

Research Article

Social and Relationship Capital Disclosure, Business Model and Firm Value: A Comparative Study of Listed Companies in Kenya and South Africa

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Abstract

The increased volatility and decline in firm value has been observed for companies listed in the Nairobi Securities exchange, Kenya as evidenced by substantial variations between market-to-book values. Company disclosures in integrated reports have long been linked with firm value. However, integration of non-financial information disclosures with financial information in a single report and its worth to the company and its distinctive stakeholders has not been accorded a proper assessment in the African context. While, preceding studies in other settings have shown mixed results, emphasis has been on establishing the total effects. This comparative study was intended to determine the effect of <IR> capitals disclosure on value of listed companies in Kenya and South Africa, focusing on the role of the business model. Specifically, the role of the business model on the relationship between social and relationship capital disclosure and value of listed companies was examined in this research comparing Kenya and south Africa from 2018 to 2020. Positivist research philosophy was applied, while the research design encompassed both exploratory and confirmatory. The study was grounded on the Legitimacy theory. Firm value in this study was proxied by Tobin's Q ratio, while, social and relationship capital was measured using an unweighted disclosure index. The study population contained 209 listed companies from which a sample of 137 was identified using purposeful sampling technique, comprising of 19 firms listed in the NSE, Kenya and 118 companies listed in the JSE, South Africa. Secondary data was collected from annual integrated reports and financial statements of the targeted firms. Preliminary analyses were conducted, such as descriptive statistics and correlation matrix. On the other hand, mediation effect was analysed by using stepwise regression method. The results depict that social and relationship capital disclosure has a statistically significant positive effect on firm values for both Kenya and South Africa. Further, business model mediates this relationship, with Kenyan listed firms manifesting inconsistent mediation while South African companies reported full/complete mediation. The study therefore recommends that social and relationship capital aspect of integrated reporting in Kenya should be made mandatory because this will improve shareholder understanding of financial statements and appropriate valuation of the firm.

Keywords

Integrated Reporting, Social and Relationship Capital, Corporate Disclosures, Business Model, Firm Value, Listed Firms

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1. Introduction

The International Integrated Reporting Council (IIRC) is a global body of regulators, investors, companies, standard-setting bodies, accountants, and non-governmental organizations that launched a pilot program regarding the issuance of integrated reports in the year 2013. This mode of reporting, considers both financial and non-financial performance in a single report. Following this initiative, South Africa mandated integrated reporting <IR> by corporations on 'apply or explain' basis in the King III Code of Governance Principles, affecting all Johannesburg Stock Exchange (JSE) listed companies. However, most countries including Kenya in the African continent still voluntarily prepare integrated reports and financial statements.

One form of non-financial information recommended for disclosure in the annual report and financial statements is social and relationship capital. Social and relationship capital comprise the institution's relationships amidst communities and the variant sorts of stakeholders, including shared norms, trust and reputation that can influence the institution's ongoing process of creating value [19]. According to IIRC [20], integrated reporting mainly focus on reporting information to providers of financial capital, however, entities are under obligation to provide information that responds to the threat of an entity's legitimacy caused by unethical practices by its employees or board, that may damage an entity's image [3]. The company's corporate image form a crucial element of the company's relational capital. As [34] put it, lack of stakeholder trust in the corporation will cause reputational damage that will harm its societal license to operate. By breaching the societal license to operate, the shareholders who are the main financial capital providers will be forced to dispose their shares resulting into a decrease in share prices. Consequently stockholders holding the remaining shares are affected in a similar way [6]. The value of the firm is maintained by good reputation, as bad reputation destroys it [12]. Despite the importance of social capital, its disclosure by organizations in their annual reports is low. While, relational capital disclosure is associated to value creation [13, 38]. However, [42] and [4] found value relevance of integrating social capital and financial capital in the annual report as insignificant.

This study compares the effect of social and relationship capital disclosure on value of listed companies in Kenya and south Africa considering the business model as mediator.

1.1. Objectives of the Study

The overall objective of this study was to assess the effect of integrated reporting capitals disclosure on firm value, focusing on the role of the business model.

1.2. Specific Objectives

1. To compare the effect of social and relationship capital disclosure on value of listed companies between Kenya

and South Africa.

2. To assess the role of business model on the relationship between social and relationship capital disclosure and value of listed companies when comparing Kenya and South Africa.

1.3. Research Hypothesis

1. H_{01} : Social and relationship capital disclosure has no statistically significant effect on value of listed companies between Kenya and South Africa.
2. H_{02} : Business model has no statistically significant mediating effect on the relationship between social and relationship capital disclosure and value of listed companies when comparing Kenya and South Africa.

2. Theoretical Review

2.1. Legitimacy Theory

The propounder of the legitimacy theory is Suchman who started it in 1995 and claimed that the existence of an entity is pegged on its value that is perceived to match with that of the larger society in which it undertakes its operations. According to Suchman, as supported by Linthicum *et al.* [27] legitimacy theory postulates that an organization's operations thrive within a system that is socially constructed, defined by norms and values meant to maintain organizational legitimacy.

The theory assumes a social concurrence between the entity and society that it ought to report to, as the organization exerts influence on the society in which it operates and the organization gets influenced socially by the society. Thus, the organizational legitimacy concept, grants an organization the opportunity to undertake its operations in a contract with the interests of the society. Corporations therefore, pursue to function within the aspirations and norms of the respective communities where they are domiciled. The reasoning behind the legitimacy theory is that companies survival is dependent upon them operating within the framework of the society's norms and values [8]. The theory then explains the decision taken by firms to effectively disclose non- financial information so as to gain legitimacy [7]. Accordingly, Greiling and Grub [14] on this aspect opine that organizations must be accountable for their actions. The theory's criticism lies on the assumption that organizations perceive the legitimacy status to be under a threat. For this reason, whatever that is disclosed in annual reports and financial statements is all about the perception of the management other than being accountable to the stakeholders and is meant to advance their self-interest or purposefully for survival [8].

The relevance of this theory in this study is on the premise that the annual report has been spotted as a salient source of legitimization. This theory therefore, makes the foundation for fifth, sixth and seventh objectives to inform on social and relationship capital and environmental capital disclosure

respectively, since the concept of legitimacy as discussed emphasize the provision of an explanation of the disclosures with regard to the social and environmental behavior of organizations.

2.2. Empirical Review

Kalunda [26] conducted an exploratory study on social reports of corporations quoted on Nairobi securities exchange, Kenya. Respectively, the article was set to establish the form of social reports exhibited by Kenyan listed firms, the extent of social reporting, any availability of guidelines that the listed firms follow when preparing and presenting social reports and ensuring quality of such reports. Using exploratory research design, the study targeted a population of 42 listed firms. The final sample comprised of 21 firms from where primary and secondary data was compiled and analyzed by employing descriptive statistics. From the study there is an indication of availability of social reports though in small portions mentioned under the chairman's statement or directors statement or in the section on the annual report discussing corporate governance matters. Few companies prepared the social reports separately. There exist lack of full disclosure as the information presented in the social reports is incomplete and insufficient as it puts more emphasis on positive social activities while negative social impacts are ignored. No guidelines were found on the preparation of social reports and their presentation, therefore voluntary and based on the policy of the board in regard to environmental and social responsibilities. The social reports are not externally audited and attested, making their quality low.

Ngari [32] study on pharmaceutical firms in Kenya inspected on how relational capital influenced performance of businesses. The paper specifically attempted to ascertain the extent of influence exerted by licensing and agreements, strategic alliances, customer and supplier relationships and knowledge of the customer on the performance of the business among the Kenyan pharmaceutical companies. Grounded on the resource-based view theory, the paper employed explanatory, quantitative and descriptive research designs and 89 pharmaceutical firms registered in the directory of manufacturers formed the research population. Using purposeful sampling 31 pharmaceutical firms licensed under the pharmacy and poisons board were identified for the accomplishment of this research. To accumulate primary data a structured questionnaire was put to use and data analysis accomplished by descriptive statistics and multiple regression approaches. Following the research findings, the aspects of strategic alliance, licensing and agreements, the relationship with customers and supplies and customer knowledge positively influenced performance of the business of pharmaceutical companies in Kenya. The study however was informed from only the pharmaceutical sector and only 3 aspects of relational capital were examined making the study results not generalizable to other sectors.

Gogan *et al.* [15] studied on the effect of relational social capital reporting on competitiveness of the organization using a case of Romanian SME's. The research considered establishing the association of knowing stakeholders and organizational competitiveness of SME's, examining the impact of the relationship with stakeholders on organizational competitiveness and determining strategic collaboration's effect on organizational competitiveness. Using case study viewpoint, 150 companies formed the study sample from which data was gathered by involving of a closed ended questionnaire. Multiple linear regression and Pearson correlation served as the main analytical methods for the purpose of testing the associations between the subcomponents of relational capital and organizational competitiveness. The study results witnessed a close relationship of relational capital and SME's competitiveness as a consequence of the subcomponents (knowing stakeholders, relationship with stakeholders and strategic collaboration) being positively associated with organizational competitiveness.

Munjuri *et al.* [28] studied on the aspects of human capital, social capital and performance of commercial banks and insurance companies in Kenya. The study was specifically set to evaluate the moderating and mediating object of social capital on the effect of human capital on performance of the firm. On the persuasion of human capital theory and social capital theory, the study put into use descriptive cross-sectional research design targeting a population of 88 companies comprising 45 insurance companies and 43 commercial that were all surveyed. Data was sourced from primary and secondary sources, with secondary data compiled from the financial statements of the organizations surveyed. The relationship hypothesized was evaluated using Baron and Kenny [2] approach and further, the data analyzed using descriptive statistics. From the study findings, the impact of human capital on firm performance is not significantly moderated by social capital. However, human capital effect on firm performance is mediated by social capital.

Haryono and Iskandar [16] studied on corporate social capital reporting and firm value aiming at analyzing and explaining the association of social performance of a corporation and firm value. On the basis of the social contracting theory, stakeholder, legitimacy, and signaling theories, the study employed a survey design using a population of 44 companies from the mining sector quoted on the Indonesia stock exchange. Utilizing a sample of 14 companies purposefully selected from the stated population, secondary data was obtained from the annual reports of the selected firms and analyzed through structural equation models. The study observance indicate that corporate social performance impact on firm value insignificantly. Besides, the social performance of a corporation positively and significantly affected a corporation's financial performance, with corporate financial performance positively and significantly affecting firm value. Further, corporate social performance had positively and significantly affected firm value through the corporate finan-

cial performance. The effect of a corporation's social performance on firm risk was negative and significant, while, firm risk negatively and significantly influenced firm value. However, corporate social performance insignificantly impacted firm value through firm risk. The study's weakness is on reliance of a small sample size limited to the mining industry comprising of 14 companies that may not support generalization of findings. Further, very few indicators of latent variables were noticed as either 1 or 2 indicators and this affected model fit as other suitable indicators might have been omitted.

Miocevic [30] interrogated the key exporter- importer relationships as part of relational capital and its antecedents. The article set to determine the impact of importer reliance and relational bonding norms on relational capital and whether formal or informal institutional distance moderate this relationship in Croatia. Anchoring the paper on institutional theory, the population consisted 655 active small and medium exporters extracted from a data set of the association exporters of Croatia. 122 exporters were selected from the manufacturing industry by use of a questionnaire that was analyzed by the application of structural equation modeling for confirmatory factor analysis, and ordinary least squares used for hypothesis testing. From the study findings importer reliance and relational bonding standard agreements were discovered to influence developments in relational capital and that institutional distance dimensions whether formal or informal show a significant moderating effect on relational norms leading to relational capital improvement. However, the study focused on SME's in Croatia, as such the interpretation of the results should be done cautionary because they may vary on the basis of industry and country context. Further, the study failed to account for the evolutionary nature of business relationships and the fact that to develop relational capital takes time calling for a longitudinal investigation.

Bhuyan *et al.* [5], empirically examined how the corporate social disclosure affect performance of the firm in Bangladesian context. The paper objectively investigated the association of enterprise social disclosure and performance of the firm measured by asset returns, market capitalization and Tobin's Q. On the foundation of legitimacy and signaling theories, the study considered a sample of top 200 companies quoted on the Dhaka stock exchange. Using data obtained from annual reports from the sampled companies covering the period 2011-2013, and putting into use content analysis and regression methods for data analysis. The aftereffect confirmed a significant relation between corporate social disclosure and firm performance. The weakness of the research is hinged on the fact that the social disclosure is confined within 30 items for performing content analysis and that the sample is limited to only 134 top firms in Dhaka stock exchange signaling inapplicability of the results to all firms.

Datta and De [10] article judged the purpose of relational capital on the performance of the firm by analyzing

Bell-metal enterprises based in Nadia district West Bangal rural region in India. The paper specifically sought to address how the subcomponents of relational capital encompassing customer relations, input supplier relations, technological knowledge sharing, external groups bonding, informal relations with firms in the cluster, location, reputation, trust and good faith relationship and their association with firm performance. The target population comprised of companies in the bell-metal category operating in the area from which a sample of 60 firms was determined using cluster sampling. Primary data was gathered from the managers of the recognized firms by use of questionnaires that were pre-structured and the variables of interest analyzed using the principal component method and regression analysis. Overall, the study results uncovered a positive and significant bond between relational capital and the of competitive performance of the firms operating in the studied sector as evidenced through the positive relation with its subcomponents. However, due to the small sample and drawing data from one region the study findings may not be sufficiently interpreted to be representative for other regions and states as regional differences may yield different results.

Casonato *et al.* [6], researched on social capital and integrated reporting in particular on how legitimacy is lost when reporting talk is unsupported by actions using a case of CBD bank in Australia. The research aimed at exploring the impact of integrated reporting on relational capital and its role on repairing organizational reputation. Precisely, the investigation sought to gauge if reported information in the integrated reports of firms consistently mirrored other information at the disposal of the investors from other media. Using a case study approach of the CBD bank that has been rocked by major scandals during the period 2004-2013, the study was based on impression management theory, ex-post facto analysis was used to investigate the consistency of information accommodated in CBD bank's integrated report with other publicly available information accessible by investors. It is established from the study that a gap exists between integrated reporting information disclosure by CBD and what information is availed publicly by other media. No congruent alignment of actions and CBD's talk was found and this information failure has caused a drop in trust in CBD by investors. It is presumed that the banks integrated report is a means by which management discloses or withholds information with the intention of protecting their own interest and at their own discretion. The conclusion arrived at from the findings is a proposal to co-opt integrated reporting as a way of improving legitimacy through trust, reputation and social capital by putting in place appropriate strategies' for impression management.

Gitahi *et al.* [13] on investigating the influence of disclosing corporations social responsiveness on value relevance of information related to accounting, base their study on annual reports of quoted banks in Kenya. The study tasked to ascertain whether corporate social responsibility disclosures in-

fluenced investment decisions. On the bedrock of signaling theory, agency theory and capital need theory, the investigation considered a survey research design. The focus population for the research composed of all the listed banks. A survey questionnaire administered to financial analysts was used to collect primary data, while, secondary data was sourced from annual reports of the banks for covering years 2010-2015 using a tabular checklist. Content analysis, descriptive statistics, correlation and regression methods were used for data analysis. The findings indicate a realization of positive perception of investors as a result of corporate social responsibility disclosures, thus, improving the value relevance of accounting information contained in the annual reports. Further, the link between corporate social responsibility disclosure and average market prices per share of quoted companies in Kenya was significant and positive.

Rhoda *et al.* [37], using a sample of Kenyan public Universities assessed the influence of relational capital initiatives (collaborative business intelligence, relationship with customers and relationship with partners) on the value creation process. Mixed methods of research design incorporating both quantitative and qualitative methods, considering all the deans and chairmen of departments of six public universities as the focus population from whom primary data was sourced using questionnaires. Correlational and regression methods as descriptive and inferential statistics respectively were the means by which data was analyzed. The study verdict provide prove that relational capital has positively and significantly associated with value creation. However, the study findings can only be limited to knowledge based organizations.

Schmid and Sender [43], studied on how social capital influence performance in family firms as moderated by nepotism. The study aimed at establishing whether organization social capital is positively interconnected with performance and whether nepotism moderates this relationship. Employing survey research design a sample of 2,355 firms was designated from a total population of 597,000 family firms using a self-identification approach, which ended in a final sample of 77 firms. Data collected using e-mailed or post mailed questionnaires was analyzed by the use of ordinary least squares method. From the study results it is revealed that nepotism is a critical element in the determination of the extent to which family firms could profit from organization social capital.

Rotimi *et al.* [38] motivated by the demand of stakeholders more information disclosure for improved stakeholder relationships, examined how <IR> practices consisting content elements (external environment, governance, BM, risks and opportunities, strategy and resource allocation, performance, outlook and basis of presentation) can help better such association in manufacturing firms quoted on the Nigerian stock exchange. Hinging the paper on the stakeholder and legitimacy theories, the paper employed survey research design and on the basis of event criterion a sample of 675 respondents

was identified randomly from departments that applied <IR> information most. Using a questionnaire data was amassed from the sample respondents and analyzed with the support of descriptive and inferential statistics. The results recorded an improved stakeholder relationship of quoted Nigerian manufacturing companies.

Nguyen and Ha [33] study focused on social capital and firm performance of Vietnamese manufacturing and service firms. The paper specifically analyzed the structural, relational and cognitive dimensions of social capital on firm performance. The paper was grounded on the social capital and social exchange theories. A cross-sectional research design was employed and primary data collected from a 153 listed companies that were selected using snowball and convenience sampling methods. The data analysis techniques employed entailed both exploratory and confirmatory factor analysis and evaluation of associations done using structural equation modeling. The study findings reveal a positive relationship between the social capital dimensions and firm performance and that knowledge transfer and innovation variables act as mediators.

Iorun *et al.* [21] carried out an examination on the relationship between relational capital disclosure and Market value of selected Nigerian listed companies. Particularly the study examined the relationship between customer services, distribution channels and strategic partnerships disclosure and market value. Stemming the study on the signaling theory, ex-post facto research design was applied. All the 151 companies form 11 sectors listed in the exchange group of Nigeria as at December 2022 formed the research population. 32 companies were sampled on the ground that; the company was incorporated and listed in the Nigerian stock exchange before 2013, audited annual report published by the Nigerian stock exchange for the period 2013-2022 and the company contained relevant disclosure on relational capital components in the annual reports. Secondary data obtained was described by way of descriptive statistics, and analysed using correlation and regression analysis. The study results show customer service disclosure had a statistically insignificant effect on Tobin's Q. On the other hand, disclosures in relation to distribution channels positively and significantly influenced firm value. Furthermore, the association between strategic partnership disclosure and firm value was positive and significant.

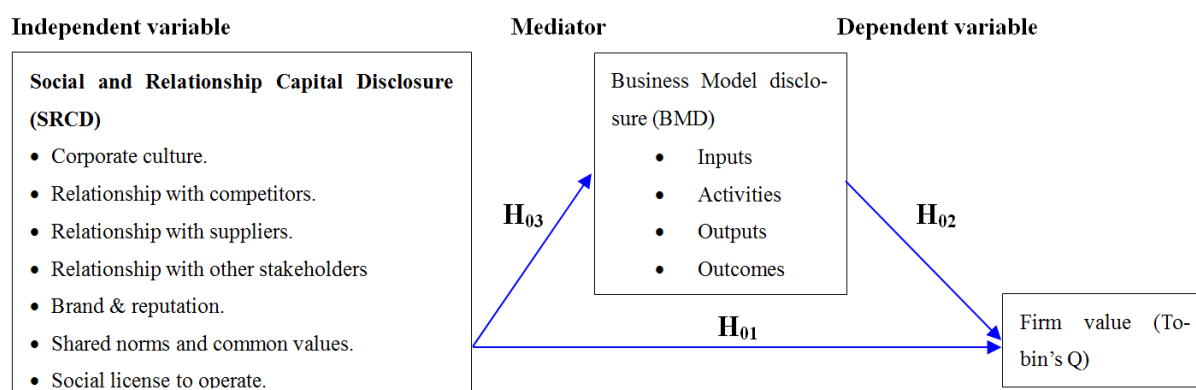
2.3. Summary of Literature Gaps

On the basis of the reviewed studies, mixed results have been affirmed. Such results can be reasonably attributed to the application of different methodologies, differences in the unit of analysis, differences in adopted reporting frameworks, variation in sample sizes, industry type and country specific factors. Most studies have considered the direct effects of social and relationship capital disclosure and firm value [32, 33, 21]. No study was available considering the mechanism

through which this direct relationship is accomplished. This has motivated the researcher to carry out a comparative study from a developing country context, Kenya and South Africa with the aim of providing additional evidence on the role

played by the business model on the association between social and relationship capital disclosure and value of listed companies in the <IR> context.

2.4. Conceptual Framework



Source: Researcher, 2024

Figure 1. Conceptual model.

3. Materials and Methods

3.1. Population, Sample and Data Collecting

The study target population was made up of 209 firms comprising of 64 and 145 firms hailing from Kenya and South Africa respectively by December, 2020. The companies were categorized using the industry sector classification criteria prescribed by the Global Industry Classification Standard (GICS) that applies to companies globally. The GICS classifies industries into 11 sectors namely; communication services, consumer discretionary, consumer staples, energy, financials, health care, industrials, information technology, materials, real estate and utilities. This classification was adopted for this inquiry as presented in Table 1 below;

Table 1. Target Population by Industry Sector.

Industry sector	Kenya	South Africa	Total
Communication services	4	5	9
Consumer discretionary	7	22	29
Consumer staples	11	10	21
Energy	1	4	5
Financials	23	33	56

Industry sector	Kenya	South Africa	Total
Health care	-	4	4
Industrials	10	15	25
Information technology	-	10	10
Materials	4	32	36
Real estate investments	1	9	10
Utilities	3	1	4
Total	64	145	209

Source: Researcher, 2024

3.1.1. Sample and Sampling Design

Since the focus of the study was on quoted companies in the Nairobi and Johannesburg securities exchanges, that had adopted <IR>, non-probability sampling design was utilized to select the desired sample. Purposeful sampling using judgmental method was applied to identify the sample for this study for both the Kenyan and South African case. According to Patton [35] purposeful sampling as a method is applied in research for the purpose of identification and selection of cases that are rich in certain required information for optimal use of scarce resources. On this basis the sample comprised of listed firms from the various industry sectors that had adopted integrated reporting for Kenya, and for South Africa firms contained in the IIRC's website, <IR> examples database, as <IR> reporters and listed on the JSE

by December, 2020 were considered. Prior studies that have applied the same technique include [29, 44, 23, 47].

3.1.2. Sample Frame

The sampling frame comprised of 209 firms derived from Kenya and South Africa by the end of December 2020.

3.1.3. Sampling Size

Listed firms that were better placed in providing the requisite information on integrated reporting capitals and business model disclosures were encompassed in the sample. Thus, the sample size for this study was 137 listed firms. The sample size was determined by applying the formula below as advanced by Yamane [46].

$$n = N / [1 + N (e)^2] \quad (1)$$

Where; n = Sample Size and N = Population size

Thus, assuming 95% level of confidence the study sample size of 137 firms will be determined as;

$$n = N / [1 + N (e)^2] = 209 / [1 + 209(0.05)^2] = 137 \text{ firms}$$

This comprised of 19 and 118 listed firms from Kenya and South Africa respectively across the various industry sectors as presented in Table 2 below;

Table 2. List of sampled <IR> companies for Kenya and South Africa.

Industry sector	Kenya	South Africa	Total
Communication services	-	3	3
Consumer discretionary	1	16	17
Consumer staples	2	10	12
Energy	-	3	3
Financials	14	24	38
Health care	-	4	4
Industrials	1	9	10
Information technology	-	9	9
Materials	-	31	31
Real estate investments	-	9	9
Utilities	1	-	1
Total	19	118	137

Source: Researcher, 2024

3.1.4. Sampling Procedure

For the Kenyan case, the study employed criterion sam-

pling strategy in which listed firms that had embraced integrated reporting were selected for the study. Accordingly, this procedure allows advance determination of the criteria that differentiates the participants from others. This procedure was appropriate for this study as the predetermined criteria for inclusion in the sample relate to integrated reporting which is voluntary in Kenya. For South African case where integrated reporting is compulsory, firms that had adopted integrated reporting and whose reports were contained in the IIRC's website <IR> examples database, as <IR> reporters and listed on the JSE qualified for inclusion in the sample. This sampling strategy has been employed in prior studies [1].

3.2. Data Collection

Secondary sources were the main source of data for this study. Published annual report and financial statements or integrated report and financial statements were obtained from the listed companies' websites or hard copies.

3.2.1. Instrumentation

The study employed a checklist as the main data collection instrument that was structured around the variables of interest (social and relationship capital disclosure and business model) and the specific items of disclosures required in the published integrated reports and financial statements. The <IR> capital (social and relationship) and business model aspects were subdivided into disclosure indicators based on the IIRC's [19], framework consisting of 42 items of disclosure in relation to social and relationship capital and business model categories; social and relational capital (7 items), BM identification (2 items), BM inputs (8 items), BM business activities (12 items), BM outputs (3 items) and BM outcomes (10 items). A 4 point likert scale scoring method was employed to provide a reflection of the extent of disclosure of the integrated reporting capitals and business model aspects in the integrated reports of the listed companies. A score of 0 indicates non-disclosure of an item, meaning no information is provided on the aspect, while, a score of 1 indicates limited disclosure, meaning the item is only mentioned in the report, a score of 2 indicates a mention of the aspect with brief explanation of specific information, and a score of 3 as a reflection of full disclosure involving detailed discussions incorporating the actions of the company and quantification of the aspect in monetary terms.

It is a useful tool for evaluating the required information from the published integrated reports and financial statements. The same instrument has been employed by prior studies for the purpose of data collection [9, 39, 48].

3.2.2. Data Collection Procedures

The research used secondary data that was compiled from audited integrated report and financial statements of the quoted companies covering the period 2018-2020. The

three-year period is consistent with previous research [17, 41, 39, 45] to test after implementation effects. This period was chosen as it represents a time when the adoption of <IR> has started to gain momentum in various jurisdictions and most Kenyan listed firms started preparing integrated reports from the year 2018. In cases where relevant data missed from the set of audited accounts, NSE handbook was used since it contains summaries of past financial information of the listed Kenyan companies. The information on company integrated reports contained in IIRC website on <IR> examples database, <IR> reporters for the case of JSE listed firms was used for this study.

Tobin's Q a market based performance measure was used as a proxy for firm value, computed as market value of equity plus book value of total liabilities divided by book value of total assets. Where, Market value of equity (market capitalization = market price per share * shares outstanding at the balance sheet date) was determined by establishing the market value per share taken as an average value 5 months after the financial year end multiplied by shares outstanding at the financial position date. The 5 month period is within the period applied by prior studies which considered the impact of disclosures on market value at 3 and 6 months after the fiscal year respectively, to allow for the time-lag effect between disclosure and use of information by investors. This is for assurance that the investors have assessed the published information as organizations' are legally obligated to publish their financial statement reports 3 months after financial year end. This information was extracted from daily stock trading records of NSE and JSE websites.

3.3. Data Analysis Methods

3.3.1. Descriptive Statistics

The profile of the various companies that were utilized in the study was presented using frequency tables. The actual disclosure of the various items as categorized on the checklist was summarized using the mean in order to establish the average disclosure level under each category and overall for the 3 years. While, standard deviations were employed to inform on the variability of the data points in the data set. Minimum and maximum scores were also used. The descriptive analysis provided the degree or extent to which <IR> practices relating to social and relationship capital and business model had been adopted in corporate reports. This methodology has been employed by previous researchers involved in similar studies.

The disclosure level for the respective variables was computed according to the following un-weighted disclosure index.

$$DI_{IR} = \frac{\sum d_i \text{effectively disclosed}}{n} \quad (2)$$

Where;

DI_{IR} = Disclosure index of respective <IR> variable

d_i = Disclosure score for various indicators of disclosure in respect to <IR> variable

n = Number of indicators that characterize the variable of disclosure based on the IIRC's (2013) framework and CIMA; IFAC; PwC (2013) business model background paper for <IR>

Same method has been applied in prior studies [5, 17, 40] to establish disclosure index for corporate social disclosure, human resource accounting disclosure and business model disclosure respectively. The range of disclosure index values were between 0 and 3. An index value close to 3 will suggest a higher level of disclosure and compliance with the international <IR> framework in corporate reporting, while a value close to 0 will mean the opposite. The average disclosure indices computed on the various variables were then linked to firm value measured by Tobin's Q.

3.3.2. Inferential Statistics

Pearson's correlation coefficient was used to assess the association among integrated reporting capitals disclosure, business model and firm value measured by Tobin's Q. The effect-size of the correlation coefficients was assessed using Cohen's q and Fisher's r to Z transformation methods.

To test for the direct relationship of the effect of <IR> capital disclosure of social and relationship on firm value as hypothesized in H_{01} - H_{02} , simple and multiple linear regression analysis was conducted. To assess the effect-size of regression models Cohen's f^2 was applied.

Further, mediation analysis as hypothesized was conducted using stepwise regression analysis proposed by Judd and Kenny [22] as presented in equations (3)-(5) below;

$$Y = i_1 + cX + \varepsilon_1 \quad (3)$$

$$M = i_2 + aX + \varepsilon_2 \quad (4)$$

$$Y = i_3 + c^1X + bM + \varepsilon_3 \quad (5)$$

Where

In equation (3), 'c' represents the total (unmediated) effect of the exposure variable X on the outcome variable Y .

In equation (4), 'a' represents the effect of the exposure variable X on the mediator variable M .

In equation (5), 'c¹' represents the direct effect of the exposure variable X on the outcome variable Y , and b represents the effect of the mediator variable M on the outcome variable Y .

In all three equations, i represents the intercept and ε represents the error term.

3.3.3. Mediation Analysis Steps

The existence of mediation effect was tested by sequentially verifying four conditions as proposed by Baron & Kenny [2]. for the determination of the total effect and indi-

rect effects.

Step 1: Testing for the total (unmediated) effect 'c'

To satisfy condition 1 of mediation analysis in which independent variables (social and relationship capital disclosure) and the dependent variable (firm value) must be related in the absence of the mediator. This established the regression weight 'c' an estimation of the total effect.

This was verified using equation (6) linear regression model Hypothesized as;

$$Y = i + cX + e \quad (6)$$

Where;

i = constant term

c = regression coefficient relating X to Y

e = random errors (the part of Y that isn't explained by X)

To test for the total effect 'c' for H_{01} the following models were used.

$$FV_{it} = i_1 + c_1 SRCD_{it} + e_1 \quad (7)$$

Where;

FV_{it} is the dependent variable Firm value measured by Tobin's Q , i is the Intercept, c is the Coefficient of the independent variables comprising, $SRCD_{it}$ (Social and relationship capital) and e_{it} is the error term.

To test for the direct and indirect effects that are critical for determining mediation, Baron and Kenny [2] proposed satisfaction of two conditions;

Step 2: Testing for the indirect path 'a'

To satisfy condition 2 of mediation analysis in which independent variables (social and relationship capital) and mediator variable (business model) must be related, the study used the following linear regression analysis of M over X to test for the indirect path 'a', stated as;

$$M = i_2 + aX + e_2 \quad (8)$$

Where;

i = constant term

a = regression coefficient relating X to M

e = random errors (the part of M that isn't explained by X)

Step 3: Testing for the indirect effect path 'b' and direct effect 'c'

To satisfy condition 3 of mediation analysis in which the mediating variable (Business model) and the dependent variable (Firm Value) must be related on controlling the effect of X , the study employed multiple linear regression analysis of Y over X and M to determine the indirect effect path 'b' and direct effect 'c'.

Thus;

$$Y = i_3 + c^1X + bM + e_3 \quad (9)$$

Where;

i = constant term

c^1 = regression coefficient relating X to Y on controlling for M .

b = regression coefficient relating M to Y on controlling for X .

e = random errors (the part of Y that isn't explained by X and M)

Step 4: Determining the existence and nature of mediation

Condition 4 of mediation analysis provide that the relationship between the independent variable (social and relationship capital) and dependent variable (firm value) must be reduced significantly when controlling for the effect of the mediating variable (business model).

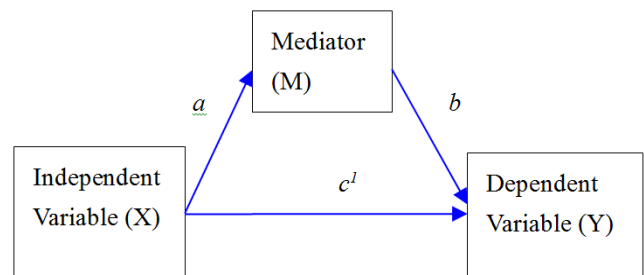
That is, the coefficient c^1 (direct effect) must be smaller than coefficient c (total effect). Baron & Kenny [2]. point out explicitly that "the strongest mediation demonstration is when c^1 is zero". For this purpose the unstandardized beta coefficients c^1 (direct effect) and c (total effect) were compared to establish existence of mediation.

Step 2 and 3 were then conducted in order to establish the direct effect 'c' and indirect effects 'a' and 'b' using the following models to test hypothesis H_{02} .

$$BMD_{it} = i_2 + a_1 SRCD_{it} + e_2 \quad (10)$$

$$FV_{it} = i_3 + c^1 SRCD_{it} + b_1 BMD_{it} + e_3 \quad (11)$$

On the basis of the above relationships Baron and Kenny [2] specified a statistical mediation path diagram as presented in Figure 2 below, which satisfies the stepwise regression process to test mediation effect.



Source: Adopted from Baron and Kenny (1986)

Figure 2. Mediation analysis model.

Accordingly, the data was to be in harmony with total mediation hypothesis if the relationship between independent variable (social and relationship capitals) and dependent variable (firm value) completely disappears when controlling for the mediator (the coefficient 'c' is zero), while partial mediation will be claimed when the association between independent variables (social and relationship capitals) and dependent variable (firm value) is significantly reduced when mediator is controlled but does not completely disappear (i.e. when the absolute value of coefficient 'c' is small than 'c' and greater than zero at the same time). The direct

effect is determined as $c - ab = c^I$ (the beta coefficients of 'c' total effect already established in equation 1 minus the product of coefficient 'a' and 'b' established in equations 2 & 3).

However, Kenny *et al* [25] post an argument that not all the conditions must be satisfied in order to claim mediation. Accordingly, MacKinnon *et al* [31] referred to this context as inconsistent mediation. Inconsistent mediation is said to occur if the coefficient of the direct effect 'c' were opposite in sign to indirect effects 'ab'. In this scenario the mediator is considered as a suppressor variable. This explains why some conditions may fail to be met yet mediation is still reported. Further, Kenny *et al* [24], expound that with inconsistent mediation, sometimes the direct effect 'c' is even larger than the total effect 'c' and the mediated effect 'ab' may explain more than 100% of the total effect.

Further, to assess the variance accounted for in the mediation models identified above the study adopted R^2 effect-size measures of mediation analysis proposed by Fairchild *et al.* [11] stated as;

$$R^2_{\text{med}} = r^2_{YM} - (R^2_{Y, MX} - r^2_{YX}) \quad (12)$$

Where;

R^2_{med} = Portion of variance explained by the mediated effect

r^2_{MY} = The squared correlation of Y and M

r^2_{XY} = The squared correlation of Y and X

$R^2_{Y, MX}$ = The squared multiple correlation of Y jointly explained by M and X

This measure was considered appropriate to complement other regularly applied effect-size measures such as proportion mediated and mediation ratio that are considered unstable in cases where several parameters are combined and are predominantly biased to small sample sizes as the methods tend to perform better with samples > 500. While, partial r^2 and standardized regression coefficients focus on the relation between two variables in the mediation model. R^2 effect-size measures offers a means to carry out an evaluation of both component paths and the overall mediated effect in mediation models [11].

3.3.4. Bootstrapping

Using the sampling distribution, the total effect and indirect effect between constructs was estimated by taking a sample size n from the dataset. A number of resampling taken between 1000 and 5000 times [36]. The mean and standard error was computed for every sample that led to the de-

velopment of a resampling distribution for the estimates. At the 95% confidence interval, values for the total effects, direct effects and indirect effects were tabulated. Thus, the bootstrapping results were then compared with the conventional mediation test results for confirmation. The results most often are expected to be the same. However, if a variation occurs, then bootstrapping results prevail. Process Macro procedure for SPSS Version 4.2 Model 4 developed by Hayes [18] was utilized in SPSS version 21.0.

3.3.5. Mediation Testing Assumptions

In testing for mediation it is assumed that; the Mediator lies on the causal pathway between the exposure and the outcome such that the predictor causes the mediator and the mediator causes the outcome. There is a possibility to manipulate the exposure and mediator theoretically, as a minimal condition for claiming causal mediation. There should be no confounding if causal mediation is to be claimed in the sense that there is no third variable influencing the independent and mediator, independent and outcome and mediator and outcome variables relationships. No interaction is expected between variables. Usual model assumptions for linear or logistic regression apply.

4. Results

The researcher conducted a single mediator analysis with panel data set (n = 54, and n = 318) for Kenya, NSE listed firms and South Africa, JSE listed firms respectively. The data was analysed as discussed below.

4.1. Descriptive Statistics

Descriptive statistics was used to analyze the data by way of depicting or describing it without any intention of making either conclusions or generalizations from the results. In this part, the indicators of each variable processed were described in terms of; minimum, maximum, mean and standard deviation.

4.1.1. Descriptive Statistics of Variable Indicators

Descriptive statistics was conducted on the various indicators related to social and relationship capital disclosure across firms listed in the NSE and JSE. The results are as presented in Table 3 below.

Table 3. Descriptive statistics of social and relationship capital disclosure indicators.

COUNTRY		N	Min.	Max.	Mean	Std. Dev.
Kenya	E1-Corporate culture	54	.00	3.00	1.6481	.73092
	E2-Relationship with competitors	54	.00	3.00	1.4259	.66167

COUNTRY		N	Min.	Max.	Mean	Std. Dev.
South Africa	E3-Relationship with suppliers	54	.00	3.00	2.0185	.78885
	E4-Relationship with other stakeholders	54	1.00	3.00	2.4630	.57340
	E5-Brand and reputation	54	1.00	3.00	2.0741	.60973
	E6-Shared norms and common values	54	.00	3.00	1.7778	.71814
	E7-Social license to operate	54	1.00	3.00	2.1667	.74606
	Valid N (listwise)	54				
	E1-Corporate culture	318	.00	3.00	1.8302	.52936
	E2-Relationship with competitors	318	.00	3.00	1.8113	.59089
	E3-Relationship with suppliers	318	.00	3.00	2.5000	.73981
	E4-Relationship with other stakeholders	318	1.00	3.00	2.4434	.52832
	E5-Brand and reputation	318	.00	3.00	2.0283	.54670
	E6-Shared norms and common values	318	.00	3.00	1.7453	.63138
	E7-Social license to operate	318	.00	3.00	2.2233	1.02823
	Valid N (listwise)	318				

Source: Research data, 2024

The description portrayed in Table 3 show that for Kenyan listed companies relationship with other stakeholders (customers and business partners) component of social and relationship capital as the most disclosed ($N=54$, $M = 2.4630$, $SD = .57340$). Whereas, disclosures of relationship with competitors aspect being the least disclosed ($N = 54$, $M = 1.4259$, $SD = .66167$). On the other hand, for companies listed in JSE, South Africa, Table 4.8 delineates that relationship with suppliers component of social and relationship capital is given prominence ($N=318$, $M = 2.5000$, $SD = .73981$). Whilst, a score of ($N=318$, $M = 1.7453$, $SD = .63138$).

Corresponding to shared norms and common values ele-

ment show least disclosure. The results are in line with earlier studies in which relationship capital disclosures above 50% in respect of customer service and strategic partnerships was reported.

4.1.2. Summary Descriptive Statistics of Business Model Disclosure Indicators by Country

The summary descriptive statistics of business model disclosure on the basis of country was examined. The comparative summary statistics is as provided in Table 4 below in respect to Kenya and South Africa respectively.

Table 4. Summary descriptive statistics of business model disclosure.

COUNTRY		N	Min.	Max.	Mean	Std. Dev.	Skewness	Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Kenya	BMInputs	54	.00	3.00	1.9444	.70247	-.635	.325	.639
	BMActivity	54	1.17	2.83	2.1188	.41227	-.117	.325	.639
	BMOutputs	54	.67	3.00	1.7901	.75596	-.026	.325	.639
	BMOutcomes	54	1.30	3.00	2.2889	.47011	-.503	.325	.639
	BMD	54	.81	2.85	2.0356	.49603	-.370	.325	.639
	Valid N (listwise)	54							
South	BMInputs	318	.00	3.00	2.1358	.70086	-1.362	.137	.273

		N	Min.	Max.	Mean	Std. Dev.	Skewness	Kurtosis	
COUNTRY		Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
Africa	BMAActivity	318	1.08	2.75	1.8483	.32145	.311	.137	-.250
	BMOutputs	318	.67	3.00	2.1960	.65901	-.670	.137	-.421
	BMOutcomes	318	.70	3.00	2.2899	.36911	-.925	.137	1.578
	BMD	318	1.03	2.92	2.1175	.38516	-.420	.137	-.270
	Valid N (listwise)	318							

Source: Research data, 2024

On the basis of Table 4, Kenyan listed companies data business model outcomes component was most disclosed with ($N=54$, $M = 2.2889$, $SD = .47011$). On the other hand, disclosures in relation to business model inputs was least ($N = 54$, $M = 1.7901$, $SD = .75596$). This finding partly contradicts that of Simoni *et al* which reported average disclosure of business model inputs.

Comparably, for South Africa, business model outcome component received most disclosure with ($N=318$, $M=2.2899$, $SD= .36911$). Whereas, disclosures in relation to business model activities was given least consideration of ($N = 318$, $M = 1.8483$, $SD = .32145$) by JSE listed companies. This result corroborates the finding of [29, 40] in which business model outcome components were dominantly disclosed as less business model inputs, activities and outputs related components exhibited least disclosures. In addition, the overall business model disclosure was greater for South Africa ($N = 318$, $M = 2.1175$, $SD = .38516$) compared to Kenya ($N = 54$, $M = 2.0356$,

$SD = .49603$). Nevertheless, the variation in business model disclosure among the studied companies was greater for Kenya compared to South Africa as indicated by the difference in the standard deviation. The finding uphold the results of the study by Szewieczek *et al* in which same degree disclosures of overall business model components by integrated reporting firms and non-integrated report preparers was found.

Accordingly, in both countries business model outcomes is the most disclosed component of the business model. This can be ascribed to the fact that investors as major users of the information contained in integrated reports are mainly interested on the entities performance in terms of shareholders return, profit/(loss) generated, the entity's contribution to the economy in terms of improving the standard of living and customer satisfaction. This information is contained in the outcomes section of the entity's business model. Thus, managers tend to disclosure more of that information to meet the investor needs.

4.1.3. Descriptive Statistics of Study Variables

Table 5. Summary Descriptive Statistics of study variables.

		N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	
COUNTRY		Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
Kenya	SRCD	54	1.00	2.86	1.9630	.45361	-.268	.325	-.197
	BMD	54	.81	2.85	2.0356	.49603	-.370	.325	-.846
	Valid N (listwise)	54							
South Africa	SRCD	318	.86	2.86	2.1545	.29523	-1.029	.137	1.824
	BMD	318	1.03	2.92	2.1175	.38516	-.420	.137	-.270
	Valid N (listwise)	318							

Source: Research data

As displayed in Table 5 above, overall, the <IR> capital disclosure of social and relationship capital expose that South Africa listed firms where <IR> is mandatory disclosure was higher ($N=318$, $M=2.1545$, $SD=.29523$) compared to Kenya ($N=54$, $M=1.9630$, $SD=.45361$). Further, in regard to reported standard deviation Kenyan listed companies highly varied in the disclosures compared to South Africa. Equally, overall business model disclosures in relation were higher in South Africa ($N=318$, $M=2.1175$, $SD=.38516$) compared to Kenya ($N=54$, $M=2.0356$, $SD=.49603$).

Moreover, the skewness and kurtosis results portray a distribution that was approximately normal. The kurtosis value is

less than 3, which means the distribution is platykurtic. Likewise, the skewness value revolved around 1, evidencing a mesokurtic distribution. Thus, the use of ordinary least squares method of estimation as a method of estimating the parameters for the purpose of hypotheses testing in the present study was applied.

4.1.4. Descriptive Statistics of Firm Value

The research also established the descriptive statistics of firm value in respect of firms listed in the NSE and JSE. The results are as presented in Table 6 below.

Table 6. Descriptive statistics of firm value.

COUNTRY		N	Minimum	Maximum	Mean	Std. Deviation
Kenya	FV-Firm value	54	.42	2.98	1.3653	.58422
	Valid N (listwise)	54				
South Africa	FV-Firm value	318	.24	3.38	1.1044	.48269
	Valid N (listwise)	318				

Source: Research data, 2024

Table 6 the description indicates average firm value of ($N=54$, $M=1.3653$, $SD=.58422$) for listed NSE companies. Whereas, average firm value of ($N=318$, $M=1.1044$, $SD=.48269$) is revealed for JSE listed companies.

Furthermore, the study uncovers that, the mean of firm values as proxied by Tobin's Q, Kenyan listed firms recorded on average value of 1.3653 with a standard deviation of 0.58422, unlike South Africa with an average value of 1.1044 with a standard deviation of 0.48269. This implies that, South African companies are more appropriately valued than Kenyan listed companies. However, a study by Hieu *et al.* and Iorun *et al.* [21] reported an average firm value

($M=1.567$, $SD=.924$) and ($M=1.6579$, $SD=1.1601$) respectively. Evidencing overvaluation of the studied firms value in both cases.

4.2. Correlation Analysis

Pearson's correlation coefficient was determined on the data relating to Kenya and South African listed firms to assess the connection between social and relational capital disclosure and firm value. The main variables of ICD, BMD and FV were related as depicted in Table 7 below.

Table 7. Correlation Matrix.

COUNTRY			SRCD	BMD	FV
Kenya	SRCD	Pearson Correlation	1		
		Sig. (2-tailed)			
		N	54		
	BMD	Pearson Correlation	.566**	1	
		Sig. (2-tailed)	.000		
		N	54	54	
	FV	Pearson Correlation	.460**	-.026	1
		Sig. (2-tailed)	.000	.850	

COUNTRY			SRCD	BMD	FV
South Africa	SRCD	N	54	54	54
		Pearson Correlation	1		
		Sig. (2-tailed)			
	BMD	N	318		
		Pearson Correlation	.554**	1	
		Sig. (2-tailed)	.000		
	FV	N	318	318	
		Pearson Correlation	.181**	.212**	1
		Sig. (2-tailed)	.001	.000	
		N	318	318	318

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

Source: Research data, 2024

4.3. Diagnostic Tests

Diagnostic tests were carried out to ensure the suitability of the data for analysis using regression techniques. Linearity was confirmed using scatter plots in which both countries data exhibited a positive linear relationship of social and relationship capital disclosure and firm value. The multicollinearity test using variance inflation factor (VIF) and Tolerance statistic met the required threshold of VIF below 10 and Tolerance statistic above 0.2. The autocorrelation test, Durbin Watson statistic was 1.823. The was found relatively normal on the basis of the calculated skewness and Kurtosis that was within the recommended threshold of -2 to +2 and -3 to +3 respectively (refer Table 3 above). Homoscedasticity check utilized the probability plots (P-P plot). No specific pattern was attached to the scatter plots.

4.4. Test of Hypotheses

The hypothesized associations are tested on the basis the

stepwise regression models.

4.4.1. Step 1: Testing for the Total (Unmediated) Effect 'c'

H₀₁: Social and relationship capital disclosure has no statistically significant effect on value of listed companies between Kenya and South Africa. (Total effect *c*).

The total (unmediated) effect 'c' was estimated using comparative regression model summary, ANOVA and coefficients between Kenya and South African listed companies data as revealed below.

(i). Model Summary of Social and Relationship Capital Disclosure and Firm Value

To obtain the explanatory power of social and relationship capital disclosure on the variation of the value of listed firms between Kenya and South Africa, regression analysis was utilized. The comparative model summary is as provided in Table 8 below.

Table 8. Comparative model summary of social and relationship capital disclosure and firm value.

COUNTRY	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Kenya	1	.460 ^a	.212	.197	.52359
South Africa	1	.181 ^a	.033	.030	.47547

a. Predictors: (Constant), SRCD

Source: Research data, 2024

In relation to Table 8 it is shown that social and relationship capital disclosure explains the variation in firm

value of NSE listed firms to the extent of 21.2% ($R^2 = .212$), and therefore, 78.8% of the variation can be ex-

plained by other factors not contained in the model. Then again, social and relationship capital disclosure explains the variation in firm value of JSE listed firms to the extent of 3.3% ($R^2 = .033$), and therefore, 96.7% of the variation can be explained by other factors not accommodated in the model.

(ii). ANOVA of Social and Relationship Capital Disclosure and Firm Value

To work out how appropriate the model was in anticipating the relationship between social and relationship capital disclosure and firm value of listed firms between Kenya and South Africa, ANOVA was exploited. The results are as illustrated in Table 9 below.

Table 9. Comparative ANOVA of social and relationship capital disclosure and firm value.

COUNTRY	Model		Sum of Squares	df	Mean Square	F	Sig.
Kenya	1	Regression	3.834	1	3.834	13.984	.000 ^b
		Residual	14.256	52	.274		
		Total	18.089	53			
South Africa	1	Regression	2.417	1	2.417	10.692	.001 ^b
		Residual	71.439	316	.226		
		Total	73.856	317			

a. Dependent Variable: FV

b. Predictors: (Constant), SRCD

Source: Research data, 2024

Based on the findings in Table 7, the indication is that ($F(1,52) = 13.984, P=.000$) in relation to Kenya NSE listed firms. Nevertheless, ($F(1,316) = 10.692, P=.001$) corresponds to JSE listed firms data. The suitability of the models in predicting the association between social and relationship capital disclosure and value of firms listed in NSE and JSE is hereby confirmed.

(iii). Regression Coefficients of Social and Relationship Capital Disclosure and Firm Value

In order to unearth the effect of one unit fluctuation in social and relationship capital disclosure on value of listed firms between NSE and JSE, the researcher undertook a regression analysis. The study findings are as expressed in Table 10 below.

Table 10. Comparative regression coefficients of social and relationship capital disclosure and firm value.

COUNTRY	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Kenya	1	(Constant)	.201	.319		.631	.531
		SRCD	.593	.159	.460	3.739	.000
South Africa	1	(Constant)	.467	.197		2.375	.018
		SRCD	.296	.090	.181	3.270	.001

a. Dependent Variable: FV

Source: Research data, 2024

On the basis of Table 10, the results indicate that holding all else constant, the value of NSE, listed firms is .201.

Whereas, a change in social and relationship capital disclosure by one unit will cause a positive and significant change

in the value of the firm ($B = .593$, $P = .000$). On the other hand, the results uncover the value of JSE listed firms is .467 on holding all else constant. Whereas, a change in social and relationship capital disclosure by one unit will cause a positive and significant change in value of the firm ($B = .296$, $P = .001$).

Further, to assess the effect-size of the connection between social and relationship capital disclosure and firm value Cohen's f^2 was computed. The calculated f^2 values disclosed ($f^2 = .27$ & $f^2 = .03$) as relating to Kenya and South Africa respectively.

Following Cohen's criteria of (.02, .15 & .35) for small, medium and large effects respectively, the results suggest a medium to large effect-size of social and relationship capital disclosure on value of NSE listed firms, compared to the small to medium effect-size in the case of South African companies data. The estimated models are stated as;

$$Y_k = .201 + .593SRCD_k + \alpha$$

$$Y_s = .467 + .296SRCD_s + \alpha$$

The objective of the study considered the effect of social and relationship capital disclosure on value of listed companies between Kenya and South Africa. From the estimated models on testing the hypothesis, findings indicate that social and relationship capital disclosure positively and significantly influence firm value of listed firms for both countries. Thus, the study findings reject the null hypothesis that social and relationship capital disclosure has no statistically significant effect on value of listed companies between Kenya and South Africa.

Table 11. Model summary of social and relationship capital disclosure and business model.

COUNTRY	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Kenya	1	.576 ^a	.332	.319	.38483
South Africa	1	.561 ^a	.315	.313	.30214

a. Predictors: (Constant), SRCD

Source: Research data, 2024

By virtue of Table 11 social and relationship capital disclosure explains the variation in business model of NSE listed firms to the extent of 33.2% ($R^2 = .332$) and therefore, 66.8% of the variation can be explained by other factors not included in the model. Yet, for JSE firms social and relationship capital disclosure explains the variation in business model to the extent of 31.5% ($R^2 = .315$) as such, 68.5% of the variation can be explained by other factors excluded from the model.

The finding tally with the results of earlier studies [37, 21] in which relationship capital disclosure positively and significantly influenced value creation of knowledge based organisations. Again [5, 43, 33], studies on social capital dimensions and firm performance has revealed a positive relationship.

4.4.2. Testing for the Direct Effect (c') and Indirect Effect (ab)

H02: Business model has no statistically significant mediating effect on the relationship between social and relationship capital disclosure and value of listed companies when comparing Kenya and South Africa.

This hypothesis sought to establish the direct path (c'), the indirect path (a) and indirect path (b). The effects were determined as follows.

Step 2: Testing for the indirect path 'a'

The relation between social and relationship capital disclosure and business model was evaluated to establish the indirect effects path 'a' via regression analysis. The regression model summary, ANOVA and coefficients between Kenya and South African listed firms data were as shown below.

(i). Model Summary of Social and Relationship Capital disclosure and Business Model (Indirect Effect Path 'a')

Social and relationship capital disclosure and business model was regressed to examine the extent to which the two variables were associated. The model summary is as provided in Table 11 below.

(ii). ANOVA of Social and Relationship Capital Disclosure and Business Model

ANOVA was deployed in order to ascertain how fit the models were in predicting the relationship between social and relationship capital disclosure and business model of listed firms between Kenya and South Africa. The results are as portrayed in Table 12 below.

Table 12. ANOVA of social and relationship capital disclosure and business model.

COUNTRY	Model		Sum of Squares	df	Mean Square	F	Sig.
Kenya	1	Regression	3.832	1	3.832	25.875	.000 ^b
		Residual	7.701	52	.148		
		Total	11.533	53			
South Africa	1	Regression	13.276	1	13.276	145.433	.000 ^b
		Residual	28.846	316	.091		
		Total	42.122	317			

a. Dependent Variable: BMD

b. Predictors: (Constant), SRCD

Source: Research data, 2024

The findings in relation to NSE firms, ($F(1,52) = 25.875, P = .000$) was reported. Alternatively, ($F(1,316) = 145.433, P = .000$) was reported for JSE. Both models are suitable in the determination of the association between social and relationship capital disclosure and business model.

(iii). Regression Coefficient to Predict Business Model from Social and Relationship Capital Disclosure

To determine how a unit variation in social and relationship capital disclosure affect the business model of listed firms in NSE and JSE, the researcher conducted simple regression analysis. The study findings are as displayed in Table 13 below.

Table 13. Regression coefficient to predict business model from social and relationship capital disclosure (Indirect effect path 'a').

COUNTRY	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Kenya	1	(Constant)	.926	.235		3.945	.000
		SRCD	.593	.117	.576	5.087	.000
South Africa	1	(Constant)	.593	.125		4.744	.000
		SRCD	.693	.057	.561	12.060	.000

a. Dependent Variable: BMD

Source: Research data, 2024

As a consequence of Table 13 a positively significant effect of social and relationship capital disclosure on business model ($B = .593, P = .000$) is found. Nonetheless, a positive and significant effect is noted between social and relationship capital disclosure and business model for JSE listed companies ($B = .693, P = .000$). This is the indirect effect path 'a'. Thus, the models are stated as;

$$BMD_k = .926 + .593SRCD_k + \alpha$$

$$BMD_s = .593 + .693SRCD_s + \alpha$$

4.4.3. Step 3: Testing for the Indirect Effect Path 'b' and Direct Effect 'c'

Multiple regression analysis was conducted taking social and relationship capital disclosure and business model as predictors of firm value. The idea was to unravel how firm value was predicted by social and relationship capital disclosure and business model. This was aimed at gauging the direct effect path 'c', and the indirect effect path 'b', to accomplish condition 3 of mediation analysis. The comparative regression model summary, ANOVA and coefficients between Kenya and South African listed companies data were as presented below.

(i). Model Summary of Social and Relationship Capital Disclosure, Business Model and Firm Value

A multiple regression was run comprising social and rela-

tionship capital disclosure and business model as predictors to interrogate their effect on firm value. Table 14 depicts the summary.

Table 14. Model summary of social and relationship capital disclosure, business model and firm value.

COUNTRY	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Kenya	1	.612 ^a	.374	.350	.47114
South Africa	1	.217 ^a	.047	.041	.47266

a. Predictors: (Constant), BMD, SRCD

Source: Research data, 2024

Table 14 shows that social and relationship capital disclosure and business model as predictors explain the variation in value of NSE listed firms to the extent of 37.4% ($R^2 = .374$) and therefore, 62.6% of the variation can be explained by other factors not contained in the model. While, for JSE listed firms 4.7% ($R^2 = .047$) is explicated, indicating that 95.3% is expounded by other factors.

(ii). ANOVA of Social and Relationship Capital Disclosure, Business model And Firm Value

ANOVA was deployed in order to ascertain how fit the models were in predicting the link between social and relationship capital disclosure, business model and firm value between Kenya and South Africa. The results are as portrayed in Table 15 below.

Table 15. ANOVA of social and relationship capital disclosure, business model and firm value.

COUNTRY	Model		Sum of Squares	df	Mean Square	F	Sig.
Kenya	1	Regression	6.769	2	3.384	15.246	.000 ^b
		Residual	11.321	51	.222		
		Total	18.089	53			
South Africa	1	Regression	3.484	2	1.742	7.797	.000 ^b
		Residual	70.372	315	.223		
		Total	73.856	317			

a. Dependent Variable: FV

b. Predictors: (Constant), BMD, SRCD

Source: Research data, 2024

The ANOVA results as presented in Table 15 indicate ($F(2,51) = 15.246, P = .000$) reported for Kenya. Then again, ($F(2,315) = 7.797, P = .000$) is depicted for South Africa. This verifies the suitability of the model in the prediction of the relation between social and relationship capital, business model and value of NSE and JSE listed firms.

(iii). Regression Coefficient to Predict Firm Value from Social and Relationship Capital Disclosure and Business Model

To determine how a unit variation in social and relationship capital disclosure affect the business model of listed firms in NSE and JSE the researcher conducted multiple regression analysis. The study findings are as displayed in Table 16 below.

Table 16. Regression coefficients to predict firm value from social and relationship capital disclosure and mediating variable business model (Direct effect 'c¹' and Indirect effect 'b').

COUNTRY	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Kenya	1	(Constant)	.773	.327		2.360	.022
		SRCD	.959	.175	.744	5.492	.000
		BMD	-.617	.170	-.493	-3.636	.001
South Africa	1	(Constant)	.353	.202		1.745	.082
		SRCD	.162	.109	.099	1.495	.136
		BMD	.192	.088	.145	2.185	.030

a. Dependent Variable: FV
Source: Research data, 2024

From the findings in Table 16 it can be deduced that all factors remaining constant, firm value of NSE listed firms is .773. Whereas, the direct effect 'c¹' signify a change in social and relationship capital disclosure by one unit would significantly cause a positive change in the value of the firm ($B = .959$, $P = .000$). While, the indirect path 'b', show that changing the business model disclosure by one unit negatively and significantly influence the value of the firm ($B = -.617$, $P = .001$).

Inversely, containing all else constant, the value of listed firms in JSE is .353. The direct effect 'c¹' is elucidated as changing social and relationship capital disclosure by one unit causes a positive and non-significant change in value of the firm ($B = .162$, $P = .136$). While, a change in business

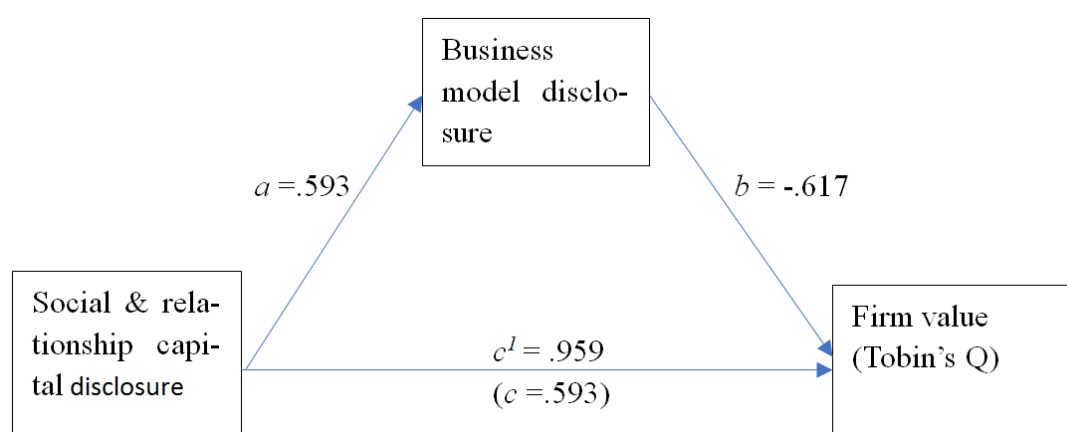
model disclosure by one unit positively and significantly influence the value of the firm ($B = .192$, $P = .030$). This represents the indirect path 'b'. The established models are;

$$FV_k = .773 + .959SRCD_k - .617BMD_k + e$$

$$FVs = .353 + .162SRCDs + .192BMDs + e$$

Step 4: Determination of existence and nature of mediation -Kenya

On the basis of unstandardized beta coefficients of direct effect 'c¹' and total effect 'c' existence of mediation was assessed. While the nature of mediation was assessed by examining the significance of the direct and indirect effects. On grounds of the three regression models above, Figure 3 and Table 17 below summarizes the unstandardized coefficients of the total, direct and indirect effects.



Source: Research data, 2024

Figure 3. Mediation effect of business model in the association between social and relationship capital disclosure and firm value for Kenya.

Table 17. The path unstandardized regression coefficient and its significance –Kenya.

Construct	Path	Construct	Standardized Estimate	P-Value	Result
Total Effects					
Firm Value	←-	Social and relationship capital disclosure	.593	.000	Significant
Direct and Indirect effects					
Firm Value	←-	Social and relationship capital disclosure	.959	.000	Significant
Business model disclosure	←-	Social and relationship capital disclosure	.593	.000	Significant
Firm Value	←-	Business model disclosure	-.617	.001	Significant

Source: Research data, 2024

Regression analysis was applied to examine whether business model mediated the relationship between social and relationship capital disclosure and value of firms listed in the NSE. In which, Table 17 and figure 3 explain that the total effect 'c' was positive and significant ($B = .593$, $P = .000$). With the addition of the mediating variable business model, the direct effect 'c^l' of social and relationship capital disclosure on firm value increased and was significant ($B = .959$, $P = .000$).

Social and relationship capital disclosure was positively and significantly associated with business model ($B = .593$, $P = .000$), the path 'a'. While, a negative and significant effect between business model and firm value ($\beta = -.617$, $P = .001$), path 'b' was confirmed. The product of the indirect effects 'ab' ($a*b = .593 * -.617$) resulted to a value of $-.3658$. The proportion mediated was about 62% ($ab/c = -.3658/.593$). A comparison of the direct versus indirect paths ($c^l = .959$ and $ab = -.3658$) proposed that $c^l > ab$ in absolute value denoting .381 ($-.3658/.959$) mediation ratio. As, $c^l > c$ and the indirect effect 'ab' is opposite in sign compared to 'c^l', inconsistent mediation is inferred.

To assess the extent to which social and relationship capital disclosure influenced firm through the business model, R^2_{med} was calculated to establish the effect-size of mediation. This resulted to R^2_{med} value of $-.159$. Negative R^2_{med} predicts occurrence of suppression effect. The overall R^2_{med} value of $-.159$ show that about 16% of the variance in the value of the firm is attributable to the indirect effects of social and relationship capital disclosure through the business model. Taking into account that relatively 37% of the total variance in firm value is explained ($R^2_{multiple} = .374$), out of this around 43% ($-.159/.374$) of the explained variance in the model was due to the mediated effect.

4.4.4. Testing the Indirect Path (ab) Significance of Mediation Analysis-Kenya

Following Hayes [18] Macro process via bootstrapping method, the presence and significance of mediation if any, was tested. The bootstrap was set at 5000 samples, with a bias corrected confidence level of 95%. The results are as provided in Table 18 below.

Table 18. Bootstrapping mediation analysis summary.

Relationship	Direct Effect	Indirect Effect	Confidence Interval		P-value	Conclusion
			Lower Bound	Upper Bound		
Social and relationship capital disclosure → Business model → Firm value	.9588 (.0000)	-.3659	-.6799	-.1499	<.05	Inconsistent Mediation

Source: Research data, 2024

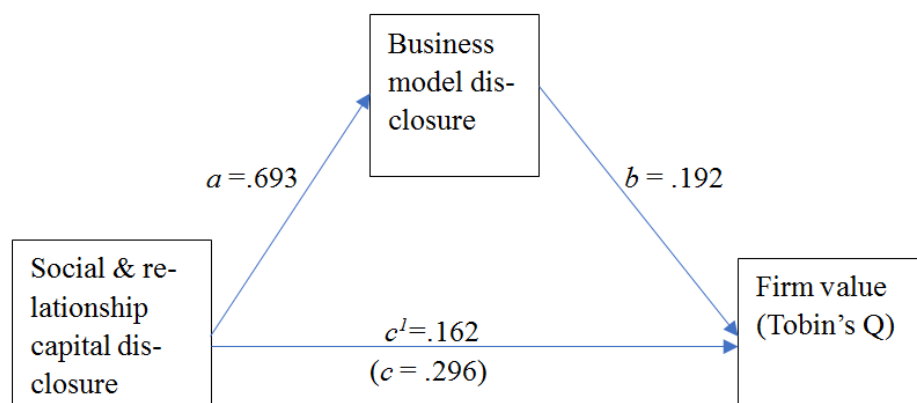
As demonstrated in Table 18, the bootstrap conducted indicates that the direct effect is positive and statistically significant ($B = .9588$, $P = .0000$). The confidence intervals of lower bound and upper bound ($LLCI = -.6799$, $ULCI =$

$-.1499$) excluded zero. Therefore, the indirect effect was statistically significant. Because both the indirect and direct effect were statistically significant after considering the mediator into the relationship, the study concludes that media-

tion exists. However, by virtue of the direct and indirect hold opposite signs, inconsistent mediation is proclaimed.

Step 4: Determination of existence and nature of mediation -South Africa.

Following the analysis conducted on the three regression models above, Figure 4 and Table 19 summarizes the unstandardized coefficients of the total, direct and indirect effect.



Source: Research data, 2024

Figure 4. Mediation effect of business model in the association between social and relationship capital disclosure and firm value for South Africa.

Table 19. The path unstandardized regression coefficient and its significance -South Africa.

Construct	Path	Construct	Unstandardized Estimate	P-Value	Result
Total Effects					
Firm Value	←-	Social and relationship capital disclosure	.296	.001	Significant
Direct and Indirect effects					
Firm Value	←-	Social and relationship capital disclosure	.162	.136	Not Significant
Business model disclosure	←-	Social and relationship capital disclosure	.693	.000	Significant
Firm Value	←-	Business model disclosure	.192	.030	Significant

Source: Research data, 2024

Regression analysis was put into use to unravel the mediating role of the business model in the association between social and relationship capital disclosure and value of firms listed in the JSE. The findings unveil that the total effect ' c ' of social and relationship capital disclosure on firm value was positive and significant ($B = .296$, $P = .001$). With the insertion of the mediating variable business model, the direct effect ' c' ' of social and relationship capital disclosure on firm value decreased and became non-significant ($B = .162$, $P = .136$). Social and relationship capital disclosure was found to be positively and significantly connected to business model ($B = .693$, $P = .000$). This represents the indirect effect path ' a '. Additionally, the indirect effect path ' b ' comprising the relation between business model and firm value was positive and significant ($B = .192$, $P = .030$). The associated

indirect effects ' ab ' was .1331 ($a*b = .693*.192$). The proportion mediated is about 45% ($.1331/.296$). Contrasting of the direct versus indirect paths ($c' = .162$ and $ab = .1331$) imply that $c' > ab$ and the resultant mediation ratio is relatively .822 ($ab/c' = .1331/.162$). Thus, by the direct effect reporting non-significant results on controlling for the mediator and the indirect effect paths ' a ' and ' b ' being both significant, it can be concluded that the business model mediates the relationship between social and relationship capital disclosure and value of firms listed in the JSE. This construed as complete/full mediation.

To estimate the magnitude of the indirect effect-size of social and relationship capital disclosure on firm value through the business model, R^2_{med} was calculated. The computed R^2_{med} value is .026. The overall R^2_{med} value of .026 propose

that approximately 3% of the variance in the value of the firm is attributable to the indirect effects of social and relationship capital disclosure through the business model. Taking into account that relatively 4.7 % of the total variance in firm value is explained ($R^2_{\text{multiple}} = .047$), out of this about 55% (.026/.047) of the explained variance in the model was due to the mediated effect.

Testing the indirect path (*ab*) significance of mediation analysis for South Africa.

Following Hayes [18] Macro process via bootstrapping method, the presence and significance of mediation if any, was tested. The bootstrap was set at 5000 samples, with a bias corrected confidence level of 95%. The results are as provided in Table 20 below.

Table 20. Bootstrapping mediation analysis summary-South Africa.

Relationship	Direct Effect	Indirect Effect	Confidence Interval		P-value	Conclusion
			Lower Bound	Upper Bound		
Social & relationship capital disclosure → Business model → Firm value	.1625 (.1358)	.1333	.0332	.2474	<.05	Complete/full Mediation

Source: Research data, 2024

As demonstrated in Table 20, the bootstrap conducted indicates that the direct effect is not statistically significant ($B = .1625$, $P = .1358$). On examining the confidence intervals of lower bound and upper bound ($LLCI = .0332$, $ULCI = .2474$), a zero was excluded from the range. This attests a statistically significant indirect effect. The direct effect was not statistically significant on inserting the mediator into the relationship. Complete/full mediation is confirmed.

5. Discussion

The study investigated the effect of social and relationship capital disclosure on value of listed companies between Kenya and South Africa, a focus on the business model. On testing the hypothesis, findings indicate that social and relationship capital disclosure positively and significantly influence firm value of listed firms for both countries. This is evidenced by a significance level of ($P < .05$) for both Kenya and South Africa data. Thus, the study findings reject the null hypothesis that social and relationship capital disclosure has no statistically significant effect on value of listed companies between Kenya and South Africa. The findings are in conformity with the results of the studies by [37, 21] in which it was proven that relationship capital disclosure positively and significantly influenced value creation of knowledge based organisations. Again, Bhuyan *et al.* [5] and Nguyen & Ha [33] studies on social capital dimensions and firm performance has revealed a positive relationship.

Besides, on incorporating the business model into the relationship the study findings uncover that the business model mediates this relationship. Business model provide a mechanism through which social and relationship capital transmit its effect on firm value. However, Kenya listed companies

evinced inconsistent mediation, as South African listed companies demonstrated complete/full mediation.

The study concludes that the disclosure of <IR> capital of social and relationship would enhance the value of the firm and that corporate entities should make such disclosures around the company business model that provides the mechanism through which this effect is accomplished.

6. Conclusion

The examined the effect of social and relationship capital disclosure on value of listed companies in Kenya and South Africa, seeking to find out whether business model mediates this relationship. On the anchor of the above findings, the researcher arrives at the following conclusions;

Social and relationship capital disclosure is statistically significant predictor of value of companies listed in Kenya and South Africa. Disclosures in respect to social and relationship capital causes an increase in firm value.

Business model is a statistically significant mediator in the relationship between social and relationship capital disclosure and firm value. However, for Kenya inconsistent mediation is conclude as South Africa exhibits complete/full mediation.

6.1. Implication of the Study

The study findings would assist those charged with governance to consider fully application of <IR> framework and by practice extensively disclose the <IR> social and relationship capital and business model disclosures.

Regulators in developing countries would to monitor <IR> practices for their domestic companies. It would assist the IIRC to review the industry's current<IR>practices and give

reason for better <IR> implementation in the future from both minority and majority economies. The IIRC could use this trend to provide guidance to local governments, firms and investors that the <IR> adoption could create social values by lowering the cost of capital and by growing revenue over time. Also, the findings provide support to the regulators in developing countries to monitor <IR> practices for their domestic companies and offer guidance for better <IR> implementation in the future by sufficiently disclosing information on various capital.

6.2. Recommendations of the Study

Based on the findings, the study reveals that overall social and relationship capital disclosures was higher in South Africa compared to Kenya. In conclusion, Social and relationship capital disclosure positively and significantly influence value of listed companies between Kenya and South Africa.

On the basis of the stated conclusions, the study makes the following recommendations;

Many countries in the African continent have not made <IR> mandatory despite the revealed importance from this study. Thus, a key policy priority to speed its adoption should therefore be the IIRC to collaborate with the international standard setters, the corporate and investment communities, purposefully to mobilize and document international integrated financial reporting standards to guide in the nature and presentation of social and relationship capital information in integrated reports. This will drive uniformity in adoption and improve the quality of disclosed information in relation to social and relationship capital for the benefit of both corporate entities and society at large.

Listed companies both in Kenya and South Africa should embrace social and relationship capital disclosures and practices. Since this study has affirmed the benefits that accrue to the firm in terms of improved firm value.

6.3. Suggestions for Further Research

The study specifically examined <IR> firms that are listed in the NSE, Kenya and <IR> firms contained in the IIRC, examples data base as integrated reporters, and listed in JSE, South Africa. Future research to be carried out on <IR> firms that are not listed in the stock exchange and have adopted <IR> to compare the results.

In Kenyan context, the study could be replicated with an increased sample size since not many companies had adopted <IR> by the time this study was conducted.

Abbreviations

<IR>	Integrated Reporting
IIRC	International Integrated Reporting Council
BMD	Business Model Disclosure
SRCD	Social and Relationship Capital Disclosure

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Data Availability Statement

The data supporting the outcome of this research work has been reported in this manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

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