The Effect of Ownership Structure on Voluntary Disclosure: Evidence from Saudi Arabia

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***Abstract*—This paper aims to examine the effect of CG characteristics (ownership structure) on the extent of voluntary disclosure in the financial reports of non-financial listed firms in Saudi Arabia. This paper aims to examine the current level of voluntary disclosure and investigate the influence of variables, such as ownership structure (managerial ownership, family member on the board and government ownership level) and control variables (size, leverage and return on assets), in relation to the level of VDS in non-financial companies listed on the Saudi Stock Exchange. The results of this study suggest that the corporate governance-related variables influence the level of information disclosed, thus confirming the proposed hypotheses. The results showed that the level of VDS was acceptable compared to other studies. With regard to the quality of disclosure, results regarding the CG characteristics showed that all the variables were significantly positively linked to the level of VDS. Moreover, the results regarding the control variables also indicate a significantly positive association with the level of VDS. The results of this paper might be of interest to regulators, investment analysts, and market participants and can aid Saudi authorities in enforcing new policies aimed towards improving the quality of financial reporting.**

***Index Terms*—corporate governance (CG), disclosure, ownership structure, voluntary disclosure (VDS)**

I. Introduction and Literature

The forces that have caused an increase in the demand for information disclosure in the current capital market stem from the information asymmetry and agency conflicts existing between stockholders and management. Therefore, the solution to agency conflicts lies in the function of the board of directors and the ownership structure. Currently, every organization, whether it is private or public, small or big, non-profitable or profitable, is looking to convince investors, customers, suppliers, creditors, regulators and the public at large about their work. They are trying to work in a way that makes all those stakeholders or users appreciate them. One way for these organizations to improve their performance is by making public their responsibility towards the environment. There is growing pressure on firms to be responsible to society, which has influenced them to work in an environmentally responsible manner. As a variety of stakeholders demand greater disclosure of environmental influences and performance, a large number of firms all over the world have started disclose on these issues. In many countries, disclosure of some environmental information has also been made mandatory. However, different research findings have suggested that these disclosures differ across industries, sectors, and countries [1].

The company's annual report is one of major corporations' communication mediums used to transmit information to outsiders [2], [3] in other words, annual reports are used as a communication method to communicate both quantitative and qualitative corporate information [4] with stakeholders or with the interested parties. Ref. [5] states that a corporation's interested parties are the owners, investors, employees, creditors, suppliers, customers, and the public. Everybody who is interested in the success of corporations depends on the information disclosed by corporations in making various decisions [5]. Relevance is a vital standard, so the information must be appropriate and relevant to the users to assist decision-making [6].

In light of recent corporate scandals involving high profile companies such as the Enron Cooperation and WorldCom [7], the restoration of public confidence or trust has become one of the main agendas among today's business leaders. Disclosing more information on the company's capital structure and control can be an important way to achieve that goal [8]. Likewise, Ref. [9] emphasizes the crucial role of full disclosure in avoiding financial reporting fraud. Investigating a series of financial statement frauds that have occurred in recent years, Ref. [10] found that, to protect investors' rights and enhance information transparency, the regulatory authorities of securities markets and information intermediaries have exerted great effort to advocate CG, thus lessening the occurrence of adverse selection and agency problems as a result of information asymmetry. High quality and relevant information is crucial for the exercise of government powers.

In addition to that, VDS is the external reporting done beyond what is mandated. It covers all information, which concerns both subsidiaries and the group itself. The increasing amount of VDS among firms all over the world have motivated the research in this particular area to wonder and explore factors that could make firms to disclose information that it is not mandated to disclose in

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the first place [11]. Over the years, corporations have had to disclose certain information regarding the company's financial position, management, creditors, competitors, and shareholders. This type of disclosure is considered as a mandatory disclosure, meaning that corporation must disclose certain information.

Presently, CG is studied as a mechanism which affects corporate disclosure. Transparency, openness, disclosure, and trust, which form the integral part of CG, will help companies improve their financial performance. In fact, in a CG survey carried out by Bursa Malaysia Berhad and the accounting firm Price Waterhouse Coopers (PWC), it was found that the majority of investors in Malaysia were prepared to pay a 20% premium for companies with superior CG [8].

One of the important areas of focus regarding VDS is the relationship between some of the firm characteristics and the level of VDS. Ref. [12] mentions that many studies empirically examined the extent of voluntary disclosure and measured the relationship between the level of disclosure and several corporate attributes. However, most of these studies have focused on developed countries. Few studies have been carried out in developing countries in general and the Middle East in particular. Also as [13] who studied the quality and volume of social reporting in the Middle East, stated that his research was a timely one in all of the Middle Eastern countries, in the region of social reporting.

Currently, there is a lack of researches directed in Saudi Arabia regarding VDS. Hence, the aim of this paper is to evaluate the degree of VDS made by Saudi firms. Especially, this paper empirically investigates the impact of some company-specific characteristics on the general level of VDSs in the annual reports of the recorded firms on the main board of the Saudi Stock Exchange. These characteristics are corporation size, corporation age, corporation part, industry category, climbing of capital, and audit firm size. By the by, the results cannot be generalized across the nations. Earlier researches around the world encompass diverse kinds of accounting systems and attitudes towards information disclosures [14] like that it might be expected that the pattern of VDS will differ significantly across diverse countries. Also, cultural and national contrasts are prone to impact accounting practices in general and corporate social reporting in particular [15], [16].

Nonetheless, Saudi Arabia is valuable for the study of a few factors. Initially, Saudi Arabia holds a 25 percent share of the whole Arab GDP and is the world's 25th greatest shipper and exporter. Second, the Saudi government has been undertaking far-reaching steps aimed at showing signs of improvement in its speculation climate to make it more appealing for local and overseas capital stores. Third, the Saudi Stock Exchange has the most elevated market capitalization in the Arab area. It is the eighth greatest developing market and ranks 23rd around the world. Finally, the issuance of the conceptual framework of accounting in 1986 and the creation of the Saudi Organization for Certified Public Accountants in 1992 represented main landmarks in the development of the accounting and auditing calling. Taken together, these reasons are liable to elevate the financial reporting practice and, in this way, increase the quality of accounting disclosure [17].

A corporation must disclose certain information about itself for the benefit of shareholders, investors, and lenders. However, studies on the issue have exposed that most mandatory disclosure by organizations is not satisfactory to the firm’s stakeholders, which means that some institutions, governments, and individuals are not satisfied with the mandatory disclosure of information supplied by companies. Nevertheless, firms have started to supply some further information in order to fill the gap in response to the dissatisfaction voiced by stakeholders. As a result of the changes taking place in the business environment everywhere, the issue of VDS has become one of the significant issues that researchers consider worth studying. To date, numerous studies have been done in this particular area to examine the association between CG attributes and VDS. Studies on company VDS have been carried out in both developing and developed countries. Currently, Saudi Arabia is one of the developing countries that faces problems attracting overseas investments. Birgit Ebner at Germany's Frankfurt Trust, who assists with the management of a Middle Eastern stock fund, claimed Saudi Arabia was not an attractive investment area compared with others in the region [18]. One of the main reasons is the absence of VDS as a result of lack of information disclosure by companies operating in the country. Investors are underweight in Saudi Arabia since in Saudi Arabia there are lots of holding corporations dominating the market. In addition, the transparency amongst the firms is presently less than in other Gulf States. In the opinion of numerous analysts in Saudi Arabia, the problem of banks operating in the Gulf region is linked to the lack of VDS. Moreover, the 2007 Saudi Arabian stock exchange report revealed that many companies listed on the Saudi Arabian stock exchange, from amongst 111 corporations, violated disclosure guidelines [19].

Economists have made recommendations to Saudi Arabian authorities on the need to affirm the principle of regulatory independence of the chambers of commerce and industry as well as to promote the principles of more transparency, VDS, justice, and equality for all business sectors and civil society institutions to achieve the goals and approaches to CG. Dr Fahd Al-Sultan, the Secretary General of the Council of Saudi Chambers of Commerce, in a presentation at a business forum on governance in Saudi Arabia, stressed the importance of working on the development and design of administrative structures to ensure that the terms of reference are met and to achieve more transparency through VDS to reduce the difficulties faced by shareholders and investors. This will benefit the region from the international experiences in the application of principles of CG for the development of a culture of hard work and conduct and professional ethics. Moreover, the importance of the role of CG will enhance the performance of the chambers of commerce, government agencies, family businesses, the private

sector, and all civil society institutions, pointing out that CG helps to develop production, prevent corruption, and lead to the prosperity of business and development gains. All these indicate the significant impact of good CG in strengthening the competitive capabilities of various entities and organizations [20].

Likewise, Dr. Majid Qarub, who is the Chairman of the Lawyers Committee in Jeddah, pointed out that the culture of CG must be grounded in the institutions, bodies, and government ministries as well as civil society institutions such as chambers of commerce to explain the principles of transparency, VDS, justice, and equality in dealing with everyone and to enhance the atmosphere of competitiveness and fair competition. In contrast, corporate social responsibility disclosure would form a significant element in the accountability concept that represents an Islamic society. Like corporate social responsibility, reporting is significant to a variety of users of company information, for instance, employees, customers, local communities, government and its agencies, stress groups, and society at large. Making social responsibility information accessible to users helps them make highly educated decisions [20].

Many companies have ignored the importance of CG, and the non-application of the regulation of CG has led to a non-disclosure situation. Today, a lot of financial information that affects, directly and indirectly, the development of companies in the stock market is required by both shareholders and investors alike. The Saudi Capital Market Authority council has issued a list of CGs under resolution No. 1-212-2006 dated 21 Shawwal 1427H (corresponding to 12 November 2006G). The list contains five sections, where section three is concerned with disclosure and transparency. It is also ensures that policies and procedures relate to disclosure are applied well, as well as disclosure in the report of the Board of Directors [19].

Currently, there is a lack of research conducted in Saudi Arabia regarding VDS but there is much research that has been done in diverse countries to find out which reasons could lead to more disclosure by corporations in their financial annual reports. Therefore, this paper investigates the effect of MOWN, family members sitting on the board, and GOWN on the disclosure of corporations. On the other hand, investigating the association between VDS and CG is important since the disclosure of information aids in decreasing the cost of agency problems when there is an information asymmetry between shareholders and management. The effectiveness gap has been narrowed in the world's main economies, but there are still important gaps in the region, particularly in Saudi Arabia. To be precise, there is a lack of understanding of the complicated ways in which a variety of CG mechanisms act together with other characteristics of companies and economies. However, most of the studies are concentrated on developing countries. Little attention has been devoted to the Middle Eastern countries, specifically Saudi Arabia. The next section of the paper reviews the relevant literature and is followed by sections on research design and, finally discussion and conclusion.

II. VDS in Financial Statement

Prior research has been carried out to provide details about voluntary information disclosure, for example, [21]-[23]. They attempted to verify diverse stages of disclosures and the relationship between a company's characteristics, such as firm size, industry type and the levels of disclosure. More details disclosure by the corporations beyond the level of information disclosed surrounded by the compulsory disclosure procedure are called VDS [24]. VDS means making public the non-financial and financial information concerning a company's operations without any legal requirement [25, 17, 26].

Ref. [27] examined the association between ownership structure variables and the level of voluntary information disclosures of firms listed on the Bahrain Stock Exchange. Bahrain-listed companies show that there is negative a significant negative relationship between blockholder ownership and VDSs. Governmental ownership and managerial ownership are not associated with VDSs. The results show that leverage and size of companies are positively significant with the level of voluntary information disclosures. In contrast, profitability of a company is insignificantly associated with VDSs.

In order to have a higher degree of protection for minority shareholders, CG is seen to be essential as a protective device. Ref. [28] examined the level of accounting information disclosure in Hong Kong. The study was conducted in 1998 based on a sample of 98 companies, and it included 20 disclosure items. The study found an association between the audit committee and disclosure, as well as the existence of positive association between the independence of non-executive directors and the level of disclosure. The results provide empirical evidence to support Hong Kong regulatory bodies' new requirements on board composition, that is, the formation of an audit committee and the restriction that family members should not make up more than half of the board membership.

Moreover, analysis of annual reporting practices in Hong Kong and Singapore shows that the extent of outside ownership is positively associated with VDSs. The majority of the internal parties and companies controlled by families are linked to low levels of disclosure. Ref. [29], examining ownership structure and corporate VDS in Hong Kong and Singapore, specifies that studies in this area (VDS) have concentrated mainly on the impact of company characteristics, for example, firm size, leverage, and profitability, on the degree of VDS. The outcomes also indicate that the rank of information disclosure is likely to be low in insider-controlled corporations, an important feature of the Singapore and Hong Kong securities exchanges.

Meanwhile, the results of the relationship between CG attributes and VDS cannot be generalized. Ref. [29]-[32] and many other researchers caution that the consequences of this relationship in one country might not be applicable

for another. Therefore, in order to know further if there is a relationship between these CG attributes and VDS, the studies recommend that this relationship is examined in that particular country by itself.

At the same time, CG has been portrayed as the methodology and structure used to administer and manage business and affairs of the corporation with the goal of enhancing shareholder value. CG has also been characterized by the Finance Committee Report (1999) as the manner in which a firm's top officers consistently observe and teach according to the goal of enhancing shareholders' value. It is also claimed that CG is the process and structure used to direct and manage the business and affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective of realizing long term shareholder value. Ref. [33] addressed the measurement of VDS accounting information in Canada in 1997 using a sample of 272 companies and also included 25 disclosure items. The study found that there is a positive relationship between firm size and level of disclosure.

In other words, the disclosure works as a bridge between the management and the financial reports' users. VDS strengthens this bridge and builds trust between the corporations and stakeholders by involving them in the corporation's life. What corporations must do in order to get their shareholders' confidence and trust is disclose more information in their annual financial reports. Ref. [34] examined the influence of a firm's financial status in explaining the level of VDS among financially distressed firms in Malaysia. The study was conducted from the period of 2001 to 2002 on a sample of 86 companies and included 22 disclosure items. The study found a positive association between the audit committee and the level of disclosure and a positive relationship between the independence of the board and the level of VDS. This paper addresses these two specific issues or weaknesses directly. First, this paper is concerned with the extent of VDSs and not the reliability of such disclosures. Second, the comprehensiveness of the VDSs may not have been fully or properly captured by the disclosure index used in this paper. Hence, the results of this paper should be interpreted with caution.

Generally, there is evidence that the level of VDS has increased in all categories over time. Swedish companies have also been studied by [35], [36]. The studies focused on the agency theory to find out which factors influenced these corporations to disclose CG information in their annual reports. In addition, many studies have been done in different developed and developing countries to figure out which factors could contribute to more disclosures by companies in their financial annual reports. For example, Ref. [4] investigated the extent to which CG attributes, ownership structure and company characteristics affect VDS practices among Kenyan companies. The research, which was from the period between 1992 and 2001, included a sample of 42 companies with 47 items for disclosure. The study found a positive relationship between the audit committee and disclosure and affirmed statistically significant association between the extent of disclosure and the independence of council. The results of the study show that disclosures of all kinds of information are affected by CG attributes, ownership structure, and corporate characteristics.

A great deal of attention has also been devoted to the effect of ownership structure on firms' disclosure in their annual reports. Ref. [37] measured the disclosure of accounting information in the Italian environment in 2002, using a sample of 175 companies with 74 disclosure items, where the dependent variable was the index of disclosure [25] and the independent variables were the independence of directors, size, leverage, profitability, the pressures of work, and the diversity and spread of ownership. Also, the research design' style was the multiple regression and variables related to the function of disclosure is to support the study hypothesis, where the study found a positive association between firm size and extent of disclosure in the accounting information. It also found the existence of a positive relationship between the independence of board members and the level of disclosure.

In light of previous studies, as mentioned above, most of the studies measuring the extent of disclosure of accounting information and its relationship to CG found a positive relationship between the independence of non-executive managers and the level of disclosure in the accounting information from the perspective of corporate governance, as demonstrated in studies by [28, 33, 34, 4, 37]. Moreover, studies measuring the disclosure of accounting information from the emergence of CG that the internal audit committee, consisting of companies due to the application of CG has a strong relationship to the level of disclosure in the accounting information as shown in the studies of Ref. [28, 34] is also clear that there is an effective role External Auditor at the level of disclosure of accounting information such as study by [29]. In addition, the studies on the role of the company's size and its relationship with the level of disclosure in the accounting information from CG have recorded a positive relationship, which confirms the importance of firm size in the level of disclosure in the accounting information. These studies were conducted by [29, 33, 34, 37]. Moreover, prior studies confirm the existence of a strong relationship between the level of disclosure in the accounting information and the application of CG on the public shareholding companies and the impact on the stock market such as the studies by [38].

Finally, most of these studies did not address the role of the financial crisis in affecting the level of disclosure in the accounting information and its impact on CG. It was a study by Ref. [28] in 1998, one year after the Asian Tigers crisis of 1997, which examined the disclosure of accounting information in Hong Kong, which is one of the countries affected by the financial crisis. Nevertheless, the study did not address the impact of the financial crisis on the level of disclosure in the accounting information. Similarly, a study by Ref. [29] in 1997 in each of the states of Hong Kong and Singapore did not address the issue of disclosure. With regard to reasons why companies disclose voluntary things, theory recommends

that many of the reasons why managements disclose things voluntarily to clients are focused on the need to raise capital at the most reduced conceivable expense [6]. The following explanations may provide reasons why companies disclose information voluntarily: Additional disclosures may help to attract new shareholders along these lines, serving to maintain a healthy demand for shares; increased information may assist in decreasing informational danger, which could decrease the expense of capital; and with the aim of increasing capital from the market, firms may raise their VDS in annual reports. Accordingly, recorded corporations are more inclined to have a higher degree of disclosure than unlisted corporations. Recorded companies frequently have an enthusiasm towards remote capital markets, while outside operations are regularly financed by external capital [39].

III. CG Attribute and VDS

Today, investors are more and more basing their investment decisions on firms' CG records. As a result, they are willing to pay additional for the shares of well-governed firms compared to those of poorly-governed corporations. This premium for well-governed firms is explained by the role of CG in a firm's general risk management strategy. In addition, there is vital need for a review of the relevant regulations to reflect the present practices of CG, i.e. the issuance of guidance for top practices for management and financial affairs in corporations and the establishment of an organization to accelerate the adoption of better CG practices. For instance, the study in this area was conducted by Ref. [40], who explores the state of CG practices in Saudi Arabia.

Nevertheless, those limited research studies approach the issue of whether to interpret the state of CG from an official perspective or from the perspective of what the practical applications of its principles must be. For example, Ref. [38] evaluates the practices of CG principles in Egypt. It recognizes the development in Egypt of the official regulations towards the application of top practices of CG. The study concluded with a set of results, such as the importance of the issuance of the new disclosure rules, which tightened control over the trafficking of inside information that led to the development of the new disclosure requirements for financial and non-financial information and gave attention to the importance of electronic disclosure and the importance of detailing the role of audit committees in companies. In addition, these developments are not met by enough Egyptian companies in their practical applications. Also, the research which was carried out by Ref. [41] examined the practices of CG in Oman and how CG was being communicated to stakeholders. They suggested enhanced regulation and communication for the Omani stock market to keep pace with international developments. In conclusion, in 2006 the Saudi Arabian Capital Market Authority intensified its efforts to maintain fairness in the trading of Saudi stocks, and amongst these efforts was the issuance of the draft of CG for listed corporations in 2006. The draft gives recommendations for criteria for the best CG practice for listed corporations. It has covered, to some extent, the three major principles issued by the OECD: a) the rights of shareholders and the equitable action of shareholders; b) the function of stakeholders in CG, transparency, and disclosure; and c) the accountability of the board of directors.

Currently, it is difficult to access any study in the Saudi environment on the impact of CG and its impact on disclosure of accounting information in terms of independence of board members. The study by Ref. [35] addressed the role of audit committees as one of the pillars of CG in the Saudi Arabian environment. The results of the study showed that the composition of audit committees recent experience in the Kingdom, and they still have encountered some problems and difficulties which in turn affected the carrying out of the tasks entrusted to it. Furthermore, most studies in the Saudi environment were about the government-linked companies and their impact on public shareholding companies in the Saudi financial market. So far, there is no study on the Saudi environment, especially for public shareholding companies. It was only in 2006 that a late application for CG was issued by the Saudi authorities.

IV. CG Characteristics

In examining the association between CG and VDS, this research attempts to answer whether ownership structure (MOWN, a FMB, and GOWN level) influences the level of VDS in annual reports. The investigation on VDS provides an excellent opportunity to apply the agency theory. Managers who are directly involved in the day-to-day running of their firms are in a position to directly communicate corporate information through the annual reports to shareholders (owners) and other external stakeholders. The disclosure of information assists to decrease the costs of agency association when there is an information asymmetry between them and the shareholders. This research tests the effect of CG, ownership structure, on VDS practice by listed companies on the Saudi Stock Exchange (Tadawul). Ownership structure is measured by MOWN, a FMB, and GOWN level of percentage in these companies.

Managers' behaviour should be under shareholders' intense observation in order to decrease the agency problem [42]. On the other hand, an increase of management ownership aligns shareholders' and managers' welfare more [42, 43]. Ref. [29], who studied the VDS and ownership structure by corporations in Hong Kong and Singapore, focused their study primarily on the impact of company characteristics, such as firm size, leverage, and profitability, on the extent of VDS. The result of their study indicates positively the correlation between the extents of outside ownership with VDS. More precisely, the results also point out that the rank of information disclosure is likely to be lower in companies which are internally controlled, which is a major advantage of the Hong Kong and Singapore stock markets.

The above study found that the level of VDS tended to increase with the passage of time. Moreover, the study suggests that MOWN and good quality of CG is related positively to VDS. Ref. [44] examined the relationship between ownership and VDS in annual reports of corporations listed on the Tunisian stock exchange using panel data for the years 2003 to 2005, with exception of financial companies. However, the VDS were proxied by an un-weighted disclosure score developed by the researchers based on a developed checklist for the disclosure. It has been extracted all the necessary data for the study of non-financial firms listed on the Tunisian stock exchange is financial annual reports for the years 2003-2005.

As mentioned before, CG includes the various activities that can reduce the cost of the agency. Also investigated was the effect of management ownership on the quality of disclosure in companies listed in the United States. The study reveals that the rise is linked to property management with higher levels of quality of disclosure in general [45]. In their study, Ref. [10] examined the association between ownership structure and voluntary corporate disclosure practices of IC design firms in Taiwan. They found that the level of VDS was negatively associated with extent of MOWN. On the other hand, Ref. [46] used the listed companies in China, and they found that there is no relation between MOWN and the level of VDS.

It is significant to note that the classic owner-manager agency problem could also prevail in family companies when there are problems between family members, for example, when the manager, who is a family member, does not agree with the owner, the other family member [47]. Apart from the various studies that have been carried out on this relationship in developed and developing countries, there are studies on the corporate voluntary disclosure in general and on the relationship between CG and voluntary disclosure in particular, are few in the Saudi Arabian market, considering that Saudi Arabia is a developing nation with a rising capital market, and the fact that many corporations in Saudi Arabia are either family or government owned corporations.

The most significant governance variable, the proportion of family members on the board, shows that the more family members are on the board, the less likely that a company has an upper degree of VDS. The Ref. [28] study indicated that the existence of the proportion of family members on the board is negatively associated with the level of VDS. Similarly, Ref. [26] results can be explained by the relatively low level of VDS and by the fact that a large proportion of firms in the Kingdom of Saudi Arabia are owned by families or the government. As a result, these companies do not have very much incentive to disclose information voluntarily. Additionally, better reporting is expected to lessen firm cost of capital because there is less uncertainty in firms that report reliably and extensively. Consequently, there is a smaller amount of investment risk and lower required rate of return.

Government-linked companies in Saudi Arabia are firms that have a primarily commercial objective and in which the Saudi government has a direct controlling stake. Controlling stake means the proportion of ownership or the ability of government to appoint board of directors members and senior management and to make main decisions. Apart from previous studies by Ref. [48, 49, 31] several studies have been conducted to observe the association between GOWN and the extent of VDS. Ref. [48] and [49] found that the level of disclosure is higher in government-linked companies than non-government-linked companies. Their consequences are consistent with MOWN, debt and external directors becoming substitutes for disclosure in CG. Though the association between GOWN and disclosure is considered consistent, GOWN does increase moral hazard and agency problems. Disclosure is seen as a means of mitigating these problems.

Moreover, GOWN is not significant in pointing companies towards greater transparency. In addition, the research attempted to measure the effect of GOWN level on VDS level among government-linked companies in Malaysia [31]. In this regard, the current study will investigate the relationship between the GOWN and VDS.

V. Research Design and Hypotheses Development

A. Managerial Ownership and VDS

Managerial ownership is the ratio of shares owned by CEOs and executives, and this includes their deemed interests. Also, ownership plays an important role in raising the agency problem and so control might be mitigated as a result of increasing the MOWN in order for their interest to be taken into account with those of other stakeholders. Thus, when the MOWN falls, external shareholders will more frequently check the behaviour of managers [42]. To decrease the expense of observing by external shareholders, the manager will supply VDS. Thus, VDS is an option to observing. Additionally, a study by Ref. [50] discovered a significant relationship between ownership structure in expanded Australian companies and voluntary fragment disclosure.

Moreover, an increase in MOWN leads to a decrease in agency cost. Therefore, the information disclosure demand to screen managers would be decreased. Another clarification is that the positions of management get to be fortified when they increase their ownership. On the other hand, management could also use inside information to their advantage with a specific end goal to counteract minority wealth, diminish information transparency, and conceal their enhancement behaviour [51], [52]. Then again, VDS is relied upon to increase with the decrease in MOWN. Ref. [23] found that the degree of disclosure of Malaysian firms is contrarily associated to the percentage of shares held by the ten most significant shareholders. Additionally, empirical confirmation demonstrates that MOWN is negatively associated to disclosure [53].

Ref. [48] and [46] examined the relationship between the extent of normal shares held by official executives

and VDS. The result found that there is a significant relationship between percentage of shares held by managers and VDS. Similarly, Ref. [45] found that there is sure association between MOWN and VDS. One can logically argue, as demonstrated from the explanations above, that there exists blend association between MOWN and information disclosure level. Therefore, it is hypothesized that:

H_1: There is an association between managerial ownership and the level of VDSs.

B. Family Member on the Board and VDS

At the point when parts of the board own a large number of shares and at the same time they are relatives from one family or various families, this may affect the financial disclosure practice of the firm. Furthermore, prior studies have mentioned that the family control phenomenon is still in existence nowadays. Nevertheless, it remains unclear to what extent a single corporate ownership structure will affect the effective control of other devices like the audit committee, independent non-executive directors, and CEO duality in shaping the financial disclosure of a firm. The pressure in a family-controlled company is that members of the controlling family would directly contribute to the daily management of the firm by appointing themselves as executives and board directors. Consequently, each family member that owns and votes its shares collectively, while, in theory, there are possible divergences between shareholder in controlling the company because of the desire of to extract confidential advantages through their participation in the company such as insider trading and others [28]. Similarly, the level of the proportion of family ownership in any firm may impact the disclosure practice of the corporation. Ref. [26] argued that in countries where some families are holding a majority share, there must be a small physical separation between those with family ownership and those that administer the capital. One can rationally argue, as shown from the studies above, that there exists a mixed association between FMB and disclosure level. Therefore, it is hypothesized that:

H_2: There is an association between the family member on the board and the level of VDS.

C. Government Ownership and VDS

There are several studies which have examined the association between GOWN and the extent of VDS in an emerging market, such as by Ref. [54] in Saudi Arabia and Ref. [48] and [29] in Singapore. Also, Ref. [54] has pointed out that currently there is a comparatively low level of VDS by a large number of companies in the Kingdom of Saudi Arabia which are government-owned or family-owned. Similarly, the findings of a study conducted by Ref. [48] utilizing Singaporean openly-recorded companies found that the level of disclosure is higher in a GLC than a non-GLC. The study discovered an immediate relationship between GOWN and the level of disclosure. In contrast, Ref. [31] found that administration ownership is not significant in indicating firms towards better transparency. Since the after-effects of these studies conflict with the impact of GOWN level on the level of VDS, it will be reconsidered in this research. Based on the research by Ref. [48], it is normal that a more elevated amount of GOWN will lead to more disclosure by companies in the annual reports following the method of measuring the legislature ownership earlier utilized by [48, 30]. This variable is communicated as the percentage of basic shares held by government data is gathered from the annual reports of the companies. One can logically argue, as demonstrated from the study explanations above, that there exists a positive relationship between GOWN and the degree of disclosure level. The following hypothesis is developed:

H_3: There is positive a relationship between government ownership and the extent of VDSs

VI. Data Collection and Sample Selection

This part describes the methods involved in the collection of data, such as sample selection and the procedures used. In this paper, the sample frame includes all the non-financial listed firms on the Saudi Stock Exchange (Tadawul). In 2009, there were 89 companies listed on the Saudi Stock Exchange, and the year 2009 was chosen because it provided the latest source of information available at the time the study was initially conducted. However, the financial companies are excluded because they are governed by the regulation of the Banking and Financial Institution Act of 1989 (BAFIA).

A. VDS Index

VDS has been gaining attention and is a major concern of the public and other stakeholders who require enterprises to disclose additional information to evaluate the sustainable development of the firm and operation performance of the administration [55]. The increase pressure on firms to be in charge to the society has guided to an increasing level of attention by regulatory bodies and accounting researchers. With the realization that VDS is important, firms will be encouraged to generate reliable information [37].

There is no agreed theory on the items' selection and number that must be involved in a disclosure index. Ref. [56] discusses that the measurement of accounting disclosure is a process that has several intrinsic limitations and subjectivity. To diminish the subjectivity, the literature recommends that the accompanying steps ought to be taken into consideration when developing the file [23]. The steps are as follows: a) concentrate on an audit of the earlier literature to draw a rundown of VDS items, b) Check that these items are not necessary by regulations and eliminate or exclude any compulsory items as well very significant, and c) search for the perspectives of academicians and professionals on the items.

Disclosure level can be measured in various differing ways. The universally used approach has been adopted, using a discretionary item score of "1" in the event that it is disclosed and "0" in the event that it is not disclosed. This method of scoring is known as the un-weighted approach based on the hypothesis that each item of

disclosure is similarly significant. An un-weighted approach has been utilized as a part of several past studies [57, 58, 12, 59, 60, 61]. Nevertheless, Ref. [1] and [62] utilize un-weighted disclosure lists.

Based on several studies, the final disclosure rundown ought to contain things like performance information, background information, and financial information about non-financial performance. Basic information incorporates issues that relate to business destinations and aggressive market items. Meanwhile, performance information includes things like horrible benefits, changes in sales, and the expenses of research and improvement. In addition, the non-financial information incorporates various staff, the training of human assets, and analysis of the items [63]. Accordingly, in this paper the degree of VDS was measured by utilizing a disclosure file which incorporated a total of 20 things disclosed in annual reports. The rundown comprises of general corporate information and financial diagrams. For each thing in the disclosure list, a firm gets a score of "1" on the off chance that it is voluntarily disclosed information on the things and "0" for otherwise. These items are classified according to the following categories:

Profile of the Organization

1. Countries of the organization's operations located
2. Nature of markets served.
3. Other relevant information on the scope and size of the organization's activities.
4. Social and environmental indicators or impacts.

Environmental and Financial Information

5. Financial summary for 5+ years
6. Assuring product quality and safety.
7. Financing for pollution control equipment and facilities.
8. Innovation and product development.
9. Environmental graphs and statistical data.

Information about Employees

10. Gender diversity of employees.
11. Line of business distribution of employees.
12. Education and training program of employees.
13. Equal opportunity policy statement.
14. Pay awards (reward program).
15. Disabled employees.

Community Information

16. Encouraging community initiatives /events /projects.
17. Encouraging education program.
18. Student recruitment/scholarship program.
19. Encouraging health program and medical research.
20. Encouraging government campaign.

The result of each component is added and then draws to determine the final outcome of each firm. The index is calculated for each publishing company as follows.

$$I_j = \frac{\sum_{t=1}^{n_j} X_{ij}}{n_j}$$

where:

n_j number if items expected for j^{th} firms n_j 89

X_{ij} 1 if i^{th} item for j^{th} firm is disclosed, 0 otherwise

So 0 j .

t year, Sources: [64].

VII. Data Analysis

The multiple regression method is utilized to test the association between the VDS in Saudi Arabia corporations and FMB, MOWN and GOWN. As a consequence of regression analysis is the equation that represents the better estimate of the variable of the independent variables that depend on it. This method is used when the independent variables associated with the dependent variable. The following is the estimated regression equation:

$$VDS = b_0 + b_1 MOWN + b_2 FMB + b_3 GOWN + b_5\ SIZE + b_6\ LEV + b7\ ROA + \varepsilon \quad (1)$$

where:

Variable	Description	*Measurement*
VDS	Voluntary Disclosure	*"Total number of points awarded for VDS, strategic, non-financial and financial information (Coding one "1" if the company disclose and Zero "0" otherwise). The disclosure index score is obtained by totalling all items with a score of "1" and expressed it as a percentage of total maximum score 20"*
MOWN	Managerial ownership	*"The proportion of ordinary shares held by the CEO and executive directors (dividing the directors shares on total shared issued and fully paid)"*
FMB	Family member on the board	*"Ratio of number of outstanding common shares held by Family member on the board to the number of total number of outstanding common shares."*
GOWN	Government ownership	*"Level of the government ownership, measured by the percentage of the shares owned by the government to the total outstanding shares."*
SIZE	Firm size	*"Log of Total assets."*
LEV	Leverage of company	*"This variable is measured by the ratio of total debt to the equity value of the firm."*
ROA	Return on assets	*"Profitability as measured by return on assets that is net income divided by sum assets."*

A. Descriptive

Descriptive analysis provides more descriptive information and enables the understanding and interpreting of the data better [63]. Descriptive statistics for the dependents and independent variables for measuring the extent of VDS is shown in Table I. The result shows that, the scores of VDS by the 89 companies range from 0 to 17. The highest items disclosed were by Saudi Basic Industry Corporation with 18 items. As shown in Table I, the mean score or the average of the items disclosed is 24.6629, reflecting that VDS is still low in Saudi Arabia companies in 2009.

TABLE I. Summary of Descriptive Statistics

	N	Min	Max	Mean	SD
VDS	89	5.00	85.00	24.6629	17.25145
MOWN	89	0.00	43.34	5.5546	10.81594
FMB	89	0.00	0.54	0.0712	0.10301
GOWN	89	0.00	83.60	10.0392	20.30084
SIZE	89	4.87	10.00	6.4676	0.99220
LVE	89	0.00	0.72	0.2970	0.17747
ROA	89	-19.32	30.60	4.9566	8.00112
Valid N(listwise)	89				

From the Table I which reports the descriptive statistics for the sample firms, it is noted that the average of voluntary disclosure extent VDS had a mean of 24.6629 with maximum and minimum sizes of 85 and 5 respectively. The mean of the proportion of independent MOWN denoted represents a mean of 5.5546 with maximum and minimum percent of 43.34 and 0.00 respectively, which indicates that a significant relationship with voluntary disclosure extent VDS. In addition, the results in Table I indicate that the average level of FMB is 0.0712 with minimum and maximum percent is 0.00 and 0.54 respectively, which mean that there is a significant positively relationship with voluntary disclosure extent VDS. However, the average level of GOWN is 10.0392 with minimum and maximum percent is 0.00 and 83.60 respectively. This positive value indicates that if there is an increase in the level of GOWN, VDS index will also increase.

Moreover, size (SIZE) had a mean of 6.4676 with minimum and maximum age at 4.87 and 10.00 respectively, indicating that the bigger firm is, the more it will voluntarily discloses its corporate information in its annual report. The Table also reveals that leverage (LEV) shows a mean 0.2970 with the minimum and maximum percentage at 0.00 and 0.72 respectively. In this regards, the mean percentage of return on assets (ROA) demonstrates a mean equals to 4.9566 with minimum and maximum percent at 19.32 and 30.60 respectively. These positive values indicate that when the Saudi Arabia companies voluntary disclose their corporate information more, ROA increase.

B. *Correlations*

Correlation analysis is the statistical instrument that can be utilized to explain the degree to which one variable is linearly associated to other (Levin & Rubin, 1998). It is the primary statistical technique employed to analyze the association between the independent and dependent variables. Before carrying out multiple regression analysis, a spearman correlations matrix was generated to assess the relationships between the independent variables, and this would help in formulating the prediction multiple model following which shows that while the value of correlation is 0, it indicates there is no association, whilst a correlation of ±1.0 indicates that there is an ideal negative or positive association. In order to interpret values between 0 no association and 1 perfect association. Furthermore, when r = ±0.1 to ±0.29, the relationship is small, when r = ±0.30 to ±0.49, the strength is medium while when r is ±0.50 and above, the strength is large. The following Table II will show the correlation between board of director's characteristics and cost of debts. The correlation results consist of two parts. The first is based on the result of the correlation among two entities: CG characteristics and VDS extent index. Also, included are the results of the correlation amongst the six 6 variables consisting of three 3 CG characteristics and three 3 control variables. Results of the correlations are demonstrated in Table II.

TABLE II. CORRELATIONS

		VDS	MOWN	FMB	GOW	SIZE	LVE	ROA
VDS	P.C	1	0.344**	0.473**	0.376**	0.468**	0.318**	0.314**
	Sig. (2-tailed)		0.001	0.000	0.000	0.000	0.002	0.003
	N	89	89	89	89	89	89	89
MOWN	P.C		1	0.191	-0.024	0.090	-0.059	0.183
	Sig. (2-tailed)			0.073	0.826	0.403	0.586	0.085
	N		89	89	89	89	89	89
FMB	P.C			1	0.368**	0.387**	0.093	0.131
	Sig. (2-tailed)				0.000	0.000	0.386	0.220
	N			89	89	89	89	89
GOWN	P.C				1	0.287**	0.113	0.201
	Sig. (2-tailed)					0.006	0.291	0.059
	N				89	89	89	89
SIZE	P.C					1	0.238*	0.148
	Sig. (2-tailed)						0.025	0.165
	N					89	89	89
LVE	P.C						1	0.039
	Sig. (2-tailed)							0.718
	N						89	89
ROA	P.C							1
	Sig. (2-tailed)							
	N							89

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
P.C Pearson Correlation

Table II, shows that among the three CG variables, there were only two which were positively significant correlated with the VDS extent index. These are MOWN at 0.344 (p=0.344) and GOWN at 0.376 (p=0.376). VDS extent index is positively significant correlated with FMB at 0.473 (p=-0.473). These negative values indicate that the extent of VDS decreases with increases in FMB and vice versa. Moreover, as shown in Table II above among the three control variables size (SIZE), leverage (LVE) and ROA, all were positively significant correlated to the VDS extent index at 0.468 (p=0.468), 0.318 (p=0.318) and 0.314 (p=0.314) respectively.

From the above discussion, it can be seen that four variables have a positive correlation with VDS extent

index, namely MOWN, GOWN, size (SIZE), leverage (LVE), and ROA. While, family members on the board (FMB) correlated negatively with VDS extent index.

C. Multiple Regression

Multiple regression is a statistical method used to examine the relationship between one dependent variable and one or more independent variables. Normality test and multicollinearity test is discussed in the next subsection as assumption of multiple regressions. The second subsection shows the regression model of this paper.

VIII. Assumption of Multiple Regressions

This section will discuss some basic assumption in undertaking any multiple regression analysis. The first section discusses the normality of the used by this paper and followed by the second section, the multicollinearity test.

A. Normality Test

There are two types of analyses that have been conducted by this paper to test the normality of data distribution. The first analysis is skewness and the second is kurtosis. Skewness analyses the normality of the data when the output values of this analyses is between ±3. Kurtosis analyses the normality of the data when the output values of this analyses is between ±10 (Kline, 1998). The following Table III shows these two analyses.

TABLE III. Normality Tests

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Err	Statistic	Std. Err
VDS	89	0.916	0.255	0.410	0.506
MOWN	89	2.185	0.255	4.083	0.506
FMB	89	1.995	0.255	5.163	0.506
GOWN	89	2.348	0.255	4.629	0.506
SIZE	89	1.311	0.255	2.114	0.506
LVE	89	0.466	0.255	-0.753	0.506
ROA	89	0.522	0.255	2.299	0.506
Valid N(listwise)	89				

Table III shows that all values under skewness analyses are located between the range of ±3. However, the values of kurtosis analyses are between ±10 including ownership. Hence the data of this paper is normal including ownership because it is normal by kurtosis analysis regardless of the other analysis.

B. Multicollinearity Test

Multicollinearity is used to check whether there is a high relationship between the independent variables. Multicollinearity shows how much each variable can impact the other variable [65]. The being of a common multicollinearity, i.e. a high correlation between independent variables in the regression is a serious problem because of the influence of each independent variable on the dependent variable becomes hard to identify. And the method used widely to detect and measure common multiple is the inflation factor difference (VIF) for each independent variable [36]. The Table below shows the 4.4 (VIF) for each independent variable.

TABLE IV. Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Err	Beta			Tolerance	VIF
	(Constant)	-15.793	9.411		-1.678	0.097		
	MOWN	0.429	0.131	0.269	3.278	0.002	0.915	1.093
	FMB	37.962	15.191	0.227	2.499	0.014	0.749	1.336
	GOWN	0.149	0.074	0.176	2.009	0.048	0.805	1.242
	SIZE	3.937	1.542	0.226	2.554	0.013	0.783	1.277
	LVE	22.653	7.890	0.233	2.871	0.005	0.935	1.070
	ROA	0.338	0.177	0.157	1.916	0.059	0.918	1.089
a. Dependent Variable: VDS								

In cases where the (VIF) is greater than 10, the independent variables are linked to a large extent, causing a problem of common multicollinearity [66]. Thus, the joint command was chosen to include multicollinearity diagnostic VIF in the performance of regression models. Results in Table IV above shows that it is not a common problem and multicollinearity scores (VIF) for each independent variable is less than 10.

C. Results from Regression Analyses

Multiple regressions analysis is a regression that generalizes the logistic model in the case of more than one independent variable [31]. The results of regressing nine independent variables on VDS index are presented in Tables V. The first Table "Model Summary" shows the nine independent variables entered into the regression model. When all the inter-correlations among the six independent variables are taken into account, the R square is 0.495. This is the total variance explained by the six independent variables meaning that 49.5 percent of the variance is explained on VDS index from the six independent variables. The remaining 50.5 percent of the impact to cost of debts is explained by other factors.

TABLE V. Summary of the Regressions Model

Model	R	R Square	Adjusted R^2	Std. Err of Estimate
1	0.703[a]	0.495	0.458	12.70147

a. Predictors: (Constant), ROA, LVE, FMB, MOWN, GOWN, SIZE

TABLE VI. THE COEFFICIENTS OF MULTIPLE REGRESSION ANALYSIS

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Err	Beta	t	Sig.
(Constant)	-15.793	9.411		-1.678	0.097
MOWN	0.429	0.131	0.269	3.278	0.002
FMB	37.962	15.191	0.227	2.499	0.014
GOWN	0.149	0.074	0.176	2.009	0.048
SIZE	3.937	1.542	0.226	2.554	0.013
LVE	22.653	7.890	0.233	2.871	0.005
ROA	0.338	0.177	0.157	1.916	0.059
a. Dependent Variable: VDS					

Based on the Table VI above, it is noted that the relationship between all the independent variables with the VDS level Saudi Arabia firms is significant. Therefore, firms that have combined the positions of MOWN and voluntary disclosure extent index VDS will increase by about 0.429. Whereas, increases of FMB and voluntary disclosure extent index VDS will increase by about 37.962 and if the percentage of GOWN increases by one percent then the voluntary disclosure extent index VDS will increase by 0.149. Whereas, the percentage of size (SIZE), leverage (LVE) and ROA increases by one percent then the voluntary disclosure extent index (VDS) will increase by 3.937, 22.653 and 0.338 respectively.

IX. DISCUSSION

From Table VI, the findings show a significant and positive association between the level of VDS and management ownership. This finding supports the first hypothesis that there is a relationship between MOWN and the level of VDS. Therefore, the first hypothesis, which states that there is an association between MOWN and the level of VDS, is supported. This positive value indicates that when there is an increase in VDS index, MOWN also increases and vice versa. The results have been mentioned by several researchers who report similar findings, Ref. [29, 46, 44, 45], who investigated the association between management ownership and voluntary company disclosure practices of Singapore and Hong Kong stock markets, China, Tunisia and the United States, respectively. They find that the extent of VDS is positively associated with levels of MOWN.

As shown in Table VI, there is a significant and positive association between the level of VDS and family members on the board. This result is consistent with the study by Ref. [67] who reported the consequences of an experimental investigation of the level of VDS by 38 listed banking corporations in India. The results also indicated that size and assets-in-place are significant and that other variables such as age, diversification, family members on the board, multiple exchange listings, and complexity of the business are insignificant in explaining the level of disclosure. However, this result is not consistent with the study by Ref. [28] whose results indicate that the existence of the proportion of FMB is negatively related to the level of VDS. The study supplies empirical evidence to regulators and policy makers in East Asia for implementing the two new boards of governance requirements on family control and an audit committee. Also, the results are inconsistent with the studies by Ref. [26] and [68], who investigated the association between family members on the board and voluntary corporate disclosure practices of companies in the Kingdom of Saudi Arabia owned by families or the government. These companies do not have much incentive to disclose information voluntarily. Therefore, the second hypothesis states that there is an association between the FMB and the level of VDS is supported. This negative value indicates that when there is a decrease in FMB, VDS index increases and vice versa.

The third hypothesis states that the level of GOWN is positively related to VDS index. This hypothesis is supported by the fact that the level of GOWN is significant and positively correlated with the level of VDS extent. This positive value indicates that if there is an increase in the level of GOWN, VDS index will also increase and vice versa. This result sheds new light on the effect of ownership on VDS since very few studies have provided such evidence. Ref. [48] investigated the influence of ownership structure and board composition on VDS of listed companies in the stock exchange of Singapore for the year 1995. The results of their study show that the extent of disclosure is higher in government-linked companies than non-government-linked firms. Moreover, Ref. [31] argued that previous studies on listed firms in Hong Kong, Malaysia, and Singapore through and before the 1997 financial crisis found an important association between ownership structure and the level of VDS in annual reports. Also, the results are not consistent with Ref. [54], who have explained the comparatively low level of VDS by the fact that a large ratio of companies in the Kingdom of Saudi Arabia are owned by the government or by families who have little interest in the disclosure of information on a voluntary basis.

Additionally, this paper considers corporation size as one of the main control variables since it is generally accepted that there is a positive relationship between the size of a corporation and the extent of VDS. As can be seen in Table VI, the findings show a significant and positive relationship between the level of VDS and firm size. This result matches that of Ref. [4] who finds that large companies voluntarily disclose more information.

Moreover, it is observed that there is a significant relationship between leverage and VDS practice. These findings, as presented in Table VI, indicate a positive and significant relationship between the ROA and the extent of VDS. These positive values indicate that when the ROA increases, the Saudi companies will increase voluntary disclose on their information. The results are inconsistent with a study by Ref. [69] who made a meta-analysis of 29 disclosure studies and found that size listing status and financial leverage have an important positive effect on disclosure extent. Ref. [4] also found that large companies and companies with high debt voluntarily disclose more information.

X. CONCLUSION

This paper reasonably achieved its objective to identify the effect of CG, specifically ownership structure, on the

VDS of listed companies on the Saudi stock market (TADAWUL). According to the descriptive analysis for the variables used in this paper and based on the sample that consisted of 89 Saudi listed companies, it is observed that Saudi companies do not show an adequate amount of voluntary disclosure, consistent with the OECD report that VDS in the Middle East exceeded the world's average until 2004. The descriptive analysis also shows that Saudi companies have a high percentage of block holder ownership that indicates high ownership structure. To understand the empirical results of this current study, the study has achieved its basic objective, which is to investigate the association between ownership CG and VDS extent index of the Saudi listed companies for the year 2009.

Based on the correlation analysis in Table IV, the results show that MOWN has a positive significant relationship with the extent of VDS in Saudi Arabian companies. Furthermore, the regression analysis indicates that MOWN is significantly related to the dependent variable, which is VDS. These results support the first hypothesis, which suggests that there is a significant association between MOWN and VDS. The results regarding the effect of MOWN on VDS in this paper are supported by previous studies [29], [46], [44] and [45]. They find that the extent of VDS is positively associated with levels of MOWN.

A few limitations can be enumerated and taken into consideration for further work. Instead of just the 20 items examined for VDS, new items in the disclosure index which might produce different results should be included. Furthermore, this paper is limited to annual reports in one year (2009). More satisfying results could be achieved if the study period is analysed for more than a year (penal data). However, this paper has ignored other independent variables such as religion, culture, or cost of equity, which may influence the level of VDS because the data of these variables is not available in Saudi Arabia. Future research can consider financial companies and unlisted companies as well and compare the VDS of these two sectors. Moreover, future studies may use penal data because this kind of data has advantages such as taking into account long-term effects.

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