	-	-	-	n.a
Bank debt	-	n.a	n.a	-	n.a	n.a	n.a
Cash flow	+	n.a	+	+	+	+	n.s
Cash flow Volatility	n.s	n.a	+	-	+	+	n.a
Liquid Assets	-	-	-	-	-	-	-
Investment opportunity	+	+	+	+	n.s	n.s	+
Dividend payment	n.s	n.a	-	n.s	+	-	-

Moreover, Bigelli and Sánchez-Vidal (2012), Hardin et al. (2008), Al-Najjar and Belghitar (2011), and Ferreira, M. A., and Vilela, A. S. (2004). have found a negative association between size and cash holdings and hence the following the hypothesis is proposed.

H1: There is a negative relationship between firm size and cash holdings.

Leverage is used as an alternate source of liquidity (Maheshwari and Rao, 2017). Especially those companies that hold less cash who have open access to debt markets (Al-Najjar and Belghitar, 2011; D'Mello et al., 2008). Furthermore, companies with leverage are closely monitored by lending entities and therefore hold less cash (Ferreira, M. A., and Vilela, A. S. (2004). Numerous empirical studies have found a negative relationship between leverage and cash holdings (e.g., Kim et al., 2011; Lian, Sepehri and Foley, 2011; Ozkan and Ozkan, 2004). On the other hand, leveraged companies facing more risk of default hold more cash (Islam, 2012). This negative and positive relation of leverage with cash holdings supports the tradeoff theory.

The following hypothesis is proposed:

H2: There is a positive or negative relationship between cash holdings and leverage.

Capital intensiveness is one of the key characteristics of the hospitality sector (Singal, 2015). Those profitable companies having easy and cheap access to debt markets need to hold less cash (Maheshwari and Rao, 2017). According to tradeoff theory, excess capital expenditure will lead to insolvency (Bates et al., 2009). On the other hand, supporting the tradeoff theory, excess capital expenditure will confront the company to financial insolvency; therefore, companies should retain excess cash reserve (Riddick and Whited, 2009). Generally, capital expenditure is the establishment and improvement of assets, and it can be mortgaged by the firm as a guarantee when required (Kim et al., 2011). As a result, those companies which may easily obtain the capital from the financial market will retain very little cash. Moreover, the negative relationship between capital expenditures and cash holdings is confirmed by various studies (e.g., Kim et al., 2011).; Uyar and Kuzey, 2014). The following hypothesis is developed:

H3: There is a negative association between capital expenditure and cash holdings.

Following the tradeoff theory, companies tend to amass cash to fund new project ventures, thereby saving the related opportunity costs (Uyar&Kuzey, 2014). Similarly, according to the pecking order theory, companies tend to hold cash to overcome the adverse selection costs related to external funds and therefore suggest a positive relationship between growth opportunities and cash holdings. Furthermore, the effect of growth opportunities on cash holdings is deemed to be strong in the textile sector. Hence, the following hypothesis is presented.

Hypothesis 1: There is a positive association between growth opportunities and cash holdings.

According to tradeoff theory, there is an inverse relationship between liquidity and cash holdings. Liquidity refers to the liquid assets that can be easily converted into cash or can be used as an alternative to cash (Al-Najjar and Belghitar, 2011), thereby reducing the cost of capital (Al-Najjar, 2013). Bates et al. (2009) recommended that liquidity consists of assets that act as an alternate source of cash for emergencies, and hence such companies amass less cash. Based on these above arguments, the following hypothesis is presented:

H5: There is a negative association between liquidity and cash holdings.

Cash flow is a liquid source which minimizes need for holding cash (Ferreira, M. A., and Vilela, A. S. (2004). The tradeoff theory postulated that there is a negative link between cash flows and cash holdings, while pecking order theory predicts a positive relationship between the two. Deloof (2003) determined that cash flow is a readily available source of funds that can be utilized in advance projects and hence reduces the need for holding cash.

On the other hand, following the influx of cash flows, companies have a tendency to amass cash (Drobetz and Grüninger, 2007) to save more (Lian et al., 2011). Companies with more cash flows need to hold more cash to invest in new projects and to overcome contingent situations in future (Opler, T., Pinkowitz, L., Stulz, R., and Williamson, R. (1999). Various researchers have found a positive association between cash flows and cash holdings (e.g., Ferreira, M. A., and Vilela, A. S. (2004).; Ozkan and Ozkan 2004).

Based on the above arguments, the following hypothesis is developed:

H6: There is a positive relationship between cash flows and cash holdings.

According to tradeoff theory, companies with high variation in cash may face the menace of cash shortage (Ozkan and Ozkan, 2004). Therefore, such companies need to compile to overcome the deficiency. Companies tend to lose profitable investment avenues due to fluctuation in their cash flows (Minton and Shrand, 1990). Contrary to the above discussion, there also exists a negative link between cash flow instability and cash holdings (Paskelian, Bell and Nguyen, 2010) because the cost of keeping cash is more than the cash flows produced in companies that face the elevated cost of capital Ferreira, M. A., and Vilela, A. S. (2004).

H7: There is a positive relationship between cash flows instability and cash holdings.

Research Design

Dependent Variable

Cash plus its equivalency (Dependent Variable) is a backbone of any organization and have to pay its obligation in order to smooth running of business activities in the Textile sector of Pakistan. However, if a firm is suffered from a shortage of liquid assets, then it's can leads to affluence in a sooner or later stage. So, It's is a very imperative part of any organization to retain some portion of liquid cash. Proxy is used for cash, and its equivalency is divided by Total Current and Non-Current assets.

Independent Variable

Firm Size (SIZ) is stately as normal Log of Entire Resources, LVR is measured as Total liabilities to TA, Capital expenditure (CEX) is measured as Principal Spending to TA, Growth opportunity (GoP) is measured as Market to Book Value, Liquidity (LQY) is measured as Networking Capital minus Cash to TA, Cash flow (CFW) is scaled as Operating cash flow to TA, Cash stream instability (CFV) is scaled as Typical nonconformity of cash drift to TA, and the last variable is Dividend (DVD) is used as dummy variable if a company's regularly basis or interval basis pay dividend will be equal to 1 otherwise 0.

Generalized Method of Moments (GMM)

Several empirical studies (Ozkan and Ozkan, 2004, García-Teruel and Martínez-Solano, 2008, Al-Najjar and Belghitar, 2011, Bigelli and Sánchez-Vidal, 2012 and Uyar and Kuzey, 2014) employed a dynamic model using the Generalized Method of Moments (GMM) technique. The dynamic model is employed as, according to Ozkan and Ozkan (2004), companies adjust to their target cash holdings. Companies need to determine the changes in the cash ratios that lead to partial adjustment and set a target level to undertake cash decisions. Hence, cash decisions made previously are utilized to explain cash levels achieved at any time Ozkan and Ozkan (2004). Moreover, GMM is popular for dealing with the problem of endogeneity. Endogeneity refers to the correlation of regressors with error terms. The common causes of endogeneity include omitted variables, simultaneity and measurement errors. Furthermore, the Durbin-Wu Hausman test is used to detect the presence or absence of endogeneity. The F test result [F= 4.60 (p-value: 0.000)] shows the presence of endogeneity i.e.; the regressors are correlated with the error term. Hence, GMM is used to overcome the endogeneity problem by employing instruments.

The dynamic panel data design of the learning is as below:

$CASH_{i,t}= \alpha + \delta_0 CASH_{i,t-1}+ \delta_1 SIZE_{i,t}+ \delta_2 LEV_{i,t}+ \delta_3 CE_{i,t}+ \delta_4 GO_{i,t}+ \delta_5 LIQ_{i,t}+ \delta_6 CF_{i,t}+ \delta_7 INT_{i,t} +$

λ_i and η_t are the subsector and time dummy terms to imprison sub-part and occasion detailed belongings; and $\varepsilon_{i,t}$is the error term. The industry null factor takes on a cost of 1 for a specific sub-sector and 0 otherwise. Similarly, the time dummy null takes on the cost of 1 for a specific year and 0 otherwise. Moreover, $\delta_0$is 1- the modification coefficient.

.

Research Methodology

Generalized Method of Moments (GMM)

Active panel estimators are Arellano-Bond and Arellano-Bover significantly standard for panel statistics investigates Blundell-Bond (Arellano and Bover, 1995; Blundell and Bond, 1998). Together are overall estimators intended for circumstances with;

1) "Minor T, bulky N" panels, meaning limited time stages and several entities;
2) A direct practical association;
3) Unique left-hand-side inconstant which is active, liable on its particular previous insights;
4) Self-determining inconstant that are not rigorously exogenous means these are connected with earlier and probably present comprehensions of the fault;
5) Permanent separate properties; and
6) Autocorrelation and Heteroscedasticity within entities.

Arellano-Bond estimation started their work by altering all regressors, typically by differencing, and uses the widespread technique is named difference GMM. The ArellanoBond estimator supplements Arellano-Bond via assembling an extra supposition that chief alterations of tool variables are uncorrelated through the static properties. This permits the outline of additional tools and can intensely advance competence. It shapes a scheme of binary equations-the innovative calculation and the distorted one-and is recognized as arrangement GMM.

Several empirical studies employed a dynamic design using the Generalized Method of Moments (GMM) technique. The dynamic design is employed as, according to Ozkan, companies adjust to their target cash holdings. Companies need to determine the changes in the cash ratios that lead to partial adjustment and set a target level to undertake cash decisions. Hence, cash decisions made previously are utilized to explain cash levels achieved at any time Ozkan and Ozkan (2004). Moreover, GMM is popular for dealing with the problem of endogeneity. Endogeneity refers to the correlation of regressors' with error terms. The common causes of endogeneity include omitted variables, simultaneity and measurement errors. Furthermore, the Durbin-Wu Hausman test is used to detect the presence or absence of endogeneity. The F test result [F= 4.60 (p-value: 0.000)] shows the presence of endogeneity, i.e., the regressors are correlated with the error term. The dynamic panel data design of the study is as follows:

$$CASH_{i,t}= \alpha + \delta_0 CASH_{i,t-1}+ \delta_1 SIZE_{i,t}+ \delta_2 LEV_{i,t}+ \delta_3 CE_{i,t}+ \delta_4 GO_{i,t}+ \delta_5 LIQ_{i,t}+ \delta_6 CF_{i,t}+ \delta_7 INT_{i,t} + \delta_8 RISK+ \delta_9 DIVD_{i,t} + \delta_{10} STEX_{i,t} +\lambda_i+\eta_t+ \varepsilon_{i,t} \quad (2)$$

whereλ_i and η_t are the industry and time dummy variables to capture sub-sector and time specific effects; and $\varepsilon_{i,t}$is the error term. The industry dummy factor takes on value of 1 for a specific sub-sector and 0 otherwise. Similarly, the time

dummy factor takes on value of 1 for a specific year and 0 otherwise.Moreover, δ_0 is 1 minus the adjustment coefficient.

Following the assumption of 'white noise' disturbances, Arellano and Bover (1990) argue that if the errors are auto-correlated, then the GMM estimations make use of lagged variables as instruments. Therefore, the methodology used assumes that there is no second-order serial correlation in the errors in first differences. Hence, the test proposed by Arellano and Bond (1991) is used to check for the absence of second-order serial correlation. Similarly, the Hansen (1982) test of over-identifying restrictions is used to check for the validity of instruments (i.e., absence of correlation between the instruments and the error term). In this study, a 2-step GMM estimator is used to perform all estimations, since one-step estimate.1

Research Design, Data, Sample Size and Descriptive statistics

The research type for this research study will be analytical. In analytical research, the researcher has to use evidences or information which are already accessible, and these evidences or information will be further analyzed to make a conclusion.

The major aim of this research is to investigate the attributes affecting cash holdings of the textile sector. Data have been extracted from Thomson Reuters DataStream from 2005 to 2018. The secondary data source is used to collect the data. Thomson Reuters DataStream adopted Industry Classification Benchmark (ICB) in the year 2005, which is why 2005 has been chosen as the starting year.

Table 1. Evocative Figures

Variable	Observation	Mean	Median	Std. Dev	Mini	Max
CASH	566	0.045	0.013	0.072	0.000	0.506
COMP SIZE	566	6.654	6.664	0.617	4.687	8.146
LEVERAGE	566	0.637	0.622	0.296	0.031	1.896
CAP-EXP	566	0.062	0.041	0.072	0.000	0.515
CASHFLOW	566	0.044	0.032	0.089	0.255	0.490
LIQUDITY	566	0.000	1.970	0.001	-0.003	0.016
GROWTHOPP	566	0.233	0.001	2.643	-16.25	50.96
CFV	566	0.051	0.037	0.048	0.000	0.346
DIVIDEND	566	0.527	1.000	0.500	0.000	1.000

Table 1 shows the descriptive statistics, which clarifies that the textile sector retains 4.5% of cash in the form of liquid cash out of total assets. Whereas the same techniques already followed by the Russian companies, which retain 5% of the cash and its equivalence of total asset, Chinese retain 3.5% cash, Indian companies retain 3% of liquid of Total asset, 2% kept by Brazilian companies in the form of liquid cash of total current and Non-current assets. Similarly, 8% is retained by UK companies, and the last 10% is retained by US companies (Al-Najjar 2013).

The ratio of reliant variable is measured as (CSH) equivalent/Total properties (TA) while rest of Independent variable is measured as follows, i.e., Firm Size (SIZ) is stately as normal Log of Entire Resources, LVR is measured as Total liabilities to TA, Capital expenditure (CEX) is measured as Principal Spending to TA, Growth opportunity (GoP) is measured as Market to Book Value, Liquidity (LQY) is measured as

Networking Capital minus Cash to TA, Cash flow (CFW) is scaled as Operating cash flow to TA, Cash stream instability (CFV) is scaled as Typical nonconformity of cash drift to TA and last variable is Dividend (DVD) is used as dummy variable if a company's regularly basis or interval basis pay dividend will be equal to 1 otherwise 0. Table 2 portrays the Pearson correlation matrix, which shows the relationship between the dependent variable and the explanatory variables. Rule of thumb (0.8) describes that if the relationship ship among variables is less than 0.8, then there clearly indicates no signals of a multicollinearity problem. So, in this study, there is no issue of multi-collinearity.

Econometric Model

For estimation of consistent results and also to deal with the dynamic unbalanced panel data, the Two-step scheme comprehensive process of moments is working with advanced features (Roodman, 2009). In this research, xtabond2 commands have been adopted in Stata for the estimation of accurate results. The GMM techniques help to encounter the endogeneity problem, which may be detected among the explanatory variable and error term; the Endogeneity problem can be removed by fitting a valid instrument. During the estimation process, lagged of cash and its equivalent was used "dependent variable" as an instrument was. Further positive lagged cash shows that prior-year cash holding is having a significant positive impact on current years. Other main features of GMM includes encountering the problem of first and second-order serial autocorrelation by gaining well-organized result (Wooldridge, 2001), Ahmad & Adaoglue (2018) and Mumtaz, Ahmad & Shah (2020), It also deals with the heteroscedasticity problem by allowing orthogonal condition for efficient estimation (Bawm, Schaffer &stillman, 2002).

Research Model

he model estimated is:

$$CSH_{i,t}= \alpha + \delta_0 CSH_{i,t-1}+ \delta_1 SIZ_{i,t}+ \delta_2 LVR_{i,t}+ \delta_3 CEX_{i,t}+ \delta_4 GOP_{i,t}+ \delta_5 LQY_{i,t}+ \delta_6 CFW_{i,t}+ \delta_7 CFV+ \delta_8 DVD_{i,t} +\gamma_i+\mu_t+ \varepsilon_{i,t}$$

Whereas γ_i and μ_t indicate the manufacturing and time model factors to grip sub-part and time-specific possessions, and $\varepsilon_{i,t}$ represents error expression to grip unnoticed variables.

Empirical Results

Table 3 portrays the estimation result of System GMM. In this estimation, result Lagged of Cash, Firm size, leverage, capital expenditure, cash flow, cash flow volatility and dividend payments are found to be positive and significant where p-values are less than 0.05 while liquidity and growth opportunity is found to be negative and insignificant, and it's p-value re greater than 0.05.

In this research, Table 3 displays the estimated regression result whereas it indicates a positive coefficient between determined dimensions and cash investment, supporting the pecking-order theory. This theory reveals that large firms hold excess cash and may easily launch new advanced, sophisticated technologies projects and get a standard level of economies of scale(Opler, T., Pinkowitz, L., Stulz, R., and Williamson, R. (1999). This result is consistent with(Opler, T., Pinkowitz, L., Stulz, R., and Williamson, R. (1999), Ozkan and Ozkan (2004),andKim, J., Kim, H., and Woods, D. (2011).

Leverage (LVR) indicates a positive link with cash, holding that high leverage companies in the Textile Sector of

Pakistan hold excess cash to keep away companies from bankruptcy and financial distress. This result is consistent with Gelli, M., and Sanchez-Vidal, J. (2012).

Firms with capital expenditure retain more cash and support the tradeoff theory. According to this theory Textile sector continuously invest in capital expenditure where these companies retain more cash and can easily cope with the menace situation. This result is consistent with Ferreira, M. A., and Vilela, A. S. (2004).and Rajan, R.G., Zingales, R., (1995).

Companies with high cash inflow as well as outflow retain more money because they continuously require cash in order to invest in multi projects, and I support the pecking-order theory. According to the D'Mello et al. (2008), firms that prefer internally generated funds over

external funds may save the transaction cost. The Textile Sector of Pakistan is suffering from high competition in the open market economy of internal as well as external. Therefore, Firms involved in textile retain more cash to gain economies of scale. This effect is reliable with D'Mello et al. (2008), Ferriera and Vilela (2004) Ozkan and Ozkan (2004). The growth opportunity has an inverse bang on the cash prosperity and supports the free cash flow theory. Ferriera & vilela (2004) argued that Top management retains funds and invest in useless projects, which damage the value of companies as well as other stakeholder.

Companies facing more unpredictability in cash stream are extremely open to the elements to cash scarcity Ozkan and Ozkan (2004), Textile companies due to high competition keep more cash for its survival. This result is consistent with Al-Najjar and Belghitar (2011), Bigelli and Vidal (2012), Lee and Powell (2011), Bates et al. (2014), Wasiuzzaman (2014) and Mumtaz, Ahmad and Shah (2020).

Similarly, This study portrays a positive link between dividend payments and cash prosperity. It supports the companies keep additional cash in pursuit of a stable dividend policy (Maheshwari and Rao, 2017; Ozkan and Ozkan (2004),

Table 2. Pearson Correspondence Matrix

Variable	CASH	SZ	LVR	CAPX	CF	LIQ	G.OPP	CFV	DD
CASH	1.000								
SZ	0.082*	1.000							
LVR	0.326***	0.411***	1.000						
CAPX	0.072*	0.207***	-0.169***	1.000					
CF	0.271***	0.030	-0.267***	0.079*	1.000				
LIQ	-0.026	-0.017	-0.019	0.008	-0.022	1.000			
GR	-0.028	-0.011	0.030	-0.022	-0.029	-0.005	1.000		
CFV	0.334***	-0.049	-0.219***	0.065	0.706***	-0.041	-0.050	1.000	
DIVID	0.297***	0.294***	-0.489***	0.230***	0.235***	-0.043	-0.077***	0.237***	1.000

****p<0.01, ** p<0.05, * p<0.01*

Table 3. Predictable Deterioration Consequence

Ind: Variable	Estimated Sign	Model	p.value	Sig
L.CASH	Positive	0.708	0.000	***
FIRM SIZE	Positive	0.009	0.000	***
LEVERAGE	Positive	0.027	0.000	***
Cap-Exp	Positive	0.093	0.000	***
CF	Positive	0.118	0.000	***

Ind: Variable	Estimated Sign	Model	p.value	Sig
LIQ	Negative	-4.777	0.653	
G.Opportunity	Negative	-0.004	0.127	
CFV	Positive	0.734	0.000	***
DIVID	Positive	0.006	0.026	**

Furthermore, in table 3, Autocorrelation first order specify the non-availability of serial association, whereas autocorrelation second-order specifies the nonattendance of 2nd order serial association. While Hensen test portrays no link among tools and mistake phrases and use of instruments are valid.

Conclusion

This study analyzes the impact of tools used for cash holding in the Textile sector of Pakistan for the period of 14 years (2005-2018). The tools consist of firm size, leverage, capital expenditure, growth opportunity, liquidity, cash flow, cash flow volatility and dividend payments. Unbalanced dynamic panel data is engaged for empirical estimation. For estimation of consistent result Dynamic panel data, i-e Two-step System generalized method of moments (GMM) is used. System generalized method of moments (GMM) model estimation reveals that Firm size, leverage, capital expenditure, cash flow, cash flow volatility and dividend dummy affect cash holdings positively while liquidity and growth opportunities affect cash holdings negatively. Lagged cash is used as an instrumental variable, and its positive implication (coefficient) reveals that the prior year reserve of cash have a significant impact on the current year and, suggesting these companies have a target level of cash. The academic implication indicates that larger companies in the textile sector retain more cash and easy access to diversify and advance sophisticated technology projects and, furthermore, compete in an open market economy. The existing estimation result is consistent with the prediction of trade-off theory, pecking-order theory and free-cash flow theory.

Furthermore, in table 3, Autocorrelation first order specify the non-availability of serial association, whereas autocorrelation second-order specifies the lack of 2nd order serial association. While Hensen test in null hypothesis result portray that there is no link between instrument and error term and its using of the instrument are valid.

Limitation and Future Research

Our present research is paying attention to the Textile Sector of Pakistan by means of its unique attributes (competitiveness, capital-intensity, risk and debt intensiveness). These variables will be used and can be expanded to some other research area in order to show the widespread effect of some other determinants on cash holdings. Moreover, some other variables, i.e., interest rates, Price fluctuation, GDP and market capitalization etc., can be taken as explanatory variables to show their impact on retaining cash.

References

Ali, A., & Yousaf, S. (Sep. - Oct. 2013). Determinants of Cash holding in German Market, *IOSR Journal of Business and Management* (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668. *12*(6) PP 28-34.

Afza, T., & Adnan, S. M. (2007). Determinants of corporate cash holdings: A case study of Pakistan.Proceedings of Singapore Economic Review Conference (SERC) 2007, Singapore 164-165.

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.*

Akron, S., Demir, E., Díez-Esteban, J. M., & García-Gómez, C. D. (2020). Economic policy uncertainty and corporate investment: Evidence from the U.S. hospitality industry. Tourism Management, *77, 104019*. doi:10.1016/j.tourman.2019. 104019

Al-Najjar, B., & Belghitar, Y. (2011). Corporate cash holdings and dividend payments: Evidence from simultaneous analysis. *Managerial and Decision Economics*, *32*(4), 231–241. doi:10.1002/mde.1529

Analysis: Pakistan. International Journal of Current Research, 6(2), 5316–5318

Antonio, F., Kadyrzhanova, D., Jae W., & Sim, J. W. (2013). Rising intangible capital, shrinking debt capacity, and the US corporate savings glut. *Federal Reserve Board working paper*. doi:10.2139/ssrn.235086

Arellano, M., & Bond, S. (1995). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *Review of Economics Studies*, 58, 277–97.doi:10.2307/2297968

Baker, M. (2016). Statisticians issue warning over misuse of P values. Nature, *531*(7593), 151–151. doi:10.1038/nature.2016.1950

Baltagi, B. H. (2005). Econometric analysis of panel data (3rded.). England: Wiley.

Bashir, M. M. S. (2014). Determinants Of Corporate Cash Holdings: Panal Data

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).

Baum, C. F., Schaffer, M. E., & Stillman, S. (2002). Instrumental variables and GMM: Estimation and testing(Boston College Working Papers in Economics No. 545). Boston College Departmentof Economics website: http://fmwww.bc.edu/ec-p/wp545.pdf

Baum, C. M., Caglayan, N., Ozhan, & Talavera, O. (2006). "The impact of macroeconomic uncertainty on non-financial firms' demand for liquidity", *Review of Financial Economics, , 15*(4) 289-304.

Bigelli, M., & Sanchez-Vidal, J. (2012).Cash holdings in private firms.*Journal of Banking & Finance*, *36*, 26-35. doi:10.1016/j.jbankfin.2011.06.004

Chauhan, Y., Pathak, R., & Kumar, S. (2018). Do bank-appointed directors affect corporate cash holding? *International Review of Economics & Finance*, *53*, 39-56.

D'Mello, R., Krishnaswami, S., & Larkin, P. J. (2008). Determinants of corporate cash holding: Evidence from spin-offs *journal of Banking & Finance*. Pp. 1209-1220.

Dittmar, A., & Mahrt-Smith, J. (2003).International corporate governance and corporate cash holding.*Journal of Financial and Quantitative Analysis. 38*(01), 111-133

Drobetz, W., & Grüninger, M. C. (2007). Corporate cash holdings: Evidence from Switzerland. *Financial Markets Portfolio Management*, *21*, 293-324. doi: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. doi:10.1111/j.1354-7798.2004.00251.x

FRESARD, L. (2010). Financial Strength and Product Market Behavior: The Real Effects of Corporate Cash Holdings. *The Journal of Finance, 65*(3), 1097–1122. doi:10.1111/j.1540-6261.2010.01562.x

Gill, A., & Shah, C. (2012).Determinants of corporate cashholdings: Evidence from Canada. *International Journal of Economicsand Finance, 4*(1), 70-79.

Hansen, E., & Wagner, R. (2017).Stockpiling cash when it takes time to build: Exploring price differentialsin a commodity boom. *Journal of Banking & Finance, 77*, 197-212.

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. doi:10.5539/ijbm.v7n6p172

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance and takeovers. American EconomicReview, 76,323–339.

Jensen, M. C., & Meckling, W. (1976). Theory of the firm: managerial behaviour agency costs and ownership structure. *Journal of Financial Economics, 30*(4), 474–493. doi:10.1016/0304-405x(76)90026-x

Kalcheva, I., & Lins, K. V. (2007).International evidence on cash holdings and expected managerial agency problems. *Review of Financial Studies, 20,* 1087–112.

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. doi:10.1016/j.ijhm.2010.10.004

Lian, Y., Sepehri, M., & Foley, M. (2011). Corporate cash holdings and financial crisis: An empiricalstudy of Chinese companies. *Eurasian Business Reviews, 1*(2), 112-124.

Maheswari, Y., & Rao, K. T. V. (2017). Determinants of corporate cash holdings.*Global Business Review*, *18*(2), 416-427. doi:10.1177/0972150916668610

Mumtaz, M., Ahmad, W., & shah, S. A. A. (2020) Determinants of cash holding Hospitality sector of France, Spain and United State of America.

Martínez-Sola, C., Garcia-Teruel, P. J., & Martínez-Solano, P. (2011).Corporate cash holding and firmvalue. *Applied Economics, 45*(2), 161-170.

Millar, M. H., & Orr, D. (1966). A model of the demand for money by firms. Quarterly *Journal of Economics, 80*, 413-435

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. doi:10.1016/s0304-405x(99)00042-2

Mohsin, S., Shujahat, H. H., & Ghulam, M. C. (2016). Determinants of corporate cash holding in Pakistan. *International Journal of Organization Leadership 5,* 50-62.

Guizani, M. (2017). The Financial Determinants of Corporate Cash Holdings in an Oil Rich Country) MuncefGuizani, The Financial Determinants of Corporate Cash

Holdings in an Oil Rich Country: Evidence from Kingdom of Saudi Arabia, *Borsa Istanbul Review, 17*(3), September 2017, Pages 133-143

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.doi:10.1016/0304-405x(84)90023-0

Nyborg, K. G., & Wang, Z. (2014). 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.doi: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. doi:10.1016/j.jbankfin.2003.08.003

Paskelian, O. G., Bell, S., and 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.

Pastor, C. C., & Gama, P. M. (2013). Determinant factors of cash holdings: Evidence from Portuguese SMEs. *International Journal of Business and Management, 8*(1), p.104.

Peterson, M., & Rajan, R. (2002). Does distance still matter: The information revolution in small business lending? *The Journal of Finance, 57*(6), 2533–2570. doi:10.1111/1540-6261.00505

PWC. (2019). March 2019 global economy Watch [online] https://www.pwc

Rajan, R. G., Zingales, R., (1995). What do we know about capital structure? Someevidence from international data. *The Journal of Finance 50*(5), 1421–1460.

Riddick, L. A., & Whited, T. M. (2009).The corporate propensity to save.*The Journal of Finance, 64*(4), 1729-1766. doi:10.1111/j.1540-6261.2009.01478.x

Robert, C., Vogel, & Maddala, G. S. (1967). Cross-section estimates of liquid asset demand by manufacturing corporation,

Roodman, D. (2008). XTABOND2: Stata module to extend xtabond dynamic panel data

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. doi:10.1016/j.ijhm.2015.03.006

Uyar, A., & Kuzey, C. (2014). Determinants of corporate cash holdings: Evidence from emerging market of Turkey. *Applied Economics, 46*(9), 1035-1048.

Vatavu, S. (2012). Determinants of Capital structure: Evidence from Romanian manufacturing companies. *Journal of Advanced Research in Scientific areas.*

Wasiuzzaman, S. (2014).Analysis of corporate cash holdings of firms in Malaysia. *Journal of Asia Business Studies, 8*(2), 118-135.