



**CORPORATE REPUTATION AND BUSINESS  
OUTCOMES:  
AN EMPIRICAL STUDY  
IN TURKEY**

**Master's Thesis**

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**Eskişehir, 2018**

**CORPORATE REPUTATION AND BUSINESS OUTCOMES:  
AN EMPERICAL STUDY IN TURKEY**



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**MASTER'S THESIS**

**Department of Business Administration**

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June 2018**

## FINAL APPROVAL FOR THESIS

This thesis titled “**Corporate Reputation and Business Outcomes: An Empirical Study in Turkey**” which has been prepared and submitted by **Telford Carl VICTOR** in partial fulfillment of the requirements in “**Anadolu University Directive on Graduate Education and Examination**” for the Master of Arts in **Department of Business Administration Program in Finance** has been examined and approved on **25/07/2018**.

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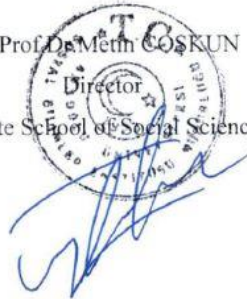
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## **ABSTRACT**

### **CORPORATE REPUTATION AND BUSINESS OUTCOMES: AN EMPIRICAL STUDY IN TURKEY**

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**Masters in Finance**

**Anadolu University, Graduate School of Social Science, May 18**

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The main purpose of this study is to examine how corporate reputation dimensions- Management, Quality, Working Brand, Corporate Social Responsibility, Emotional Commitment, and Recognition are correlated with business outcomes of different sectors. In addition, the relation of corporate reputation dimensions on business outcomes also a prime objective of this research. Therefore, three statistical techniques: coefficient of correlation, scatterplot, and ordinary least square (OLS), have been applied in this study in order to obtain those outcomes. The research comprises seven corporate reputation dimensions, five business outcome indicators, and eleven sectors. After examining the variables through the statistical techniques, by and large, the study ascertains a strong positive correlation and statistically significant relation between corporate reputation dimensions and business outcome indicators. As a result, if any company wants to ensure the robustness of business outcomes, in other words, their customers' positive perceptions, then they should intensely concentrate on boosting the value of the corporate reputation dimensions.

**Key words:** *Corporate Reputation Dimensions, Business Outcomes, RepMan Data*

## ÖZET

### KURUMSAL İTİBAR VE İŞ SONUÇLARI: TÜRKİYE'DE UYGULAMALI BİR ÇALIŞMA

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**İşletme Anabilim Dalı-Finansman Bölümü**

**Anadolu Üniversitesi, Sosyal Bilimler Enstitüsü, Mayıs 2018**

**Danışman: Öğretim Uyesi Dr. Özlem SAYILIR**

Bu çalışmanın temel amacı, kurumsal itibar boyutlarının- Yönetim, Kalite, Çalışma Markası, Kurumsal Sosyal Sorumluluk, Duygusal Bağlılık ve Tanınma sonuçlarıyla nasıl ilişkilendirildiğini incelemektir. Ayrıca, kurumsal itibar boyutlarının iş sonuçları üzerindeki etkisi de bu araştırmanın temel amacıdır. Bu nedenle, üç istatistiksel teknik: korelasyon katsayısı, dağılım grafiği ve olağan en küçük kareler (OLS), çalışmada kullanılmıştır. Araştırma yedi kurumsal itibar boyutu, beş sonuç göstergesi ve on bir sektörden oluşmaktadır. İstatistiksel teknikler yoluyla değişkenler incelendikten sonra, çalışma güçlü bir pozitif korelasyon ve kurumsal itibar boyutları ile sonuç göstergeleri arasında istatistiksel olarak anlamlı bir ilişki tespit edilmiştir. Sonuçta herhangi bir şirket, iş sonuçlarının sağlamlığını, başka bir değişle, müşterilerinin olumlu algılarını, sağlamak istiyorsa, kurumsal itibar boyutlarının değerini arttırmaya yoğunlaşmalıdır.

**Anahtar Kelimeler:** *Kurumsal İtibar Boyutları, İş Sonuçları, RepMan Verileri*

2018

.../.../

#### **STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES**

I hereby truthfully declare that this thesis is an original work prepared by me; that I have behaved in accordance with the scientific ethical principles and rules throughout the stages of preparation, data collection, analysis and presentation of my work; that I have cited the sources of all the data and information that could be obtained within the scope of this study, and included these sources in the references section; and that this study has been scanned for plagiarism with “scientific plagiarism detection program” used by Anadolu University, and that “it does not have any plagiarism” whatsoever. I also declare that, if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.



(Signature)

**Telford Carl VICTOR**

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# 1. INTRODUCTION

The introduction chapter discusses the overview of the concept of corporate reputation, theoretical background of the of corporate reputation and financial performance as well as business outcomes, research method summary, aims and statement of purpose, research questions, and finally research framework.

## 1.1 Overview

Establishing a decent corporate reputation is increasing on the firms' strategies. Corporate reputation can be viewed as an important intangible asset, important to a company's performance and in this manner long run presence. Corporate reputation has pulled in enthusiasm from an extensive variety of academic disciplines. It is likewise a developing spotlight on business and media consideration. It influences the manner by which different partners carry on towards an organization, influencing, for example, employee retention, customer satisfaction, and customer loyalty. As anyone might expect, CEOs see corporate reputation as a significant intangible resource (Institute of Directors, 1999).

A good reputation is a valuable asset that lets a firm to accomplish stable profitability or sustained superior financial performance. Keeping this in mind, it must be precise about how the reputation is defined, the features that contribute to its progress, and how it influences current and future financial performance. Following Fombrun (1996: P. 72), it is defined as 'a perceptual representation of a company's past actions and future prospects that describe the firm's overall appeal to all its key constituents when compared to other leading rivals. As such, 'it is viewed as global perception of the extent to which an organization is held in high esteem or regard' (Weiss, Anderson, and MacInnis, 1999: 75). This definition advises that corporate reputation is a general organizational attribute that reflects the extent to which external stakeholders see the firm as 'good' and not 'bad.'

The following table represents how the corporate reputation is defined and viewed in different business fields.

**Table 1.1:** *Categorization of corporate reputation (Fombrun and Riel, 1997)*

| <b>Business Filed</b>   | <b>Definition of reputation</b>                                                                                                            |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Accountancy             | Reputation seen as an intangible asset and one that can or should be given financial worth. Reputation viewed as traits or signals.        |
| Economics               | Perception held of the organization by an organization's external stakeholders.                                                            |
| Marketing               | Viewed from the customer or end-user's perspective and concentrating on the manner in which reputations are formed.                        |
| Organizational Behavior | Viewed as the sense-making experiences of employees or the perception of the organization held by an organization's internal stakeholders. |
| Sociology               | Viewed as an aggregate assessment of a firm's performance relative to expectation and norms in an institutional context.                   |
| Strategy                | Reputation viewed as assets and mobility barriers. Since reputations are based on perception, they are difficult to manage.                |

Corporate reputation is defined as “A perceptual representation of a company’s past actions and future prospects that describes the firm’s overall appeal to all of its key constituents when compared with other leading rivals” (Fombrun, 1996, p.72). An increasing body of research claims that good corporate reputations have tactical value for the firms that own them (Roberts and Dowling, 2002). According to Walker (2010), a good reputation can lead to numerous planned assistances such as letdown firm costs; allowing firms to charge premium prices; attracting applicants, investors, and customers; high profitability and making competitive barriers. A constructive reputation upsurges the likelihood that stakeholders will contract with a given firm. A significant part of the present work on reputation has concentrated on building up that reputation is an important intangible resource by demonstrating its impacts on corporate financial performance (Rindova et al., 2010).

More reputable firms can ask for a premium, which will in turn fascinate investors. A positive reputation will attract workforces and create lower employee turnover, develop client attitudes, lower a customer’s perceived risk, increase the tendency to joint venture and create

higher credibility. Accordingly, it may be said that reputation is then a possible source of competitive advantage (Davies et al., 2010). Not behaving reliably or honestly can have immediate and long-term consequences. For instance, a reduction in positive reputation may affect the future actions of other players toward a firm. As long as the “present value of future income exceeds the short-term profit” of dishonesty, firms will be authentic and finance in their reputations (Fang, 2005).

Generally, ‘reputation is determined by the worth (quality) of the actor’s preceding efforts’ (Podolny and Phillips, 1996: 455). In several cases, the firm’s outside communities may identify these efforts. As such, managers involve in explicit reputation increasing activities (e.g., advertising, sponsorships) in order to expand their firms’ reputations (Fombrun, 1996). They also arrange the set of links that form with exchange partners to ensure that they benefit from the network transmission of organizational reputation or status (Podolny, 1994). However, external constituencies do not directly perceive the full range of actions that lead them to form the impressions that encompass an overall reputation. They may therefore rely on previous financial performance outcomes as signals of a firm’s overall esteem. This is the organizational variant of Shapiro’s (1983) product-level analysis. Just as previous demonstrations of quality lead to a reputation for product quality, previous demonstrations of overall financial performance lead stakeholders to believe that a company is ‘good.’

Capital Magazine, as a standout amongst the most generally known month to month magazines in Turkey, publishes reputation rankings of Turkish companies relying upon top managers’ perceptions since 2000. Investigations of the relationship between corporate reputation and financial performance are generally rare in spite of the fact that in recent years several studies investigate this relationship. However, in Turkey, there is a gap in such investigations on the relationship between corporate reputation and business outcomes. Traditionally, Turkish firms did not view corporate reputation as something of major significance. They were substantially more centered on target measures of business outcomes. To the extent they considered reputation at all; they related it to how they actually may be evaluated in business sectors that compared them with other corporate executives. As of late, nonetheless, Turkish managers have come to perceive corporate reputation as something that is unmistakable, huge and vital despite the fact that it remains distinct, significant and important even though it

remains an intangible asset. As to the reasons behind this change, rising global competition may be one strong force that compelled firms to realize the importance of competing through intangible resources. As international participants can usually easily reproduce tangible products, it is often intangible company-specific, problematic to reproduce resources that become important (Dunbar and Schwalbach, 2000). These may contain intellectual property rights, unique competence and most likely corporate reputation (Hall, 1992).

For example, in Turkey, Arçelik A.Ş. was the most reputable company according to ‘Research on Turkey's Most Reputable Sectors and Companies’ made by RepMan Reputation Research Center which was published in 2013 on RepMan Forum. This study includes the RepMan Reputation Score (RMS) which is calculated by measuring company’s Corporate Social Responsibility (CSR), Emotional Commitment (EC), Financial Strength (FS), Product/Service Quality (PSQ), Quality of Management (QM), Working Brand (WB), and Recognition (RC) (RepMan 2012)

This research also includes five business outcomes indicators which are - RR: In every aspect, I express that this company is reputable and reliable, RPS: I would like to use / re-use / recommend this company's products / services, RPW: It is a company that I would recommend as a place to work / work for my child / myself, BLS: I am interested to buy stocks for long-term when it opens, and SSRP: I have material and moral support for social responsibility projects

## **1.2. Research Approach**

This research develops and studies a theoretical extension of the Corporate Reputation and business outcomes and investigates how the corporate reputation is correlated with business outcomes of different sectors in Turkey. The research is mainly formulated by the different sector’s reputation based on the RepMan reputation score, which has been calculated through Quality of Management reputation score, Product/Service Quality reputation score, Working Brand reputation score, Financial Strength reputation score, Corporate Social Responsibility reputation score, Emotional Commitment reputation score, and finally Recognition reputation score.

### 1.3 Objectives and Statement of Purpose

The overall purpose of this research is to examine the influence of corporate reputation on business outcomes. Simply to state: does corporate reputation positively influence business outcomes? We explore the proposition that corporate reputation can act as a source of adaptive and rebound resilience helping firms to sustain their business outcomes over time.

The main objective of this study is to examine how Management, Quality, Working Brand, Corporate Responsibility, Emotional Commitment, and Recognition dimensions of corporate reputation are correlated with business outcome's indicators.

### 1.4 Research Questions

- ✚ Are reputational dimensions (Management, Quality, Working Brand, Corporate Responsibility, Emotional Commitment, and Recognition) significantly related to business outcomes?
- ✚ How the reputation dimensions influence the business outcomes of different sectors of Turkish economy for specific time.

### 1.5 Research Outline

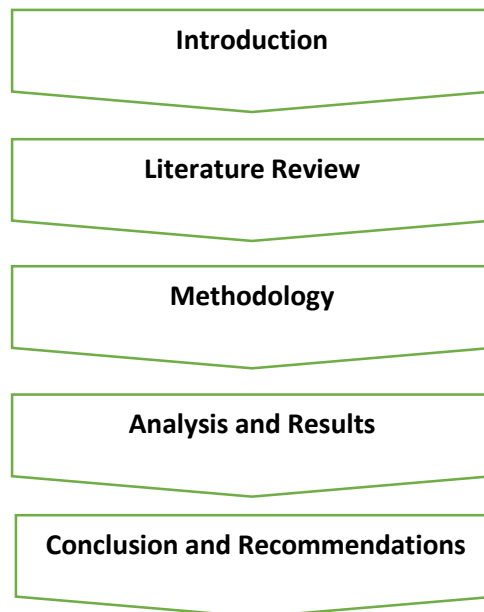


**Figure 1.1:** *Outline of the Research*

## **2. LITERATURE REVIEW**

Chapter two presents theoretical overview and existing literature of Corporate Reputation. At the end of the chapter, the hypothesis of the study is stated based on the literature.

### **2.1 Definition of Reputation**

The perception of reputation emphasizes on the evaluation and uniqueness of a principal organization from others in its peer group (Bitektine, 2011). Reputation denotes to the many social judgments that internal and external actors make about the actions of the focal organization, and which impact the way that these actors view claims that an organization may project about itself (Chun, 2005; Harvey et al., forthcoming). Ertug and Castellucci (2013) claim that reputation indicates the expected upcoming behavior, performance, or quality of actors based on their previously observed behavior, performance, or quality in both economic and sociological accounts. While perceived as an asset of the organization, reputation is therefore essentially a socio-cognitive concept based on peer group observations (Rindova et al., 2010).

Fombrun and Van Riel (1997) suggested that it is because of the enormous diversion in the idea of acceptance that definitions have developed independently as opposed to interactively among distinct agencies of researchers. For example, Shenkar and Yuchtman-Yaar, (1997, p.1361) opined that “numerous phrases are used to explain the relative status of businesses. In sociology, status is the favored time period, in economics; it's far reputation, in advertising and marketing, photograph, and in accountancy and regulation, goodwill.” Wartick (2002, p.373) argued that the phrases: “identity, photo, prestige, goodwill, esteem, and standing” have all been applied interchangeably with ‘popularity’, reliant on the level of simplification or the pivotal point of the dialogue. Shenkar and Yuchtman-Yaar has argued about the tendency to select the time period ‘prestige’ to ‘reputation’ because they are usually extra interested by ‘occupational standing’ than within the recognition of a specific corporation. They highlighted that advertising and marketing literature is commonly concerned with the ‘photo’ of a specific emblem, while because accounting researchers focus on the company as a unit of analysis, they choose on the time period ‘goodwill’, presumably “since it's far the company which owns, buys, and sells this asset” (Shenkar and Yuchtman-Yaar, 1997, 1363).

## 2.2 Reputation Indicators

Corporate Reputation Researches started with the “RepMan” study in Turkey. Started at the beginnings of 2000’s leading companies of Turkey preferred RepMan to conduct the perception of their reputations and designed their strategies accordingly. Nowadays, there are a number of reputation researches on with different approaches and contents not only in the World but also in Turkey. All of them provide very essential data to the company executives to decide on their strategic preferences on reputation. The RepMan Reputation Score (RMS) was calculated by measuring the performances of the companies of different sectors on recognition, management quality, product & services quality, working brand, financial stability, corporate (social) responsibility and emotional attachment aspects.

Fombrun and Rindova (1996) suggested that the problem of defining reputation results from the diversity of the disciplinary perspectives from which it comes, including marketing, economics, accounting, sociology, strategy and organizational behavior. It is the breadth of research where definitions have been developed independently rather than interactively that has caused much of the inconsistency (Fombrun and Van Riel, 1997), with the term ‘reputation’ often used synonymously with numerous other terms.

Given the broad range of academic interest in the concept of corporate reputation, it is not surprising that many other terms have become associated with it or used interchangeably within reputation literature, including ‘image’ (or ‘brand image’) ‘identity’, ‘prestige’, ‘goodwill’, ‘esteem’ and ‘standing’ (Wartick, 2002). More recently, the concepts of ‘status’ (Jensen and Roy, 2008) and ‘celebrity’ (Pfarrer, Pollock and Rindova, 2010) have also been used in connection with the concept of reputation. As Shenkar and Yuchtman-Yaar (1997, 1361) stated, “Various terms are used to describe the relative standing of organizations. In sociology, prestige is the preferred term, in economics it is reputation, in marketing, image, and in accountancy and law, goodwill.” Therefore, a necessary step in developing our understanding of corporate reputation is to identify an appropriate definition and understand the relationship between it and other commonly used terms, in particular, image and identity. Caruana (1997, 111) highlighted the necessity for such distinctions as well as the need to develop a framework for understanding key sources of corporate reputation, given that current research has been revealed as “limited in its ability to identify the attributes that determine corporate reputation.” By developing an

integrated definition, it becomes possible to further our understanding of the dimensions of corporate reputation, since “one cannot talk about measuring something until one knows what that something is” (Wartick, 2002, 372).

Chun (2005) suggested that within marketing literature the terms ‘image’ and ‘reputation’ are often used interchangeably and without clear distinction or definition. This was demonstrated in the work of Dowling (1993), who used the terms interchangeably when investigating company reputation. Initially he referred to the “dilution of the value of a company’s image or reputation”, whereas later he used the term ‘image’ alone: “during the decade of the 1980s thousands of business enterprises around the world suffered a loss of image” (Dowling, 1993, 102). As with concepts of reputation and image, a considerable volume of literature has been devoted to defining identity. This literature generally falls into two broad categories, that is, ‘corporate’ identity and ‘organizational’ identity. Hatch and Shultz (1997, 358) pointed out that “corporate identity differs from organizational identity in the degree to which it is conceptualized as a function of leadership and by its focus on the visual.”

A corporate reputation is a collective assessment of a company’s attractiveness to a specific group of stakeholders relative to a reference group of companies with which the company competes for resources” (Fombrun, 2012: 100). Most empirical studies dealing with reputation depend on Fortune mag’s list of the USA’s most admired agencies (FMAC) (Fryxell and Wang, 1994; Brown and Perry, 1994; Wartick, 2002; Basdeo, Smith, Grimm, Rindova and Derfus, 2006; Walker, 2010) or its international (Dunbar and Schwalbach, 2000; Inglis, Morley and Sammut, 2006; Brammer and Pavelin, 2006) and worldwide (Waddock, Bodwell and Graves, 2002; Schwaiger, 2004; Fombrun, 2007) equivalents. This index has some of strengths whilst Fortune mag’s “worldwide maximum widespread agencies” (GMAC) index prices firms from 24 industries and 13 international locations (Schwaiger, 2004), the FMAC survey costs the 10 largest US firms in 30 industry organizations the usage of over 8,000 specialists who're company executives, corporate analysts or outside directors (Griffin and Mahon, 1997), and are consequently acquainted with the corporations they score. Respondents are requested to charge companies on 8 separate yet interrelated attributes: (1) monetary soundness; (2) lengthy-term funding price; (3) Use of corporate assets; (4) Innovativeness; (5) first-rate of the business enterprise’s management; (6) best of its services and products; (7) ability to attract, broaden and

maintain gifted human beings; and (8) Acknowledgement of social obligation” (Chun 2005, p.99).

In addition, the GMAC was first applied in 1997 (Schwaiger, 2004) while the FMAC was accumulated yearly on account that 1983 (McGuire, Schneeweis and branch, 1990) with little modification (McGuire, Sundgren and Schneeweis, 1988); accordingly permitting comparisons among companies’ reputations over an extended time frame.

Brown and Perry (1994) highlight that those financial measures of performance account for between 42% (McGuire, Sundgren, and Schneeweis, 1988) and 53% (Fombrun and Shanley, 1990) of the variance in the overall FMAC ratings for corporate reputation. The eight different characteristics rated within the survey are also highly correlated. Fombrun and Shanley (1990) carried out a factor analysis of these attributes and found that they loaded on one factor that explained 84% of the variance. This single factor was also shown to be significantly influenced by prior business outcomes. Therefore, both the use of an overall rating as well as the use of ratings for individual attributes can be criticized (Fryxell and Wang, 1994; Brown and Perry, 1994).

A second issue with a sole overall ranking of corporate reputation is that apart from potentially over-valuing the financial measurement, there is a potential to overlook or under value other non-financial dimensions which have been claimed to be important elements of corporate reputation. These other reputational scopes contain: corporate social responsibility (Chakravarthy, 1986; McGuire, Sundgren, and Schneeweis, 1988; Preston and O’Bannon, 1997); product and service quality; managerial quality; employee know-how (Hall, 1992; Dollinger, Golden, and Saxton, 1997; Schwaiger, 2004); corporate governance and disclosure (Espinosa and Trombetta, 2004); environmental concern (Brammer and Pavelin, 2006); and innovation (Gürhan-Canli and Batra, 2004). This proposes a need to move away from single dimension or combined measures of reputation to investigate a wider range of individual reputational dimensions that can potentially influence a firm’s financial performance.

Similarly, Schwaiger (2004) noted in his review of the measures of corporate reputation that indices including Fortune magazine’s most admired global companies (GMAC) and America’s most admired companies (FMAC), the German Manager Magazin’s ‘Gesamt

reputation’ and the Harris-Fombrun ‘Reputation Quotient’, are all based on a set of categories that can be viewed as intangible properties, for example, quality of management, quality of employees, social responsibility, transparency, and openness (2004). While Schwaiger (2004) did not specifically identify these concepts as ‘intangible resources’, it is evident that they correspond with what are referred to by other reputation researchers as intangible resources (Iwu-Egwuonwu, 2011). The questions within the FMAC survey include innovativeness, management quality, product quality, ability to attract, develop and keep talented people, and social responsibility (Fombrun and Shanley, 1990; Fryxell and Wang, 1994; Chun, 2005), all of which can be viewed as intangible resources.

Rather than depending on this spontaneous method to classify those intangible resources that are seen to be important, the contents of senior executive communication to identify what it is that those accountable for the management of their firm’s reputation perceive as significant intangible or reputational resources for future success. While this approach relies on the perceptions and beliefs of an important group of internal stakeholders rather than external stakeholders (as in the case of FMAC), it also relies on the fact that a primary role of senior executives is to manage, maintain, and improve their firm’s corporate reputation (Hall, 1992). Identifying possible intangible, reputational resources seen to be critical to firm success by giving the level of attention to various intangible resources in annual reports as a source of information about senior executives’ perceptions of their firm’s key reputational resources. This allows the thesis to unobtrusively describe the perceptions and beliefs of a key and knowledgeable group of stakeholders from a large number of firms over an extended period of time, and thus to test the effects of corporate reputation on firms’ future, long-term business outcomes (Hall, 1992).

### **2.3 Corporate Reputation and Business Outcomes**

Most of the studies that have considered the existence of a relationship between reputation and business outcomes have assumed the existence of a positive relationship. This method largely reflects a wide-ranging, streamlining assumption about how reputation impacts upon future performance (Roberts and Dowling, 1997), that is, a statement that a good reputation always positively influences financial performance. To elaborate on this slightly, it proposes that there is little or no fluctuation in the level of influence reputation has, and that this level of

influence occurs at all points in time irrespective of the general economic, industrial or competitive environments. On the other hand, a more conservative or realistic view can be proposed – that the effects of reputation on business outcomes differ as a result of changes in the conditions confronting individual firms, industry sectors or the economy in general. For example, during a general economic downturn such as that brought on by the global financial crisis, even firms that had been identified as having a superior reputation were negatively affected, apparently receiving little in the way of benefit from their reputation. This suggests that if conditions are sufficiently difficult that all firms suffer, we may observe no relationship. Yet, if observed over a longer period we might find that firms with stronger reputations recover or rebound earlier or more quickly than those without. On the other hand, conditions at other points in time may be so munificent (McArthur and Nystrom, 1991; Husted, Allen and Kock, 2012).

In practical terms, this assumption is reflected in empirical research by the use of relatively short time periods and/or cross-sectional methodologies. Both McGuire et al. (1990) and Nanda, Schneeweis and Eneroth (1996) relied on measures of corporate reputation in only two years, 1983 and 1989, respectively, and calculated future business outcomes using an average of only three years (1982-1984 and 1989-1991, respectively).

An alternative approach to understanding the relation between reputation and performance, however, is to focus on the capacity of firms with a superior reputation to better sustain superior profitability over extended periods of time, compared to firms without such standing. A few authors have identified that firms with superior reputations, albeit along different dimensions, were both able to sustain superior profitability over the long term and recover from positions of inferior performance faster than those without superior reputations (Roberts and Dowling, 1997; Roberts, 1999; Roberts and Dowling, 2002). This suggests that reputation influences performance in a less direct manner and that this influence can be observed by examining the capacity of firms to sustain above average profitability for extended periods.

Dowling (2002) who explored the existence of a relationship between firms with a superior reputation and their ability to sustain superior levels of profitability, compared to those without a superior reputation, over an extended 15-year period using a large multi-industry dataset (3,141 firm observations). They defined persistent profitability as a measure of “how fast abnormal profits converge upon normal long-run profit levels” (Roberts and Dowling, 2002,

1079). The results provide strong support for the argument that firms with superior reputation tend to sustain superior levels of performance over time, compared to firms without such standing. Additionally, Roberts and Dowling (2002) found that firms with a superior reputation were able to recover from inferior levels of performance faster than firms lacking that recognition. Nevertheless, while the use of sustained business outcomes may present a better alternative to traditional approaches of measuring reputational benefit, the mechanism through which corporate reputation influences sustained above average business outcomes remains unclear.

## **2.4 Existing Literature**

Both financial and management research has supported the use of corporate reputation in assessing a firm's business outcomes. Firms perceived as excellent along an array of dimensions may have easier access to financial capital or have a lower cost of conducting their businesses. Managerial capacity has been cited to be of prime interest when evaluating security selection (Harris, 1975). A firm's corporate reputation quality may affect its ability to deal in cheaper implicit contracts (e.g., non-union employees) in contrast to costlier explicit contracts (Cornell and Shapiro, 1987). As in financial theory, corporate strategic management has also emphasized the importance of measuring public perceptions of firm quality. A firm's strategic management has often been defined as the process through which a firm ensures its long-term survival. Management literature (Prahalad and Hamel, 1990; Sanchez & Heene, 1997) which deals with the importance of 'core' areas in firms' performance is consistent with perceived quality of various firm activities being taken as a signal of imminent financial performance.

More directly, finance literature has linked management reputation and firms' equity and accounting performance. Previous researches have analyzed the relation between market and accounting based measures of U.S. firms' performance and external evaluators' perceptions of the qualitative attributes of U.S. firms [Clayman (1987); McGuire et al. (1988, 1990); Solt and Statman (1989); and Shefrin and Statman (1995)]. For instance, Shefrin and Statman (1995) argue that "uninformed" noise traders may tend to identify good companies' stocks as good stocks. They hypothesize that neglected or loser firms (Arbel and Strebal, 1983) are, in fact, perceived by investors as poor in quality. These disregarded, and therefore related low-quality firms may have higher hazard balanced returns and are for the most part smaller in size.

Conversely, firms apparent as great are by and large extensive and have the low book to market ratios. Utilizing expert studies on U.S. firms and British firms on corporate reputation of U.S. and British firms' over a variety of subjective components (e.g., quality of management, capacity to innovate) different authors have tended to how much perceived qualitative performance is related to a firm's subsequent accounting and equity market performance, past accounting and equity market performance forecasts future perceptions as to qualitative performance, and the interrelationships between the different qualitative factors.

Previous researches (McGuire et al., 1988, 1990) have showed that for both the U.S. and Britain, past accounting-based performance is exceedingly related to evaluators' observation of various qualitative measures (e.g., financial soundness). For most studies (Shefrin and Stateman, 1995, 1997; McGuire et al., 1988, 1990), little correlation, however, is found for either U.S. or U.K. firms, between perceived management quality and future excess risk adjusted security returns. Other studies, however, (Antunovich and Laster, 1998) have claimed that for U.S. firms, Fortune reputation rankings are directly related to future firm equity performance.

Thus, hypothetical and empirical evidence exists on the peripheral perception of firm performance across a wide variety of qualitative characteristics as suggestive of the ability of firms to lower costs of capital, to lesser various contracting costs, to upsurge investor interest, and to accomplish higher future business outcomes. Current rankings, however, may also be related to previous financial performance. For instance, academic scholars (Smircich and Stubbart, 1985) have said that managers and planners may be encouraged to manipulate financial data to enhance the external perception of managerial quality and strong financial performance. However, current rankings may not necessarily be related to future equity market performance. Finance theory generally admits the position that corporate equity prices includes all past information such that unless published reputation ranking contain new information that influence firms' expected risk and return, published reputation rankings should not affect future equity risk-adjusted returns.

McGuire and Branch (1990) observe the relation between firm quality and business outcomes by using data from Fortune Magazine's survey of corporate reputation. They examine mainly two issues: (1) the degree to which perceived firm or management quality influences the subsequent corporate financial performance, and (2) the degree to which historical measures of

corporate business outcomes forecast future perceptions of corporate or management quality. They find that financial measures of both risk and return influences perceptions of firm quality. They also obtain that perceptions of firm quality though correlated with the subsequent performance of precise financial measures, are generally more meticulously related to prior business outcomes than to succeeding performance.

Herremans et al. (1993) studied whether large US manufacturing companies with better reputations for social responsibility outperform companies with poorer reputation during the six-year period. They examine corporate business outcomes using accounting indicators which are (1) operating margin (operating profit before depreciation, as a percentage of sales), (2) net margin (after-tax profit as a percentage of sales), (3) ROA (operating profit as a percentage of the net book value of assets), and (4) ROE (after-tax profit as a percentage of the book value of stockholders' equity). Within the scope of this study, there are 21 manufacturing industries involved in the Fortune corporate reputation survey for the period 1982 and 1987. The results are constant with the hypothesis that companies' reputations for corporate social responsibility and their performance, as reflected by accounting measures of profitability, are predictable to be positively associated.

Hammond and Slocum (1996) examine the impact of prior firm business outcomes on subsequent corporate reputation. They obtain that business outcomes measures of market return of the firm and return on sales moderately affects the subsequent corporate reputation by using Fortune the Most Admired Companies list for the period 1981 and 1993.

Dunbar and Schwalbach (2000) inspect the relationship between corporate reputation and business outcomes of 63 German firms over the period 1988 and 1998. They find that prior business outcomes have a strong effect on subsequent reputation. Many German firms have comparatively stable reputations. Because of the study, a corporate reputation is positively related to overall business outcomes in Germany. Business outcomes have both an immediate and a year-delayed impact on corporate reputation of German firms.

Roberts and Dowling (2002) consider the relationship between corporate reputation and superior financial performance and business outcomes. Their data sample is grounded on a sample from 1984-1998 of Fortune's report of America's Most Admired Corporations. This paper observes whether a good reputation allows a firm to achieve insistent profitability or

sustained superior financial performance. They put yearly observations on firm profitability, market-to-book value and firm size for each firm. They find that firms with superior corporate reputations have a greater chance of sustaining superior business outcomes over time.

According to Sabate and Puente (2003), the affiliation between corporate reputation and business outcomes comprises answering two questions; whether the relationship sign as positive or negative and whether corporate reputation has an impact on business outcomes or vice versa. They noted that for developed countries the positive influence of corporate reputation on business outcomes has always been validated, despite studies' using various methodologies and using data of heterogeneous nature, both for measures of corporate reputation, of financial performance, and of using several different lags.

Rose and Thomsen (2004) examine the relationship between a firm's reputation and business outcomes on Danish firms for the period 1996 and 2001. They find that corporate reputation does not impact firm value (the market-to-book value of equity) whereas corporate business outcomes progresses corporate reputation.

Eberl and Schwaiger (2005) analyze the relationship between corporate reputation and the firm's future business outcomes by means of a more differentiated concept of reputation than the one commonly used in literature by using German firms' data. They obtain two important conclusions. Firstly, superior business outcomes in the past is only one component of a company's reputation. Secondly, reputation's "cognitive component" has a positive impact on future business outcomes while there is strong evidence that the "emotional component" has a negative impact.

Inglis, Morley and Sammut (2006) test the relationship between corporate reputation and business outcomes by using Australian data for the period 2003 and 2004. Following Rose and Thomsen's (2004) methodology (ROA, ROE and ROIC), they find no causal relationship between corporate reputation and business outcomes in either direction for Australian firms in sample period.

Sanchez and Sotorrio (2007) empirically test the relationship between corporate reputation and business outcomes of the 100 most prestigious companies operating in Spain in

2004. They find that there exists a strong and nonlinear relationship between business reputation and the financial result of the company.

Zhang and Rezaee (2009) examine the relationship between corporate credibility and business outcomes in China. In their research, they used both accounting-based and stock market-based analysis. Net profit margin, ROE, and sales growth rates are the accounting-based business outcomes measures; market-adjusted return and total returns are stock market-based firm business outcomes measures. In addition, they also considered other business outcomes measures for instance assets, capital, and growth of profit before tax, ROA, and cost of capital. They acquire that firms with high credibility have more low cost implied claims than other firms, thus exhibiting higher financial performance.

As global competitors can usually easily reproduce tangible products, it is often intangible company-specific, difficult to imitate resources that become important (Dunbar and Schwalbach, 2000). These may include intellectual property rights, unique competence and most likely corporate reputation (Hall, 1992). Such unique factors constitute a base from which firms can build unique and sustainable competitive advantage.

As a result of corporate scandals at the beginning of the millennium, the importance of a positive corporate reputation has never been greater (Wang & Smith 2008). When a business firm loses its reputation, there is a loss of trust, which is fundamental to business activities involving the firm 's customers, suppliers, lenders, investors, and others. A positive corporate reputation means management's commitment to ethical accounting and principled business practices. A key factor in corporate reputation is corporate social responsibility, such as taking care of the environment. Other factors include wise use of assets, financial soundness, and investment value, all of which are based on honest financial reporting. These measures of business outcomes are unreliable and meaningless without ethical accounting practices. Wang & Smith (2008) have found that high-reputation firms show an average market value premium of \$1.3 billion in the US market and results also indicate that high-reputation firms experience superior business outcomes and lower cost of capital.

The issue of corporate reputation, as it is built on various characteristics (e.g. environmental responsibility, good human resources practices, and honest financial reporting), is increasingly important to corporate business practices in countries around the world. Reputation

has become more important in recent years, following Enron and other financial scandals, resulting investor losses, and ruined reputations of involved companies. According to Becchetti et al. (2007), there has been very little empirical research on its impact and relevance in the capital market. Desai et al. (2007) identified reputational penalties to top corporate managers at firms that violate financial reporting standards. Because of these reputational penalties, there was higher management turnover and poorer employment prospects for the displaced managers.

Barnett et al. (2006) show that the concept of corporate reputation has added importance in recent years. Their research reviews, analyzes, and assesses prior definitional statements of corporate reputation. They distinguish corporate reputation from corporate identity, corporate image, and corporate reputation capital. Chun (2005) observes that the interest in corporate reputation encompasses a wide range of academic disciplines. She develops a construct for evaluating corporate reputation.

Chalmers and Godfrey (2004) find that discretionary reporting, about derivatives, is positively related to the magnitude of reputation costs confronting managers and firms. Sacconi (2004) offers a definition of corporate social responsibility (CSR) in terms of an economic theory of self-regulation based on the concepts of social contract, reputation and mutual conformism. Cox et al. (2004) examine institutional investor preferences for reputation built on corporate social performance. Their research found that long-term institutional investment was positively related to social performance.

Harrington (2003) points out that as far back as the 1960s, socially conscious investors joined together to promote stocks of companies with a reputation for not polluting, good employment practices, and not exploiting the third world. Following Enron and other financial scandals in the early 2000s, both socially responsible investors and profit-oriented investors have found some common ground, as both are evaluating a company's social conscience. Harrington concludes that unethical companies drain shareholder value. Taking steps to build a reputation based on social responsibility was once regarded as harmful to financial performance. According to Harrington, there is sign this is no longer the case. From 1990 to 1998, the Domini 400 Social Index, which analyze the impact of social screening on financial performance, returned 18.54 %, which surpassed the S&P 500 return of 16.95 % (Harrington 2003). Becchetti et al. (2007) used the Domini 400 Social Index to evaluate the market reaction to corporate entry and exit from the

Index, a benchmark for reputation built on corporate social responsibility. Related to reputation, Keim (1978) and Carroll (1973) offer foundational work on the study of social responsibility. Keim (1978) observed that the constraints within which business operates are changing. Carroll (1973) noted that the social environment would require adoption of more contemporary and surrounding definitions regarding corporate efficiency and productivity. Subsequent years have proved out the expectations of these earlier works.

Studies of the relationship between corporate reputation and business outcomes are relatively scarce although in recent years several studies investigate this relationship. However, in Turkey, there is very few studies on the relationship between corporate reputation and corporate business outcomes. Traditionally, Turkish firms did not believe corporate reputation to be something of major importance. They were much more focused on objective measures of financial performance. To the extent they considered reputation at all; they related it to how they personally might be assessed in markets that compared them with other corporate executives. Recently, however, Turkish managers have come to recognize corporate reputation as something that is distinct, significant and important even though it remains an intangible asset. As to the reasons behind this change, increasing global competition may be one strong force that helped firms realize the significance of competing through intangible resources. The overall purpose of the study is to obtain how corporate reputation impact the business outcomes of the Turkish economy for a certain period.

## **2.5 Hypothesis**

After extensively studying the literature of the corporate reputation as well as business outcomes and RepMan reputation data, which was based on recognition, management quality, product & services quality, working brand, financial stability, corporate (social) responsibility and emotional attachment of different sectors of Turkey, the following hypothesis has been developed. The hypothesis is separated into two sections, the first one for the all given sectors together and another one is for individual sector. The study has not included three sectors namely Liquid Fuel, LPG Gas, and Telecommunication because of data insufficiency.

H0: It assumes that there is no correlation between RepMan Reputation Scores indicators and business outcome as well as no impact of RMS reputation indicators (independent variables) on each business outcome (dependent variable)

H1: It assumes that there is a correlation between RepMan Reputation Scores indicators and business outcome as well as impact of RMS reputation indicators (independent variables) on each business outcome indicators (dependent variable)

### **3: DATA AND METHODOLOGY**

#### **3.1 Introduction**

This part of the study elucidates the nature of data and selected methods to analyze the data. Alongside, it also describes what kinds of analytical tools are utilized. In the first few paragraphs, it discusses the data collection sources, what kind of data have been used, and how the raw data has been generated into the final data. Later, different statistical methods employed in the study have been discussed.

#### **3.2 Data**

The study utilizes the dataset of “2012 Corporate Reputation Research”<sup>1</sup> conducted by the Reputation Research Center of Turkey(RepMan)<sup>2</sup>.

The data consists of seven corporate reputation components (dimensions of reputation) which are used to compute a composite reputation score called RMS (by factor analysis). These components are as follows:

- Corporate Responsibility **(CSR)**,
- Emotional Commitment **(EC)**,
- Financial Strength **(FS)**,
- Product/Service Quality **(PSQ)**,
- Quality of Management **(QM)**,

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<sup>1</sup> 2012 Corporate Reputation Research was conducted in 7 geographical regions, 15 cities with 14.176 participants including 929 opinion leaders.

<sup>2</sup> A knowledge sharing center which is a basic source and model of reputation researches in Turkey. Its mission is to accumulate information about reputation researches and later share to both academicians and practitioners.

- Working Brand (**WB**),
- Recognition (**RC**).

According to Julie Short & Betsy Burton (2013), “a business outcome is a specific, measurable target action that is taken in response to a business direction (or a change in business direction) or a business disruption (or a set of business disruptions)”. Moreover, it includes five business outcomes indicators:

- **RR**: In every aspect, I express that this company is reputable and reliable,
- **RPS**: I would like to use / re-use / recommend this company's products / services,
- **RPW**: It is a company that I would recommend as a place to work / work for my child / myself,
- **BLS**: I am interested to buy stocks for long-term,
- **SSRP**: I have material and moral support for social responsibility projects.

The companies or brands investigated comprises eleven sectors:

- Automotive,
- Banking,
- Construction,
- Durable consumption,
- Fast moving consumption,
- Holding,
- Liquid fuel,
- LPG gas,
- Retail,
- Telecommunication,
- Transportation

### 3.3 Methodology

The study considers three important tests to ascertain the expected outcomes. Among these, first one is correlation test where it tests Pearson correlation coefficient considering the

two-tailed test for obtaining the best possible results. The second one is scatterplot which is a graphical representation of correlation along with linearity. Finally, regression test where it selects Least Square method to reduce the error terms.

### 3.3.1 Descriptive statistics

Descriptive statistics is a collection of numbers, tables, charts, and graphs which are used to describe, summarize, and present raw data. Now, a short definition of the major variables of descriptive statistics is given below:

**Mean:** Mean is the average, the most common measure of central tendency.

**Median:** Median is the value in the middle of the data set when the measurements are arranged in order of magnitude.

**Mode:** Mode is the value occurring most often in the data.

**Variance:** Variance is expressed as the sum of the squares of the differences between each observation and the mean, which quantity is then divided by the sample size.

**Standard deviation:** Standard deviation is expressed as the positive square root of the variance. It is the average difference between observed values and the mean.

**Skewness:** Skewness measures how concentrated data points are at the high or low end of the scale of measurement.

**Kurtosis:** Kurtosis measures how concentrated data are around a single value, usually the mean. Thus, kurtosis assesses how peaked or flat is the data distribution.

### 3.3.2 Correlation and scatterplot

Basically, correlation denotes the relationship between quantitative variables or categorical variables – between two variables. On the other hand, scatterplot is a graphical representation of the correlation between two variables. Most importantly, correlation provides the proof of the relationship between two variables and scatterplots are useful for interpreting the

trends of statistical data. Despite the difference of representation of findings, both correlation and scatterplots consider the r value to conclude the results.

There are several correlation techniques; especially, Pearson product moment, Spearman rank-order correlation, Kendall rank correlation. Among the techniques, Pearson or product moment correlation technique is one of the most common and useful technique in the academic research. However, no matter which technique a study follows, the main result of correlation is determined by the correlation coefficient, simply put, r value.

The correlation coefficient, r, first introduced by Karl Pearson in 1896. According to Deborah J. Rumsey (n.d.), the r value measures the strength and direction of a linear relationship between two variables on a scatterplot. The correlation coefficient, in other words, r value lies between +1 and -1 (Renter, 2009). This value is categorized into different points as exhibited in Table 1.

**Table 3.1:** *Guidelines for interpreting the correlation coefficient (Bruce Ratner, 2009)*

| <b>Value</b>            | <b>Description</b>                      |
|-------------------------|-----------------------------------------|
| Exactly -1              | A perfect negative linear relationship  |
| Between -0.70 and -1.0  | A strong negative linear relationship   |
| Between -0.30 and -0.70 | A moderate negative linear relationship |
| 0                       | No linear relationship                  |
| Between 0.30 and 0.70   | A moderate positive linear relationship |
| Between 0.70 and 1.0    | A strong positive linear relationship   |
| Exactly +1              | A perfect positive linear relationship  |

The calculation of correlation coefficient for two variables is characterized by, for example, one variable is x and another variable is y. Therefore, the formula of Pearson correlation coefficient as follows:

$$r = \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{[N \sum x^2 - (\sum x^2)][N \sum y^2 - (\sum y^2)]}}$$

In the above equation, the letter  $r$  represents Pearson  $r$  correlation coefficient,  $N$  for number of observation,  $\sum xy$  denotes sum of the products of paired scores,  $\sum x$  indicates sum of  $x$  scores,  $\sum y$  sum of  $y$  scores,  $\sum x^2$  sum of squared  $x$  scores, and  $\sum y^2$  mentions sum of squared  $y$  scores.

### 3.3.3 Regression

Regression is a statistical technique which is used to ascertain the linear relationship between dependent or response, a variable which depends on another variable or variables, and explanatory or independent variable, a variable which influences the dependent variable. Regression is mainly used for prediction and causal interference (Campbell & Campbell, 2008, p. 3). There are various kinds of regression techniques used in different studies. The study employs ordinary least square method.

#### 3.3.2.1 Ordinary least squares method

According to Pohlman, & Leitner (2003. P. 119), ordinary least squares (OLS) method is a statistical technique to discover the relationship between a dependent and an accumulation of explanatory variables, with an error or disturbance term. The error term and linear consolidation of independent variables explain the dependent variable. The important feature of OLS is that it minimizes the sum of squared disturbances or errors for all variables when calculating parameter values (Campbell & Campbell, 2008, p. 6).

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \cdots + \beta_n X_n + \varepsilon \dots\dots\dots (i)$$

Where

$Y$  is an observed random variable, it is also called dependent or response variable. Subsequently,  $X$ 's are called observed non-random variables (also named conditioning or predictor or explanatory or independent variables). Alongside,  $\alpha$  is a slope parameter—which explains the status of an observed random variable in the absence of explanatory variables. On the other hand,  $\beta$  represents intercept parameter; which explains the magnitude and direction of a linear relation. Finally,  $\varepsilon$  denotes unobserved random variable or error or disturbance term. It captures the amount of variation which is unpredicted by slope and intercepts parameters.

The study scrutinizes the impact of corporate reputation on business outcomes indicators. Here, OLS regression method considers business outcomes indicators as a dependent variable and other variables—Corporate Responsibility (CR), Emotional Commitment (EC), Financial Strength (FS), Product/Service Quality (PSQ), Quality of Management (QM), Working Brand (WB), and Recognition (RC)—as independent or explanatory variables.

The OLS equations are as follows:

$$RR = \alpha_0 + \beta_1(CSR) + \beta_2(EC) + \beta_3(FS) + \beta_4(PSQ) + \beta_5(QM) + \beta_6(RC) + \beta_7(WB) + \varepsilon \dots\dots\dots (ii)$$

$$RPS = \alpha_0 + \beta_1(CSR) + \beta_2(EC) + \beta_3(FS) + \beta_4(PSQ) + \beta_5(QM) + \beta_6(RC) + \beta_7(WB) + \varepsilon \dots\dots\dots (iii)$$

$$RPW = \alpha_0 + \beta_1(CSR) + \beta_2(EC) + \beta_3(FS) + \beta_4(PSQ) + \beta_5(QM) + \beta_6(RC) + \beta_7(WB) + \varepsilon \dots\dots\dots (iv)$$

$$BLS = \alpha_0 + \beta_1(CSR) + \beta_2(EC) + \beta_3(FS) + \beta_4(PSQ) + \beta_5(QM) + \beta_6(RC) + \beta_7(WB) + \varepsilon \dots\dots\dots (v)$$

$$SSRP = \alpha_0 + \beta_1(CSR) + \beta_2(EC) + \beta_3(FS) + \beta_4(PSQ) + \beta_5(QM) + \beta_6(RC) + \beta_7(WB) + \varepsilon \dots\dots\dots (vi)$$

In the linear regression, the null hypothesis assumes that explanatory variables do not have an impact on the dependent variable. On the other hand, alternative hypothesis assumes an opposite relation— explanatory variables do have an impact on the dependent variable.

The hypothesis are expressed as follows:

$$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$$

$$H_1: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 \neq 0$$

If p-value is greater than five per cent, we cannot reject null hypothesis, which implies that there is no impact of explanatory variables on the dependent variable. On the other hand, if p-value is

less than five percent, we can reject the null hypothesis, which means that the explanatory variables do have an impact on the dependent variable.

## 4: FINDINGS AND ANALYSIS

### 4.1 Introduction

In the first section, we present the findings of the correlation analysis, where the relationship among variables of all 11 sectors has been discussed. On the other hand, in the second section, scatter plot diagrams are illustrated along with explanations.

### 4.2 Descriptive statistics

**Table 4.1:** *Descriptive statistics of business outcomes*

| Variables | RR                 | RPS     | RPW                | BLS                | SSRP               |
|-----------|--------------------|---------|--------------------|--------------------|--------------------|
| N         | 101                | 154     | 154                | 154                | 154                |
| Mean      | 60.7156            | 59.9942 | 59.0691            | 50.5502            | 58.0415            |
| Median    | 60.0300            | 59.2500 | 58.0850            | 50.4550            | 57.1100            |
| Mode      | 56.54 <sup>a</sup> | 59.16   | 52.55 <sup>a</sup> | 41.95 <sup>a</sup> | 56.82 <sup>a</sup> |
| Std. Dev. | 7.66327            | 7.16923 | 6.91200            | 6.19039            | 6.43195            |
| Skewness  | .171               | .271    | .254               | .095               | .386               |
| Kurtosis  | .426               | .248    | -.013              | .499               | -.077              |
| Minimum   | 40.90              | 39.74   | 39.63              | 33.48              | 43.95              |
| Maximum   | 82.59              | 80.66   | 78.32              | 69.70              | 75.41              |

a. Multiple modes exist. The smallest value is shown

Table 4.1 represents the descriptive statistics of business outcome indicators where mean, median, and mode for all variables are close to 59 except BLS which is about 50. Here, the standard deviation shows a good sign—a less dispersion of data from its mean value which denotes a close value of all variables to mean value. Now, considering skew and kurtosis, rule of thumb suggests that all the data of variables are pretty symmetric, simply put, without skew. The reason behind this is the absolute value of each variable's skewness which is less than 0.5. On the other hand, considering the kurtosis value, it can be said that the data of variables are considered as Mesokurtic distributions—the normal bell curve, neither peaked nor flat.

**Table 4.2:** *Descriptive analysis of corporate reputation indicators*

| Variables | QM      | PSQ                | WB      | FS                 | CSR     | EC                 | RC      |
|-----------|---------|--------------------|---------|--------------------|---------|--------------------|---------|
| N         | 154     | 154                | 154     | 154                | 154     | 154                | 154     |
| Mean      | 62.2136 | 61.5877            | 61.4247 | 62.6227            | 57.7974 | 57.8727            | 43.8396 |
| Median    | 61.7000 | 60.9000            | 61.1000 | 61.8500            | 57.2500 | 57.0000            | 46.3000 |
| Mode      | 58.50   | 57.60 <sup>a</sup> | 61.40   | 55.40 <sup>a</sup> | 57.00   | 51.60 <sup>a</sup> | 15.40   |
| Std. Dev. | 6.79108 | 6.72792            | 6.69654 | 6.49489            | 6.08869 | 6.87010            | 22.6361 |
| Skewness  | .360    | .383               | .369    | .493               | .511    | .498               | -.146   |
| Kurtosis  | .461    | .416               | .252    | .001               | .616    | .279               | -1.244  |
| Minimum   | 44.10   | 42.40              | 44.40   | 49.80              | 44.10   | 41.40              | 1.80    |
| Maximum   | 83.70   | 81.60              | 81.70   | 82.00              | 78.60   | 78.30              | 84.70   |

a. Multiple modes exist. The smallest value is shown

Table 4.2 demonstrates the descriptive statistics of corporate reputation indicators where mean, median, and mode for all variables are close to 60 except recognition which is about 45. Here, the standard deviation shows a good sign—a less dispersion of data from its mean value which denotes a close value of all variable, except recognition indicator, to mean value. Now, considering skewness and kurtosis, rule of thumb suggests that all the data of variables are pretty symmetric, simply put, without skew. However, only one corporate reputation indicator, corporate social responsibility, is slightly right skewed because the absolute value of the variable's skewness is greater than 0.5. On the other hand, considering the kurtosis value, it can be said that most of the variables' data are considered as Mesokurtic distributions—the normal bell curve, neither peaked nor flat. However, recognition variable has a different shape, squared, but not peak.

| Variables | Mean        | Std. Deviation |
|-----------|-------------|----------------|
| RMS       | 60.20       | 3.499714274    |
| QM        | 62.51666667 | 3.678269521    |
| PSQ       | 61.18333333 | 3.716674141    |
| WB        | 61.6        | 3.785234471    |
| FS        | 62.9        | 3.642526596    |
| CSR       | 57.21666667 | 3.095426734    |
| EC        | 57.71666667 | 2.956630966    |
| RC        | 53.56666667 | 11.02028433    |
| RPS       | 59.03666667 | 3.713077789    |
| RPW       | 54.6        | 3.3620232      |
| BLS       | 45.59       | 2.142325839    |
| SSRP      | 57.88166667 | 2.703252979    |

**Table 4.3:** Descriptive analysis of Liquid fuel sector, **Source:** Authors' computation (SPSS)

Table 4.3 represents the selected variables' (RMS, components of RMS, business outcomes) mean and standard deviation for the liquid fuel sector. Noticeably, FS has the highest mean, while BLS has the lowest mean among the variables.

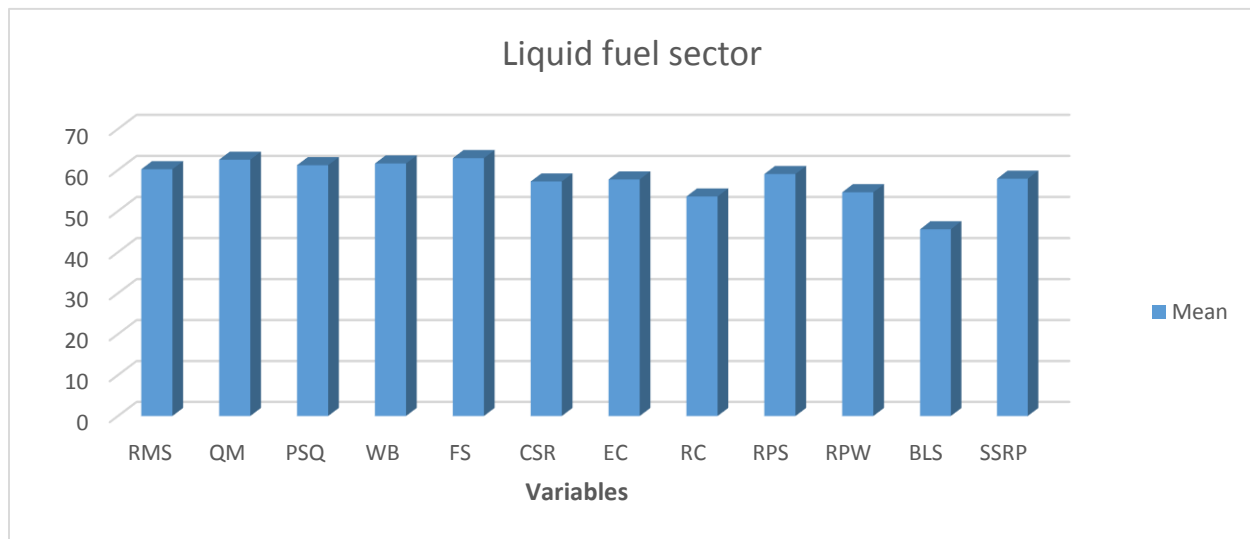


**Figure 4.1:** Mean value of variables for liquid fuel sector, **Source:** Authors computation (Excel)

**Table 4.4:** Descriptive analysis of Banking sector, **Source:** Authors' computation (SPSS)

| Variables | Mean        | Std. Deviation |
|-----------|-------------|----------------|
| RMS       | 56.32857143 | 5.958888457    |
| QM        | 56.42857143 | 6.649861603    |
| PSQ       | 56.3        | 6.147419721    |
| WB        | 55.78571429 | 5.937476431    |
| FS        | 59.34285714 | 6.197979111    |
| CSR       | 53.13571429 | 5.952841228    |
| EC        | 52.9        | 6.440496875    |
| RC        | 57.41428571 | 9.395813891    |
| RR        | 53.58785714 | 6.599063079    |
| RPS       | 53.15428571 | 6.413944801    |
| RPW       | 54.45285714 | 6.610081378    |
| BLS       | 44.72857143 | 5.047386006    |
| SSRP      | 55.35928571 | 5.908366251    |

Table 4.4 demonstrates the selected variables' (RMS, components of RMS, business outcomes) mean and standard deviation for the banking sector. Similar to the liquid fuel sector, FS has the highest mean, while BLS has the lowest mean among the variables.

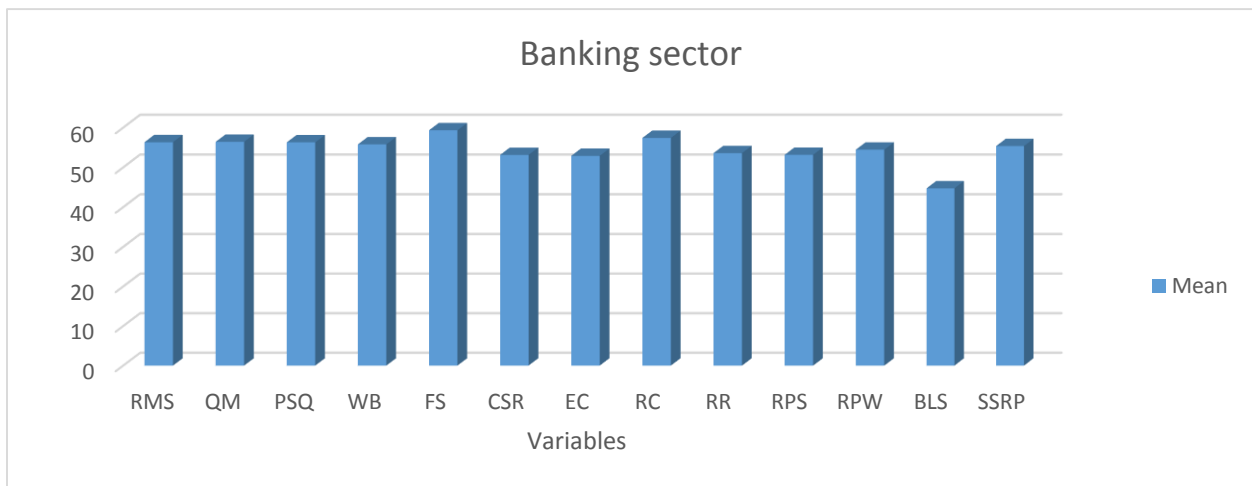


**Figure 4.2:** Mean value of variables for banking sector, **Source:** Authors computation (Excel)

**Table 4.5:** Descriptive analysis of Telecommunication sector, **Source:** Authors' computation (SPSS)

| Variables | Mean    | Std. Deviation |
|-----------|---------|----------------|
| RMS       | 65.2    | 5.463210289    |
| QM        | 67.3    | 6.023841521    |
| PSQ       | 66.05   | 5.935486501    |
| WB        | 65.45   | 5.023610919    |
| FS        | 66.225  | 5.05791459     |
| CSR       | 62.2    | 5.56596802     |
| EC        | 63.55   | 5.387949517    |
| RC        | 72.675  | 5.02485489     |
| RR        | 66.7125 | 5.227799888    |
| RPS       | 63.8575 | 5.708948385    |
| RPW       | 65.34   | 5.046404661    |
| BLS       | 56.085  | 3.978077425    |
| SSRP      | 62.775  | 5.12299717     |

Table 4.5 illustrates the mean and standard deviation value of selected variables' (RMS, components of RMS, business outcomes) for the banking sector. Here, the variable RC has the highest mean, whereas BLS has lowest mean.

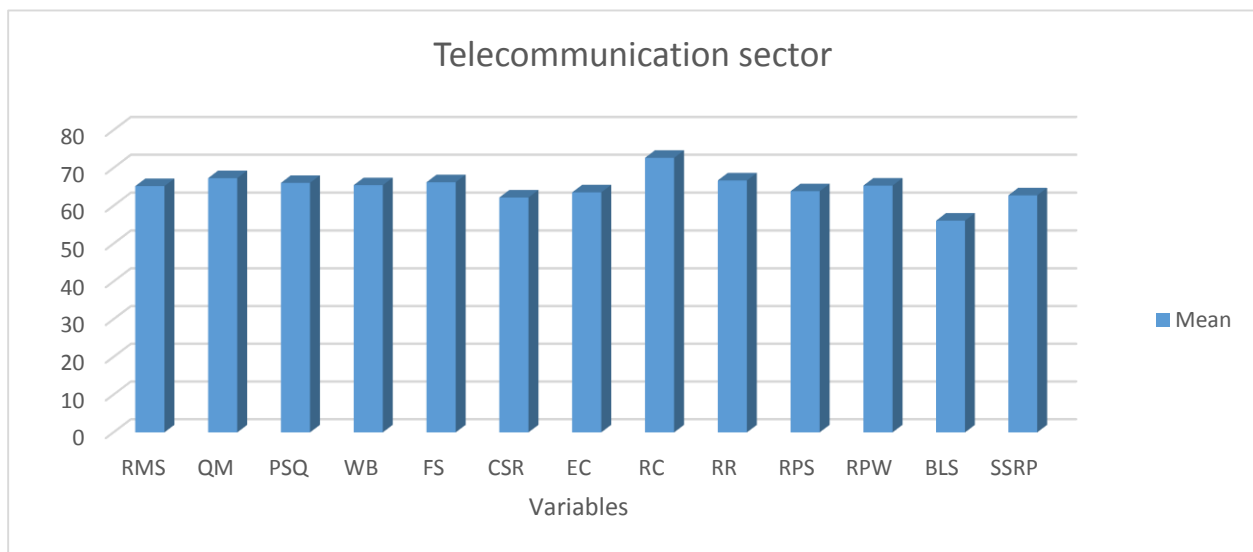


**Figure 4.3:** Mean value of variables for telecommunication sector, **Source:** Authors computation (Excel)

**Table 4.6:** Descriptive analysis of Durable consumption sector, **Source:** Authors' computation (SPSS)

| <b>Variables</b> | <b>Mean</b> | <b>Std. Deviation</b> |
|------------------|-------------|-----------------------|
| RMS              | 65.15833333 | 8.377291636           |
| QM               | 66.29166667 | 8.333007569           |
| PSQ              | 65.675      | 8.127073162           |
| WB               | 65.375      | 8.663205894           |
| FS               | 66.325      | 8.605613918           |
| CSR              | 62.63333333 | 8.569431225           |
| EC               | 61.51666667 | 8.687382003           |
| RC               | 67.375      | 8.090300028           |
| RR               | 65.57083333 | 8.633861938           |
| RPS              | 64.42083333 | 8.375716478           |
| RPW              | 63.33416667 | 7.894638524           |
| BLS              | 54.98333333 | 7.437558658           |
| SSRP             | 58.85583333 | 8.120128143           |

Table 4.6 denotes the mean and standard deviation value of selected variables' (RMS, components of RMS, business outcomes) for the durable consumption sector. Here, the variable RC has the highest mean while BLS has lowest mean.

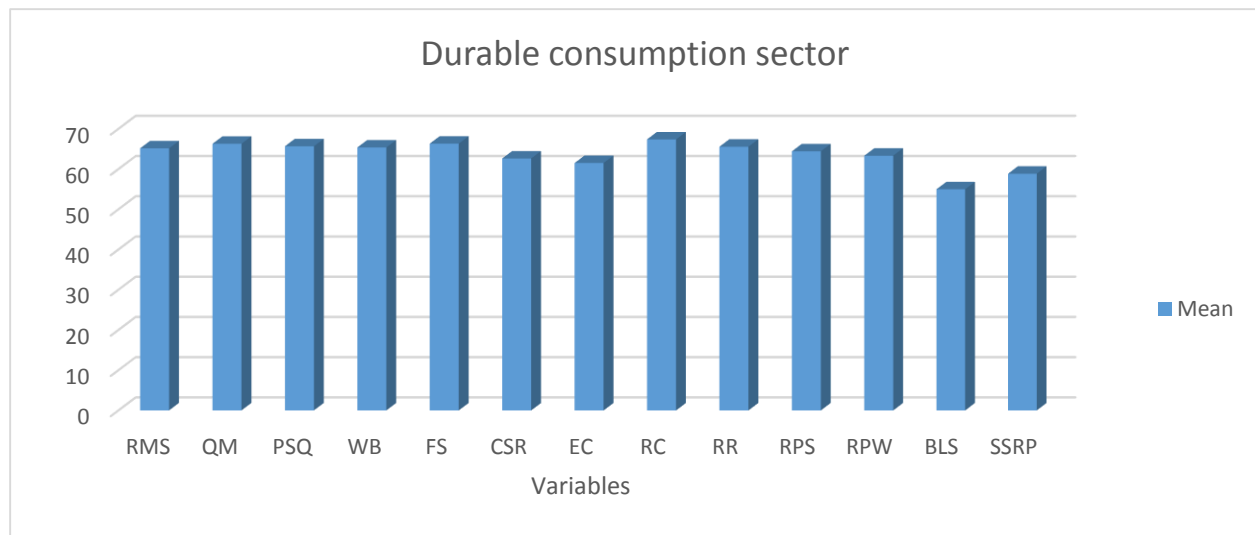


**Figure 4.4:** Mean value of variables for durable consumption sector, **Source:** Authors computation (Excel)

**Table 4.7:** Descriptive analysis of Fast moving consumption sector, **Source:** Authors' computation (SPSS)

| Variables | Mean        | Std. Deviation |
|-----------|-------------|----------------|
| RMS       | 63.84117647 | 9.026215903    |
| QM        | 65.38823529 | 9.542856121    |
| PSQ       | 64.35294118 | 10.163545      |
| WB        | 65.20588235 | 9.208112632    |
| FS        | 67.65882353 | 8.106329227    |
| CSR       | 61.68235294 | 7.936957485    |
| EC        | 62.19411765 | 9.793267495    |
| RC        | 55.82352941 | 27.09399217    |
| RR        | 63.48058824 | 10.54246441    |
| RPS       | 63.35352941 | 10.73168087    |
| RPW       | 61.84470588 | 10.10055328    |
| BLS       | 50.19705882 | 7.656914983    |
| SSRP      | 62.89705882 | 8.875377995    |

Table 4.7 shows the selected variables' (RMS, components of RMS, business outcomes) mean and standard deviation value for the fast moving consumption sector. Noticeably, FS has the highest mean, while BLS has the lowest mean among the variables.

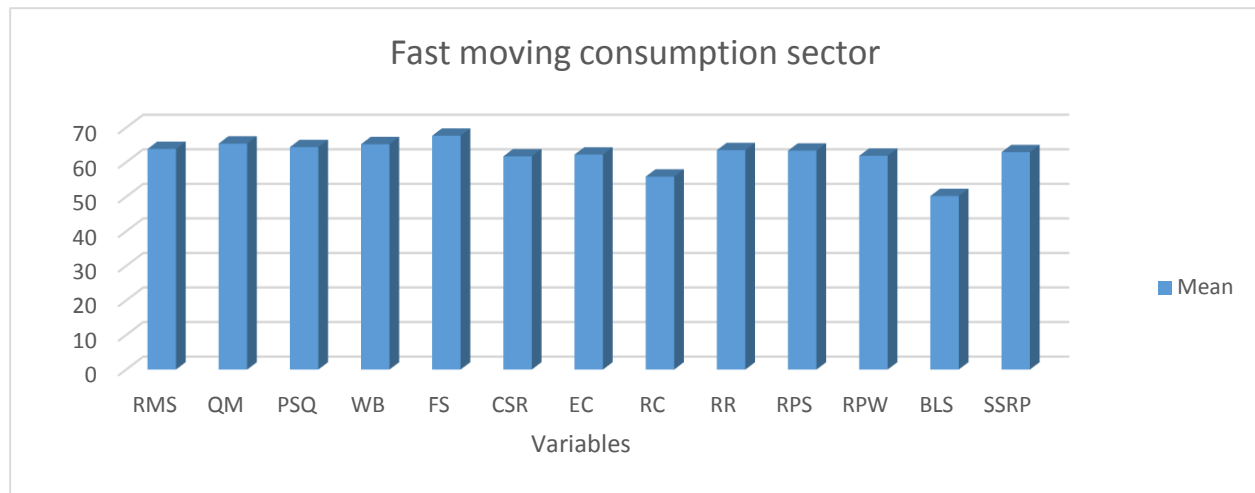


**Figure 4.5:** Mean value of variables fast moving consumption sector, **Source:** Authors computation (Excel)

**Table 4.8:** Descriptive analysis of Holding sector, **Source:** Authors' computation (SPSS)

| Variables | Mean        | Std. Deviation |
|-----------|-------------|----------------|
| RMS       | 59.74166667 | 4.673223208    |
| QM        | 62.025      | 3.811257249    |
| PSQ       | 60.9        | 4.477621122    |
| WB        | 60.40833333 | 5.521109627    |
| FS        | 60.825      | 5.290149508    |
| CSR       | 57.24166667 | 4.782631138    |
| EC        | 56.975      | 4.846390409    |
| RC        | 40.93333333 | 15.90307765    |
| RR        | 61.44666667 | 3.913383408    |
| RPS       | 59.36833333 | 4.715764342    |
| RPW       | 60.4275     | 5.458359935    |
| BLS       | 53.06583333 | 3.88840107     |
| SSRP      | 57.13666667 | 5.316320213    |

Table 4.8 shows the mean and standard deviation value of selected variables' (RMS, components of RMS, business outcomes) for the holding sector. Here, the variable QM has the

highest mean along with the lowest standard deviation. On the other hand, RC has lowest mean, but highest standard deviation.



**Figure 4.6:** Mean value of variables holding sector, **Source:** Authors computation (Excel)

**Table 4.9:** Descriptive analysis of Construction sector, **Source:** Authors' computation (SPSS)

| Variables | Mean        | Std. Deviation |
|-----------|-------------|----------------|
| RMS       | 60.01538462 | 3.652589528    |
| QM        | 62.21538462 | 3.062364597    |
| PSQ       | 61.23076923 | 3.608874389    |
| WB        | 61          | 3.625373544    |
| FS        | 61.66153846 | 3.735982348    |
| CSR       | 57.86153846 | 3.856280259    |
| EC        | 56.14615385 | 3.835712751    |
| RC        | 26.91538462 | 18.62828701    |
| RR        | 60.38       | 3.877739892    |
| RPS       | 59.62846154 | 3.708051704    |
| RPW       | 56.80692308 | 4.137937056    |
| BLS       | 51.28923077 | 3.961151898    |
| SSRP      | 55.40538462 | 4.219900503    |

Table 4.9 denotes the mean and standard deviation value of selected variables' (RMS, components of RMS, business outcomes) for the construction sector. Similar to the holding

sector, the variable QM has the highest mean along with the lowest standard deviation. On the other hand, RC has lowest mean, but highest standard deviation.

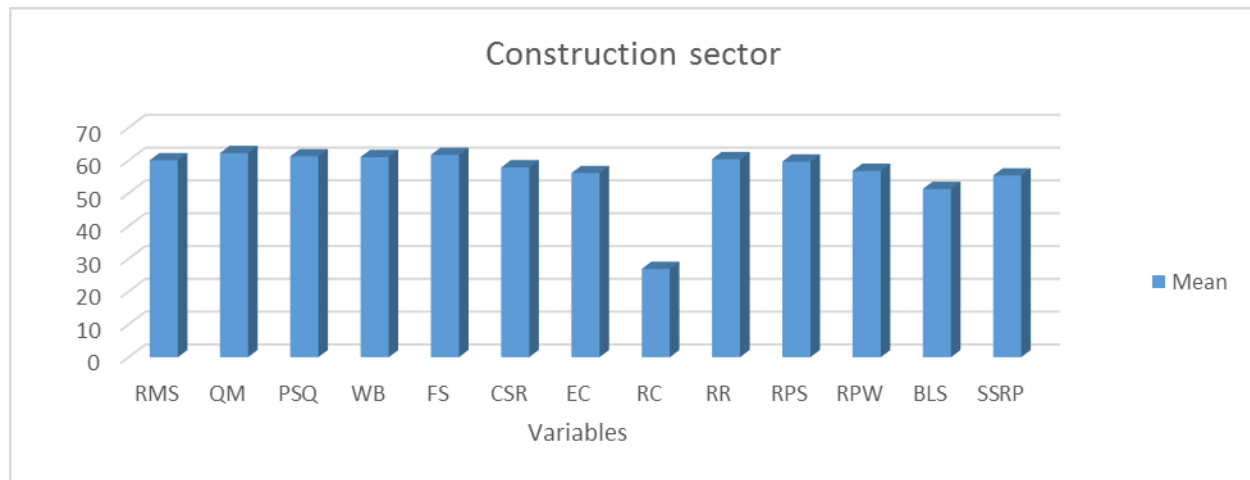


**Figure 4.7:** Mean value of variables construction sector, **Source:** Authors computation (Excel)

**Table 4.10:** Descriptive analysis of Automotive sector, **Source:** Authors' computation (SPSS)

| Variables | Mean        | Std. Deviation |
|-----------|-------------|----------------|
| RMS       | 62.27647059 | 6.557107729    |
| QM        | 63.84117647 | 7.370384897    |
| PSQ       | 62.80588235 | 7.263218173    |
| WB        | 62.94705882 | 6.999117591    |
| FS        | 64.12352941 | 6.719889267    |
| CSR       | 58.66470588 | 5.722209055    |
| EC        | 60.38823529 | 6.910307731    |
| RC        | 41.57058824 | 21.0515369     |
| RR        | 56.395      | 2.990695094    |
| RPS       | 60.21588235 | 7.429094039    |
| RPW       | 60.93       | 6.771305266    |
| BLS       | 52.81294118 | 5.228615692    |
| SSRP      | 60.76941176 | 6.010184555    |

Table 4.10 demonstrates the mean and standard deviation value of selected variables' (RMS, components of RMS, business outcomes) for the automotive sector. Here, the variable, FS has the highest mean and RC has the lowest mean, but highest standard deviation.

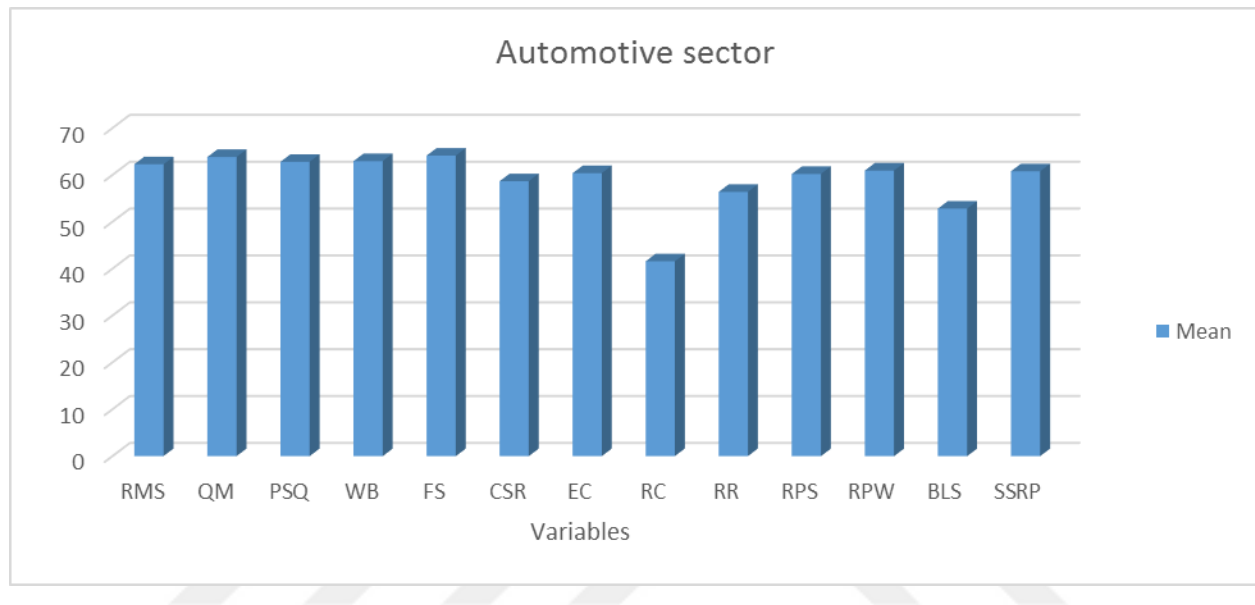


**Figure 4.8:** Mean value of variables automotive sector, **Source:** Authors computation (Excel)

**Table 4.11:** Descriptive analysis of Retail sector, **Source:** Authors' computation (SPSS)

| Variables | Mean   | Std. Deviation |
|-----------|--------|----------------|
| RMS       | 59.17  | 5.153434669    |
| QM        | 61.63  | 5.095324654    |
| PSQ       | 60.9   | 5.059863854    |
| WB        | 60.71  | 4.707547132    |
| FS        | 61.5   | 4.88603452     |
| CSR       | 56.6   | 4.323578765    |
| EC        | 57.4   | 5.145656205    |
| RC        | 52     | 14.53669686    |
| RR        | 58.39  | 5.726191288    |
| RPS       | 58.719 | 5.325159257    |
| RPW       | 55.282 | 4.774196384    |
| BLS       | 51.526 | 4.334643904    |
| SSRP      | 57.648 | 4.888959898    |

Table 4.11 explains the selected variables' (RMS, components of RMS, business outcomes) mean and standard deviation value for the retail sector. Here, the variable, QM has the highest mean and BLS has the lowest mean.



**Figure 4.9:** Mean value of variables retail sector, **Source:** Authors computation (Excel)

**Table 4.12:** Descriptive analysis of Transportation sector, **Source:** Authors' computation (SPSS)

| Variables | Mean   | Std. Deviation |
|-----------|--------|----------------|
| RMS       | 63.41  | 6.398341799    |
| QM        | 64.96  | 6.606259658    |
| PSQ       | 64.2   | 6.333157892    |
| WB        | 64.52  | 6.453560602    |
| FS        | 65.36  | 6.092837325    |
| CSR       | 60.27  | 6.033618778    |
| EC        | 61.4   | 6.280127387    |
| RC        | 54.98  | 11.52656834    |
| RR        | 62.942 | 6.565089151    |
| RPS       | 62.711 | 6.540033044    |
| RPW       | 61.561 | 6.055853825    |
| BLS       | 56.358 | 5.769307295    |
| SSRP      | 60.614 | 5.826871087    |

Finally, Table 4.12 illustrates the mean and standard deviation value of selected variables' (RMS, components of RMS, business outcomes) for the transportation sector. Here, similar to the automotive sector, the variable FS has the highest mean and RC has the lowest mean, but the highest standard deviation.

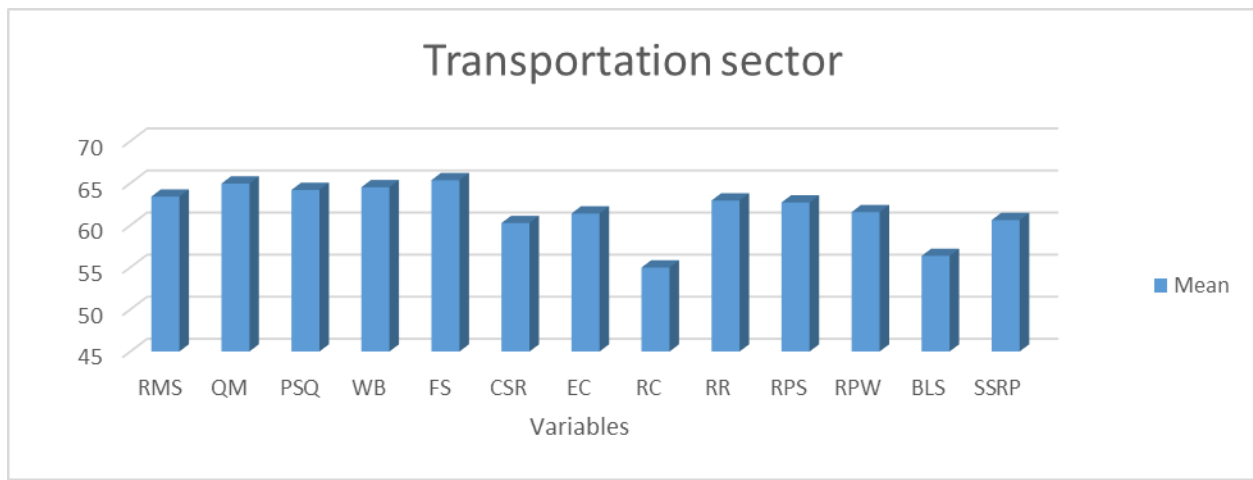


**Figure 4.10:** Mean value of variables transportation sector, **Source:** Authors computation (Excel)

From all the sectors, Financial Strength has the highest mean value while Buying Long term stocks have the lowest.

**Table 4.13:** Number of companies in sectors, **Source:** Authors' computation (SPSS)

| N<br>umber | Sector                  | Number of companies in sector |
|------------|-------------------------|-------------------------------|
| 1          | Automotive              | 17                            |
| 2          | Banking                 | 14                            |
| 3          | Construction            | 13                            |
| 4          | Durable consumption     | 12                            |
| 5          | Fast moving consumption | 17                            |
| 6          | Holding                 | 12                            |
| 7          | Liquid fuel             | 6                             |
| 8          | Retail                  | 10                            |
| 9          | Telecommunication       | 4                             |
| 10         | Transportation          | 10                            |

Table 4.13 illustrates the number of companies in each sector which have been selected for the study. Here, the lowest number of companies belongs to the telecommunication sector whereas the highest numbers of companies are from the automotive and the fast moving sector.

**Table 4.14:** *RMS and Components (Mean Values of All Sectors)*, **Source:** *Authors' computation (SPSS)*

| <b>Sector</b>           | <b>RMS</b> | <b>QM</b> | <b>PSQ</b> | <b>WB</b> | <b>FS</b> | <b>CSR</b> | <b>EC</b> | <b>RC</b> |
|-------------------------|------------|-----------|------------|-----------|-----------|------------|-----------|-----------|
| Liquid fuel             | 60.20      | 62.52     | 61.18      | 61.60     | 62.90     | 57.22      | 57.72     | 53.57     |
| Banking                 | 56.33      | 56.43     | 56.30      | 55.79     | 59.34     | 53.14      | 52.90     | 57.41     |
| Telecommunication       | 65.20      | 67.30     | 66.05      | 65.45     | 66.23     | 62.20      | 63.55     | 72.68     |
| Durable consumption     | 65.16      | 66.29     | 65.68      | 65.38     | 66.33     | 62.63      | 61.52     | 67.38     |
| Fast moving consumption | 63.84      | 65.39     | 64.35      | 65.21     | 67.66     | 61.68      | 62.19     | 55.82     |
| Holding                 | 59.74      | 62.03     | 60.90      | 60.41     | 60.83     | 57.24      | 56.98     | 40.93     |
| Construction            | 60.0       | 62.2      | 61.2       | 61.0      | 61.7      | 57.9       | 56.1      | 26.9      |
| Automotive              | 62.28      | 63.84     | 62.81      | 62.95     | 64.12     | 58.66      | 60.39     | 41.57     |
| Retail                  | 59.17      | 61.63     | 60.90      | 60.71     | 61.50     | 56.60      | 57.40     | 52.00     |
| Transportation          | 63.41      | 64.96     | 64.20      | 64.52     | 65.36     | 60.27      | 61.40     | 54.98     |

Table 4.14 illustrates the RMS mean values and of all the sectors. The Telecommunication sector has the highest RMS value whereas the Banking sector has the lowest RMS mean value.

This table also shows a breakdown of the RMS mean values where components such as Quality of Management and Financial strength with the highest values in most sectors and Buying Long term stocks with the lowest mean value, Recognition in some sectors are low.

### 4.3 Correlation Analysis

In correlation analysis, here, the study has discussed the relationship among RMS indicators, and RMS and business outcomes—RR, RPS, RPW, BLS, and SSRP—to ascertain the best possible correlation among the variables to ensure effective decision.

Table 4.15 elucidates the correlation between RMS (composite reputation score) and business outcome whereas Table: 4.4, 4.5, 4.6, 4.6, 4.7, 4.8, and 4.9 exhibit the correlation between various components of RMS and the business outcomes.

**Table 4.15:** Correlation between RMS and business outcomes (*Source: Authors' computation, SPSS*)

| Variables | RMS     | RR      | RPS     | RPW     | BLS     | SSRP    |
|-----------|---------|---------|---------|---------|---------|---------|
| RMS       | 1       | 0.937** | 0.923** | 0.911** | 0.848** | 0.897** |
| RR        | 0.937** | 1       | 0.988** | 0.971** | 0.929** | 0.910** |
| RPS       | 0.923** | 0.988** | 1       | 0.960** | 0.853** | 0.912** |
| RPW       | 0.911** | 0.971** | 0.960** | 1       | 0.868** | 0.925** |
| BLS       | 0.848** | 0.929** | 0.853** | 0.868** | 1       | 0.814** |
| SSRP      | 0.897** | 0.910** | 0.912** | 0.925** | 0.814** | 1       |

\*\* Correlation is significant at the 0.01 level (2-tailed).

The most striking observation is that all of the business outcomes indicators are positively correlated with RMS. statistically significant at 0.01 level. Notably, the relationship between RMS and RR, RMS and RPS, and RMS and RPW are strongly positive, showing nearly perfect (+1) correlation. This profound correlation indicates that increasing RMS of a company leads to increasing business outcomes indicators accordingly.

**Table 4.16:** Correlation between CR and business outcomes (*Source: Authors' computation, SPSS*)

| Variables | CSR     | RR      | RPS     | RPW     | BLS     | SSRP    |
|-----------|---------|---------|---------|---------|---------|---------|
| CSR       | 1       | 0.934** | 0.913** | 0.898** | 0.858** | 0.884** |
| RR        | 0.934** | 1       | 0.988** | 0.971** | 0.929** | 0.910** |
| RPS       | 0.913** | 0.988** | 1       | 0.960** | 0.853** | 0.912** |
| RPW       | 0.898** | 0.971** | 0.960** | 1       | 0.868** | 0.925** |
| BLS       | 0.858** | 0.929** | 0.853** | 0.868** | 1       | 0.814** |
| SSRP      | 0.884** | 0.910** | 0.912** | 0.925** | 0.814** | 1       |

\*\* Correlation is significant at the 0.01 level (2-tailed).

The table above shows the relationship between corporate social responsibility (CSR) and business outcome indicators. Here, CSR has a strong positive correlation with the business outcomes indicators. However, the correlation between CSR/RR and CSR/RPS pairs are much stronger than the other three pairs: CSR/RPW, CSR/BLS, and CSR/SSRP. Nevertheless, the strong correlation among pairs indicate that raising corporate social responsibility in a company leads to increasing the business outcome indicators significantly.

**Table 4.17:** Correlation between EC and business outcomes (**Source:** Authors' computation, SPSS)

| Variables | EC      | RR      | RPS     | RPW     | BLS     | SSRP    |
|-----------|---------|---------|---------|---------|---------|---------|
| EC        | 1       | 0.925** | 0.927** | 0.916** | 0.859** | 0.931** |
| RR        | 0.925** | 1       | 0.988** | 0.971** | 0.929** | 0.910** |
| RPS       | 0.927** | 0.988** | 1       | 0.960** | 0.853** | 0.912** |
| RPW       | 0.916** | 0.971** | 0.960** | 1       | 0.868** | 0.925** |
| BLS       | 0.859** | 0.929** | 0.853** | 0.868** | 1       | 0.814** |
| SSRP      | 0.931** | 0.910** | 0.912** | 0.925** | 0.814** | 1       |

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 4.17 demonstrates a correlation scale between emotional commitment (EC) and business outcome indicators. In this table, it is conspicuous that among five pairs only one pair: EC/BLS, has, scale wise, little bit low point than other four pairs. However, it does not clarify to have a weak correlation for the pair rather it denotes a strong correlation like other four variables but little less. In one word, the relationship among the pairs are strongly positive which denotes that increasing EC accelerates business outcomes of a company.

**Table 4.18:** Correlation between FS and business outcomes (**Source:** Authors' computation, SPSS)

| Variables | FS      | RR      | RPS     | RPW     | BLS     | SSRP    |
|-----------|---------|---------|---------|---------|---------|---------|
| FS        | 1       | 0.909** | 0.916** | 0.905** | 0.807** | 0.921** |
| RR        | 0.909** | 1       | 0.988** | 0.971** | 0.929** | 0.910** |
| RPS       | 0.916** | 0.988** | 1       | 0.960** | 0.853** | 0.912** |
| RPW       | 0.905** | 0.971** | 0.960** | 1       | 0.868** | 0.925** |
| BLS       | 0.807** | 0.929** | 0.853** | 0.868** | 1       | 0.814** |
| SSRP      | 0.921** | 0.910** | 0.912** | 0.925** | 0.814** | 1       |

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 4.18 demonstrates correlation of an important corporate reputation indicator, financial strength (FS) with business outcome indicators. Actually, financial strength is one of

the major indicator for any business because wealth maximizing or profit maximizing—no matter which one does a company consider—is one of the prime concern of a company. In the above table, it shows that FS has a strong positive correlation with business outcome indicators which signifies that financial strength of a company inspires business outcome indicators to increase.

**Table 4.19:** Correlation between PSQ and business outcomes (**Source:** Authors' computation, SPSS)

| Variables | PSQ     | RR      | RPS     | RPW     | BLS     | SSRP    |
|-----------|---------|---------|---------|---------|---------|---------|
| PSQ       | 1       | 0.935** | 0.942** | 0.919** | 0.833** | 0.884** |
| RR        | 0.935** | 1       | 0.988** | 0.971** | 0.929** | 0.910** |
| RPS       | 0.942** | 0.988** | 1       | 0.960** | 0.853** | 0.912** |
| RPW       | 0.919** | 0.971** | 0.960** | 1       | 0.868** | 0.925** |
| BLS       | 0.833** | 0.929** | 0.853** | 0.868** | 1       | 0.814** |
| SSRP      | 0.884** | 0.910** | 0.912** | 0.925** | 0.814** | 1       |

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 4.19 delineates the relationship between product/service quality and business outcome indicators by some statistical points. Here, PSQ has a strong positive correlation with business outcome indicators—RR, RPS, RPW, BLS, and SSRP. This relationship indicates that increasing product or service quality leads to increasing the business outcome indicators, in other words, customer perceptions in a company.

**Table 4.20:** Correlation between QM and business outcomes (**Source:** Authors' computation, SPSS)

| Variables | QM      | RR      | RPS     | RPW     | BLS     | SSRP    |
|-----------|---------|---------|---------|---------|---------|---------|
| QM        | 1       | 0.937** | 0.935** | 0.906** | 0.838** | 0.883** |
| RR        | 0.937** | 1       | 0.988** | 0.971** | 0.929** | 0.910** |
| RPS       | 0.935** | 0.988** | 1       | 0.960** | 0.853** | 0.912** |
| RPW       | 0.906** | 0.971** | 0.960** | 1       | 0.868** | 0.925** |
| BLS       | 0.838** | 0.929** | 0.853** | 0.868** | 1       | 0.814** |
| SSRP      | 0.883** | 0.910** | 0.912** | 0.925** | 0.814** | 1       |

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 4.20 signifies the correlation between quality of management (QM) and business outcome indicators. In this table, it is conspicuous that among five pairs two pairs: QM/BLS and QM/SSRP, have, scale wise, little bit low point than other three pairs: QM/RR, QM/RPS, and QM/RPW. However, it does not clarify to have a weak correlation for the pairs rather it denotes

a strong correlation like other four variables but little less. In one word, the relationship among the pairs are strongly positive which denotes that increasing quality of management accelerates business outcome indicators of a company.

**Table 4.21:** *Correlation between RC and business outcomes (Source: Authors' computation, SPSS)*

| Variables | RC      | RR      | RPS     | RPW     | BLS     | SSRP    |
|-----------|---------|---------|---------|---------|---------|---------|
| RC        | 1       | 0.523** | 0.495** | 0.534** | 0.446** | 0.610** |
| RR        | 0.523** | 1       | 0.988** | 0.971** | 0.929** | 0.910** |
| RPS       | 0.495** | 0.988** | 1       | 0.960** | 0.853** | 0.912** |
| RPW       | 0.534** | 0.971** | 0.960** | 1       | 0.868** | 0.925** |
| BLS       | 0.446** | 0.929** | 0.853** | 0.868** | 1       | 0.814** |
| SSRP      | 0.610** | 0.910** | 0.912** | 0.925** | 0.814** | 1       |

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 4.21 presents correlation scale between corporate reputation score, recognition (RC), and business outcome indicators: RR, RPS, RPW, BLS, and SSRP. Noticeably, this is the only correlation table which has no strong positive correlation pairs—RC/RR, RC/RPS, RC/RPW, RC/BLS, and RC/SSRP. All of the pairs, here, are moderately positively correlated with each other. However, considering the direction of the correlation, it shows an upward relation which denotes that increasing recognition leads to increasing business outcome indicators of a company.

**Table 4.22:** *Correlation between WB and business outcomes (Source: Authors' computation, SPSS)*

| Variables | WB      | RR      | RPS     | RPW     | BLS     | SSRP    |
|-----------|---------|---------|---------|---------|---------|---------|
| WB        | 1       | 0.929** | 0.942** | 0.914** | 0.832** | 0.898** |
| RR        | 0.929** | 1       | 0.988** | 0.971** | 0.929** | 0.910** |
| RPS       | 0.942** | 0.988** | 1       | 0.960** | 0.853** | 0.912** |
| RPW       | 0.914** | 0.971** | 0.960** | 1       | 0.868** | 0.925** |
| BLS       | 0.832** | 0.929** | 0.853** | 0.868** | 1       | 0.814** |
| SSRP      | 0.898** | 0.910** | 0.912** | 0.925** | 0.814** | 1       |

\*\* Correlation is significant at the 0.01 level (2-tailed).

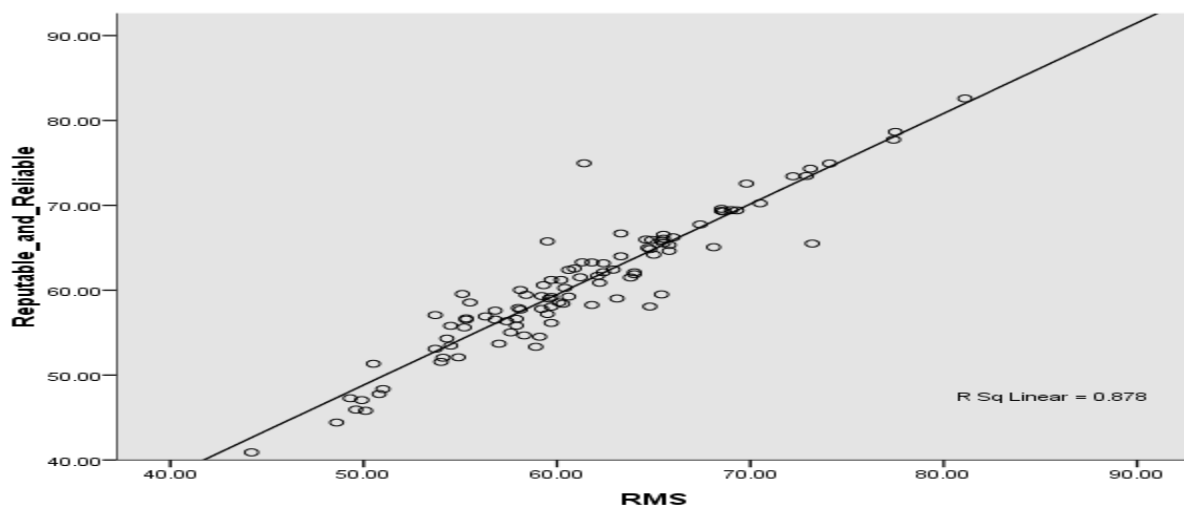
Finally, Table 4.22 which also elucidates, like previous tables, the relationship between corporate reputation indicator, working brand (WB), and business outcome indicators. It shows that all of the five pairs: RC/RR, RC/RPS, RC/RPW, RC/BLS, and RC/SSRP, are strongly correlated along with positive direction; these correlations are statistically significant at 0.01

level. Therefore, the relationship indicates that raising working brand accelerates business outcome indicators of a company.

Taking into consideration the correlation analysis statistics, it is obvious that there is a significant positive correlation between RMS reputation indicators and business outcome indicators. The composite reputation score (RMS) as well as the individual components of the reputation score tend to have a strong and statistically significant correlation with all the business outcome indicators except for one variable, recognition. This signifies that the respondents of the study are not that much concerned about recognition of businesses, considering their responses, as much as they are concerned about other variables of RMS reputation indicators. Apparently, it provides the businesses a flexible room to concentrate on some specific RMS variables rather than all.

#### 4.4 Scatter Plots

A scatter Plot is a graphical representation of correlation which shows the strength, direction as well as linearity of two variables in a chart. This section of the study explains scatter



plot of RMS and five indicators of business outcomes.

**Figure 4.11:** Relationship between RMS and RR (**Source:** Authors' computation, SPSS)

Graph 4.11 illustrates a positive relationship between RMS and RR. As perceived reputation of a company increases, people are more inclined to express that this company is reputable and reliable.

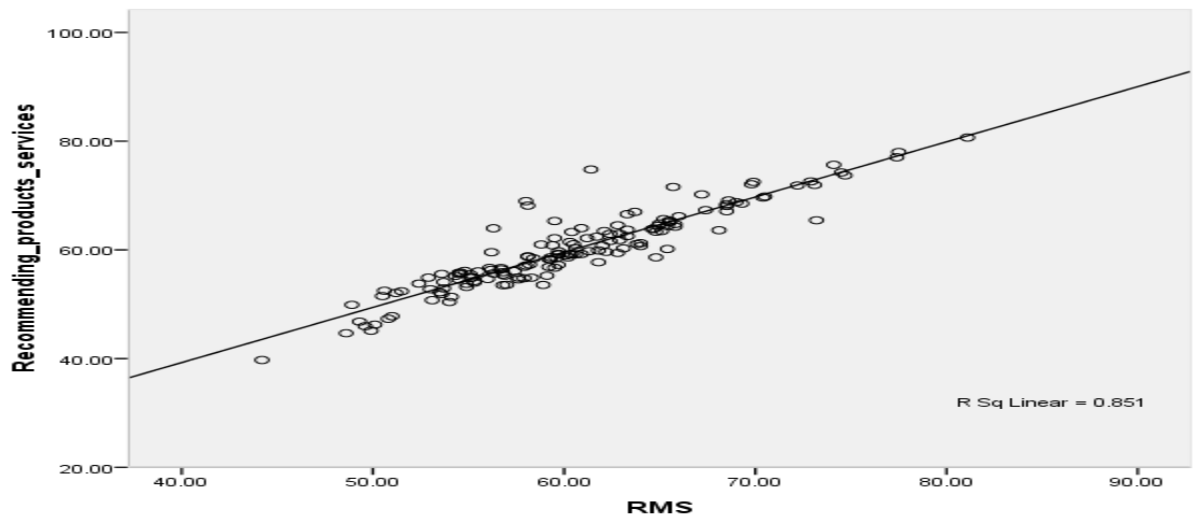
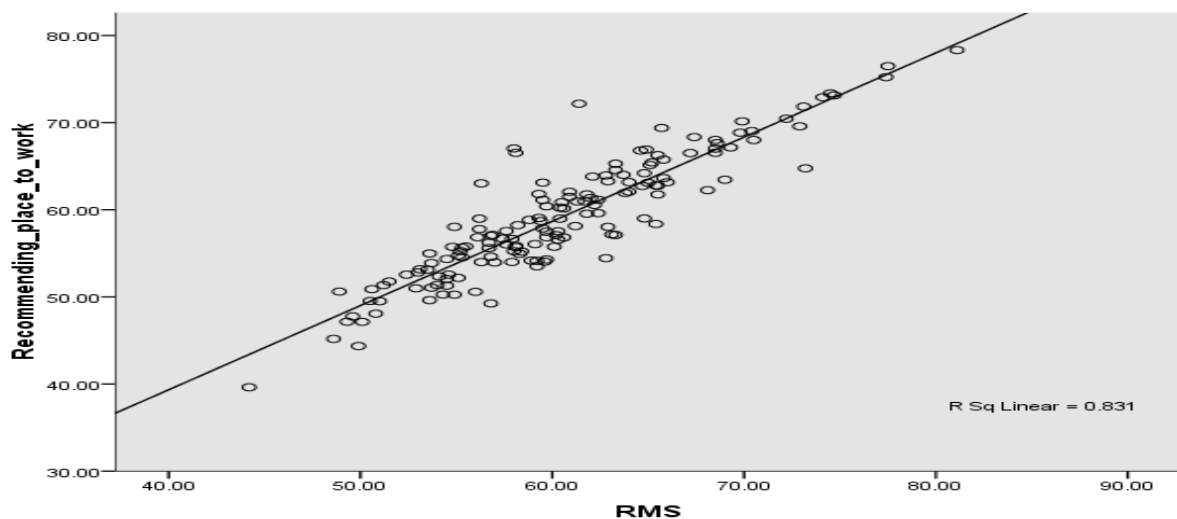


**Figure 4.12:** Relationship between RMS and RPS (*Source:* Authors' computation, SPSS)

Graph 4.12 illustrates a positive relationship between RMS and RPS. As perceived reputation of a company increases, people tend to reuse and/or recommend products and services



of that company.

**Figure 4.13:** Relationship between RMS and RPW (*Source: Authors' computation, SPSS*)

Graph 4.13 provides the strength and direction of correlation between RMS and RPW. It can be seen that the relationship between these variables is strongly positive. Hence, the desirability of a company as a workplace is enhanced as the perceived reputation rises.

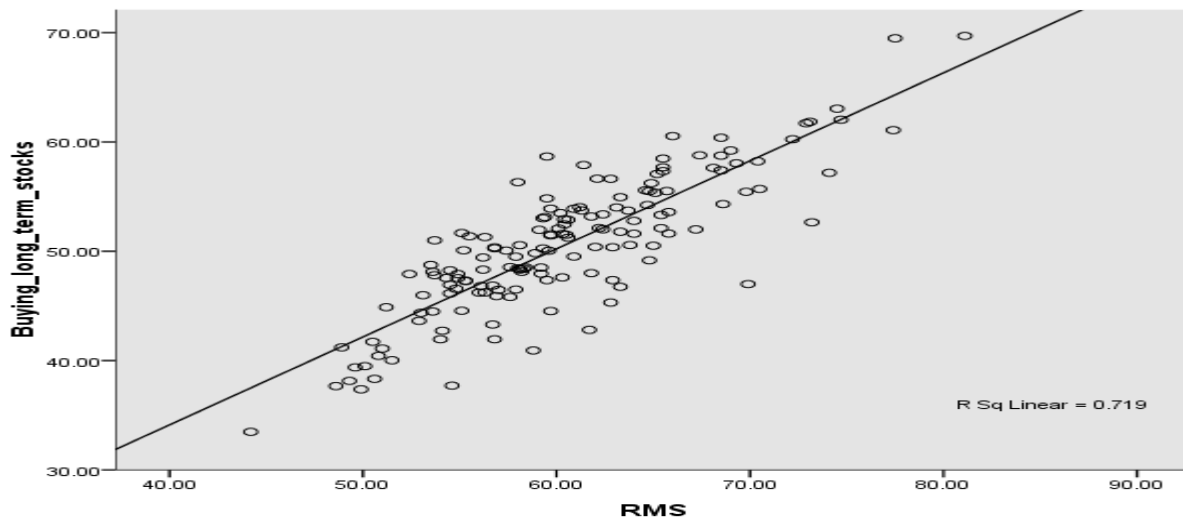
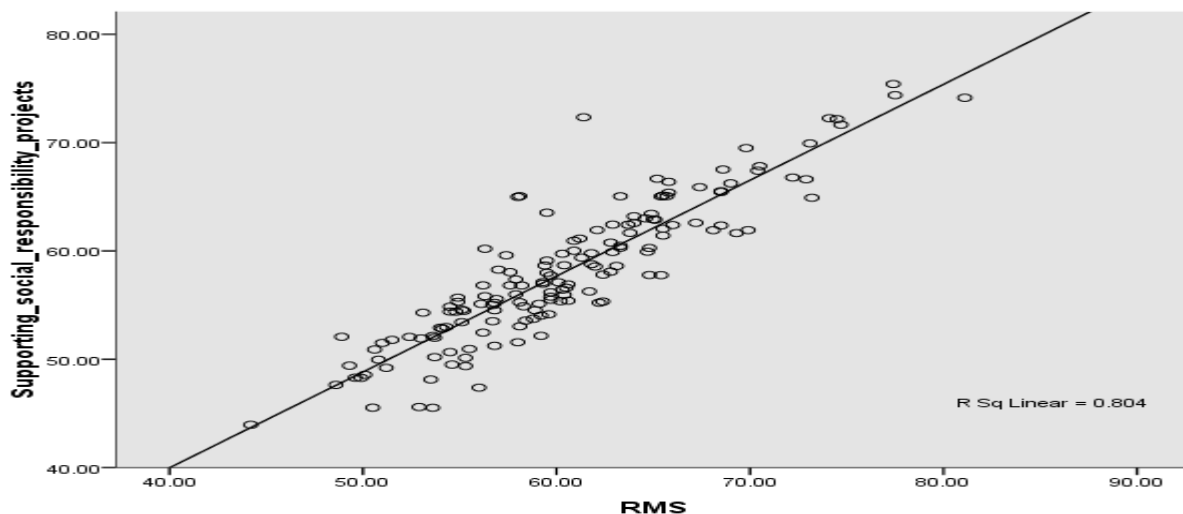


**Figure 4.14:** Relationship between RMS and BLS (*Source: Authors' computation, SPSS*)

As seen in Graph 4.14, there is a positive correlation between RMS and BLS. People are more inclined to invest in stocks of companies with strong perceived reputation on a long-term



basis.

**Figure 4.15:** Relationship between RMS and SSRP (*Source: Authors' computation, SPSS*)

Graph 4.15 shows a strong positive linear correlation between RMS and SSRP. People are more willing to provide material and moral support for social responsibility projects of companies with a good perceived reputation.

#### 4.5 Regression Analysis

In this section, we analyze the impact of corporate reputation dimensions on business outcomes—RR, RPS, RPW, BLS, and SSRP. To ensure more precise and vibrant decision about each regression analysis, we focus on three important findings of each regression table: firstly, the coefficient value of independent variables in accordance with the dependent variable, secondly, probability of F-statistics, and finally, R-squared value.

Dependent Variable: RR

Method: Least Squares

Date: 03/22/18 Time: 15:25

Sample (adjusted): 7 154

Included observations: 101 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | -0.360214   | 3.119058              | -0.115488   | 0.9083   |
| CSR                | 0.581945    | 0.206307              | 2.820767    | 0.0059   |
| EC                 | -0.043156   | 0.236048              | -0.182827   | 0.8553   |
| FS                 | -0.444784   | 0.236708              | -1.879045   | 0.0634   |
| PSQ                | 0.211682    | 0.269898              | 0.784303    | 0.4349   |
| QM                 | 0.468187    | 0.268387              | 1.744445    | 0.0844   |
| RC                 | 0.039320    | 0.016027              | 2.453416    | 0.0160   |
| WB                 | 0.215313    | 0.306595              | 0.702273    | 0.4843   |
| R-squared          | 0.899544    | Mean dependent var    |             | 60.71546 |
| Adjusted R-squared | 0.891982    | S.D. dependent var    |             | 7.663345 |
| S.E. of regression | 2.518637    | Akaike info criterion |             | 4.761208 |
| Sum squared resid  | 589.9487    | Schwarz criterion     |             | 4.968346 |
| Log likelihood     | -232.4410   | Hannan-Quinn criter.  |             | 4.845063 |
| F-statistic        | 118.9679    | Durbin-Watson stat    |             | 2.815988 |
| Prob(F-statistic)  | 0.000000    |                       |             |          |

**Table 4.23:** Regression analysis of RR and RMS dimensions (*Source: Eviews*)

When we regress RMS components of corporate social responsibility, emotional commitment, financial strength, product/service quality, quality of management, recognition and working brand on the business outcome of RR (In every aspect, I express that this company is reputable and reliable), the model estimated seems to be significant (as implied by the low p value of F-statistic). The RMS components which are statistically significant in the regression model are corporate social responsibility and recognition. As expected, the respondents tend to support businesses which have a significant participation in corporate social responsibilities and have a good recognition. This finding reflects the satisfaction of respondents to the businesses with a recognizable corporate social responsibility and good recognition.

The above table evinces regression analysis of dependent variable, RR, and independent variables—corporate social responsibility, emotional commitment, financial strength, product/service quality, quality of management, recognition, and working brand. It encompasses several test results; however, all the results are not necessary to explain the analysis properly. There are three important measurements or test results which ensure a conspicuous idea about the analysis. Firstly, the coefficient of each independent variable considering financial strength which shows one unit increase of independent variable leads to increasing dependent variable holding other variables fixed. For example, the coefficient of corporate social responsibility 0.581945 indicates that one unit increase in CSR leads to increasing RR by 0.303288 units holding other variables fixed. Importantly, this finding is statistically significant because the p-value is less than five percent. Secondly, probability of F-statistics value (0.000000) which indicates that independent variables jointly have a significant on the dependent variable. Finally, R-squared value which shows how strong the data are to the fitted regression line. Here, the value 0.8995 explains that 89.95% variation in RR can be determined by the independent variables of the analysis.

Dependent Variable: RPS  
Method: Least Squares  
Date: 03/22/18 Time: 15:27  
Sample: 1 154  
Included observations: 154

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | -2.419402   | 2.306237              | -1.049069   | 0.2959   |
| CSR                | 0.059960    | 0.129548              | 0.462836    | 0.6442   |
| EC                 | 0.193219    | 0.135224              | 1.428879    | 0.1552   |
| FS                 | -0.076156   | 0.165913              | -0.459011   | 0.6469   |
| PSQ                | 0.414977    | 0.194854              | 2.129681    | 0.0349   |
| QM                 | 0.029390    | 0.185525              | 0.158415    | 0.8743   |
| RC                 | -0.011590   | 0.011779              | -0.983944   | 0.3268   |
| WB                 | 0.417706    | 0.218300              | 1.913447    | 0.0576   |
| R-squared          | 0.896611    | Mean dependent var    |             | 59.99419 |
| Adjusted R-squared | 0.891654    | S.D. dependent var    |             | 7.169119 |
| S.E. of regression | 2.359781    | Akaike info criterion |             | 4.605565 |
| Sum squared resid  | 813.0110    | Schwarz criterion     |             | 4.763329 |
| Log likelihood     | -346.6285   | Hannan-Quinn criter.  |             | 4.669648 |
| F-statistic        | 180.8780    | Durbin-Watson stat    |             | 2.237922 |
| Prob(F-statistic)  | 0.000000    |                       |             |          |

**Table 4.24:** Regression analysis of RPS and RMS dimensions (*Source:* Eviews)

When we regress RMS components of corporate social responsibility, emotional commitment, financial strength, product/service quality, quality of management, recognition and working brand on the business outcome of RPS (I would like to use / re-use / recommend this company's products / services), the model estimated seems to be significant (as implied by the low p value of F-statistic). The only one RMS component which is statistically significant in the regression model is product/service quality. This component, product/service quality, has a positive relationship with RPS. As expected, the respondents tend to provide more support for the business which are good in product/service quality, in other word, good product/service quality motivate the respondents to recognize reputable businesses. This finding reflects the satisfaction of respondents to the businesses with a superior product/service quality.

Table 4.24 represents statistical values of regression analysis where its prime purpose is to ascertain the impact of independent variables on RPS of the business outcomes. There are three important statistical measurements by which the analysis can be described in a more precise way. First of all, scrutinizing the coefficient values of independent variables considering

dependent variable. Surprisingly, here, the findings show only one independent variables, PSQ, which has a statistically significant coefficient value considering RPS of business outcomes. It indicates that one unit increase of independent variable leads to increasing dependent variable holding other variables fixed. For instance, the coefficient of PSQ 0.414977 indicates that one unit increase in PSQ leads to increasing RPS by 4.490916 units holding other variables constant. Secondly, considering the probability of F-statistic, the independent variables jointly have a significant impact on RPS because the F-statistics value is less than five percent which statistically bolster the impact of independent variables on dependent variable. Finally, the R-square value which denotes that 89.66% variation in RPS can be explained by the selected independent variables in the regression analysis.

Dependent Variable: RPW  
Method: Least Squares  
Date: 03/22/18 Time: 15:28  
Sample: 1 154  
Included observations: 154

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 1.140442    | 2.580975              | 0.441865    | 0.6592   |
| CSR                | 0.106776    | 0.144981              | 0.736481    | 0.4626   |
| EC                 | 0.371981    | 0.151333              | 2.458031    | 0.0151   |
| FS                 | 0.111049    | 0.185678              | 0.598075    | 0.5507   |
| PSQ                | 0.697428    | 0.218067              | 3.198235    | 0.0017   |
| QM                 | -0.325974   | 0.207626              | -1.570008   | 0.1186   |
| RC                 | 0.001086    | 0.013182              | 0.082417    | 0.9344   |
| WB                 | 0.009068    | 0.244306              | 0.037117    | 0.9704   |
| R-squared          | 0.860688    | Mean dependent var    |             | 59.06912 |
| Adjusted R-squared | 0.854009    | S.D. dependent var    |             | 6.911759 |
| S.E. of regression | 2.640898    | Akaike info criterion |             | 4.830665 |
| Sum squared resid  | 1018.254    | Schwarz criterion     |             | 4.988429 |
| Log likelihood     | -363.9612   | Hannan-Quinn criter.  |             | 4.894749 |
| F-statistic        | 128.8585    | Durbin-Watson stat    |             | 1.659915 |
| Prob(F-statistic)  | 0.000000    |                       |             |          |

**Table 4.25:** Regression analysis of RPW and RPS dimensions (**Source:** EvIEWS)

When we regress RMS components of corporate social responsibility, emotional commitment, financial strength, product/service quality, quality of management, recognition and working brand on the business outcome of RPW (It is a company that I would recommend as a place to work / work for my child / myself), the model estimated seems to be significant (as

implied by the low p value of F-statistic). The RMS components which are statistically significant in the regression model are emotional commitment and product/service quality. These components each have a positive relationship with RPW. As expected, the respondents tend to provide more support for the business which are good in emotional commitment and product/service quality, in other word, robust emotional commitment and good product/service quality motivate the respondents to recognize reputable businesses. This finding reflects the satisfaction of respondents to the businesses with a strong emotional commitment and good product/service quality.

The impact analysis of RPW and other corporate reputation indicators, simply put, impact of independent variables on dependent variable has been shown with some statistical indicators in the above table. Here, the second column of upper part illustrates the coefficient of independent variables considering dependent variable. It indicates that one unit increase of independent variable leads to increasing dependent variable holding other variables fixed. In this table, there are only two independent variables: emotional commitment and product/service quality, which have statistically significant value, in other word, the probability value of these two variables' coefficient is less than five percent. On the other hand, the probability (p-value) of F-statistic is statistically significant which denotes that all the independent variables have jointly impact on dependent variable, RPW of business outcomes. Finally, R-square value also shows a higher percentage, it means that 86.06% variation in the RPW of business outcomes can be explained by independent variables.

Dependent Variable: BLS  
Method: Least Squares  
Date: 03/22/18 Time: 15:30  
Sample: 1 154  
Included observations: 154

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 4.807059    | 2.897529              | 1.659020    | 0.0993   |
| CSR                | 0.727732    | 0.162763              | 4.471112    | 0.0000   |
| EC                 | 0.681777    | 0.169894              | 4.012957    | 0.0001   |
| FS                 | -0.659605   | 0.208451              | -3.164317   | 0.0019   |
| PSQ                | -0.013028   | 0.244812              | -0.053215   | 0.9576   |
| QM                 | 0.226282    | 0.233091              | 0.970787    | 0.3333   |
| RC                 | -0.006884   | 0.014799              | -0.465153   | 0.6425   |
| WB                 | -0.121219   | 0.274270              | -0.441969   | 0.6592   |
| R-squared          | 0.781129    | Mean dependent var    |             | 50.54984 |
| Adjusted R-squared | 0.770635    | S.D. dependent var    |             | 6.190589 |
| S.E. of regression | 2.964802    | Akaike info criterion |             | 5.062047 |
| Sum squared resid  | 1283.347    | Schwarz criterion     |             | 5.219811 |
| Log likelihood     | -381.7777   | Hannan-Quinn criter.  |             | 5.126131 |
| F-statistic        | 74.43698    | Durbin-Watson stat    |             | 1.395441 |
| Prob(F-statistic)  | 0.000000    |                       |             |          |

**Table 4.26:** *Regression analysis of BLS and RMS dimensions (Source: Eviews)*

When we regress RMS components of corporate social responsibility, emotional commitment, financial strength, product/service quality, quality of management, recognition and working brand on the business outcome of BLS (I am interested to buy stocks for long-term when it opens), the model estimated seems to be significant (as implied by the low p value of F-statistic). The RMS components which are statistically significant in the regression model are corporate social responsibility, emotional commitment and financial strength. There is a positive relationship between BLS and corporate social responsibility and emotional commitment. As expected, the respondents tend to support businesses which are good in emotional commitment and corporate social responsibilities. However, they tend to provide less support to the businesses which are less reputable in terms of financial strength. This finding may reflect the desire of respondents to enhance the reputation of businesses with an inferior FS by supporting their financial strength activities.

Influence or impact of independent variables—CSR, EC, FS, PSQ, QM, RC, and WB—on the dependent variable, BLS, can be seen in Table 4.26 which demonstrates various statistical

indicators to elucidate the regression analysis for corporate reputation indicators and business outcomes. Here, as with previous tables, three important indicators have been explained. Firstly, the coefficient of independent variables, it specifies that one unit increase of independent variable leads to increasing dependent variable holding other variables fixed. For example, the coefficient of FS -0.659605 indicates that one unit increase in FS leads to increasing RPW by 0.659605 units holding other variables fixed. Secondly, probability of F-statistics value (0.000000) which indicates that independent variables jointly have a significant on dependent variable in this sector. Finally, R-squared value which shows how strong the data are to the fitted regression line. Here, the value 0.7811 explains that 78.11% variation in RPW can be determined by the independent variables of corporate reputation indicators.

Dependent Variable: SSRP  
Method: Least Squares  
Date: 03/22/18 Time: 15:31  
Sample: 1 154  
Included observations: 154

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 7.116657    | 2.116521              | 3.362431    | 0.0010   |
| CSR                | -0.246318   | 0.118891              | -2.071787   | 0.0400   |
| EC                 | 0.915320    | 0.124100              | 7.375652    | 0.0000   |
| FS                 | 0.621601    | 0.152265              | 4.082377    | 0.0001   |
| PSQ                | -0.014909   | 0.178825              | -0.083373   | 0.9337   |
| QM                 | -0.358978   | 0.170263              | -2.108376   | 0.0367   |
| RC                 | 0.007432    | 0.010810              | 0.687517    | 0.4928   |
| WB                 | -0.062058   | 0.200342              | -0.309761   | 0.7572   |
| R-squared          | 0.891809    | Mean dependent var    |             | 58.04144 |
| Adjusted R-squared | 0.886622    | S.D. dependent var    |             | 6.431712 |
| S.E. of regression | 2.165661    | Akaike info criterion |             | 4.433878 |
| Sum squared resid  | 684.7527    | Schwarz criterion     |             | 4.591642 |
| Log likelihood     | -333.4086   | Hannan-Quinn criter.  |             | 4.497962 |
| F-statistic        | 171.9245    | Durbin-Watson stat    |             | 2.134628 |
| Prob(F-statistic)  | 0.000000    |                       |             |          |

**Table 4.27:** Regression analysis of SSRP and RMS dimensions (**Source:** Eviews)

We regress RMS components of corporate social responsibility, emotional commitment, financial strength, product/service quality, quality of management, recognition and working brand on the business outcome of SSRP (I have material and moral support for social responsibility projects), the model estimated seems to be significant (as implied by the low p

value of F-statistic). The RMS components which are statistically significant in the regression model are emotional commitment, financial strength, corporate social responsibility, and quality of management. There is a positive relationship between SSRP and emotional commitment and financial strength. As expected, the respondents tend to support CSR activities of businesses to which they feel emotionally attached and of businesses which they perceive as financially strong. However, they tend to provide support to the CSR activities of businesses perceived as less reputable in terms of corporate social responsibility and quality of management. This finding may reflect the desire of respondents to enhance the reputation of businesses with an inferior CSR performance and quality of management by supporting their CSR and management activities.

Finally, the table above shows the relationship among the dependent and independent variables by deeming least squares regression method for understanding the impact of corporate social responsibility, emotional commitment, financial strength, product/service quality, quality of management, recognition, and working brand on SSRP. Here, in the upper part, it illustrates the coefficient, standard error, t-statistic, and probability of independent variables where coefficient is one of the most prominent measurement to explain relationship between variables. On the other hand, lower part evinces different statistical measurements, especially two measurements which are most important to elucidate the significance of the regression analysis. Noticeably, in this test, among seven independent variables, four variables have statistically significant coefficient value considering dependent variable which undoubtedly strengthen the relationship of the variables in this regression analysis. Alongside, the probability of F-statistic (0.015922) is also statistically significant at five percent level, it denotes that all the independent variables jointly have a significant impact on dependent variable in the sector. Finally, R-square value also shows a higher percentage, it means that 89.18% variation in SSRP of business outcomes can be explained by independent variables.

The regression analysis explains the impact of independent variables—corporate reputation indicators—on dependent variable, business outcome indicators, in other words, customers' perceptions.

This significant impact of corporate reputation components on business outcome indicators signifies, considering the hypothesis of the study, that all the five regression models lead us to reject null hypothesis (H0) implying that corporate reputation score and its various components (dimensions) do have impact on different business outcome indicators.

In Table above, the analysis signifies that all corporate reputation components jointly have significant impact on customers' perception on company's reputation. This concludes that if any company wants to ensure their customers' positive perception then, of course, they should intensely concentrate on and work for boosting the value of the corporate reputation dimensions. This same explanation goes for other four regression analysis as well because they also delineate significant impact of reputation dimensions on various business outcomes.

Companies should attempt to improve related reputation components to reflect the effect of enhanced reputation performance on their business outcomes. For instance, people would like to recommend a company's product or service if the companies are good in product/service quality. They would like to recommend the company as a work place even for their children if company has good emotional commitment and product and service quality. They will buy long-term stock because of good corporate social responsibility, emotional commitment, and financial strength. Material and moral support for social responsibility projects of a company depend on corporate social responsibility, emotional commitment, financial strength, and quality of management.

## **5: CONCLUSION**

### **5.1 Background**

As the study discussed, simply put, a good reputation is a valuable asset that lets a firm to accomplish stable profitability or sustained superior financial performance. The idea of corporate reputation was seen to be of fringe worry to senior administration in the not very far off past. Research into factors influencing corporate achievement demonstrates a developing enthusiasm for intangible assets. The importance of reputation is becoming increasingly vital in progressively competitive markets (Abimbola and Vallaster, 2007). Establishing a decent corporate reputation is increasingly on the firms' strategies. Corporate reputation has pulled in enthusiasm from an extensive variety of academic disciplines. It is likewise a developing spotlight on business and media consideration. It influences the manner by which different partners carry on towards an organization, influencing, for example, employee retention, customer satisfaction, and customer loyalty. As anyone might expect, CEOs see corporate reputation as a significant intangible resource (Institute of Directors 1999).

There are numerous studies which have examined and discussed the relationship between corporate reputation and business outcomes of a company. Interestingly, most of studies have considered the existence of a relationship between reputation and business outcomes which have assumed the existence of a positive relationship. This method largely reflects a wide-ranging, streamlining assumption about how reputation impacts upon future performance (Roberts and Dowling, 1997), that is, a statement that a good reputation always positively influences business outcomes. Remarkably, the findings of the study are in line with Roberts and Dowling's streamlining assumptions: a positive correlation between corporate reputation indicators and business outcomes as well as significant influence of corporate reputation indicators on business outcomes.

### **5.2 Overall findings**

Finding the expected results, this research has explored a theoretical extension of the Corporate Reputation and business outcomes and investigated how the corporate reputation is correlated with the business outcomes of different companies in Turkey. To do so, it has considered three important and useful techniques—correlation, scatter plot, and regression

analysis—to ascertain the ultimate objectives of the study. The prime objective of this research is to examine the correlation between corporate reputation and business outcomes as well as the influence of corporate reputation on business outcomes. Alongside, the study has also promptly answered the research questions addressing two major findings: i) reputational dimensions (Management, Quality, Working Brand, Corporate Responsibility, Emotional Commitment, and Recognition) significantly correlated to business outcomes, and ii) corporate reputation indicators have significant influence on business outcomes. It is noticeable, considering the hypothesis, that all the five regression models lead us to reject null hypothesis (H0) implying that corporate reputation score and its various components (dimensions) do have impact on different business outcome indicators.

### **5.3 Recommendation**

In summary, attaining positive business outcomes (customer perception) is highly likely essential for a company to maximize the profit or wealth and survive in the competitive market. Now, regarding the findings of regression analysis, the research has concluded that if any company wants to ensure the robustness of business outcomes, in other words, their customers' positive perceptions, then, of course, they should intensely concentrate on and work for boosting the value of the corporate reputation dimensions. Concentrating more on the corporate reputation indicators may provide them more confidence and chance of surviving in the competitive market. Companies should attempt to improve related reputation components to reflect the effect of enhanced reputation performance on their better reputation performance in various dimensions, meaning higher product/service quality, stronger emotional commitment, enhanced financial strength, admired corporate social responsibility, and best quality of management. Alongside, they should also concentrate on recognition and working brand to ensure the highest possible business outcomes, simply put, customer perceptions.

### **5.4 Limitations of the Study and Suggestions for the Future Researchers**

The data which has been used in the study was taken from the dataset of '2012 Corporate Reputation Research' conducted by the Reputation Research Center of Turkey (RepMan) where 7 geographical regions, 15 cities with 14,176 participants including 929 opinion leaders were in the participation list. The main purpose is to find the influence of the corporate reputation over

the business outcomes and the research has used five indicators to analyze the business outcomes as well as eleven sectors as the sample. As reputation is an intangible asset and cannot be accomplished over-night, data of longer period or continuous survey could have been more accurate for the study. The data for this study has only been obtained from the RepMan due to lack of sources or availability of the data. Automotive, Banking, Construction, Durable consumption, fast moving consumption, Holding, Liquid fuel, LPG gas, Retail, Telecommunication, and Transportation sectors' data have been employed in the analysis. Thus, the study may not be precisely accurate for other sectors in Turkey. As the investigation on the relationship between corporate reputation and business outcomes is relatively new in Turkey with a limited number researches, more studies are needed to be conducted on this field. Future researchers can focus on the remaining sectors to learn whether other sectors have same business outcomes based on the reputation. Potential researchers may also study how bad reputation negatively influence the business outcomes as well as financial performances of a given economy.

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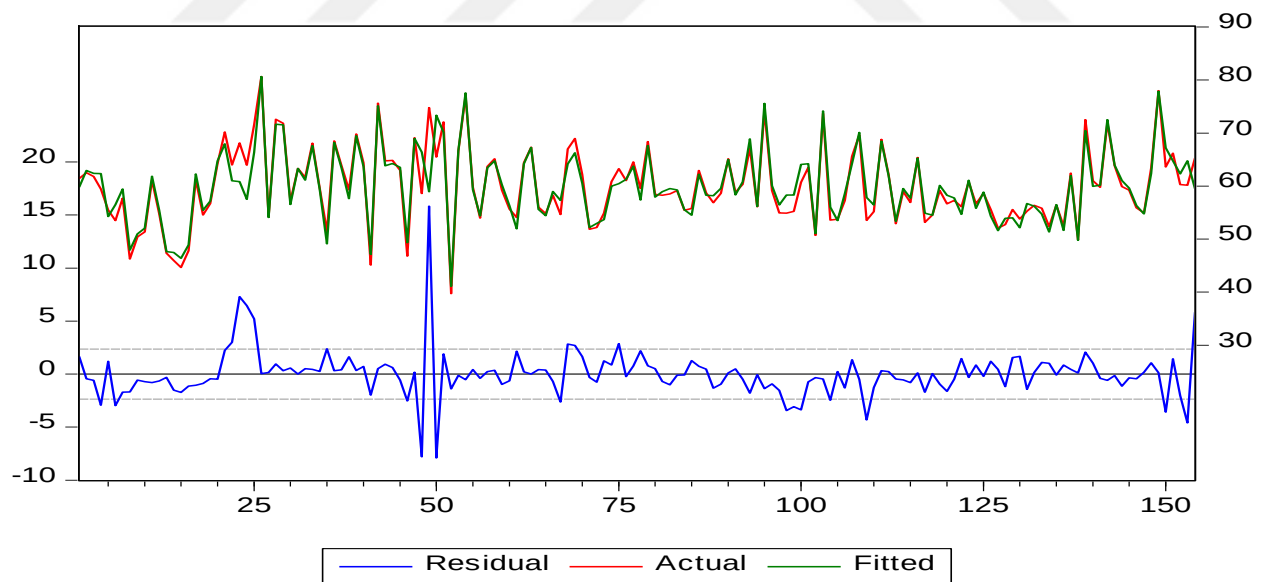
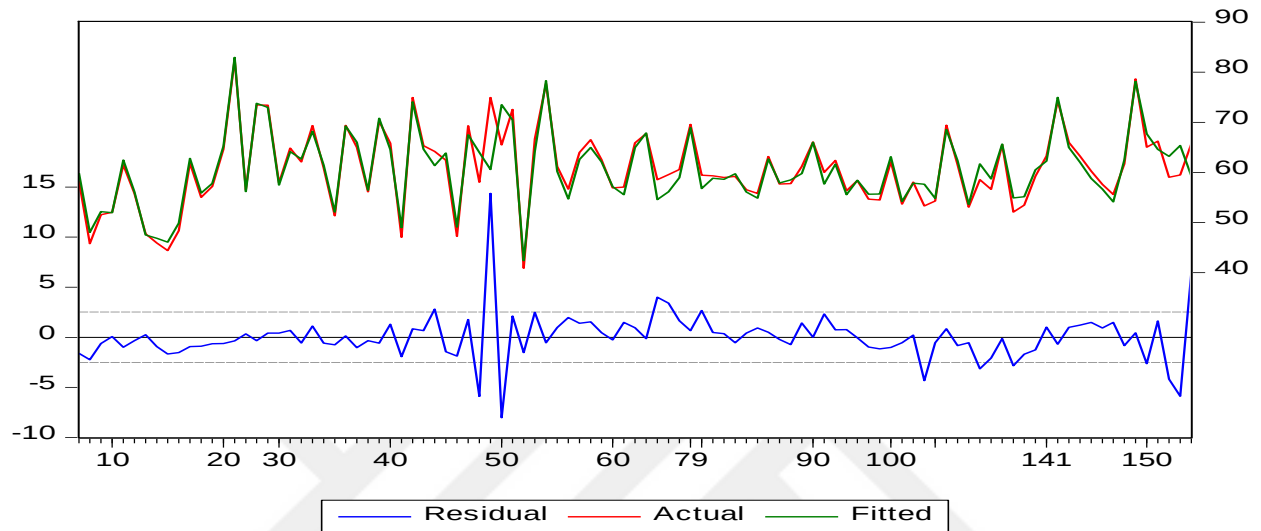
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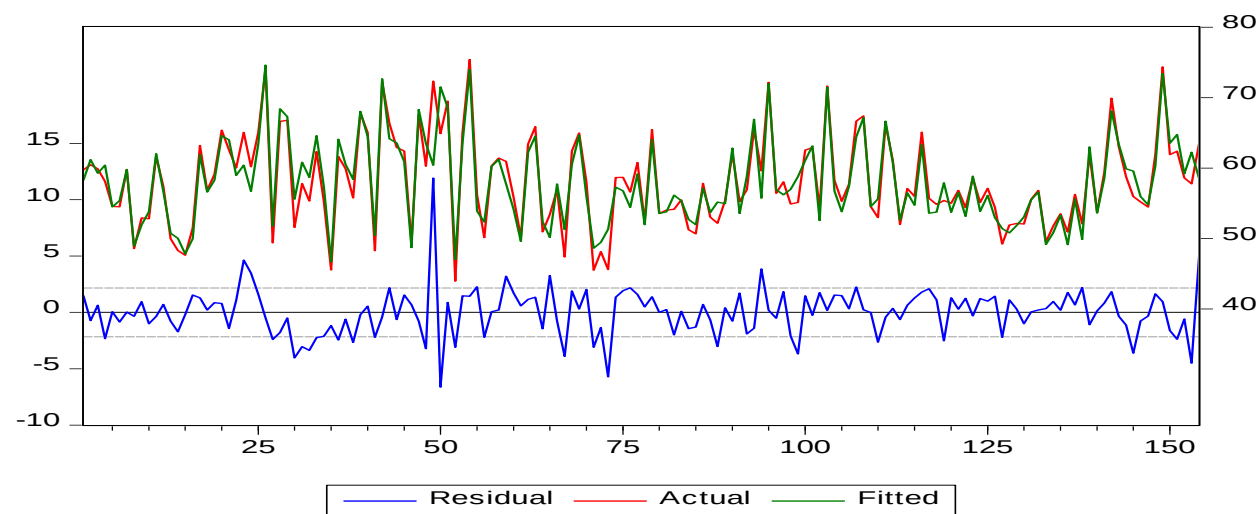
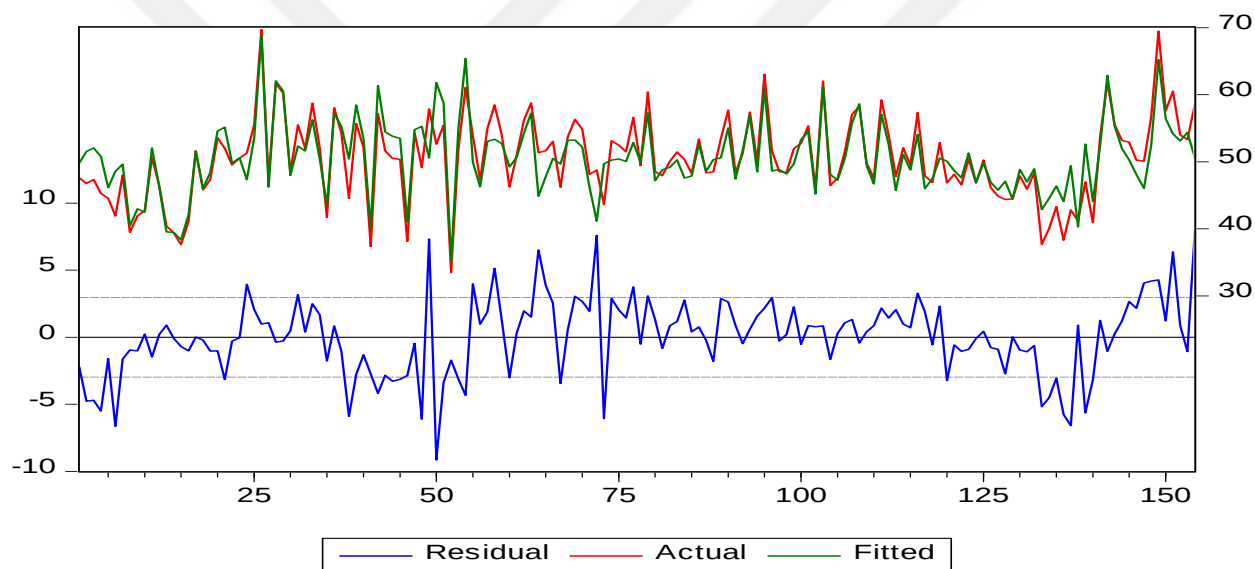
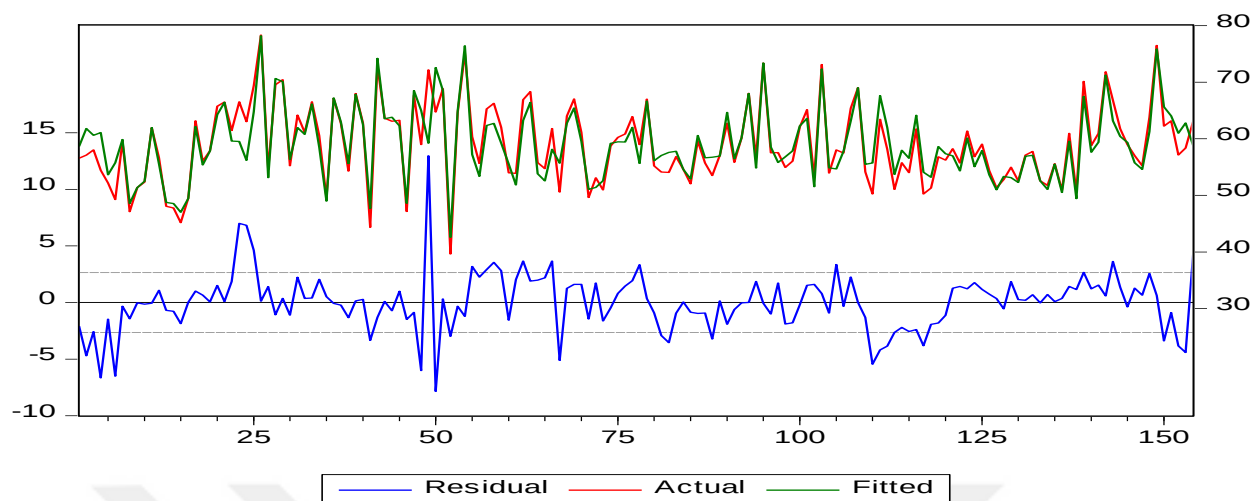


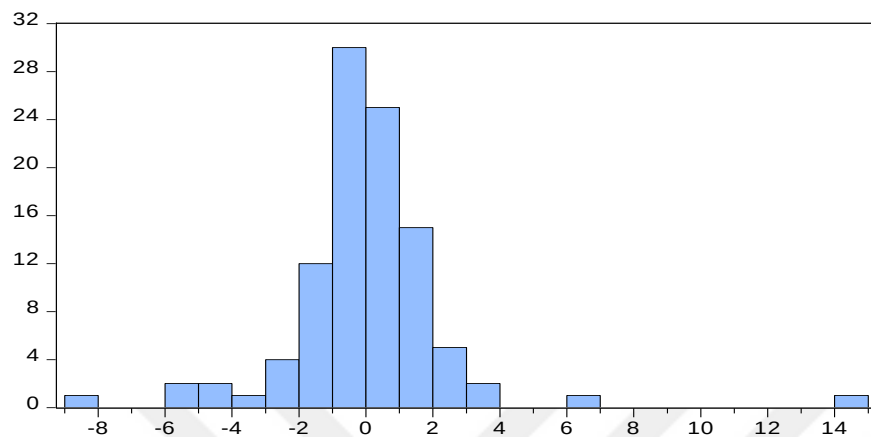
## APPENDIX

### Regression

#### 1. Actual, Fitted, Residual Graph

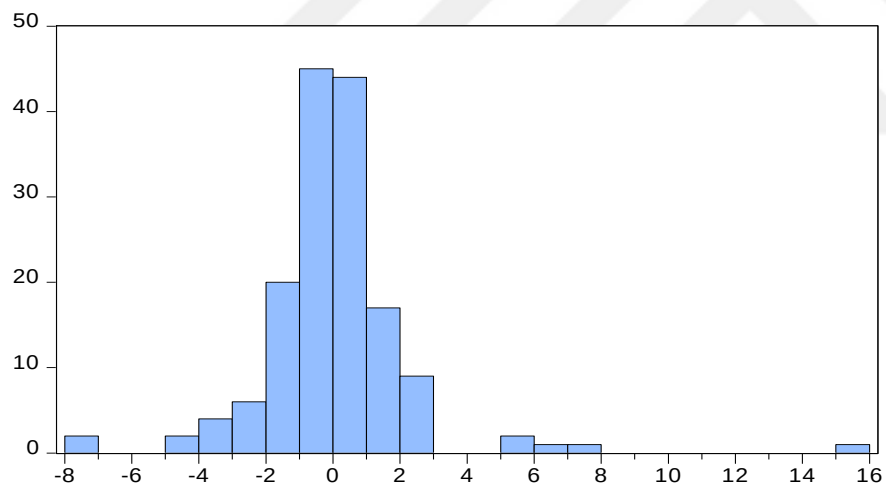




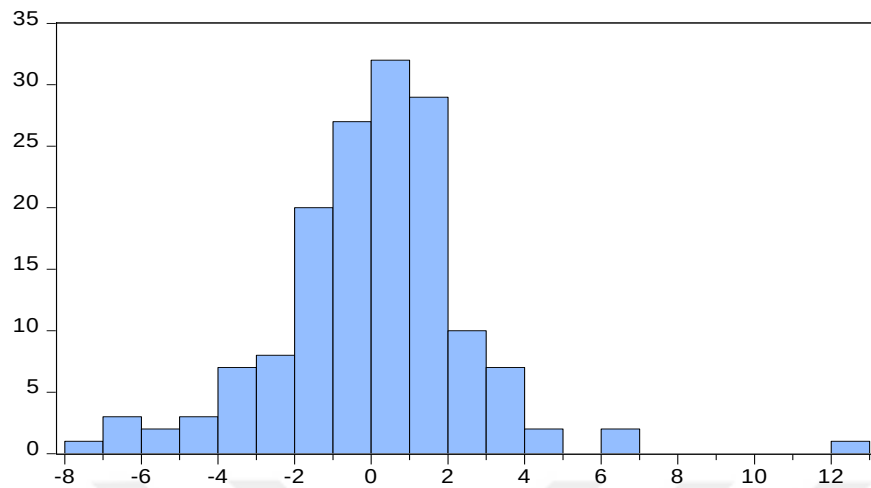


|                   |           |
|-------------------|-----------|
| Series: Residuals |           |
| Sample 7 154      |           |
| Observations 101  |           |
| Mean              | -1.49e-14 |
| Median            | -0.124181 |
| Maximum           | 14.35700  |
| Minimum           | -8.022468 |
| Std. Dev.         | 2.428886  |
| Skewness          | 1.577725  |
| Kurtosis          | 15.21199  |
| Jarque-Bera       | 669.5018  |
| Probability       | 0.000000  |

2. Histogram: Normality tests



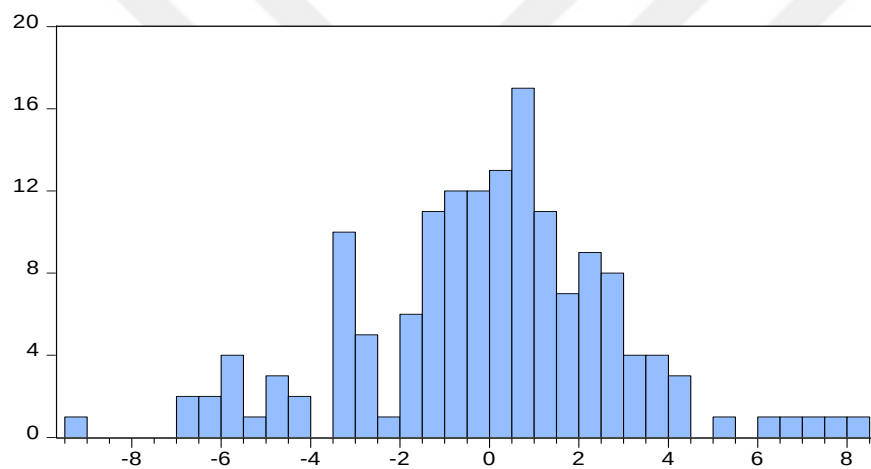
|                   |           |
|-------------------|-----------|
| Series: Residuals |           |
| Sample 1 154      |           |
| Observations 154  |           |
| Mean              | 1.41e-15  |
| Median            | -0.067501 |
| Maximum           | 15.83096  |
| Minimum           | -7.900629 |
| Std. Dev.         | 2.305167  |
| Skewness          | 1.972015  |
| Kurtosis          | 18.41176  |
| Jarque-Bera       | 1623.915  |
| Probability       | 0.000000  |



Series: Residuals  
Sample 1 154  
Observations 154

|           |           |
|-----------|-----------|
| Mean      | -1.66e-14 |
| Median    | 0.078575  |
| Maximum   | 12.95108  |
| Minimum   | -7.846395 |
| Std. Dev. | 2.579778  |
| Skewness  | 0.455736  |
| Kurtosis  | 7.177279  |

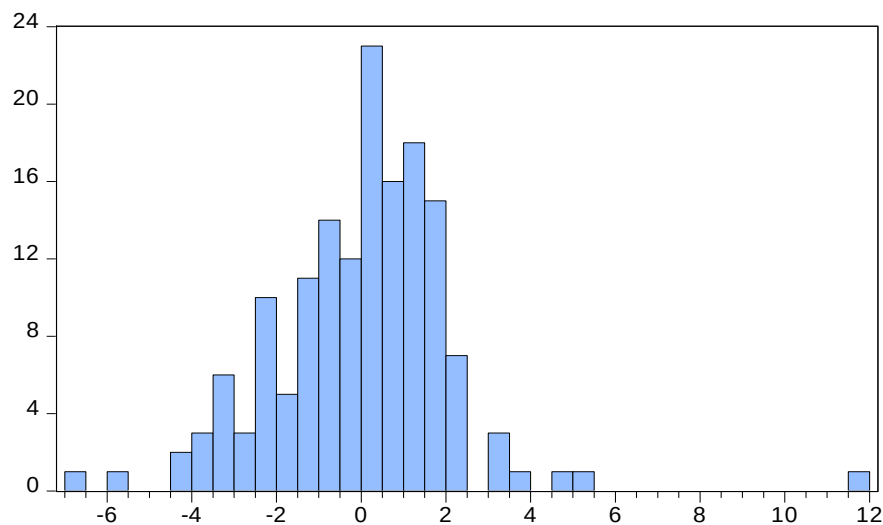
|             |          |
|-------------|----------|
| Jarque-Bera | 117.2995 |
| Probability | 0.000000 |



Series: Residuals  
Sample 1 154  
Observations 154

|           |           |
|-----------|-----------|
| Mean      | -9.63e-15 |
| Median    | 0.237520  |
| Maximum   | 8.128713  |
| Minimum   | -9.159945 |
| Std. Dev. | 2.896185  |
| Skewness  | -0.184736 |
| Kurtosis  | 3.715548  |

|             |          |
|-------------|----------|
| Jarque-Bera | 4.161328 |
| Probability | 0.124847 |



Series: Residuals  
Sample 1 154  
Observations 154

|           |           |
|-----------|-----------|
| Mean      | -1.52e-14 |
| Median    | 0.201819  |
| Maximum   | 11.92214  |
| Minimum   | -6.624125 |
| Std. Dev. | 2.115540  |
| Skewness  | 0.750730  |
| Kurtosis  | 9.060001  |

|             |          |
|-------------|----------|
| Jarque-Bera | 250.1088 |
| Probability | 0.000000 |

### 3. Serial correlation LM tests

#### Breusch-Godfrey Serial Correlation LM Test:

|               |          |                     |        |
|---------------|----------|---------------------|--------|
| F-statistic   | 9.006348 | Prob. F(2,91)       | 0.0003 |
| Obs*R-squared | 16.68872 | Prob. Chi-Square(2) | 0.0002 |

#### Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 05/05/18 Time: 17:27

Sample: 7 154

Included observations: 101

Presample and interior missing value lagged residuals set to zero.

| Variable  | Coefficient | Std. Error | t-Statistic | Prob.  |
|-----------|-------------|------------|-------------|--------|
| C         | -1.001324   | 2.901989   | -0.345047   | 0.7309 |
| CSR       | 0.073762    | 0.193057   | 0.382072    | 0.7033 |
| EC        | -0.008147   | 0.218049   | -0.037365   | 0.9703 |
| FS        | 0.082874    | 0.224757   | 0.368725    | 0.7132 |
| PSQ       | 0.188515    | 0.253617   | 0.743303    | 0.4592 |
| QM        | -0.033088   | 0.248137   | -0.133348   | 0.8942 |
| RC        | -0.004027   | 0.015012   | -0.268261   | 0.7891 |
| WB        | -0.282591   | 0.292030   | -0.967680   | 0.3358 |
| RESID(-1) | -0.335507   | 0.112781   | -2.974849   | 0.0038 |
| RESID(-2) | 0.204964    | 0.121266   | 1.690203    | 0.0944 |

|                    |           |                       |           |
|--------------------|-----------|-----------------------|-----------|
| R-squared          | 0.165235  | Mean dependent var    | -1.49E-14 |
| Adjusted R-squared | 0.082676  | S.D. dependent var    | 2.428886  |
| S.E. of regression | 2.326315  | Akaike info criterion | 4.620207  |
| Sum squared resid  | 492.4686  | Schwarz criterion     | 4.879130  |
| Log likelihood     | -223.3205 | Hannan-Quinn criter.  | 4.725026  |
| F-statistic        | 2.001411  | Durbin-Watson stat    | 2.117098  |
| Prob(F-statistic)  | 0.047915  |                       |           |

#### Breusch-Godfrey Serial Correlation LM Test:

|               |          |                     |        |
|---------------|----------|---------------------|--------|
| F-statistic   | 7.791636 | Prob. F(2,144)      | 0.0006 |
| Obs*R-squared | 15.03807 | Prob. Chi-Square(2) | 0.0005 |

#### Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 05/05/18 Time: 17:34

Sample: 1 154

Included observations: 154

Presample missing value lagged residuals set to zero.

| Variable  | Coefficient | Std. Error | t-Statistic | Prob.  |
|-----------|-------------|------------|-------------|--------|
| C         | 0.872045    | 2.318761   | 0.376082    | 0.7074 |
| CSR       | -0.039262   | 0.125410   | -0.313072   | 0.7547 |
| EC        | 0.051773    | 0.131944   | 0.392385    | 0.6954 |
| FS        | 0.060708    | 0.159487   | 0.380644    | 0.7040 |
| PSQ       | 0.079931    | 0.187667   | 0.425919    | 0.6708 |
| QM        | -0.041503   | 0.177942   | -0.233241   | 0.8159 |
| RC        | 0.001758    | 0.011456   | 0.153418    | 0.8783 |
| WB        | -0.127304   | 0.211351   | -0.602334   | 0.5479 |
| RESID(-1) | -0.101778   | 0.085463   | -1.190899   | 0.2357 |
| RESID(-2) | 0.306016    | 0.088360   | 3.463299    | 0.0007 |

|                    |           |                       |          |
|--------------------|-----------|-----------------------|----------|
| R-squared          | 0.097650  | Mean dependent var    | 1.41E-15 |
| Adjusted R-squared | 0.041253  | S.D. dependent var    | 2.305167 |
| S.E. of regression | 2.257119  | Akaike info criterion | 4.528787 |
| Sum squared resid  | 733.6206  | Schwarz criterion     | 4.725991 |
| Log likelihood     | -338.7166 | Hannan-Quinn criter.  | 4.608891 |
| F-statistic        | 1.731475  | Durbin-Watson stat    | 1.995115 |
| Prob(F-statistic)  | 0.086879  |                       |          |

Breusch-Godfrey Serial Correlation LM Test:

|               |          |                     |        |
|---------------|----------|---------------------|--------|
| F-statistic   | 13.85367 | Prob. F(2,144)      | 0.0000 |
| Obs*R-squared | 24.85002 | Prob. Chi-Square(2) | 0.0000 |

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 05/05/18 Time: 17:42

Sample: 1 154

Included observations: 154

Presample missing value lagged residuals set to zero.

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.  |
|--------------------|-------------|-----------------------|-------------|--------|
| C                  | 2.183810    | 2.415853              | 0.903950    | 0.3675 |
| CSR                | -0.040604   | 0.133966              | -0.303090   | 0.7623 |
| EC                 | 0.029736    | 0.139794              | 0.212716    | 0.8318 |
| FS                 | 0.090033    | 0.172126              | 0.523066    | 0.6017 |
| PSO                | 0.035978    | 0.202794              | 0.177410    | 0.8594 |
| QM                 | -0.075537   | 0.193017              | -0.391349   | 0.6961 |
| RC                 | 0.007460    | 0.012248              | 0.609082    | 0.5434 |
| WB                 | -0.081992   | 0.226020              | -0.362765   | 0.7173 |
| RESID(-1)          | 0.106994    | 0.079554              | 1.344926    | 0.1808 |
| RESID(-2)          | 0.394397    | 0.082018              | 4.808687    | 0.0000 |
| R-squared          | 0.161364    | Mean dependent var    | -1.66E-14   |        |
| Adjusted R-squared | 0.108949    | S.D. dependent var    | 2.579778    |        |
| S.E. of regression | 2.435194    | Akaike info criterion | 4.680661    |        |
| Sum squared resid  | 853.9447    | Schwarz criterion     | 4.877866    |        |
| Log likelihood     | -350.4109   | Hannan-Quinn criter.  | 4.760765    |        |
| F-statistic        | 3.078594    | Durbin-Watson stat    | 1.916220    |        |

Breusch-Godfrey Serial Correlation LM Test:

|               |          |                     |        |
|---------------|----------|---------------------|--------|
| F-statistic   | 21.04292 | Prob. F(2,144)      | 0.0000 |
| Obs*R-squared | 34.82919 | Prob. Chi-Square(2) | 0.0000 |

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 05/05/18 Time: 18:17

Sample: 1 154

Included observations: 154

Presample missing value lagged residuals set to zero.

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.  |
|--------------------|-------------|-----------------------|-------------|--------|
| C                  | -0.661013   | 2.572942              | -0.256909   | 0.7976 |
| CSR                | -0.150441   | 0.146045              | -1.030099   | 0.3047 |
| EC                 | -0.100870   | 0.151550              | -0.665593   | 0.5067 |
| FS                 | 0.548643    | 0.203467              | 2.696475    | 0.0078 |
| PSQ                | 0.028859    | 0.217601              | 0.132623    | 0.8947 |
| QM                 | -0.125776   | 0.207467              | -0.606244   | 0.5453 |
| RC                 | -0.003168   | 0.013119              | -0.241482   | 0.8095 |
| WB                 | -0.210717   | 0.246308              | -0.855501   | 0.3937 |
| RESID(-1)          | 0.263413    | 0.083341              | 3.160680    | 0.0019 |
| RESID(-2)          | 0.412817    | 0.083234              | 4.959704    | 0.0000 |
| R-squared          | 0.226164    | Mean dependent var    | -9.63E-15   |        |
| Adjusted R-squared | 0.177799    | S.D. dependent var    | 2.896185    |        |
| S.E. of regression | 2.626125    | Akaike info criterion | 4.831627    |        |
| Sum squared resid  | 993.1008    | Schwarz criterion     | 5.028831    |        |
| Log likelihood     | -362.0353   | Hannan-Quinn criter.  | 4.911731    |        |
| F-statistic        | 4.676204    | Durbin-Watson stat    | 1.997341    |        |
| Prob(F-statistic)  | 0.000019    |                       |             |        |

Breusch-Godfrey Serial Correlation LM Test:

|               |          |                     |        |
|---------------|----------|---------------------|--------|
| F-statistic   | 2.309381 | Prob. F(2,144)      | 0.1030 |
| Obs*R-squared | 4.786000 | Prob. Chi-Square(2) | 0.0914 |

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 05/05/18 Time: 18:22

Sample: 1 154

Included observations: 154

Presample missing value lagged residuals set to zero.

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.  |
|--------------------|-------------|-----------------------|-------------|--------|
| C                  | 0.117105    | 2.105819              | 0.055610    | 0.9557 |
| CSR                | -0.009709   | 0.118239              | -0.082110   | 0.9347 |
| EC                 | 0.017423    | 0.123285              | 0.141327    | 0.8878 |
| FS                 | 0.036087    | 0.151855              | 0.237640    | 0.8125 |
| PSQ                | 0.027090    | 0.177748              | 0.152407    | 0.8791 |
| QM                 | -0.010531   | 0.168840              | -0.062374   | 0.9504 |
| RC                 | 0.001560    | 0.010822              | 0.144158    | 0.8856 |
| WB                 | -0.063621   | 0.200773              | -0.316879   | 0.7518 |
| RESID(-1)          | -0.083285   | 0.084588              | -0.984599   | 0.3265 |
| RESID(-2)          | 0.162381    | 0.087889              | 1.847579    | 0.0667 |
| R-squared          | 0.031078    | Mean dependent var    | -1.52E-14   |        |
| Adjusted R-squared | -0.029480   | S.D. dependent var    | 2.115540    |        |
| S.E. of regression | 2.146496    | Akaike info criterion | 4.428281    |        |
| Sum squared resid  | 663.4720    | Schwarz criterion     | 4.625486    |        |
| Log likelihood     | -330.9777   | Hannan-Quinn criter.  | 4.508385    |        |
| F-statistic        | 0.513196    | Durbin-Watson stat    | 1.945542    |        |
| Prob(F-statistic)  | 0.863226    |                       |             |        |

#### 4. Heteroskedasticity Test

##### Heteroskedasticity Test: Breusch-Pagan-Godfrey

|                     |          |                     |        |
|---------------------|----------|---------------------|--------|
| F-statistic         | 0.564783 | Prob. F(7,93)       | 0.7827 |
| Obs*R-squared       | 4.118484 | Prob. Chi-Square(7) | 0.7660 |
| Scaled explained SS | 24.81335 | Prob. Chi-Square(7) | 0.0008 |

##### Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/05/18 Time: 17:29

Sample: 7 154

Included observations: 101

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.  |
|--------------------|-------------|-----------------------|-------------|--------|
| C                  | -10.03060   | 27.83281              | -0.360388   | 0.7194 |
| CSR                | 0.856658    | 1.840977              | 0.465328    | 0.6428 |
| EC                 | 0.881186    | 2.106367              | 0.418344    | 0.6767 |
| FS                 | 1.937281    | 2.112253              | 0.917164    | 0.3614 |
| PSQ                | -1.679899   | 2.408422              | -0.697510   | 0.4872 |
| QM                 | -0.061764   | 2.394946              | -0.025789   | 0.9795 |
| RC                 | -0.010063   | 0.143012              | -0.070367   | 0.9441 |
| WB                 | -1.615009   | 2.735891              | -0.590305   | 0.5564 |
| R-squared          | 0.040777    | Mean dependent var    | 5.841076    |        |
| Adjusted R-squared | -0.031423   | S.D. dependent var    | 22.12998    |        |
| S.E. of regression | 22.47498    | Akaike info criterion | 9.138577    |        |
| Sum squared resid  | 46976.59    | Schwarz criterion     | 9.345715    |        |
| Log likelihood     | -453.4981   | Hannan-Quinn criter.  | 9.222433    |        |
| F-statistic        | 0.564783    | Durbin-Watson stat    | 1.273893    |        |
| Prob(F-statistic)  | 0.782692    |                       |             |        |

##### Heteroskedasticity Test: Breusch-Pagan-Godfrey

|                     |          |                     |        |
|---------------------|----------|---------------------|--------|
| F-statistic         | 1.007149 | Prob. F(7,146)      | 0.4287 |
| Obs*R-squared       | 7.093799 | Prob. Chi-Square(7) | 0.4192 |
| Scaled explained SS | 55.50802 | Prob. Chi-Square(7) | 0.0000 |

##### Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/05/18 Time: 17:37

Sample: 1 154

Included observations: 154

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.  |
|--------------------|-------------|-----------------------|-------------|--------|
| C                  | -17.22090   | 21.59598              | -0.797412   | 0.4265 |
| CSR                | 0.001013    | 1.213112              | 0.000835    | 0.9993 |
| EC                 | 0.997410    | 1.266259              | 0.787682    | 0.4322 |
| FS                 | 2.620390    | 1.553635              | 1.686619    | 0.0938 |
| PSQ                | -1.631070   | 1.824644              | -0.893911   | 0.3728 |
| QM                 | -0.944723   | 1.737282              | -0.543794   | 0.5874 |
| RC                 | -0.094443   | 0.110300              | -0.856241   | 0.3933 |
| WB                 | -0.586244   | 2.044198              | -0.286784   | 0.7747 |
| R-squared          | 0.046064    | Mean dependent var    | 5.279292    |        |
| Adjusted R-squared | 0.000327    | S.D. dependent var    | 22.10099    |        |
| S.E. of regression | 22.09737    | Akaike info criterion | 9.079345    |        |
| Sum squared resid  | 71290.90    | Schwarz criterion     | 9.237108    |        |
| Log likelihood     | -691.1095   | Hannan-Quinn criter.  | 9.143428    |        |
| F-statistic        | 1.007149    | Durbin-Watson stat    | 1.212412    |        |
| Prob(F-statistic)  | 0.428677    |                       |             |        |

**Heteroskedasticity Test: Breusch-Pagan-Godfrey**

|                     |          |                     |        |
|---------------------|----------|---------------------|--------|
| F-statistic         | 0.836480 | Prob. F(7,146)      | 0.5587 |
| Obs*R-squared       | 5.938056 | Prob. Chi-Square(7) | 0.5470 |
| Scaled explained SS | 16.48450 | Prob. Chi-Square(7) | 0.0210 |

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/05/18 Time: 17:43

Sample: 1 154

Included observations: 154

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | -3.967461   | 16.17378              | -0.245302   | 0.8066   |
| CSR                | 0.015074    | 0.908530              | 0.016592    | 0.9868   |
| EC                 | 0.567875    | 0.948334              | 0.598813    | 0.5502   |
| FS                 | 1.221837    | 1.163557              | 1.050088    | 0.2954   |
| PSQ                | -1.544697   | 1.366523              | -1.130385   | 0.2602   |
| QM                 | -0.817376   | 1.301095              | -0.628221   | 0.5308   |
| RC                 | -0.022224   | 0.082606              | -0.269036   | 0.7883   |
| WB                 | 0.769868    | 1.530953              | 0.502869    | 0.6158   |
| R-squared          | 0.038559    | Mean dependent var    |             | 6.612039 |
| Adjusted R-squared | -0.007538   | S.D. dependent var    |             | 16.48727 |
| S.E. of regression | 16.54929    | Akaike info criterion |             | 8.501114 |
| Sum squared resid  | 39986.33    | Schwarz criterion     |             | 8.658877 |
| Log likelihood     | -646.5857   | Hannan-Quinn criter.  |             | 8.565197 |
| F-statistic        | 0.836480    | Durbin-Watson stat    |             | 1.212928 |
| Prob(F-statistic)  | 0.558731    |                       |             |          |

# Heteroskedasticity Test: Breusch-Pagan-Godfrey

|                     |          |                     |        |
|---------------------|----------|---------------------|--------|
| F-statistic         | 1.269226 | Prob. F(7,146)      | 0.2695 |
| Obs*R-squared       | 8.833837 | Prob. Chi-Square(7) | 0.2648 |
| Scaled explained SS | 10.78056 | Prob. Chi-Square(7) | 0.1485 |

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/05/18 Time: 18:19

Sample: 1 154

Included observations: 154

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.  |
|--------------------|-------------|-----------------------|-------------|--------|
| C                  | -8.413958   | 13.38260              | -0.628723   | 0.5305 |
| CSR                | -1.308196   | 0.751742              | -1.740221   | 0.0839 |
| EC                 | -0.392757   | 0.784676              | -0.500534   | 0.6175 |
| FS                 | 0.293419    | 0.962757              | 0.304769    | 0.7610 |
| PSQ                | -0.827216   | 1.130696              | -0.731599   | 0.4656 |
| QM                 | 0.627542    | 1.076560              | 0.582914    | 0.5609 |
| RC                 | -0.057080   | 0.068351              | -0.835110   | 0.4050 |
| WB                 | 1.809006    | 1.266750              | 1.428069    | 0.1554 |
| R-squared          | 0.057363    | Mean dependent var    | 8.333423    |        |
| Adjusted R-squared | 0.012168    | S.D. dependent var    | 13.77739    |        |
| S.E. of regression | 13.69331    | Akaike info criterion | 8.122242    |        |
| Sum squared resid  | 27375.99    | Schwarz criterion     | 8.280006    |        |
| Log likelihood     | -617.4126   | Hannan-Quinn criter.  | 8.186325    |        |
| F-statistic        | 1.269226    | Durbin-Watson stat    | 1.295938    |        |
| Prob(F-statistic)  | 0.269522    |                       |             |        |

**Heteroskedasticity Test: Breusch-Pagan-Godfrey**

|                     |          |                     |        |
|---------------------|----------|---------------------|--------|
| F-statistic         | 0.958416 | Prob. F(7,146)      | 0.4640 |
| Obs*R-squared       | 6.765634 | Prob. Chi-Square(7) | 0.4537 |
| Scaled explained SS | 24.50631 | Prob. Chi-Square(7) | 0.0009 |

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/05/18 Time: 18:23

Sample: 1 154

Included observations: 154

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 3.962651    | 12.38913              | 0.319849    | 0.7495   |
| CSR                | 0.657065    | 0.695935              | 0.944147    | 0.3467   |
| EC                 | 0.755084    | 0.726425              | 1.039452    | 0.3003   |
| FS                 | 0.477589    | 0.891286              | 0.535843    | 0.5929   |
| PSQ                | -1.363587   | 1.046758              | -1.302677   | 0.1947   |
| QM                 | -0.109204   | 0.996640              | -0.109572   | 0.9129   |
| RC                 | -0.005912   | 0.063276              | -0.093431   | 0.9257   |
| WB                 | -0.326765   | 1.172711              | -0.278641   | 0.7809   |
| R-squared          | 0.043933    | Mean dependent var    |             | 4.446446 |
| Adjusted R-squared | -0.001906   | S.D. dependent var    |             | 12.66471 |
| S.E. of regression | 12.67677    | Akaike info criterion |             | 7.967970 |
| Sum squared resid  | 23462.29    | Schwarz criterion     |             | 8.125734 |
| Log likelihood     | -605.5337   | Hannan-Quinn criter.  |             | 8.032053 |
| F-statistic        | 0.958416    | Durbin-Watson stat    |             | 1.401424 |
| Prob(F-statistic)  | 0.463956    |                       |             |          |