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Do Capital Markets Punish Tunneling Behaviour of Business Groups? Agency Perspective of Related Party Transactions

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ABSTRACT

This study examines that do capital markets punish the tunneling behaviour of business groups in a unique institutional setting of Pakistani group firms. For this purpose, data of 207 non-financial firms belonging to various business groups were taken as a sample from 2006 to 2018. The Ordinary Least Square and Two Stages Least Square regression models are estimated. The results of various estimated models showed that both accounting performance and market valuation of the sample firms are negatively influenced by related party transactions (RPTs). Therefore, these transactions are assumed to be a means of conflict by the market participants and consistent with the tunneling perspective and conflict of interest hypothesis. These results support the notion that capital market pressure acts as a disciplinary device and punish the tunneling behaviour of the group firms. Besides capital markets, the regulatory framework and corporate governance (CG) mechanisms, therefore, should be improved in such a way to reduce the tunneling of minority shareholder's wealth. Moreover, external auditors shall devise stringent procedures to evaluate the reported RPTs to minimize its negative effects. This study also contributes to agency theory and tunneling aspect of RPTs in case of emerging markets. Main limitation of the current study is small sample size because majority of the group firms are not listed with Pakistan Stock Exchange and their annual reports are not publically available.

Keywords

Tunneling, RPTs, Business Groups, Accounting performance, Market performance

JEL

Classification

D53, L10, L25

1. Introduction of the study

Agency theory predicts that managers or major shareholders could expropriate the wealth of minority shareholders in different ways. For example, weak corporate law and poor enforcement mechanisms can increase the fear of expropriation among minority shareholders. Johnson, Boone, Breach and Friedman (2000a) suggested that the hazard of

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expropriation is particularly higher in firms belonging to business groups. The group firms are known to be less transparent, have more opportunities, and have complicated structures. In addition, they may have better links to the political apparatus in the country thus making it difficult to be externally interfered and monitored. In a common form of business group, a sole shareholder or family takes control of several independent firms and holds a significant ownership stake with excess cash flow rights relative to other shareholders. As such the controlling shareholder may be able to transfer or tunnel profit from the associated firms. Along with the minority shareholders, tunneling also hurts development of equity market (Ge et al., 2010; Johnson et al., 2000b; Bertrand et al., 2002; and Wurgler, 2000). Therefore, capital markets punish the expropriating behavior of the group firms.

Related party transactions (RPTs) are recurring transactions of concern to the academic and practitioners due to the frequent corporate scandals. These are multifaceted complex business transactions with managers, owners, directors and associated firms etc. A party related can have variety of types. It can be a subsidiary, a joint venture, owned by a family member, or a firm owned, affiliated, or associated with some related individual(s). The inherent complexity of these transactions leads to audit risk because these transactions are difficult to be audited (Johnstone & Bedard, 2004). The General Accounting Office (2003) acknowledged that RPTs are used by companies to manipulate their financial reports. The literature shows that most of the corporate collapses took place due to RPTs (Ge et al., 2010; and Gallery et al., 2008). Therefore, RPTs are considered a potent threat by all stakeholders. Ryngaert and Thomas (2012) and Ge et al., (2010) considered RPTs as a mechanism to expropriate a firm's scarce resources for a purpose other than to maximize the wealth of shareholders. So, group firms with more RPTs are expected to be negatively responded by the capital markets.

Contrary to the above views, the "efficient transaction hypothesis" (ETH) suggested that RPTs are beneficial business transactions that can efficiently fulfill the economic needs of firms. Thus, these transactions will advance the interests of the minority shareholders and act as an efficient contract (Gordon et al., 2004). The idea that not all RPTs could be the result of self-dealing are coined by Kohlbeck and Mayhew (2004); they opined that some more complex RPTs might be in line with the ETH and would thus positively support the performance of the firm. Friedman et al., (2003) used the term "propping" for the first time, which refers to the relationship among the affiliated firms in which they shift resources from one firm to another through RPTs. The controlling shareholders (family or government) use these resources to prop up the cash flows of the financially distressed firm through the transfer of resources from other affiliated firms. In this vein, conferring to the transaction cost hypothesis (TCH) of (Coase, 1937; and Williamson, 1998), RPTs are considered as internal dealings among the affiliated firms which provide an alternative to exchanges at the market rate and are expected to be less costly and bring ease in production (Fan & Goyal,

2006). Thus, related party transactions could, in fact, increase performance (Amzaleg & Barak, 2011; and Jian & Wong, 2010).

The above view seems to be more relevant to markets characterized by inefficient capital allocation, lack of skilled labor and product markets. As such these market imperfections could increase the probability of agency costs associated with the information asymmetry and contracting problems. However, group affiliation and internal dealings among these firms are expected to better allocate the financial, labor and material resources in a manner that would create economies of scale, bring cost-effectiveness and make easier access to the financial and other resources (Ryngaert & Thomas, 2007; Siegel & Choudary, 2012; and Pizzo, 2013). Few studies show that group affiliations bring technological advancement, share human, advertising, and other resource and contribute towards profitability and growth of the firms (Chang and Hong, 2000; Siegel and Choudary, 2012; Lo et al. 2010; Moscariello, 2007; Nekhili and Cherif, 2011; Wahab et al., 2011).

The dual nature of these transactions is one of the sources of motivation to study the economic consequences of the RPTs in the perspective of Pakistani business groups and the response of the capital markets towards these transactions. We add to the knowledge on the effect that RPTs have on the firm accounting performance and market valuation in three ways. First, we provide new proof on the effects of RPTs in the capital markets with weaker protection of minority shareholders' rights, ownership concentration, cross-shareholdings and interlocking among the business groups and have more information asymmetry (see e.g., La Porta et al., 2000) and focus on the role of the capital markets in disciplining the group firms tunneling behavior.

Thus, the results of this study could be directly relevant to emerging capital markets e.g., most of the Asian markets having institutional setup similar to Pakistan. Second, this study adds to the tunneling literature and especially to the existing small number of studies that have reported a consistent decline in the financial performance of group firms and reported expropriations in the Pakistani context such as Ghani et al., (2005), Karacaer et al., (2009), and Bhutta and Suleman (2016), however, they could not identify the tools that facilitate expropriations. So this study examines direct avenue i.e. RPTs through which expropriation may occur and causing declines in the financial performance of group firms; and is also negatively perceived by the capital markets through adverse response to the group firms' share prices. Third, compared to the previous studies that focus on one or the other particular types of RPTs separately, in this study all the RPTs are considered and analyzed. Moreover, apart from the conflicting results in the literature on the nature of RPTs, the existing studies on the RPTs are mostly based on the US, European Countries and Chinese firms, which have different ownership structure, investors' protection, corporate governance (CG) systems, enforcement mechanisms than Pakistan. For this purpose, the

study investigates that either the capital markets punish the tunneling behaviour of firms belonging to business groups in Pakistan.

2. Literature Review

Traditionally, research in the field of “Corporate Governance” has mainly focused on the conflict of interest between stockholders and management. However, particularly in the case of emerging and less developed economies, extant literature has pointed to the existence of conflict of interest between majority and minority stockholders called agency type II (see Albuquerque & Schroth 2010; Shleifer & Vishny, 1997; Barak & Lauterbach, 2011; Johnson et al., 2000b; and Liu & Magnan, 2011). La Porta et al., (1998) documented that concentrated ownership due to majority shareholdings by families, institutions, or Government is normal in emerging economies. These so-called insiders’ shareholders with major stakes in the firms enjoy excessive control rights and have the opportunity to expropriate resources through their operating and financial decisions (Gopalan & Jayaraman, 2012).

According to Ryngaert and Thomas (2012) RPTs serve as a potent mean of wealth expropriation by the majority owner(s). Many studies show that several financial frauds and decline in earnings have occurred due to RPTs (Ge et al., 2010). Statement of Financial Accounting Standards 57 (SFAS 57) and International Accounting Standard 24 (IAS 24) defines RPTs as, “the transactions between a company and its subsidiaries, affiliates, principal owners, officers or their families, directors or their families, or entities owned or controlled by its officers or their families. These transactions include sales and purchase of assets, goods and services, cash payments, loan guarantees and other types of transactions with affiliated firms.” These accounting standards require proper disclosure of RPTs with the aim to reflect changes in financial position due to RPTs within the financial statements for the benefits of stakeholders. The using of RPTs by one party against the interests of the other is similar to the conflict of interest hypothesized earlier by Berle and Means (1932), followed by Jensen and Meckling (1976), and Classens et al., (2002). Johnson et al., (2000) coined the term “tunneling” for such situations where the dominant insiders transfer resources or profits from one firm to another firm. Similarly, Djankov et al., (2005) opined that controlling shareholders could extort cash from affiliated firms through RPTs. Denis and McConnell (2003) suggested that internal mechanism (board composition, compensation system, ownership structure, and corporate transparency) and external mechanism (legal environment, protection of minority shareholders, competition for corporate control and competition within the product markets) could mitigate the incidents of RPTs induced expropriation.

In contrast, Gordon et al., (2004) proposed the efficient transaction hypothesis and explains that RPTs can fulfill the economic needs of firms. This according to Friedman et

al., (2003) is propping which refers to the relation where controlling shareholders propped up the cash flows of the financially distressed firms through their private resources or group firms. Siegel and Choudary (2012) supported this view and explain that due to market imperfections and agency problems in the emerging markets internal dealing among group firms may better allocate the financial, labor and material resources in a manner that may create economies of scale and easier access to finance and other resources. Being economical, RPTs increase utilization efficiency of the firms' resources (Chien & Hsu, 2010).

This dual role of RPTs implies that RPTs could either be used to dilute wealth of shareholders (Johnson et al., 2000; and Cheung et al., 2006) or these could serve the economic needs of financially distress firms to enhance their financial performance (Gordon et al., 2000; and Jian & Wong, 2004). Cheung et al., (2006) categories RPTs into transactions with the aim of expropriation and having a negative impact, positive impact including for the minority stockholders, and strategic importance and impact on the earnings of firms. Moreover, it is worth revealing that in studies about the relationship between RPTs and financial performance of firms variety of accounting and market based measures of performance are used. Accounting based measures include return on asset, return on equity, return on stock price, stock price, and earnings per share, free cash flow (Allgood & Farrell, 2003; Peng, 2004; Shen & Cannella, 2003; and Neumann & Voetmann, 2005). As these accounting-based proxies do not capture future perspectives, therefore, market-based measured are preferred in the investigation of the impact of RPTs on the wealth of equity holders. However, results are inconclusive; of the two conflicting hypotheses some studies accept one and reject the other and vice versa.

In line with the Conflict of Interest Hypothesis (CIH), considerable numbers of studies documented an indirect association between RPTs and firms' performance and concluded that capital markets punish the expropriating behaviour of dominant shareholders. Ho et al., (2001) and Gordon et al., (2004b) substantiated the CIH and reported existence of the negative association of RPTs with market-adjusted returns. Similarly, Jian and Wong (2004) found that related party sales inversely influence Tobin's q and market-to-book ratio of the sample firms. Yeh et al., (2012) found a negative impact of receivables to payables ratio on the firm operating performance. Economic value added (EVA) and market value added (MVA) are also used and RPTs was found to be inversely related to both these measures (Chiou & Huang, 2006; and Cheung et al., 2009). Jian and Wong (2004); Nekhili and Cheirf, (2011) used Tobin's q to report an indirect relationship with RPTs. Michael and Shawn (2011) conducted interesting research while considering ex-ante RPTs with counterparty before becoming associated firm and ex-post RPTs. They documented direct relationship RPTs and Tobin's q in the ex-ante time period while the association is reported as negative in the ex-post time period. Moreover, Liu, Qiao and Joe (2007) suggested that operating

revenue almost equal to the related party receivables in the case of excessive transactions with foreign subsidiaries of firms. They also reported relatively longer collection period of these related party receivables and thus could turn detrimental to both liquidity and performance of the firms (Huang & Liu, 2010). Keeping in view the characteristics of Pakistani economic system and following the majority, it is hypothesized that:

H₁: There is an inverse relationship between related party transactions (RPTs) and the various accounting-based measures of financial performance (ROA, ROE, and Earnings per Share) of firms.

H₂: There is an inverse relationship between related party transactions (RPTs) and the market-based financial performance of firms.

3. Research Methodology

This section discusses data collection and sample framework and introduces the regression model(s) employed to analyze the data.

3.1 Data Collection and Sample Framework

Data of CG and ownership structure variables such as size of board, independence of board, CEO-duality and compensation, director ownership, ownership of associated firms, institutional ownership, foreign ownership, block-holdings, audit quality, number of a banking relationship, bank borrowings is acquired from the individual firm's annual reports for the period 2006-2018. Moreover, related party sales, purchases, payables, receivables, and other firm-level financial data is acquired from a "balance sheet analysis of financial statements" of SBP (State Bank of Pakistan) and annual reports of firms for the same sample period. We searched for firms from different sectors listed on "Pakistan Stock Exchange" (PSX) that have reported RPTs for the sample period and have followed the Corporate Governance Code 2002 and 2012 regarding evaluation and disclosure of RPTs. Financial and government and quasi-government firms are excluded from the sample. Furthermore, data is normalized through winsorization and observation with extreme values, negative equity and losses are dropped from the data. We use Cook's D to identify and remove abnormal observations. This shall help achieve goodness of fit and generalizability of the results. Finally, an unbalanced panel of 207 firms with 1098 firm-year observations is left for the estimations of the different econometric models.

3.2 Statistical Modeling

Following Yezhen and Wong (2015) and Lin et al., (2010), the study used return on assets (ROA) and returns on equity (ROE) and earnings-per-share (EPS) as measures of the dependent variable. The following econometric model is estimated to quantify the relationship between RPTs and the dependent variable.

$$\begin{aligned}
 PROF_{i,t} = & \alpha + \beta_1 B.S_{i,t} + \beta_2 NED_{i,t} + \beta_3 B.M_{i,t} + \beta_4 CEO.Sal_{i,t} + \beta_5 CEO.Duality_{i,t} + \beta_6 INST_{i,t} + \beta_7 M.O_{i,t} + \beta_8 \\
 & F.O_{i,t} + \beta_9 ASSO_{i,t} + \beta_{10} Block_{i,t} 20\% + \beta_{11} Block_{i,t} 30\% + \beta_{12} EAR_{i,t} + \beta_{13} EAS_{i,t} + \beta_{14} M.Banks_{i,t} + \beta_{15} \\
 & L.Amount_{i,t} + \beta_{16} LEV_{i,t} + \beta_{17} F.S_{i,t} + \beta_{18} F.G_{i,t} + \beta_{19} RPT_{i,t} + \eta_i + \lambda_t + \mu_{i,t} \text{-----} (1)
 \end{aligned}$$

$PROF_{it}$ is measured in terms of *EPS*, *ROA* and *ROE* of firm *i* at time *t* and *B.S*, *NED*, *B.M*, *CEO-Sal*, *CEO-duality*, *INST*, *M.O*, *F.O*, *ASSO*, *Block 20%*, *Block 30%*, *EAR*, *EAS*, *M.Banks*, *L.Amount*, *LEV*, *FS*, *F.G* and *RPT* are explanatory variables and represent board size, CEO-duality, board meetings, CEO-compensation, board independence, Institutional ownership, foreign ownership, managerial ownership, associate ownership, blockholdings20%, blockholdings30% , external audit quality, external audit fee, number of banks in relationship, loan amount from banks, leverage, firm size and related party transactions proxies respectively. Moreover, α_0 and $\mu_{i,t}$ are the usual constant and error terms of the regression; η_i , and λ_t represent industry and year dummies.

In the case of market-based performance, 2-Stage Least Square (2SLS) estimation technique is used because both CG and ownership structure of a firm are said to have influence on RPTs where the later is used to explain the value of firm. (Gordon et al., 2006; and Nekhili & Cherif, 2011). It is stated that both CG and ownership structure of a firm affect RPTs. Therefore, these studies suggested that the related party transactions that can determine the value of company are themselves affected by the company's ownership characteristics and governance mechanisms. Thus, in the first equation, we check the effect of RPTs, with the complete set of variables on the Tobin's q. In the second equation, we check the effect of the CG and ownership variables on the RPTs. Both RPTs and Tobin's Q are endogenous variables; whereas, the CG, ownership, and the control variables are exogenous. Leverage and external audit quality are used as instrumental variables in the model of RPTs. Nekhili and Cherif (2011) used dividend as a variable for the protection of minority shareholders; we prefer leverage (debts to equity) and external audit quality (audit by big4) as monitoring devices for protection of the minority shareholders' wealth.

3.2.1 Endogeneity Test

In the presence of endogeneity, OLS and 2SLS regressions estimates are inefficient Woodridge (2001). To test that firm value and RPTs are endogenously determined, Durdin-Wu-Hausman test (1978) has suggested a test that compares the OLS with 2SLS estimates. This test can be operationalized in two steps. In the first step, the RPTs is regressed against the instrumental variables and all variables in the Tobin's Q regression. The instrumental variables are expected to be correlated with the RPTs and uncorrelated with the error term. The residuals, predicated from this auxiliary regression, are then included in the value regression as an explanatory variable. If the residuals are found statistically significant, it is taken as endogeneity. In the case of our study, the results of the residuals are significant for

the Tobin's q but insignificant for the ROA, ROE, and EPS. Therefore, this study has used 2SLS for the Tobin's q while OLS in case of ROA, ROE, and EPS.

$$TobinsQ_{it} = \alpha_0 + \beta_1 B.S_{it} + \beta_2 NED_{it} + \beta_3 INST_{it} + \beta_4 M.O_{it} + \beta_5 ASSO.O_{it} + \beta_6 F.S_{it} + \beta_7 ROA_{it} + \beta_8 TANG_{it} + \beta_9 DRPTRP_{it} + \beta_{10} DRTPSP_{it} + \eta_i + \lambda_t + \mu_{i,t} \text{ ----- (2)}$$

$$DRPTRP_{it} = \alpha_0 + \beta_1 B.S_{it} + \beta_2 NED_{it} + \beta_3 INST_{it} + \beta_4 M.O_{it} + \beta_5 ASSO.O_{it} + \beta_6 F.S_{it} + \beta_7 EAQ_{it} + \beta_8 LEV_{it} + \eta_i + \lambda_t + \mu_{i,t} \text{ -----(3)}$$

$$DRTPSP_{it} = \alpha_0 + \beta_1 B.S_{it} + \beta_2 NED_{it} + \beta_3 INST_{it} + \beta_4 M.O_{it} + \beta_5 ASSO.O_{it} + \beta_6 F.S_{it} + \beta_7 EAQ_{it} + \beta_8 LEV_{it} + \eta_i + \lambda_t + \mu_{i,t} \text{ -----(4)}$$

3.3 Operationalization and Justification of Variables

The current study uses various variables to account for governance mechanisms, ownership structure prevailing in a country, external agents of governance such as external auditors and banks monitoring.

The governance variables include corporate board size measured through number of board members of a firm in a particular year (Gao & King, 2008; and Ullah & Shah, 2015). These members include both "executive and non-executive/independent directors". Independence of corporate board is captured through the ratio of independent directors to the board size. Board meetings are used to represent the efficiency of the corporate board as required under the "Code of Corporate Governance 2012" all RPTs should be approved by the corporate board. Therefore, these variables directly affect the quantity and quality of the RPTs (Ullah & Shah, 2015). CEO-duality is a common practice in Pakistani business groups and hence considered as control. Dual position of the CEO may facilitate the expropriation of minority shareholders wealth through RPTs (Ullah & Shah, 2015).

The ownership structure is another commonly observed set of variables that have significant association with the RPTs. In the context of Pakistan most widely used variables in agency framework are managerial ownership that represents the portion of ownership held by the directors and their blood relative (Gao & King, 2008). Ownership of associated firms in Pakistani group firms is computed as the ownership stake of other firms out of total ownership (Ullah & Shah, 2015). We expect that the higher level of this ownership will be positively related with the number of RPTs and negatively affect performance of firms. Institutional ownership and holding of the foreign investors in domestic firms assumed to play significant role in balancing interest of various stakeholders (Berkman et al., 2009; and Gao & Kling, 2008). In emerging markets institutional investors are considered as disciplining agents due to their capacity, knowledge and access to information. The study compute institutional ownership as a portion of ownership held by financial institutions and foreign ownership as a portion of ownership held by foreign investors respectively (Gao & Kling, 2008).

The study use external agents such as external auditor and number of banks in relationship with firms. The study consider external auditor as an agent of governance that can closely monitor the quality, quantity and pricing mechanism used by firm in executing RPTs. Therefore, the external auditors can play significant role in reducing the likelihood of expropriating wealth of minority shareholders by using such transactions (Gao & Kling, 2008). The study also incorporate BIG4 as a representation for the quality of audit and has assigned a “value of 1 if the firm auditor is from big4 otherwise 0” is assigned (Bennouri, Nekhili & Touron, 2015). The number of banks in relation with firms is used as an external governance agent for the first time in Pakistan. We expect that the number of banks in relationship with a firm are positively associated with level of monitoring by these banks (Ullah & Shah, 2014). Thus, as the number of banks increases the probability of expropriations through RPTs will decrease and will positively affect firm value (Ghosh, 2007). These banks are expected to control profit diluting and credit risk enhancing transactions (Ullah, & Shah, 2011).

The control variables include firm size and leverage. Earlier research studies reported positive connection of firm size with RPTs and Tobin’s q and negative association of leverage with RPTs and Tobin’s q. The study measure size as log to total assets (Yeh, Shu & Su, 2012) and leverage as debts to equity of firm in a given year (Gao & Kling, 2008).

4. Empirical Analysis and Discussion

Descriptive statistics, and correlation, and regression results are presented in Table 1 to Table 4.

4.1 Descriptive Statistics & Pearson Correlation

Descriptive statistics of all the variables except the RPTs are reported in Table 1 where these statistics for the measures of RPTs are shown in Table 2. As shown in Table 1, the average numbers of member of corporate board are 9. On the average 35% of the members are external directors. A significant number (42%) of CEO perform dual functions. On the average the boards of the sample firms hold 6 meetings annually. The ownership of associated firms has a minimum value 0, the maximum value of 0.90 and its mean value is 0.493. We expect that this high percentage of associated firms’ ownership in Pakistan might causes the firms to have a controlling decision right with the controlling shareholders. The mean value of blockholder20% is 0.7021 and the average value of the blockholder30% is 0.4584. These statistics also show that on the average managerial ownership is 0.383, institutional ownership is 0.0862, and foreign ownership is 0.0326. The average value of ROA, ROE, EPS, and net profit margin are 0.87, 0.65, 12.46 and 0.039 respectively. To remove outliers from these variables, all corresponding rows where an abnormal value of these variables exists are dropped and as such 46 observations are dropped. The same

procedure was used for other variables such as size & growth of firms, tangibility, and leverage. In total 212 observations were dropped.

Table 1 Descriptive Statistics

VARIABLES	N	Mean	S.d	Min	Max
Corporate Governance					
Board Meetings	908	5.638	2.655	3.000	12.000
Board Independence	910	0.556	0.287	0.000	0.875
Board Size	909	8.209	1.614	7.000	15.000
CEO-duality	910	0.426	0.495	0.000	1.000
CEO-compensation	910	6.532	1.398	0.000	8.317
Ownership Structure					
Associate ownerships	910	0.298	0.294	0.000	0.950
Blockholder20	903	0.722	0.447	0.000	1.000
Blockholder30	910	0.459	0.499	0.000	1.000
Managerial Ownership	910	0.383	0.238	0.000	0.938
Institutional Ownership	910	0.086	0.146	0.000	0.797
Foreign ownership	910	0.033	0.116	0.000	0.085
External Agent					
Big4	910	0.431	0.59	0	1
No of External Auditor	910	1.352	0.498	0.000	2
External Auditor Fee	910	5.991	0.637	0.000	7.444
No Banks in Relationship	910	4.611	2.273	0.000	15.800
Bank loans	910	0.509	0.125	0.000	0.815
Financial Variables					
Leverage	910	0.498	0.126	0.000	0.765
Firm size	910	9.157	2.575	0.000	12.730
Firm Growth	910	8.935	2.847	0.000	12.670
Tang	910	0.449	0.327	0.000	0.799
Financial Performance					
EPS	910	0.322	0.994	-3.876	9.716
ROA	910	0.002	0.019	-0.079	0.526
ROE	910	0.094	0.226	-0.763	0.753
TobinsQ	910	12.821	11.029	0.000	24.560

Table 1 shows descriptive statistics of the variables used in different regression models by using data from 2006 to 2018 for 207 firms belonging to different associated companies. Board size is computed as a log of number of board members, Board independence is computed as the number of non-executive directors divided by total directors, Board meetings are computed as a log of the total number of board meetings. CEO-duality is equal to 1 if the chairman and CEO position is held by the same person otherwise 0, CEO compensation is computed as log of annual salary of CEO, Associate ownership stands for percentage of associate ownership to total ownership, Blockholder20% and Blockholder30% stands for the major shareholder holding 20% and 30% shares and are coded 1 otherwise 0, “managerial ownership represents percentage of ownership of

directors, their children and spouses divided by total ownership, institutional ownership represents the percentage of ownership of financial institutions divided by total ownership, foreign ownership represents the percentage of ownership of foreign investors divided by total ownership". A number of external auditors represent the total number of audit firms which have performed their audit in a given year. The external audit fee is computed as a log of external audit fee, a number of banks in relationship represent the total number of banks that have loan contracts with the firm in a given year, and Banks loan is computed as banks loan divided by the total liability of a firm in a given year. Control variables include Firm Size is computed as log of total assets, Firm growth is computed as changes in the firm fixed assets, leverage ratio is computed as debts divided by total assets, tangible is computed as fixed assets divided by total assets, EPS is computed as net profit divided by outstanding shares, ROA is net profit divided by total assets, ROE is net profit divided by equity of a firm in a given year.

In Table 2 the proxy of RPTs *Drptrp* is measured as the difference of related party receivables and payables scaled by total assets. Its value ranges from -0.444 to 0.3378 and has a mean of -0.030 across all the firms and the time periods. The second proxy of RPTs *Drptsp* is the difference of related party sale and purchase divided by total assets. Its average value is -0.023 having a maximum (minimum) value of 0.365 (-0.686). These statistics show that on average 3% of the firm assets and 2.33% of the firms' sales and purchases might be expropriated, however to be confirmed through the regression analysis. *Rploan* is the third proxy of RPTs and it is computed as related party loans divided by total assets. it has a maximum and minimum values of 0.68 and 0.00 respectively whereas on the average 29% of the total liabilities are loans granted through RPTs and may increases up to 69 %.

Table 2: Descriptive Statistics

VARIABLES	N	Mean	Sd	Min	Max
DRPTRP	910	-0.03	0.315	-0.444	0.338
DRPTSP	910	-0.021	0.078	-0.379	0.366
Director Loans	910	0.291	0.011	0	0.68

Table 2 shows descriptive summary of the different types of related party transactions, DRPTRP stands for difference of the related party receivables and payable scaled by total assets for a firm in a given year. DRPTSP stands for the difference between the related party sale and purchases scaled by firm total assets. Director loan represents the loan granted to different directors and is computed as a loan granted divided by total assets of a firm in a given year. N shows a number of observations, mean shows average value, sd stands for standard deviations, Min stands for the minimum value of a variable and Max represents the Maximum value of a variable.

The correlations between the variables are presented in Table-A-1(Annexed-1) which showed the magnitude of linear association between the variables. The correlation statistics showed no issue of multicollinearity in the given set of the explanatory variables. Both DRPTRP and DRPTSP exhibit a positive linear association with CEO-duality, ownership of associated firms, blockholders20%, and 30%. Whereas, the two measures are negatively correlated with size, independence, and meetings of board, CEO composition, institutional and foreign ownership, audit fee, an external audit from Big4, number of banks in a relationship, banks loan, leverage, firm size, firm growth, and tangibility. These associations imply that firm with relatively higher managerial ownership, more ownership of associated firms, CEO-duality may have high probability of RPTs. Firms with large sized boards, many independent directors in the board, good compensation policy, more intuitional and foreign ownership, good audit quality and lending from more banks would have low probability of related parted transactions. These associations substantiate the theoretical predictions in the literature review with the exception that there exists a high correlation between the size of firm and growth and ownership of associated firms with blockholder20%. These simple correlations would be further analyzed through more rigorous regression models. These relationships also show that smaller firms have less tangible assets, low growth rate, lower leverage and are lesser profitable.

4.2 RPTs and Market Financial Performance

Table 3 presents results of the regression model with Tobin's Q as the dependent variable. The table reports the estimated values of the parameters of the independent variables with their respective standard errors in the parentheses. The test statistics of Durbin (score) and Wu-Hausman are significant at the 5% and suggests that RPTs are endogenously determined by the CG and ownership structure variables (Nekhili & Cherif, 2011). The Wald test is significant at 1% and means that the instruments used in the Tobin's Q equations are not weak. The result of the Sargan (Score) and Basman tests of over-identification for 2SLS models of Tobin's Q are insignificant, which shows that the models are not over-identified. The year and industry dummy variables in these models are statistically relevant at 5%.

The results of both OLS and 2SLS show that Tobin's Q is inversely influenced by the measures of RPTs. These results support the hypothesis that there is a negative relationship between RPTs and the value of the firm. These results support the view that RPTs are considered value destroying by the market participants. Putting differently, these transactions are assumed to be a tool through which the wealth of shareholders is transferred to the controlling shareholders or associated/ affiliated firms (Nekhili & Cherif, 2011). These results are in line with the notion that capital markets do punish the tunneling behaviour exhibited by the group firms. The results corroborate the findings reported by

Gordon (2004); Gordon et al., (2006), and Jian and Wong (2004). Size and independence of board are positive and significant in all models. The extant literature reveals that larger boards offer more benefits to firms (Coles et al., 2008; and Kiel & Nicholson, 2003). From the resources dependency perspective, the direct association of size of board with Tobin's Q is said to bring more opportunities, create linkages with other firms in industry, and access their resources such as financial and technical advice (Ge et al., 2010; Hillman and Dalziel, 2003; Kiel and Nicholson, 2003; Kula, 2005; Liew et al., 2015; Pfeffer and Salancik, 1978; Zahra and Pearce, 1989).

Similarly, our results are also in line with the agency theory perspective that the larger boards are capable to better monitor firms' managerial activities and as such may diminish the probability of expropriation by the controlling shareholders (Kiel & Nicholson, 2003). The positive and significant relationship of board independence and Tobin's Q is due to the reason that independent directors are assumed to be neutral and could act to balance the power between insiders and outsiders by reducing the probability of expropriations (Nekhili & Cherif, 2011; Gordon et al., 2006; Liew et al., 2015). Furthermore, these independent directors usually have more expertise and industry-specific knowledge that may bring effectiveness in their decisions, which may positively affect the value of a fund (Dalton et al., 1998). Managerial ownership and ownership of associated firms have significant but an inverse impact on the dependent variable. The relationship is significant in 2SLS regressions only.

In accordance to Shleifer and Vishny (1997) large shareholders with more controlling power may allocate firm resources in a manner that may lead to expropriation (Nekhili & Cherif, 2011; Gordon et al., 2006). These results reveal that an increase in the ownership by managers and associated firms lead to more control over the resources distribution and increase both agency costs and chances of expropriation by them. Ultimately it would deteriorate value of the fund. These findings of the inverse relationship support the entrenchment and expropriation hypotheses and fail to support the alignment of interest hypothesis proposed by Jensen and Meckling (1976). The negative and insignificant effect of institutional ownership suggests that either these institutional investors are passive or collude with the associated firms or managers and thus are collectively involved in the expropriation of firms' resources or they may buy shares for speculating market for excess returns only (Demsetz & Villalonga, 2001). Size of fund and tangibility show direct and significant association with value of firms. These findings imply that small firms and firms with fewer tangible assets face greater probability of bankruptcy and less investors' confidence to invest in these firms (Titman & Wessels, 1988). Moreover, these firms relative to large firms have the disadvantage to acquire economies of scale and have relatively lesser market exposure (Petit & Singer, 1985).

Table 3 Regression Results of Related Party Transactions and Firm Value.

VARIABLES	(TobinsQ) OLS	(TobinsQ) 2SLS	(TobinsQ) OLS	(TobinsQ) 2SLS	(TobinsQ) OLS	(TobinsQ) 2SLS
DRPTRP	-0.2077* (0.1101)	-0.2829** (0.1371)				
DRPTSP			-0.2451* (0.1350)	-0.1202** (0.6050)		
DIRLOAN					-0.3151*** (0.1251)	-0.4132** (0.1051)
Board size	0.2129* (0.1169)	0.2243* (0.1312)	0.2158* (0.1160)	0.2219* (0.1172)	0.2058* (0.1160)	0.2118* (0.1071)
Board Independence	0.7351*** (0.2149)	0.1364** (0.6620)	0.8017*** (0.1937)	0.7672** (0.3151)	0.8923*** (0.1937)	0.9912*** (0.3151)
Associated ownership	-0.8339* (0.499)	-0.2874** (0.1215)	-0.2504 (4.370)	-0.22928* (0.1151)	-0.3230 (3.2101)	-0.3195** (0.1551)
Managerial ownership	-0.2848 (0.8532)	-1.090* (0.491)	-0.4249 (0.8883)	-0.6238** (0.2988)	-0.2765 (0.8953)	-0.8453** (0.2988)
Institutional ownership	-0.3915 (7.148)	-0.4700 (10.15)	-0.9117 (7.207)	-0.6036 (0.7294)	-0.7114 (7.207)	-0.5926 (0.7252)
Firm size	-0.2054 (0.2336)	0.5215* (0.2988)	-0.1373 (0.2406)	0.9895* (0.3203)	-0.1643*** (0.0406)	0.9895** (0.3203)
Tangibility	-0.5555 (0.4713)	0.4933* (0.2575)	-0.5197 (0.4615)	0.4591** (0.2516)	-0.4127 (0.3415)	0.5151*** (0.1011)
ROA	0.6680 (0.5327)	0.1676 (0.5188)	0.7294 (5.353)	0.4972 (5.366)	0.7294 (5.369)	0.4552 (3.252)
Constant	-0.1476* (0.0844)	-0.2490* (148.3)	-1.617* (0.8271)	-1.692* (0.8958)	-0.610 (.7350)	-0.692 (0.6478)
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Sector Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Observations	885	885	885	885	885	885
R-squared	0.012		0.011		0.045	
Test of Endogeneity						
Durbin (score)		5.72(0.016)		9.01(0.006)		6.52(0.010)
Wu-Hausman		5.68(0.017)		8.68(0.007)		7.54(0.011)
Wald test				14.16(0.000)		18.16(0.000)
Test of over identifying		16.56(0.000)				
Sargan (score)		2.56(0.107)		1.23(0.302)		1.06(0.507)
Basman		1.65(0.197)		1.01(0.301)		1.12(0.297)

Table 3 show results of Ordinary Least Square (OLS) and 2 Stages Least Square (2SLS). In these models, Tobin's q act as dependent whereas *DRPTRP* is the main independent variables which is computed as the difference of the related party receivables and payables scaled by total assets for a firm in a given year and *DRPTSP* which is computed as the difference of the related party sales and purchases scaled by firm total assets. Refer to note to Table 1 & 2 for the definition of the other variables. Robust standard errors in parentheses showing different level of significance at 1% 5% and 10% represented by *** p<0.01, ** p<0.05, * p<0.1.

4.5 RPTs and Accounting-based Measures of Financial Performance

Table 4 reports results of regression analysis of different models with the three different accounting-based measures of financial performance of the firms. The main focus of the analyses is on DRPTRP and DRPTSP as primary variables of interest. All other variables including the year and industry dummy variables are included in the estimated models.

Consistent with the agency theory and expropriation hypothesis, coefficients of the difference of the related party receivables and payables in column 2 through 4 are showing an inverse relationship with the dependent variables EPS, ROA, and ROE. These results indicate that an increase in RPTs dilute financial performance of the firms and RPTs are not used for the benefit of the associated firms. These findings coincide with those reported by Kohlbeck and Mayhew (2010), Gordon et al., (2006) and Cheung et al., (2006). We find that the coefficients of size and independence of boards of the firms are positive however statistically significant in three of these models. Larger boards are expected to have skilled members with diversified experiences and therefore could increase the financial performance of firms. Moreover, larger boards would better monitor managerial activities and therefore will effectively diminish the probability of expropriation by the controlling shareholders or associated firms (Kiel & Nicholson, 2003). From the resource dependency perspective, large board may create more opportunities for the firms, establish corporate linkages with other firms in the industry to access their resources (Hillman & Dalziel, 2003; Kiel & Nicholson, 2003; Kula, 2005; Pfeffer & Salancik, 1978; Zahra and Pearce, 1989). The direct association of board independence and accounting based financial performance measures is in accordance to the agency theory that independent directors are assumed to be neutral and thus reduce the expropriations capacity of insiders (Nekhili & Cherif, 2011; Gordon et al., 2006). The findings are similar to the previous studies (see e.g., Coles et al., 2008; and Kiel & Nicholson, 2003). Further, results show that financial performance is an increasing function of CEO compensation. However, this relationship lacks statistical significance. CEO compensation mitigates the negative effects of RPTs on the performance of the firms. CEO compensation is used as internal governance tool to motivate him/her to safeguard the interests of all investors and involve him/herself in profit creating activities (Core et al., 1999; Gordon et al., 2004; Gao and King, 2008). The estimated coefficients of managerial ownership and ownership of associated firms reflect that an increase in managerial ownership (entrenched managers) and ownership of associated firms may provide more control over the resources distribution of the firms and as such increase chances of expropriation. The results further reveals that increase in institutional ownership and external audit fee both enhances performance and mitigate the negative impact of RPTs on the performance of the firms. Financial performance of the firms declines with an increase in leverage, bank loans, and number of banks. Though statistically insignificant however as expected, audit from the big4 auditor increase earnings

per share and return on assets and equity. Last, size and tangibility show positive and significant association with the accounting-based measures of financial performance of firms. This suggests that such firms have the advantage of economies of scale and secure earning more profits (Petit & Singer, 1985).

The results of the proxy of RPTs measured as the difference of the related party sales and purchases in column 5th to 7th are consistent and support predictions of the agency theory and expropriation hypothesis. As was the case in preceding paragraph, the estimated results show financial performance of firms computed through accounting-based measures is the decreasing function of RPTs. In general, results of the other independent variables show similar effect as found in the earlier discussions.

To sum up, this inverse relationship of the financial performance of firms and the RPTs substantiate the conflict of interest and expropriation hypotheses and major shareholders are using these transactions to the disadvantage of other shareholders, however, to advance their own interest. Further, this relationship in the case of market-based measure of financial performance of the firms support the notation that capital markets do penalize group firms for tunneling behavior.

Table 4. Regression Analysis of Firm Performance RPTs and Corporate Governance

VARIABLES	(EPS) Model 1	(ROA) Model 2	(ROE) Model 3	(EPS) Model 1	(ROA) Model 2	(ROE) Model 3
DRPTRP	-0.319** (0.162)	-0.0649*** (0.0270)	-0.0313* (0.0163)			
DRPTSP				-0.628*** (0.198)	-0.00704 (0.0566)	-0.0683*** (0.0200)
Board size	0.251** (0.125)	0.0832** (0.0417)	0.0102 (0.0262)	0.247 (0.224)	0.0825** (0.0417)	0.00987 (0.0262)
Board Independence	0.334** (0.161)	0.0169 (0.0122)	-0.0302* (0.0162)	0.326** (0.160)	0.0183 (0.0121)	-0.0294* (0.0161)
CEO-duality	-0.0777** (0.0330)	-0.00334 (0.00601)	-0.00384 (0.00366)	-0.0771** (0.0337)	-0.00329 (0.00606)	-0.00377 (0.00372)
CEO-Compensation	0.0293** (0.0123)	0.00596** (0.00287)	0.00351*** (0.00124)	0.0310** (0.0121)	0.00631* (0.00383)	0.00367*** (0.00123)
Associate ownership	- 0.2901*** (0.0625)	-0.0200 (0.0122)	- 0.7071*** (0.0771)	-0.0227 (0.0626)	-0.0213* (0.0122)	-0.7691*** (0.0771)
Managerial ownership	-0.0860** (0.0437)	-0.0141 (0.0152)	-0.0690* (0.0391)	- 0.0489** (0.0240)	-0.0119 (0.0153)	-0.00789 (0.00894)
Institutional ownership	0.268*** (0.0883)	0.0533*** (0.0179)	0.0310*** (0.0100)	0.264*** (0.0875)	0.0528*** (0.0176)	0.0306*** (0.00993)
External Audit fee	0.0819*** (0.0265)	0.0152*** (0.00579)	0.00778*** (0.00270)	0.0830*** (0.0268)	0.0154*** (0.00585)	0.00789*** (0.00273)
External Audit Big4	0.00568 (0.0485)	0.00414 (0.00994)	0.00200 (0.00508)	0.00195 (0.0487)	0.00342 (0.00999)	0.00238 (0.00509)
No banks in Relationship	-0.0423	-0.0353***	-0.00745	-0.0414	-0.0351***	-0.00738

	(0.0622)	(0.0124)	(0.00649)	(0.0621)	(0.0126)	(0.00648)
Banks Loan	-0.0345***	-0.00612***	-0.00376***	-0.0341***	-0.00600***	-0.00373***
	(0.00855)	(0.00170)	(0.00101)	(0.00860)	(0.00174)	(0.00101)
Firm size	0.0230***	0.000894	0.00237***	0.0229***	0.000890	0.00236***
	(0.00507)	(0.00110)	(0.000528)	(0.00508)	(0.00111)	(0.000528)
Tang	0.0310	0.0247**	0.00578	0.0298	0.0251**	0.00567
	(0.0554)	(0.0104)	(0.00625)	(0.0560)	(0.0104)	(0.00630)
Leverage	-0.629***	-0.184***	-0.0699***	-0.623***	-0.183***	-0.0693***
	(0.0588)	(0.0139)	(0.00676)	(0.0587)	(0.0138)	(0.00674)
Constant	0.129	-0.00509	0.0328	0.101	-0.0112	0.0302
	(0.328)	(0.0577)	(0.0374)	(0.330)	(0.0576)	(0.0375)
Industry dummy	YES	YES	YES	YES	YES	YES
Year dummy	YES	YES	YES	YES	YES	YES
Observations	948	948	948	948	948	948
F-test	9.45(0.000)	7.68(0.000)	10.45(0.000)	8.75(0.000)	9.54(0.000)	8.59(0.000)
R-squared	0.301	0.325	0.193	0.299	0.323	0.192
Hausman Test	37.98(0.00)	41.41	39.89(0.000)	49.78(0.000)	51.45(0.000)	48.59(0.000)
		(0.000)				

Table 4 show results of different regression models with dependent variables EPS, ROA and ROE and main independent variables *DRPTRP* which is computed as the difference of the related party receivables to payables scaled by total assets for a firm in a given year and *DRPTSP* which is computed as the difference of the related party sales and purchases scaled by firm total assets. Refer to note to Table 1 & 2 for the definition of other variables.. Robust standard errors in parentheses showing different level of significance at 1% 5% and 10% represented by *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

5. Conclusion and Future Scope

This study is an endeavor to determine that do capital markets punish the tunneling behavior exhibited by the group firms major shareholders. The study used agency framework to analyze the influence of RPTs on the financial performance in the Pakistani listed firms. For this purpose data for the period, 2006-2018 of 207 firms listed in Pakistan Stock Exchange is analyzed through OLS and 2SLS regression estimation techniques. Using multiple/alternative measures for the variables, it is found that financial performance and RPTs have a persistent negative association. RPTs are considered as conflicting by investors in Pakistan because these transactions have an adverse effect on the profitability of firms and market value. These results are consistent with the CIH and contradictory to the ETH. The results also supported that the existence of large board size and more independent members are negatively associated with the RPTs, whereas, higher managerial ownership and ownership of associated firms also found to have a negative influence on the RPTs. The results highlighted importance of the internal and external audit quality in controlling the expropriations through RPTs. These results support the view that capital markets penalize group firms for their expropriating behavior. On this note, a stern regulatory framework and corporate governance mechanisms are required to be in placed in order to reduce the expropriation of minority shareholders wealth through the RPTs in Pakistan. Future studies

may use data of firms of multiple countries. Furthermore, the issue of the RPTs could be investigated with respect to dividend payout, performance shock etc, to test the agency conflict and expropriation of minority shareholders by group firms. In future, other measures of performances may also be considered.

The findings of this study have significance for academia, investors, auditors and policymakers. This is first study of its nature on the RPTs and its economic consequences in Pakistan; we expect more follow up studies and further research. The findings showed that RPTs are used as a source of expropriations in Pakistani group firms. So auditors should handle such transactions more carefully and closely examine the pricing mechanisms used by firms in RPTs related contracts to ensure that these transactions are executed at arms-length-price with no harm to minority shareholders. The study has showed a negative response of investors towards share pricing of the group firms. Therefore, investors in stock market may avoid investing in such firms with higher intensity of RPTs. The findings of negative response of investors towards RPTs also invite the attention of corporate boards and independent directors; they shall carefully evaluate and examine RPTs in order to minimize its value destroying impact.

Main limitation of the current study is the small sample size because data of business group's firms in majority cases is not available. Mostly group firms are not listed with Pakistan Stock Exchange and their annual reports are not publically available. Moreover, the data is collected from the annual reports of the firms so the validity of the results entirely depends on the data provided by firms in their audited reports. The study has used only Tobin's q to measure the market response towards the RPTs, other measures may be considered for more robust results.

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Table A-1 Matrix of Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	
(1) drptrp	1.000																							
(2) drptsp	-0.028	1.000																						
(3) board size	-0.105	-	1.000																					
(4) board Independence	-0.024	-	0.067	1.000																				
(5) ceo-duality	0.015	0.130	-	0.074	1.000																			
(6) ceo-compensation	-0.198	-	0.083	-	0.096	1.000																		
(7) associate ownership	0.119	0.094	-	0.031	0.090	0.151	1.000																	
(8) block20	0.054	-	0.066	0.158	-	0.127	0.186	0.792	1.000															
(9) block30	0.050	-	0.087	0.157	-	0.127	0.186	0.792	1.000															
(10) Managerial ownership	0.011	0.063	-	0.181	-	-	-	-	-	1.000														
(11) institutional ownership	-0.049	-	0.129	0.115	0.267	0.364	0.347	0.332	-	-	1.000													
(12) Foreign ownership	-0.050	0.103	-	0.202	0.094	0.157	0.006	0.127	0.089	-	0.198	1.000												
(13) no. External auditor	-0.147	-	0.010	0.037	0.109	0.089	-	0.002	-	-	0.093	1.000												
(14) Audit fee	-0.103	0.038	-	0.083	-	0.052	0.053	0.046	0.053	0.044	0.017	1.000												
(15) no. Banks	-0.153	-	0.123	0.008	0.017	-	-	-	-	0.066	0.072	0.080	0.088	0.074	0.305	1.000								
(16) bank loan	-0.065	-	0.077	-	0.114	0.051	0.178	0.083	-	0.021	0.048	-	-	-	0.104	1.000								
(17) firm size	0.040	0.203	0.163	0.019	0.074	0.079	0.117	0.168	-	0.069	0.070	0.103	0.109	0.046	-	-	1.000							
(18) firm growth	-0.091	0.040	0.090	0.289	0.086	0.048	0.044	0.020	0.035	-	0.045	0.069	0.070	-	0.185	-	-	1.000						
(19) leverage	-0.039	-	0.142	0.236	0.140	0.156	0.077	0.067	0.064	-	0.085	0.090	-	0.235	0.009	0.014	0.827	1.000						
(20) tobinsq	-0.032	0.132	-	0.007	0.008	0.034	-	0.036	-	-	-	-	0.025	-	0.047	0.087	0.019	0.027	1.000					
(21) eps	-0.000	0.015	0.009	-	0.083	0.080	0.170	0.118	0.129	0.002	0.035	0.016	0.065	0.007	0.041	-	0.034	0.122	-	1.000				
(22) roe	-0.002	-	0.148	-	0.083	0.080	0.170	0.118	0.129	-	-	0.081	0.169	0.206	0.043	-	0.034	0.122	-	1.000				
(23) roa	-0.043	0.040	0.052	0.052	0.063	0.127	-	0.081	0.047	0.076	0.017	-	0.263	0.103	0.195	0.055	0.099	0.146	0.021	0.392	1.000			
		0.005	0.069	-	0.046	0.134	0.039	0.084	0.064	-	-	-	0.269	0.099	0.198	0.047	-	0.100	0.149	0.018	0.453	0.983	1.000	
		0.004	0.063	-	0.143	0.188	0.052	0.063	0.043	0.088	0.028	-	0.087	0.172	0.142	0.142	-	0.075	0.122	-	0.367	0.615	0.619	1.000
		0.090	-	0.090	-	-	-	-	-	0.199	-	-	-	-	0.003	0.197	-	-	0.032	-	-	-	-	-

Refer to note to Table 1 & 2 for the definition of the variables.