

[DOI: 10.20472/BMC.2016.004.013](https://doi.org/10.20472/BMC.2016.004.013)

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THE NEXUS BETWEEN DISCRETIONARY EXPENDITURES AND CORRUPTION: INDUSTRY LEVEL PERSPECTIVES FROM BRIC AND TURKEY

Abstract:

The conflict of interest between the managers and owners within opportunistic behaviours' of managers has been a significant area of finance research. Uncontrolled moral hazard in management may result some typical forms of behaviours like excessive perquisite consumption, non-optimal investment decision, inefficient use of assets and discretionary expenditures. Their effects have a potential to destruct firm's financial performance and the shareholder's wealth.

Several studies revealed the measurement of this managerial moral hazard behaviour by using accounting-based performance ratios. In this study, firms' discretionary expenditures have been used as a proxy for managerial behaviour related to moral hazard. This problem can be more severe as a result of the bribery implications of firms and corruption issues. Taking all this account, this paper attempts to investigate the nexus between firms' discretionary expenditures and corruption giving industry level perspectives from emerging markets and identifies the sectors that are most affected.

The dataset constitutes 466 non-financial firms operating in four large emerging countries BRIC (Brazil, Russia, India, China) and Turkey covering the 10 year time span from 2005-2014. Results reveal that all industries in the sample countries with a high control of corruption tend to face less moral hazard related behaviour taking into account industrial differences. However, considering industrial breakdown reveal interesting findings. For some industries an upward sloping relationship has been seen between the control of corruption and the proxy for moral hazard related behavior, which indicates that the higher the level of corruption control, the higher moral hazard.

Keywords:

moral hazard, discretionary expenditures, corruption, emerging market, BRIC, Turkey

Introduction

The milestone study of Jensen and Meckling (1976) defines agency relationship as a contract between the principal(s) and another person (the agent) to conduct some service on their behalf, and this service contract engages decision making authority to the agent. According to them, when the interest of a firm's manager is not aligned with the firm's shareholders; agency cost may arise. From this point, to generate the agency problem between a principal and an agent, there need to be a conflict of interest and asymmetric information. In literature, asymmetric distribution of the information is highlighted as the most important problem between managers and owners which also leads to moral hazard and adverse selection problems (Fama 1980, Ramakrishnan and Thakor 1982, Jensen 1986).

Ramakrishnan and Thakor (1982) stress the economic theory of agency and indicate that each agent acts consistent with the maximization of their own personal welfare, thus giving rise to a phenomenon called moral hazard. Uncontrolled moral hazard in management may result some typical forms of behaviour like managerial extravagance, non-optimal investment decision, work shirking and self-serving behaviour. The adverse implications of these attributes then can cause negative effects of firm's financial performance, firm value destruction and wider effects on the overall stakeholders of the firms; like creditors, employees, suppliers and social environment.

The purpose of this study is to underline the nexus between moral hazard related behaviour and corruption in firms across BRIC and Turkey. BRIC countries are selected as the main group for their well-known driving role in the global economy. The four BRIC countries are distinguished from a host of other promising emerging markets by their demographic and economic potential to rank among the world's largest and most influential economies in the 21st century. They comprise more than 2.8 billion people or 40 percent of the world's population and account for more than 25 percent of global GDP. BRIC countries are among the ten largest accumulators of foreign exchange reserves, accounting for 40% of the world's total. China is the largest, with an enormous \$2.4 trillion of foreign exchange reserves, enough to buy two-thirds of all NASDAQ-quoted companies. It is very large in economic terms; its GDP is larger than the rest of the group combined, constituting 58% of the BRIC total (Piper, 2015). Additionally, the prediction reports (PWC, 2015) indicate that China and India will be the world's biggest economies by 2050, whereas Russia and Brazil will be in the top ten (5th and 8th)

The study attempts to examine whether firms operating in these emerging countries with a high level of corruption control display weaker moral hazard related behaviour from industry-level perspective. Several studies have investigated the association between corruption and macroeconomic indicators at the country level. In addition,

some studies investigate the corruption on firm-level and also industry-level perspective in emerging countries that will be mentioned in literature review.

Measuring country level corruption and interpreting data is a crucial but a hard task. Corruption level can be identified with several measures. Transparency International's Corruption Perception Index (TICPI), Transparency International Global Corruption Barometer and World Governance Indicators' (WGI) control of corruption are well-known corruption indices which are extensively used for assessing the country and territory corruption level.

TICPI and WGI gather related data by providing the results of several studies from all over the world. They measure corruption with a single indicator for the country and territory and reveal several dimensions of the respondents' direct experience with bribery whereas Transparency International Global Corruption Barometer ask individuals and managers about their experience with corruption. The International Country Risk Guide of the Political Risk Services Group, Global Competitiveness Index of the World Economic Forum, and the Global Integrity Index are the other services which provide corruption data.

The remainder of the study is organised as follows. Following part relates with the literature review. Research design part introduces the sample and variables. Control of corruption level versus discretionary expenditures explicit whether these issues vary among industries on emerging countries. Finally, last section concludes the study.

Literature Review

Ang et al. (2000) are the first to highlight the measurement of agency costs, which supports the theoretical work of Jensen and Meckling's (1976) moral hazard related behaviour on agency costs. They use operating expenses to net sales which states the level of superfluous or perquisite expenditure of the firm as a proxy for the direct agency costs. As an inverse proxy for the direct equity agency costs, they use asset utilization ratio which shows how effectively firm utilize its assets.

Another frequently used moral hazard related behaviour in terms of agency costs is Selling, General, and Administrative (SGA) Expense to net sales ratio. Some of the studies call this ratio as discretionary expenditure ratio as Singh and Davidson (2003); Florackis and Ozkan (2004); Ertuğrul (2005); Fleming et al. (2005); Truong (2006); Chen and Yur-Austin (2007); Henry (2010); Hijazi and Conover (2011), some of them states as a proxy for managerial extravagance Chen and Yur-Austin (2007). Higher this ratio means superfluous consumption of management which have adverse effects on firm's financial performance.

Discretionary Expenditure, labelled as SGA is measured as the Selling, General, and Administrative Expense to net sales. The selling part of these expenses include the cost of sales personnel salaries and sales related expenses such as travel and advertising. General and Administrative Expenses include officer's salaries, office utilities expense, insurance expenses and office payrolls. In addition, SGA expenditures include rent, utilities, lease payments and supplies (Kieso et al. 2010). This ratio indicates how effectively the firm manages its discretionary expenses. Higher agency conflict of outside equity should be reflected as higher managerial discretionary expenses which are captured by SGA expense ratio.

Giannetti (2003) states that countries with good protection can mitigate the potential agency problems that exist between insiders and outsiders. Adversely, principal-agent problem can be more severe as a result of the bribery implications of firms (Wu 2005). From this point, corruption level has remarkable effects on moral hazard related behaviour.

In the Worldbank Report (2007) corruption is defined as *the exercise of official powers against public interest or the abuse of public office for private gains*. Public sector corruption can be seen as a failure of public governance principles whereas private sector corruption is directly related with the failure of corporate governance mechanisms. The link between the public sector and private sector corruption is that under the countries which have high corrupt levels, firm managers would have to bribe the government officials for the survival and growth of the firm (Chakraborty 2015).

For measuring the corruption, corruption control variable which is determined by WGI is used because it yields the largest sample size for assessing the level of country's corruption in this study. Some of the studies use survey results as well (Gaviria 2002, Sahakyan and Stiegert 2012).

Corruption control have been heavily studied from the macro level perspective. Some of the studies investigate the corruption control level and financial development which evidence that lower corruption and higher financial development raise investment (Ahlin and Pang, 2007). Higher control of corruption are highly correlated with increased economic development (La Porta et al, 1998). Ahmad and Ali (2010) investigate the relationship between corruption (using TICPI) and financial sector performance for a large sample of 38 developed and emerging economies between the years 1995 and 2005. They reveal one unit increase in corruption index (which means less corruption) increases domestic credit to the private sector by 5.31 units.

Moreover, Goel (2012) investigate the government corruption (using TICPI) by looking at the impact of taxation and several business regulations in various countries taking into account the religion factor. Findings state that, regulation, not taxation, generally positively impacts corruption in the related countries. And a recent study Cazurra (2016) investigates types, measures, causes, consequences, and controls of

corruption. He provides suggestions for how to extend leading theories of the firm by using corruption and discusses the corruption issue from the perspective of agency theory, transaction cost economics the resource-based theory, resource dependence theory and neo- institutional theory.

There has been some studies which investigate this notion from firm level perspective. Safavian et al. (2001) state that for Russian microenterprises exists widespread political control over most forms of economic activity. This creates an environment in which bribes and side-payments are the norms to do business. They report on survey data from 200 small and micro firms in Russia in 1999 and reveal that enterprises that report corruption also apply more often for external finance.

There are several studies which analyses the linkage between corporate governance mechanisms and corruption control. Chakraborty (2015) investigates whether an under corrupt country experience better or worse corporate governance mechanisms than a country without corruption. He studies 51 developed and 10 Asian countries between the years 2007–2011 and reveals that corruption (using TICPI) adversely affects corporate governance in most specifications. Engelen (2015) studies the impact of managerial incentives, entrenchment and block holder monitoring on managerial behaviour typically associated with moral hazard, on a sample of German quoted firms between the years 2006–2010. He states that higher excess compensation is significantly associated with higher agency costs stemming from managerial moral hazard. Thus, he finds German firms tend to have agency conflicts.

The study of Donadelli (2014) is the detailed one, which gives perspectives from country, industry and firm level by questioning the linkage between the agency problem, financial performance and corruption. He reveals that the negative relationship between corruption and average stock returns is stronger in corruption-sensitive industries and agency problems are exacerbated in these industries.

Measures of Corruption

This part gives some part of knowledge about the non-governmental organisations corruption measure methodology. TICPI is one of the well-known index for measuring corruption level of countries. Based on expert opinion from around the world, this index measures the perceived levels of public sector corruption worldwide since 2012 (IACA Report, 2015). This index scores and ranks countries based on how corrupt a country's public sector is perceived to be from 0 to 100, with 100 indicating very clean countries (highly transparent country) and 0 indicating the highly corrupt countries (least transparent country). As at the end of 2015, 168 countries assessed in this index and two-thirds score below 50, with a global average score of 43 %. Corruption task is a significant issue specifically for emerging markets. For BRIC Countries, 100

% of them score less than 50 which state a serious corruption problem among these countries.

Since 1996, the control of corruption determined by the World Governance Indicators (WGI) has been used another corruption measure which has gained acceptance amongst economists and academics (World Bank Governance Report 2015). WGI is not a strictly corruption indicator since it measures several dimensions in terms of voice and accountability, political stability and absence of violence, governance effectiveness, regulatory quality, rule of law and control of corruption. World Bank ranked countries by the control of corruption using a measure that runs from 2.5 (low control of corruption) to 2.5 (high control of corruption) (Worldwide Governance Indicators, 2015). As at the end of 2015, six dimensions of governance covering over 210 countries captured by the WGI.

Table 1: Ranking of Countries by Alternative Classifications of the Level of Corruption in the Country, Top Five and Bottom Five Countries

Transparency International Corruption Perception Index 2015			World Bank Governance Indicators Control of Corruption 2015			Transparency International Global Corruption Barometer 2013		
Rank	Country/ Territory	Score	Rank	Country/ Territory	Control of Corruption Estimate	Rank	Country/ Territory	Corruption*
<i>Top</i>								
1	Denmark	91	1	New Zealand	2.27	1	Australia	1
2	Finland	90	2	Denmark	2.26	2	Denmark	1
3	Sweden	89	3	Norway	2.23	3	Finland	1
4	New Zealand	88	4	Switzerland	2.19	4	Japan	1
5	Netherlands	87	5	Finland	2.18	5	Spain	2
<i>BRIC & Turkey</i>								
66	Turkey	42	97	Turkey	-0.12	47	Turkey	21
76	Brazil	38	111	China	-0.33	83	India	54
76	India	38	117	Brazil	-0.38	NA	Brazil	NA
83	China	37	128	India	-0.46	NA	Russia	NA
119	Russia	29	168	Russia	-0.87	NA	China	NA
<i>Bottom</i>								
163	South Sudan	15	206	Yemen	-1.55	91	Zimbabwe	62
165	Sudan	12	207	Libya	-1.61	92	Kenya	70
166	Afghanistan	11	208	South Sudan	-1.61	93	Yemen	74
167	Korea (North)	8	209	Somalia	-1.69	94	Liberia	75
167	Somalia	8	210	Equ. Guinea	-1.84	95	Sie. Leone	84

Source: Transparency International, Worldwide Governance Indicators

*Transparency International has asked over 114,000 people in 107 countries for their views on corruption in this section "Have you paid a bribe to any one of 8 services listed (education, judiciary, medical and health, police, registry and permit services, utilities, tax revenue and/or customs, land services) in the past 12 months? (%)".

The same breakdown is also used in the study of Cazorra (2015) with country rankings.

Table 1 indicates the ranking of the top five and bottom countries with BRIC & Turkey using three mentioned well known corruption measures. Transparency International's Corruption Perceptions Index (TICPI) and the World Bank's Control of Corruption aggregate information from multiple surveys, Transparency International's Global Corruption Barometer ask individuals and managers about their experience with corruption.

Country rankings according to Transparency International Global Corruption Barometer is slightly differ from measures coming from surveys of individuals or firms of TICPI and WGI has to be noted. As to TICPI report in which the results are shown in 0 to 100 interval, the world average is measured as 43, whereas EU and Western Europe average is 67. Accordingly all of the BRIC countries are ranked below the world average and Turkey almost represents the average (42).

As emphasized beforehand, in this study control of corruption variable has been tackled from WGI reports. The control of corruption variable ranges from approximately -2.5 which means weak control related with the high corruption to 2.5 which means strong control meaning low corruption (World Bank Governance Report, 2015).

The firms' average control of corruption levels across BRIC and Turkey between 2005 and 2014 are stated in Table 2. This table also reports average control of corruption indicator over this periods. Turkey has the strongest control of corruption and Russia has the weakest. However, the last 3 years trend depicts that Turkey and Brazil's control of corruption levels are deteriorating and China, India and Russia's results are improving.

Table 2: Yearly Control of Corruption Levels in Sample Countries

	BRAZIL	RUSSIA	INDIA	CHINA	TURKEY
2005	-0.17	-0.78	0.14	-0.64	-0.02
2006	-0.14	-0.85	-0.3	-0.51	0
2007	-0.12	-0.95	-0.42	-0.59	0.09
2008	-0.02	-1.05	-0.36	-0.54	0.08
2009	-0.12	-1.09	-0.48	-0.54	0.07
2010	0	-1.06	-0.51	-0.6	0.03
2011	0.15	-1.04	-0.57	-0.56	0.06
2012	-0.07	-1.02	-0.56	-0.48	0.17
2013	-0.12	-1	-0.56	-0.36	0.11
2014	-0.38	-0.87	-0.46	-0.33	-0.12
average	-0.099	-0.89	-0.408	-0.515	0.047

Source: Worldwide Governance Indicators

Discretionary Expenditures versus Control of Corruption

In order to observe whether the control of corruption and moral hazard related behaviour vary among industries on emerging countries, the order of magnitude of the co-movement between control of corruption and discretionary expenditures analyzed in detail. Similar methodology is used in Donadelli et al. (2014) study. They observe the relationship as the industry average returns increase/decrease as the level of corruption increase/decrease.

Shlapentokh (2013) study gives some clues about the Russian environment. He states that Russian corruption undermines labor ethics, particularly among younger generations and these managers believe that bribes and connections are the best and perhaps only way to become successful in private sector.

Table 3 states the industry groups with number of observations in the related period.

Data have been retrieved from Bloomberg Professional Database. Each variable is used as an average between the years 2005 and 2014.

Table 3. Total Observations by Industry and Country

INDUSTRY / COUNTRY	Energy	Materials	Capital goods	Trans portation	Auto & Comp.	Retail	Food, Bev.& Tobacco	Pharma Biotech Life Sci.	Telecom	TOTAL BY COUNTRY
BRAZIL	30	100	100	10	20	30	70	10	30	400
CHINA	150	200	510	50	70	40	80	80	30	1.210
INDIA	80	170	380	20	90	20	70	150	40	1.020
RUSSIA	100	120	140	30	30	10	30	10	30	500
TURKEY	30	380	450	40	120	140	280	30	60	1.530
TOTAL BY INDUSTRY	390	970	1.580	150	330	240	530	280	190	4.660

Although there are 18 different industry types for the related sample, for scatter diagrams the industries which are common in all countries are selected. The results of nine industries in terms of Material, Energy, Capital Goods, Transportation, Automobiles & Components, Retailing, Food, Beverage & Tobacco, Pharmaceuticals, Biotechnology & Life Sciences and Telecommunication Services are reported.

Figure 1 is a scatter diagram showing the relation between the average control of corruption and average discretionary expenditures between the years 2005-2014 across firms in BRIC and Turkey. This figure depicts the average SGA ratio which is

stated on the vertical axis against the average level of control of corruption which is stated on the horizontal axis in the BRIC and Turkey.

As shown in all industries chart, Turkey, the only country with positive corruption control level and having the highest average control of corruption, has the lowest ratio for moral hazard related behaviour across the sample in the related period. (0.2635).

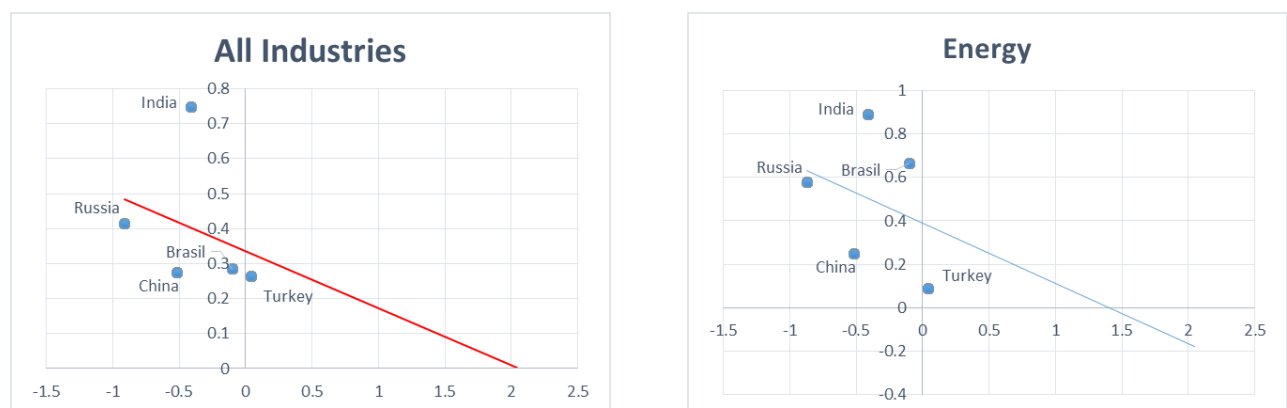
On contrary, Indian firms has the highest SGA ratio (0.7466), representing an excessive different composition compared to other selected countries. (China 0.2735, Brazil 0.2845, Russia 0.4152). That high ratio of Indian firms means that 75% of the sales generated by Indian firms, are absorbed by discretionary expenditures.

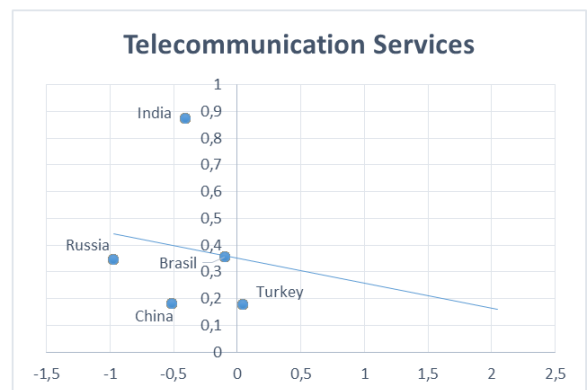
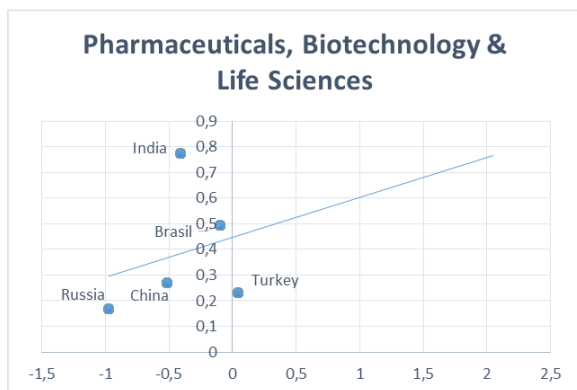
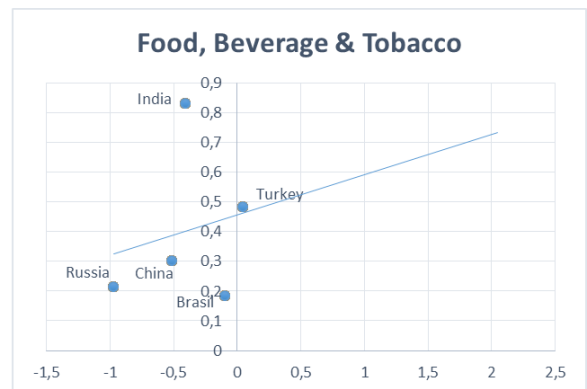
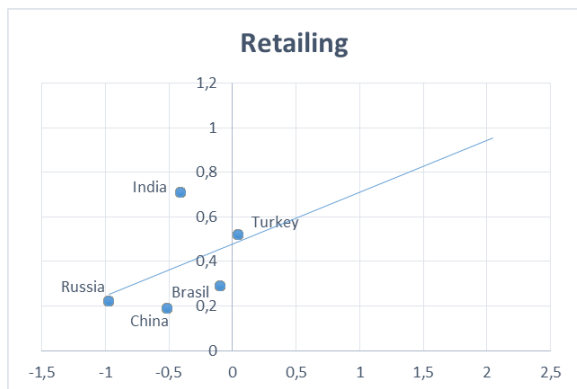
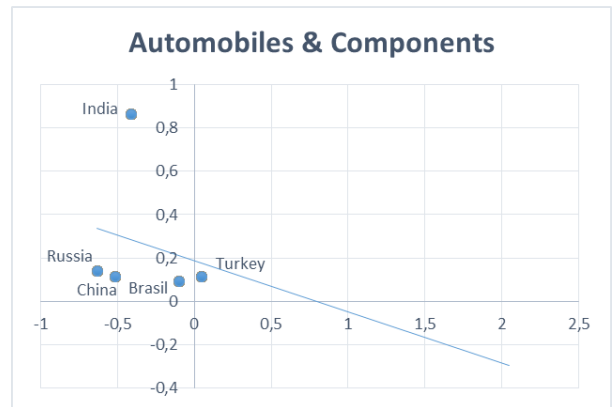
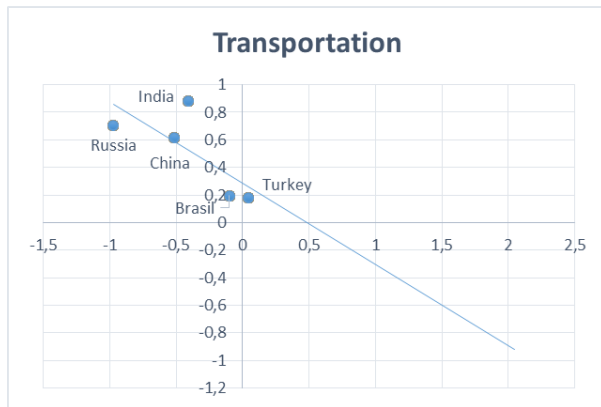
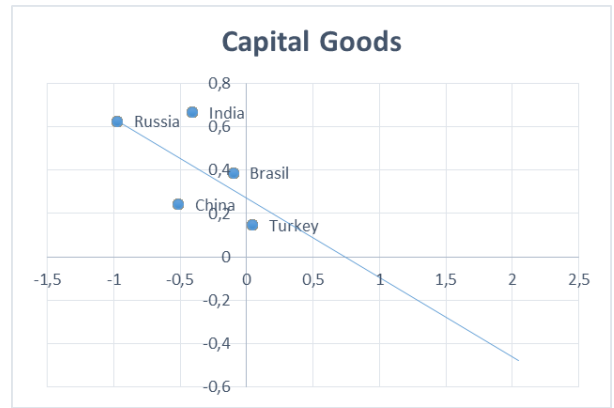
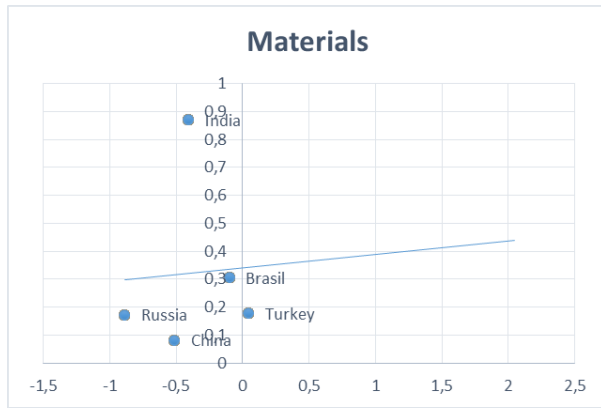
The top three industries exceeding the average discretionary expenditures per country is as follows;

- Brazil; Energy, Pharmaceuticals, Biotechnology & Life Sciences, Capital Goods.
- Russia; Transportation, Capital Goods, Energy.
- India; Energy, Transportation, Telecommunication.
- China; Transportation, Food, Beverage & Tobacco, Pharmaceuticals, Biotechnology & Life Sciences.
- Turkey; Retail, Food, Beverage & Tobacco, Pharmaceuticals, Biotechnology & Life Sciences.

As shown above, Energy, Transportation and Pharmaceuticals, Biotechnology & Life Sciences are the most common industries among selected countries.

Figure 1. Scatterplot of Control of Corruption Level versus Discretionary Expenditures





In order to observe whether the control of corruption and moral hazard related behaviour vary among industries on emerging countries, the order of magnitude of the co-movement between control of corruption and the strongest proxy for moral hazard related behaviour as the managerial extravagance has to be noted. From this notion, sub-figures are generated. Similar methodology is used in Donadelli et al. (2014) study. They observe the relationship as the industry average returns increase/decrease as the level of corruption increase/decrease.

For Energy, Capital Goods, Transportation, Automobiles & Components and Telecommunication Services, a downward sloping relationship has been seen between the control of corruption and the proxy for moral hazard related behaviour. Results state that as the level of corruption decreases, thus the level of corruption control increases (moves towards 2.5), firms' discretionary expenditures decreases.

On the other hand, for the rest of industries; Materials, Retailing, Food, Beverage & Tobacco, Pharmaceuticals, Biotechnology & Life Sciences, an upward sloping relationship has been seen between the control of corruption and the proxy for moral hazard related behaviour, which indicates that the higher the level of corruption control, the higher moral hazard.

Conclusion

Public and private corruption is one of the major hindrances to economic growth in emerging countries. Many emerging countries suffer from corruption and the fastest growing emerging countries BRIC and Turkey are the most remarkable ones for investigating this issue. The study attempts to examine whether firms operating in these countries with a high level of corruption control display weaker moral hazard related behaviour from industry-level perspective.

In order to observe whether the control of corruption and moral hazard related behaviour vary among industries on emerging countries, the order of magnitude of the co-movement between control of corruption and discretionary expenditures has been investigated. Findings reveal that as the level of corruption control increases, discretionary expenditures decreases for all nine industries in BRIC and Turkey between the years 2004-2015 within 4.660 observations. Industries exceeding the average discretionary expenditures per country gives different results. Energy, Transportation and Pharmaceuticals, Biotechnology & Life Sciences are the common industries exceed the average discretionary expenditures among selected countries.

In the observation period; Turkey, the only country with positive corruption control level and having the highest average control of corruption, has the lowest ratio for moral hazard related behaviour across the sample in the related period. On contrary,

Indian firms has the highest SGA ratio representing an excessive different composition compared to other selected countries.

Anti-corruption strategies has to be promoted worldwide. There has been very few studies address the effects of corruption on corporate governance and on mitigating moral hazard related behaviour. Several studies indicate that corporate governance standards can have remarkable effects on global anti-corruption campaign. In order to achieve this, public governance quality has to be increased and receiving bribe payments has to be minimized. Independent anticorruption organization may help combat corruption. The causes and consequences of corruption has to be analyzed detailed.

This paper does not directly involve in the private corruption on the firm level. Results are interpreted from the public corruption perspective. This is an initial study and the following studies will be about the firm manager's perception of corruption depending on survey results.

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