

Ownership Structure and Cash Holdings: Insights from Manufacturing Firms

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To cite this paper

Sethi, M., Swain, R. K., & Dash, S. R. (2021). Ownership Structure and Cash Holdings: Insights from Manufacturing Firms. *Orissa Journal of Commerce*. 42(3), 59-73.

Keywords

Ownership structure, Group affiliate, Standalone firm, Cash holdings, Firm characteristics

JEL Classification

G30, G32

Abstract: This study aims at analyzing whether ownership structure (i.e., if a firm is a group affiliate or standalone) affects cash holdings of manufacturing firms in India. It also makes a comparative analysis of the drivers of cash holdings such as firm size, growth opportunities, leverage, cash flow, dividend, net working capital, R&D, tangibility, profitability, and firm age for group affiliated and standalone firms. By applying a fixed-effect model with a sample of 500 firms over a period from 2007 to 2019, the study reveals that group affiliates accumulate less cash than standalone firms. Further, this paper demonstrates that the impact of drivers of cash holdings also differs between the group affiliate and standalone firms. The study carries a lot of significance to the managers in understanding the dynamics between ownership structure and cash holdings and deciding the appropriate level of cash by considering firm characteristics in the light of ownership structure. The findings are also useful for bankers, regulators, credit rating agencies, investors in assessing the cash holding behavior of firms with respect to the ownership structure.

1. Introduction

Corporate cash holdings have drawn plausible attention from academia and researchers in recent times. Especially the credit crunch of late 2007 magnified the role of holding cash by the corporate across the globe. Cash is a crucial asset due to its imperativeness in the establishment, operation, and success of every business. It is the basic input needed and the ultimate outcome that corporate rely upon. The behavior of corporate to accumulate and hold cash reserves is fairly pronounced by several financial theories. Trade-off theory (Myer, 1977) explains that the amount of cash balance a corporate holds is a point at which the costs equate with the benefits of holdings such amount of cash. Pecking order theory (Myers and Majluf, 1984) explains the preference of corporate to hold cash in the situation of cash shortfall and cash surplus. It stipulates that firms favour to meet the investment needs through

internal reserves followed by debt and equity. When the firms generate sufficient funds, after meeting the investment need, firms tends payback the debt first then hold cash. Agency theory (Jensen, 1986) emphasizes the objective of the managers in gratifying their own interest through large cash reserves. The motive of the firms also influences their behavior in holding cash. Firms keep cash for transaction, precautionary and speculative motive (Keynes, 1936; Opler *et al.*, 1999). Firms having adequate cash balance can get rid of the need of accessing costly and restrictive external financial markets (Habib and Hasan, 2017; Harford *et al.*, 2012; Opler *et al.*, 1999).

Though the preference of the firms to keep cash reserve is explained by the financial theories still several factors influence the cash position of firms. The factors influencing a firm's cash holdings have been an agenda of debate in the corporate finance literature and the illustration to firm cash holdings spans from the equilibrium of marginal costs with benefits of cash holdings to the way firms are governed (Opler *et al.*, 1999; Ferreira and Vilela, 2004; Ozkan and Ozkan, 2004; Drobetz and Gruninger, 2007; Terue *et al.*, 2009; Duchin, 2010; Gill and Shah, 2012; Sun *et al.*, 2012; Ali and Yousaf, 2013; Al-Najjar, 2013; Mugumisi and Mwanza, 2014; Maheshwari and Rao, 2017; Chauhan *et al.*, 2018; Chen *et al.*, 2018; Hu *et al.*, 2019; Arora, 2019; Aslam *et al.*, 2019; Das and Goel, 2019; Sethi and Swain, 2019; Chen *et al.*, 2020; Khuong *et al.*, 2020; Sarfraz *et al.*, 2021; Jadyappa *et al.*, 2021). Though several dimensions of cash holdings have been studied in the global context very few pieces of literature are available in the Indian context. Further, though the effect of ownership structure in terms of promoter ownership on cash holdings in the Indian context has been duly documented by Gupta and Bedi (2020), the effect of ownership structure in terms of Indian group and standalone firm on cash holdings is a new area to explore. Hence, our paper examines the previously unheeded but very crucial relationship between ownership structure (i.e. if a firm is group affiliated or standalone) and cash holdings in an emerging economy like India. For this purpose, a sample of 500 manufacturing companies for 13 years from 2007-2019 is taken for the study. The result of the fixed effect regression reveals that group affiliates keep less cash than the standalone firms. Further, it documents that the influence of drivers of cash holdings also differs between the group affiliate and standalone firms. The outcomes of the study are of immense use for the firm managers, investors, rating agencies, etc. in making relevant economic decisions.

This study adds to the present literature in two ways. Firstly, an emerging economy like India which is characterized by smaller and growing companies than developed countries, limited access to financial markets, more dependency on institutional financing coupled with high-interest rates, higher political instability, poor corporate governance, uneven distribution of wealth, less developed financial market, etc. (Chauhan and Banerjee, 2018) is taken as sample. So the findings can provide new insights in terms of how group affiliation affects cash holdings amid the above-mentioned country characteristics. Secondly, this paper provides evidence on the asymmetric effect of firm characteristics on cash holdings of group affiliates and standalone firms.

2. Review of Literature and Hypotheses Development

2.1. Ownership Structure and Cash Holdings

It is apparent from the earlier discussion that cash holdings play a crucial role in the corporate setting and some underlying theories and motives explain cash holdings by the firms. Cash holding is such a crucial

decision that it is influenced by every development in the corporate world. In recent years there have been substantial changes in the corporate ownership structure across the globe and India is not an exception to it. This development ignites the idea that whether such ownership structure affects the cash holdings of firms. In this regard, a very good number of researches have been undertaken to establish the link between different facets of ownership structure with cash holdings such as ownership concentration and cash holdings by Borhanuddin and Ching (2011) in the Malaysian context, institutional ownership and cash holdings by Mohd *et al.* (2015) in the Malaysian context, managerial ownership and cash holdings by Ozkan and Ozkan (2004) in UK context, insider ownership and cash holdings by Isshaq *et al.* (2009) in Ghana context, state ownership and cash holdings by Megginson *et al.* (2014) and Kusnadi *et al.* (2015) in the Chinese context, foreign ownership and cash holdings by Vo (2018) in Vietnam context, promoter ownership and cash holdings by Gupta and Bedi (2020) in the Indian context, etc.

Apart from the above facets of ownership structure, there has been a tremendous change in the ownership structure in the form of the creation of a group of firms under single ownership and control. This is because, with the growth and expansion of business activities, multiple firms are being created with single ownership and control which is termed as group affiliation, and the firm operating without any peer or sister units is termed as a standalone firm. Out of the top 500 listed Indian firms, 89 percent are in the private sector and they represent 78 percent of total market capitalization (Chakrabarti *et al.*, 2008). Narayanaswamy *et al.* (2012) opined that the dominance of private firms affiliated to the business group is one of the dominant characteristics of the Indian corporate environment. This is substantiated by the fact that in this study out of 500 Indian firms, 314 firms are the members of group affiliates whereas 186 firms are standalone firms.

Group ownership is not merely some firms under single ownership and control rather they are independent and their investment needs are not perfectly correlated as in the case of diversified firms (Lamont, 1997; Shin and Stulz, 1998; Khanna and Tice, 2001). So due to such uncorrelated investment needs, the need for cash also varies across the members of the group. Managing cash holdings is very important in Indian business groups as group firms are engaged in tunneling profits (Bertrand *et al.*, 2002). Opler *et al.* (1999) argued that firms hold cash for investment needs but Khanna and Palepu (2000) opined that group firms can mitigate transaction costs arising out of market imperfection as a result their affiliates outperform the standalone firms. If so, the group affiliates need to hold less cash than the standalone firm as one group affiliate can cross finance its investment needs with the cash holdings of other affiliates.

The theoretical framework of Opler (1999) also posits that the optimal cash reserve can be arrived at by striking a balance between marginal costs and benefits of holding such cash reserve. The costs attributed to cash holdings are the opportunity cost of idle cash and the agency cost while the benefits of holding cash comprise of avoidance of costly external capital, agency cost, and information asymmetry. In line with this proposition, there is a reason to believe that ownership structure can significantly influence firm cash holdings as there are different financing needs and agency costs attributed to the group affiliates and standalone firms.

Hence, the presence of a facility of cross financing which is called an internal capital market reduces the need for holding cash and thereby reduces the cost of managerial discretion, opportunity

cost, and costly external financing. Chauhan *et al.* (2018) argued that group firms exhibit lower financial constraints due to the availability of internal capital market and corporate governance plays a little role in reducing the investment-cash flow sensitivity of the firm. Shleifer and Vishny (1992) opined that firms with a large asset base that can be easily liquidated must reduce the borrowing costs. Given this argument, group affiliates are required to keep less cash reserve as group firms all together are much larger than standalone firms as far as the size of assets under their control is concerned. Hence, such group affiliate firms can liquidate their assets to meet their investment need which is a source of internal capital. Few studies have highlighted the impact of group affiliates on cash holdings. Deloof (2001), without differentiating group and non-group firms, demonstrated that intra-group claims reduce the need for holding cash by Belgian firms. Locorotondo *et al.* (2014) documented that private Belgian group affiliate firms keep significantly lower cash than private non-affiliate firms. Though there is a good number of group firms operating in India still the impact of group affiliation on corporate cash holdings is unexplored. Hence, from the above arguments, our first hypothesis can be developed as:

H_{01} : Business group affiliate firms hold less cash than standalone firms.

2.2. Firm Characteristics and Cash Holdings

The prior works on cash holdings provide several firm characteristics that influence the cash holdings and these are used in this study.

2.2.1. Firm Size

There lies economies of scale in managing cash as per the transaction cost model (Baumol, 1952; Miller and Orr, 1966). Small firms find problems in raising external funds as they are younger, less known, and highly responsive to imperfection in capital markets (Kim *et al.*, 1998; Almeida, 2004). This reasoning posits that small firms hold larger cash as revealed by Opler *et al.* (1999), Chauhan *et al.* (2018), Hu *et al.* (2018), Bates *et al.* (2009), Sun *et al.* (2012), and Locorotondo *et al.* (2014).

2.2.2. Growth Opportunities

Firms having more investment opportunities are subject to higher information asymmetry and as a result face more borrowing constraints (Myers, 1977). Such firms accumulate more cash to circumvent missing of investment avenues due to fund scarcity (Opler *et al.*, 1999). So firms having growth opportunities hoard large cash balance (Kim *et al.*, 1998; Chauhan *et al.*, 2018; Hu *et al.*, 2018; Sun *et al.*, 2012; Bates *et al.*, 2009).

2.2.3. Leverage

The relationship of leverage with cash holdings is ambivalent. Higher leverage signals the ability of the firms to access the debt market and hence such firms need to hold less cash (Kim *et al.*, 1998; Opler *et al.*, 1999; Al-Najjar, 2013; Chauhan *et al.* 2018). On the flip side, highly leveraged firms are required to hold more cash to mitigate financial distress (Steijvers *et al.*, 2009; Gill & Shah, 2012).

2.2.4. Cash Flow

Cash flow being a readily available liquidity acts as a replacement for cash (Kim *et al.*, 1998; Hardin *et al.*, 2009; Subramaniam *et al.*, 2011). But cash flow may increase the cash balance of the firm as firms prefer saving cash from internally generated funds after meeting investment needs (Opler *et al.*, 1999; Chauhan *et al.*, 2018; Hu *et al.*, 2018).

2.2.5. Dividend

As firms making dividend payments can raise funds from the market at a lesser cost, they keep lower cash reserves (Opler *et al.*, 1999; Bates *et al.*, 2009; Al-Najjar, 2013; Nyborg and Wang, 2014; Hu *et al.*, 2018). Huge cash holdings also induce dividend payment (Chauhan *et al.*, 2018; Drobetz and Gruninger, 2007; Maheshwari and Rao, 2017).

2.2.6. Net Working Capital

Net working capital serves as a replacement for cash as liquid assets are easily convertible into cash as and when needed. So net working capital inversely affects cash balance (Opler *et al.* 1999; Bates *et al.* 2009; Al-Najjar, 2013; Hu *et al.* 2019).

2.2.7. Research & Development

R&D expenditures are difficult to fund through external financing owing to their uncertain outcome and information asymmetry problem. Hence, R&D expenditures are funded from internal cash flows resulting a reduction in the cash balance (Bates *et al.*, 2009; Maheshwari and Rao, 2017). Expenditure on R&D also generates huge cash inflows by magnifying sales revenue (He and Wintoki, 2016; Ruiqi *et al.*, 2017; Chauhan *et al.*, 2018; Hu *et al.*, 2019).

2.2.8. Tangibility

Firms having more fixed assets face lesser information asymmetry problems and in case of cash need fixed assets can be liquidated. Hence, assets tangibility negatively affects cash position (Bhat and Bachhawat, 2005; Drobetz and Gruninger, 2007).

2.2.9. Profitability

The relationship of profitability with cash is mixed. Pinkowitz and Williamson (2001) and Al-Najjar (2013) demonstrate that profitability inversely affects cash as profit is a ready form of liquidity. On contrary, Ali and Yousaf (2013), Mugumisi and Mwanza (2014), and Chauhan *et al.* (2018) reveals that profitability positively affects cash holdings as firms tend to save cash from internal funds.

2.2.10. Firm Age

As old firms are subject to less information asymmetry and capable of securing funds at a lesser cost, they are presumed to hold less cash. Old firms are well known and established in the market as a result they generate huge cash and that stimulates large cash holdings (Gao *et al.* 2013).

From the above literature on the impact of firm characteristics on cash holdings, it is witnessed that the impact are different under different assumptions. It gives sufficient reason to believe that the impact of firm characteristics on cash holdings may differ with variation in ownership structure of firm i.e., group affiliate and standalone firm. Hence, we can develop the second hypothesis as:

H_{02} : *The effect of firm characteristics on cash holdings differs between group affiliate and standalone firms.*

3. Research Methodology

3.1. Sample

Our sample consists of firms listed in Bombay Stock Exchange or National Stock Exchange and the data are gathered from PROWESS database of the Centre for Monitoring Indian Economy. The study spans over 13 years from 2007 to 2019 and it includes listed manufacturing firms only as listed firms are under strict adherence to the prescribed norms of the Securities and Exchange Board of India. Firms engaged in financial services activities are excluded from the sample as their financial reporting practices differ from others. Firms with missing data are also excluded. The final sample consists of 6,500 firm-year observations for 500 firms. Further, the 500 firms are categorized into two subsamples of 314 group affiliate and 186 standalone firms. For data analysis, statistical tools such as descriptive statistics, correlation matrix, and regression analysis have been used.

3.2. Variable Definition

The study uses cash holdings as dependent variables and other firm characteristics as independent variables. Cash holdings (Cash): Cash & cash equivalents scaled by net assets (total assets net of cash & cash equivalents). The logic for dividing cash & cash equivalents by net assets is that a firm's ability to earn profit rests upon its operating assets. Further, the objective of dividing cash by net assets is to circumvent circularity problem. Hence, all other variables are also divided by net assets. In line with Opler *et al.* (1999), we take the natural logarithm of cash to net assets ratio to normalize the data. Following Locorotondo *et al.* (2014), the study uses Group as a dummy that takes the value 1 if a firm is a group affiliate and 0 if a firm is standalone. The definitions of variables are provided in Table 1.

Table 1: Variable Definition

<i>Variable</i>	<i>Definition</i>
Cash	Cash & cash equivalents scaled by net assets
Group	A dummy that takes the value 1 if a firm is a group affiliate and 0 if a firm is standalone
Firm Size	Natural logarithm of net assets
Growth Opportunities	Book value of net assets less book value of equity plus the market value of equity scaled by net assets.
Leverage	Total debts scaled by net assets
Cash Flow	Cash flow from operations scaled by net assets

contd. table 1

<i>Variable</i>	<i>Definition</i>
Dividend	A dummy that takes the value 1 if a firm pays dividend and 0 otherwise
Net Working Capital	Net working capital net of cash & cash equivalents scaled by net assets
R&D	R&D expenditure scaled by net assets
Tangibility	Fixed assets scaled by net assets
Profitability	EBIT as a percentage of net assets
Firm Age	Natural logarithm of the number of years since the incorporation of the firm.

Source: Authors' Own Calculation

3.3. Model Specification

To specify the appropriate model for the data, we have undertaken the panel diagnostic test. The Hausman test result (H value of 385.468 with P value of 0.000) shows that the fixed effect model is befitting for the data. Hence, the effect of group ownership on cash holdings as well as the effect of firm characteristics on cash holdings of group affiliate and standalone firms is examined by using the following baseline fixed effect regression model:

$$Cash_{it} = \alpha + \beta Group_{it} + \beta Controlvariables_{it} + \gamma_i + \varepsilon_{it}$$

4. Empirical Results

This section provides empirical results of descriptive statistics, correlation matrix, and regression analysis.

4.1. Descriptive Statistics

Table 2 presents the summary statistics of cash holdings and other firm characteristics for business group affiliate and standalone firms. The group affiliates have median (mean) cash holdings of 1.7 percent (5.4 percent) of their net assets whereas standalone firms have median (mean) cash holdings of 2.3 percent (7.4 percent) of their net assets. The group affiliate and standalone firms also differ as far as their possible determinants of cash holdings are concerned. Group affiliate firms are larger than standalone firms. Group affiliates have less net working capital than standalone firms. Group affiliates hold more fixed assets than standalone firms. The profitability of the standalone firm is higher than group affiliates. Group affiliates are older than standalone firms. However, there is a negligible difference in growth opportunities, leverage, and cash flow of group affiliates and standalone firms.

4.2. Correlation Matrix

Table 3 shows the correlation matrix among variables. The correlation coefficient ranges from 0.001 to 0.371 which signifies the absence of collinearity among the variables. Further, we check multicollinearity by using variance inflation factor (VIF). The highest VIF is 1.422 which states that the multicollinearity issue is not present among the variables.

Table 2: Descriptive Statistics of Cash Holdings and Firm Characteristics by Ownership Structure

Variables	Business Group Affiliates					Standalone Firm				
	Mean	Median	Minimum	Maximum	Std. Dev.	Mean	Median	Minimum	Maximum	Std. Dev.
Cash	0.054	0.017	0.001	3.510	0.123	0.074	0.023	0.002	2.494	0.190
Firm Size	9.325	9.166	5.612	15.513	1.561	8.015	7.922	4.824	13.340	1.265
Growth Opportunities	1.752	1.158	-0.001	23.353	1.700	1.755	1.141	-0.115	22.489	1.745
Leverage	0.621	0.635	0.471	5.374	0.236	0.608	0.607	0.062	5.257	0.256
Cash Flow	0.091	0.084	-0.487	0.865	0.093	0.091	0.087	-0.364	1.070	0.107
Dividend	0.768	1.000	0.000	1.000	0.422	0.738	1.000	0.000	1.000	0.440
Net Working Capital	0.354	0.174	-2.235	7.571	0.650	0.487	0.247	-4.787	27.121	1.228
R&D	0.006	0.001	0.003	0.192	0.015	0.007	0.006	0.000	0.137	0.018
Tangibility	0.642	0.622	0.036	2.765	0.304	0.600	0.570	0.032	2.041	0.270
Profitability	1.115	0.993	-0.002	0.948	0.621	1.290	1.144	0.002	8.990	0.839
Firm Age	3.643	3.611	1.609	5.037	0.531	3.359	3.296	1.609	4.575	0.443

Source: Authors' Own Calculation

Table 3: Correlation Matrix among Cash Holdings and Firm Characteristics

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1 Cash	1											
2 Group	-0.231	1										
3 Firm Size	-0.114	0.371	1									
4 Growth Opportunities	0.215	-0.058	0.152	1								
5 Leverage	-0.031	0.018	0.005	-0.053	1							
6 Cash flow	0.186	-0.056	-0.003	0.347	-0.121	1						
7 Dividend	0.206	0.001	0.105	0.125	-0.321	0.194	1					
8 Net Working Capital	0.140	-0.079	-0.210	0.016	-0.115	0.014	0.099	1				
9 R&D	0.102	-0.040	0.052	0.181	-0.116	0.096	0.114	0.030	1			
10 Tangibility	-0.096	0.063	-0.192	-0.207	0.163	0.146	-0.182	-0.094	-0.109	1		
11 Profitability	0.217	-0.150	-0.189	0.221	0.010	0.288	0.167	0.148	-0.008	0.038	1	
12 Firm Age	-0.016	0.252	0.274	0.092	-0.115	0.024	0.071	-0.184	-0.002	-0.054	-0.026	1

Source: Authors' Own Calculation

4.3 Regression Evidence

In this sub-section, we examine the impact of business group affiliation on cash holdings and compare the impact of firm characteristics on cash holdings of group affiliate and standalone firms through multiple regression after controlling for firm and time effect. Table 4 reports the results of Model 1, Model 2, and Model 3. Model 1 covers a full sample of group affiliated and standalone firms while Model 2 and Model 3 separately encompass the sample of group affiliated and standalone firms respectively. All models capture time and firm fixed effects.

5. Discussion

Model 1 aims at analyzing the effect of group affiliation on firm cash holdings. For this purpose, it includes a dummy variable (Group) that takes the value 1 for group affiliated firms and 0 non-affiliated firms. In addition, other firm characteristics are taken as independent variables in the model. The regression result depicts a significantly negative coefficient for Group. This result aligns with the hypothesis (H_{01}) that business group affiliate firms hold less cash than the standalone firms which corroborates with the findings of Locorotondo *et al.* (2014) in the Belgian context. The result also depicts that other firm-level variables other than R&D and tangibility significantly explain the cash balance of the full sample firm.

Model 2 and Model 3 make a comparative analysis of the effect of firm characteristics on the cash position of group affiliate and standalone firms. The analysis documents that in line with earlier findings of Opler *et al.* (1999), Bates *et al.* (2009), Sun *et al.* (2012), Al-Najjar (2013), Locorotondo *et al.* (2014),

Table 4: Effect of Group Affiliation and Firm Characteristics on Cash Holdings

<i>Variables</i>	<i>Full Sample (Model 1)</i>	<i>Group Affiliate (Model 2)</i>	<i>Standalone Firm (Model 3)</i>	<i>t test for Difference in Coefficient</i>
Intercept	-0.459 (-0.593)	5.182*** (4.801)	-4.832*** -3.626	
Group	-1.833*** (-22.59)			
Firm Size	-0.161*** (-3.301)	-0.471*** (-6.935)	-0.168** (-2.239)	-4.023
Growth Opportunities	0.075*** (5.7)	0.052*** (-6.935)	0.125*** (5.65)	-3.162
Leverage	0.269*** (3.262)	0.305*** (2.667)	0.201 (1.539)	0.601
Cash Flow	0.434*** (2.721)	0.098 (0.446)	1.059*** (4.261)	-2.938
Dividend	0.264*** (6.329)	0.346*** (6.144)	0.139** (2.079)	2.371
Net Working Capital	-0.084*** (-3.742)	-0.494*** (-9.825)	-0.026 (-0.992)	-8.304
R&D	3.033* (1.89)	5.578** (2.468)	2.298 (0.945)	0.988
Tangibility	-0.127 (-1.409)	-0.149 (-1.322)	-0.142 (-0.858)	-0.035
Profitability	0.497*** (11.05)	0.772*** (11.54)	0.429*** (6.721)	3.702
Firm Age	-0.546*** (-2.593)	-1.659*** (-6.096)	0.538 (1.303)	2.267
Year Fixed Effects	Yes	Yes	Yes	
Observations	6,500	4,082	2,418	
Adj. R ²	0.633	0.608	0.613	

Source: Authors' Own Calculation

Note: The regression co-efficient of Model 1, Model 2, and Model 3 are reported in the table. t-statistics are within brackets below. Superscripts ***, **, and * refers to statistical significance at 1%, 5%, and 10% levels respectively.

Chauhan *et al.* (2018), and Hu *et al.* (2018), firm size negatively influence the cash holdings and the influence remains negative for both group affiliate and standalone firm. Cash holdings are positively influenced by growth opportunities in both group affiliate and standalone firms which supports the findings of Kim *et al.* (1998), Opler *et al.* (1999), Sun *et al.* (2012), Chauhan *et al.* (2018), and Hu *et al.* (2018).

Leverage positively influences the cash balance of group firms which goes in consonance with Steijvers *et al.* (2009). It means that group affiliates' cash balances are more responsive to debt level as the financial distress of one firm can have a spiraling impact on other group members. So group members hold more cash reserve as a caution against financial distress arising out of higher debt. However, such a relationship is insignificant in the standalone firm. Higher cash flow stimulates higher cash holdings in the standalone firm as revealed by Opler *et al.* (1999), Ferreira and Vilela (2004), Chauhan *et al.* (2018), and Hu *et al.* (2018). However, such impact is not significant in group firms. Firms making dividend payments hold more cash which substantiates the findings of Drobotz and Gruninger (2007), Maheshwari and Rao (2017), and Chauhan *et al.* (2018), and such behaviour is consistent in both group affiliate and standalone firms.

Net working capital serves as a replacement for cash holdings of group affiliate firms which aligns with the findings of Opler *et al.* (1999), Bates *et al.* (2009), Chauhan *et al.* (2018), and Hu *et al.* (2019). But such a relationship is insignificant in the standalone firm. Group firms engaged in R&D hold more cash as R&D generates huge cash inflows through increased sales revenue which coincides with the findings of He & Wintoki (2016), Ruiqi *et al.* (2017), Chauhan *et al.* (2018), and Hu *et al.* (2019). However, such influence is insignificant in the standalone firm. Assets tangibility is having an insignificant influence on cash balance for both group and standalone firms. For both group as well as standalone firms, more profitable firms hold more cash and it goes in conformity with Ali and Yousaf (2013), Mugumisi and Mwanza (2014), and Chauhan *et al.* (2018).

Firm age is having a negative effect on cash holdings in group firms which appreciate the presumption that old firms are subject to less information asymmetry and capable of securing funds at a lesser cost resulting to less cash reserve. But such an effect is insignificant in the standalone firm. Further, looking at the t-test for difference in coefficient, it is inferred that there is a significant variation in the effect of firm size, growth opportunities, cash flow, dividend, net working capital, profitability, and firm age on cash holdings of group affiliate and standalone firms. However, there is no significant variation in the effect of leverage, R&D, and tangibility on cash holdings of group affiliates and standalone firms.

6. Conclusion

Though prior researches have studied the drivers of cash holdings in the Indian context still the ownership structure as a driver of cash holding has not received the attention of researchers. Hence, this paper analyzes the effect of ownership structure on the cash position of Indian manufacturing firms. The result reveals that business group affiliates hold lesser cash than the standalone firm. On comparing the effect of firm characteristics on cash position, it is found that such effects differ for group affiliates and standalone firms. The major point of difference is that cash holding is an increasing function of leverage and R&D for group affiliates but such relationship is insignificant for standalone firms. Further, cash holding is a decreasing function of net working capital and firm age for group affiliates but such relationship is insignificant for standalone firms. In the case of cash flow, cash holdings is an increasing function of cash flow for standalone firms but such a relationship is insignificant for group affiliates.

The findings of the study are useful for managers as the understanding of the relationship between ownership structure and cash holdings will help the managers in deciding the appropriate level of cash by giving due consideration to other firm characteristics. The findings are also useful for bankers, regulators, credit rating agencies, investors in assessing the cash holding behavior of firms in the light of ownership structure. This study paves the way for future research in the sense that further study can be made to see whether the effect of ownership structure on cash holding gets moderated in the presence of some other firm-specific or macroeconomic variables. As this study is based on quantitative financial data and is limited to Indian manufacturing firms only, future study can be made taking qualitative data and a cross-country study can be made to gain more insight into the effect of ownership structure on cash balance of firms.

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