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The corporate governance of venture capital-funded startups in Africa

Mworia Wilfred Mutua* and Gathungu James

Entrepreneurship and Innovations Management, University of Nairobi, Kenya.

The number of venture-funded technology startups in Africa and the amount of venture capital investment has been on a steady rise in the recent past. We are now at a point in the evolution of the various startup ecosystems around the continent where we have had startups going through multiple rounds of venture funding, some increasing their valuations to unicorn status (that is, being valued at over $1 billion). Others have gone through exit and liquidation events. That said, startups and the venture capital funding model are still a relatively new phenomenon on the continent and there is scant research on startups in Africa in general, less so on how African ventures scale and how they adapt their operations and management, including their governance structures, to adapt to growth. This has all the more been highlighted by recent corporate governance failings among African technology startups resulting in crises. This study sought to investigate the corporate governance (CG) of African technology startups; the study also sought to establish how this might influence their valuation at successive funding rounds.

Key words: Venture capital, corporate governance, valuation, technology startups, management, boards.

INTRODUCTION

Startups and the venture capital funding model are still a relatively new phenomenon on the African continent. As such, there is scant research on startups in Africa in general, and less so on how African ventures scale once they are founded. Scaling here refers to how entrepreneurial ventures deal with the challenge of synchronizing internal organizing and growth, how these ventures replicate their business at scale and how they expand the scope of their activities as they grow (Weiss et al., 2022). This study sought to fill this gap by investigating the specific dimension of the corporate governance (CG) of African technology startups as they go through successive funding stages, reflecting their increasing maturity, and how this might influence their valuation at successive funding stages.

Successful organizations design their structures to match their situation (Mintzberg, 1989). The best form of organization for any given firm is largely dependent (that is, contingent) on various internal and external factors such as the size of the organization, availability, and access to resources and so on. According to Daft (2012), organizations "are designed as deliberately structured and coordinated activity systems… linked to the external environment", indicating that organizations structure themselves, intentionally, to some extent, in response to their environmental circumstances. Furthermore, corporate governance can be viewed from the perspective of the organization's ability to acquire and control the

key resources necessary for the efficient running of the firm's operations, that is, the Resource-Dependency view (Pfeffer and Salancik, 1978). A firm's board can be a link to such resources from the external environment (Afza and Nazir, 2014).

LITERATURE REVIEW

An investigation by Ewens and Malenko (2020) revealed that at the point of the first VC round, the average (median) board had 3.6 members with entrepreneurs/executives. Independent directors were incorporated into the board after the second round of funding. At this point, control over the board is shared and the independent director holds a "tie-breaking vote". This function of independent directors was found to increase the efficiency of the startup by driving the startup to taking decisions that maximize its value as opposed to those that are biased in the favor of either entrepreneur of VC members. Furthermore, Ewens and Melenko (2020) have found that the average board size over the lifetime of a startup was 4.5 members, with about 2 board seats held by VCs, 1.7 by executives and 0.8 by independent directors. In addition, the study revealed that board control shifts progressively from the founders to VCs as the startup grows and raises more venture capital.

A subsequent study by Li et al. (2021) looked at whether board characteristics matter in the context of rapidly growing enterprises. The study established strong correlations between firm performance and board size, age, structure, meeting frequency, and ownership of shares by board members. It was further found that, the larger the board was, the wider the range of expertise and perspectives that benefit strategy formulation in startups. In addition, younger boards, boards that meet more frequently and those where board members held a larger proportion of shares in the startup tended to be positively related to better startup performance and possibly, therefore, higher valuation. In other words, the level of corporate governance in a startup likely influences its valuation.

Kaplan (2021) observed that startups had unique characteristics such as rapid changes in ownership and board composition through the venture financing cycle and resulting conflicts of interest that classic corporate laws are not tailored to. Furthermore, appropriate implementation of CG in startups can reduce investor risk, consequently reducing transaction costs and improving corporate management while retaining the flexibility that startups required to implement disruptive innovation. On the other hand, despite the benefits, burdening startups with such regulations might have the detrimental effects of increasing their direct costs by, for instance, forcing them to retain expensive advisors and consultants, incurring indirect costs such as monitoring costs, and eroding competitive advantage by making certain critical information publicly available to

competitors. As far as valuation, Kaplan (2021) conceded that the impact of CG on a startup's share price, that is its value, was unclear.

According to Venugopal and Yerramilli (2019, startups appeared to rely on external directors to complement them where they lacked specific expertise. In addition, startups prioritized entrepreneurial experience and board experience in outside directors at all stages of the startup lifecycle while at the later stages C-suite experience took priority. Critically, Venugopal and Yerramilli (2019) concluded that early-stage startups that appointed outside directors raised larger amounts in later stages and were more likely to attract VC funding compared to otherwise similar early-stage startups that did not appoint outside directors.

An extensive search of various sources revealed a lack of academic research specifically on the corporate governance of startups and their valuation in African contexts. Those studies that have tackled this topic have addressed more mature, typically public companies. For instance, an early study by Kyereboah-Coleman (2007) on more mature firms in Ghana, Kenya and Nigeria, concluded that large board sizes were associated with increased corporate performance and shareholder value maximization. Ntim (2011) finds a positive and statistically significant relationship between the presence of independent non-executive directors and valuation but no such relationship when considering the effect of the presence of non-executive directors (NEDs) on firm valuation. Munisi and Randøy (2013) applied a corporate governance index comprising shareholders' rights, board of directors, disclosure and transparency, and audit and remuneration committees to investigate the effect of corporate governance on the market value of publicly traded companies on several African stock exchanges between 2007 and 2009 with firm size as a control variable.

Overall, their study found a negative association between governance and market valuation. However, the individual governance practices were not all equally associated with valuation. Outa and Waweru (2016) tested the hypothesis that compliance with CG guidelines issued in 2002 by the Capital Markets Authority (CMA) improved the financial performance and value of regulated Kenyan firms. Based on panel data spanning 520-firm year observations between 2005 and 2014, they found that compliance with a composite CG Index is significantly and positively related to firm performance and firm value.

METHODOLOGY

Research design

The study used a correlational research design to investigate the existence, direction and strength of the relationship between the level of corporate governance implementation and valuation along the venture capital lifecycle among technology startups in Africa.

The variables are only observed without manipulation, and it is understood that there may be other factors that may affect startup valuation that are uncontrolled for in the study. It is anticipated that there is an association between the variables but not necessarily a causal one. Therefore, the correlational research design is deemed most appropriate.

Population

The population for this study was all the technology startups in Africa that have raised VC funding in their history. As per Maher et al. (2021), 359 tech startups secured funding in Africa in 2020. Statista (2022) estimates that there were 446 venture-funded technology startups in Africa in 2021. ABD (2022) records over 450 startups raised by African startups in 2022

Sample

A random sampling technique was employed targeting all startup founders in Africa, or as many of them as could be reached via an online survey. The survey was developed and deployed using QuestionPro, an industry leading, commercial online surveying tool. The survey link was distributed via the LinkedIn professional social network where many, if not most or all, startup founders are likely to engage. Venture capitalists often use LinkedIn to look up prospective founders or to vet them as part of their due diligence on startups under consideration for funding. This medium was therefore thought to be a suitable avenue by which to distribute the survey. In addition, given the ambitious scope of the project, it was impossible for the researcher to get direct access to founders in order to administer a questionnaire or interview directly. To maximize the reach of the social media campaign, paid advertising was employed, enabling the researcher to send the link via direct message on LinkedIn to a targeted audience based on their title, e.g., startup founder, location, interests and so on.

Data collection

Primary data were collected using a structured survey delivered via the World Wide Web (online). The data collected included the startup's base country, category (tech, tech-enabled or non-tech) age, funding rounds to date and valuation through the various rounds, expressed as a multiple. Data relating to the independent variable, corporate governance implementation, included whether there was a board in place at the point of successive funding rounds, the board's composition in terms of the number of board members, member profile and presence of independent board members, and the existence of board committees. The survey ran between November 1 and November 29, 2022.

Reliability of the research instrument

Reliability refers to the consistency of measurement and the extent to which the results of measurement can be reproduced under the same conditions—how dependable and consistent the results are if the study is repeated under similar or identical circumstances (Neuman, 2013). While achieving perfect reliability and validity is impossible, researchers should strive toward this goal (Neuman, 2013). Consequently, the study sought, at a minimum, to establish the following three forms of reliability identified by Neuman (2013): First, measurement reliability which has to do with the consistency of the measure of a variable. Within the context of this study, the survey is standardized and uses closed ended questions only,

ensuring the instrument allows for measurement reliability. Secondly, stability reliability, which means that results from the measurement, should be consistent over time. The survey in this study collects factual and historical information, as such, stability reliability is implicit. This can be tested using the test-retest method.

Finally, representative reliability, that is, a measure yields consistent results for various social groups. Again, as designed, the instrument should be replicable to different samples or populations that meet the study objective.

Cronbach's alpha was used to measure the internal consistency of the research instrument and the result (0.902159) indicated a very high degree of consistency in this regard.

Validity of the research instrument

Validity refers to the accuracy of measurement, determining whether the results measure their intended attributes and how well they reflect reality (Neuman, 2013). Bryman and Cramer (2011) and Neuman (2013) identify various types of validity. This study aimed to establish at least the following forms of validity.

Face validity

This was established by validating the instrument with experienced academicians, particularly through the research proposal writing, review, and evaluation process, as well as with industry practitioners.

Content validity

The instrument was designed to measure each aspect of the variables being investigated within the context of the study. It's important to note that there may be additional aspects of corporate governance that are not covered by the instrument.

For instance, it is acknowledged that there are many other aspects to corporate governance than those measured by the instrument. However, this study has limited itself to only investigating those aspects that have been proposed by the CFI (2019) Governance Maturity Matrix as a standard for startup corporate governance. The instrument is therefore designed, specifically, to measure as comprehensively as possible, the CG aspects in this matrix.

Operationalization of study variables

Table 1 shows the operationalization of the variables. For purposes of analysis, the variables were treated as follows:

Governance score

Startups were given a governance score based on the criteria in Table 2. The governance score for each startup was computed as the sum of the points received against each of the governance criteria. The criteria are based on the CFI (2019) Startup Governance Maturity Matrix. The maximum total score was 13.

Valuation multiple

Each startup will have a base valuation of one at the first round. If the startup raised a second round and the first round was un-priced (that is, no valuation was done such as if it was a convertible note), the valuation will remain 1. If the startup raised a subsequent, priced (valuation done) round to a previous, priced round, the

Table 1. Operationalization of the variables.

Variable	Operational indicators	Measurement	Measurement scale	Data collection tool
Level of corporate governance Independent variable	Governance score	Board size (no. of members) Member types (founder, investor, non-investor, independent) Member profile/skills) (startup management skills, specialists, corporate management skills) Board committees Advisory board presence	Ratio	Questionnaire
Startup valuation Dependent variable	Valuation multiple	Continuous values Computation of how much more a startup is in successive funding rounds	Ratio	Questionnaire

Source: Researcher (2022).

Table 2. Governance index.

Governance (board) aspect	Criteria	Points allocated	
Board size (no. of people)	0 (no board)	0	No board = 0 points,
	Less than 3 pax	1	
	3-5 pax	2	Respective number of points based on the size of the board
	5-7 px	3	
	7+ pax	4	
Member type	Founders	1	
	Investors	1	One point for each member type represented on the board
	Others (non-investors)	1	
	Independent	1	
Member profile/skills	Startup knowledge / experience	1	
	Expert/subject-matter knowledge / experience	1	One point for each type of profile represented on the board
	Corporate management and governance knowledge / experience	1	
Board committees	No	0	Zero points for no committees,
	Yes	1	One point for each type of committee
Advisory board	Yes	1	One point for having an advisory board, 0 for not
	No	0	

Source: Researcher (2022).

valuation multiple will be calculated by taking the current round valuation divided by the previous round valuation e.g., if the previous round the startup was valued at $1,000,000 and the valuation at the current round was $1,500,000, the valuation multiple is $1,500,000 / $1,000,000 = 1.5.

If the startup raised a subsequent, priced round to a previous, unpriced round, but the startup had been valued/priced at an earlier round, the valuation multiple will be calculated based on the valuation at the last priced round, e.g., if the first round valued the startup at $1,000,000, then the startup raised a second un-priced round, after which the current round was valued at $2,300,000, the valuation multiple is $2.300, 000/$1,000,000 = 2.5.

Data analysis

Correlation analysis was undertaken to evaluate the strength and direction of the relationship between the variables. Thereafter,

regression analysis will be undertaken, subject to testing the linear regression assumptions of multicollinearity, autocorrelation, normality, homoscedasticity, and linearity. The regression equation is as follows:

$$Y = a_1 + b_1X_1 + e$$

Where: Y: Valuation multiple, a: y-intercept of the regression equation, b: regression coefficient, X_1: Governance Index score, e: Error term.

Further regression may be undertaken against each of the sub-indices to evaluate the significance of each aspect of the Governance Index on the valuation:

$$Y = a_2 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Where: Y: Valuation multiple, a_2: y-intercept of the regression equation, b_2, b_3, b_4, b_5: regression coefficients, X_2: Board size sub-index score, X_3: Member type sub-index score, X_4: Member profile sub-index score, X_5: Board committees sub-index score, e: Error term

In addition, Analysis of Variance (ANOVA) was undertaken to investigate the relationship between the level of corporate governance (independent variable) and valuation multiple (dependent variable) at different funding rounds (Erhardt et al., 2019).

RESULTS AND DISCUSSION

The online survey was viewed a total of 397 times during the survey period. There were 67 responses in total. Out of these, 36 (53%) completed the survey fully, meaning they answered all the questions presented, while 31 respondents dropped out of the survey at some point before completion, providing partial information. Appendix Table 1 shows the survey response rate.

Descriptive statistics

Governance scores

Each response was scored on the level of corporate governance as described in the data analysis section above. The tables below summarize the descriptive statistics of the data set including the median, mean, variance, standard deviation, skewness and kurtosis. The statistics are given regarding all the responses, those from non-VC-funded respondents, and those from VC-funded respondents. In total, 59 respondents gave information concerning their board characteristics, 21 of which were non-VC funded and 38 of which were VC-funded and gave their board characteristics at their respective funding rounds. Appendix Tables 2 to 4 shows governance score descriptive statistics- VC and non-VC while Appendix Table 5 and 6 shows the mean governance score.

As demonstrated above, VC-funded respondents had a higher mean governance score (6.0) implying that VC-backed startups were better governed on average, which

had an average governance score of (2.71). The mean governance score among all startups, that is VC and non-VC-funded, was 4.83. This implies that, given that the maximum possible total governance score was 13; VC-funded startups were averagely well governed while the level of governance in non-VC-funded startups was well below average and, taken together, their governance was below average. VC funded startups scored higher on all the individual scores and were roughly twice as likely to have a board, twice as likely to have a larger board size, twice as likely have a more diverse board in terms of the types of members on the board (founder, investors and non-investors), almost three times as likely to have independent board members, twice as likely to have a more diverse board in terms of available skills and just as likely to have an advisory board as their non-VC-funded counterparts. The variance in all the scores was roughly the same.

Valuation multiples

The main aim of the study was to investigate the relationship between corporate governance and valuation of technology startups in Africa. However, from the 37 respondents that indicated they had raised venture capital in their history and that went on to provide information regarding their funding rounds, only two gave a valuation multiple of more than one at a successive funding round, indicating an appreciation in the value of the startup between the two rounds. Of these, one indicated their valuation went up three times between the first and second round and the other indicated a valuation increase of eight times between the second and third round (Appendix Table 7).

One possibility is that, as is widely held in the industry, most startup founders would be hesitant to divulge valuation information. On the other hand, respondents may have been more willing to divulge information on their governance as far as board structure and so on. Consequently, respondents may have simply entered the easiest entry for the valuation multiple, that is 1, in order to move on with the survey. Future research could consider how to best go around this, for instance by administering the survey in person, or framing the question on valuation differently such as by having the respondent select from a set of categorized ranges of valuation multiple, that is say between 1 and 1.2X, 1.3 and 1.5X and so on. This approach may be backed up by the fact that respondents were willing to answer the question on their revenue stage at the point of raising a round of capital. Revenue information is another aspect that most founders would be unwilling to divulge but, in this case, it may be that the presentation of the revenue as a category of ranges as opposed to a specific dollar revenue amount more acceptable. Another possibility could be that the framing of the question on valuation

was too complicated for most of the respondents. This was the most complex question in the survey as it required the founders to calculate the valuation multiple based on historical information and enter it. This may also have turned off respondents.

Correlation analysis

To undertake correlation analysis, the data set was first split into three sets: one comprises of the full data set of non-VC-funded and VC-backed startups, the second comprising the non-VC-funded startups and the third comprising those that had raised at least one round of VC. For each data set, as relevant, one set of correlation analysis was undertaken considering the startup category, age, whether they had raised capital (in the case of the full dataset) and their total governance score. Next, the governance score was correlated to the funding round, whether it was a priced round, the amount raised at the round, and the stage of revenue growth the startup was in at the round. The results are as follows.
Considering the combined data set and testing the correlation between the category, age, if VC funded and the governance score, it was found that there was, more or less, no correlation between the startup category and the governance score as well as between the age the score. On the other hand there appeared to be a weak positive correlation between the funding status (whether the startup had raised VC in its history) and its level of corporate governance (Appendix Table 8).
  The same analysis undertaken on the dataset comprising the non-VC backed startups resulted in the following: the category was found to be non-correlated to the governance score, on the other hand the startup age was found to have a moderately positive correlation with the level of governance. Appendix Table 9 shows the non-VC - Correlation of category, age, funding status and governance score.
  Considering the VC-funded data set, there was again no correlation between the startup category and governance. On the other hand, there was a slightly negative correlation between the startup's age and the governance score. Appendix Table 10 shows the VC-funded - Correlation of category, age, funding status and governance score.
  Looking at the correlation between the governance score and funding round, whether there was a valuation in that round (pricing) the valuation multiple at that round, the amount of capital raised and the level of revenue generation of the startup at that round it was found that all these attributes were positively related to the level of governance to different extents. The most positively correlated is the amount of capital being raised in the round, followed by the level of revenue generation, whether the round was priced or not, the round itself (first, second or third round) and least of all the valuation multiple. As previously noted however, the dataset is

deemed to have not well captured the valuation multiple for the various reasons described above. Therefore, it is likely that the weakly positive correlation here is misrepresentative. Appendix Table 11 shows the correlation by funding round and related attributes.

Analysis of Variance (ANOVA)

While the research design proposed ANOVA as a possible way to analyze the level of startup governance at different funding rounds/stages, the dataset from this study was insufficient for this purpose. However, we attempted a one-way ANOVA based on whether the startup had raised VC or not. Appendix Table 12 shows the One-way ANOVA VC vs. non-VC startups, and the results were as follows:

It can be concluded from the above that whether a startup has raised VC has a strong bearing on their level of corporate governance ($F = 8.3$, p-value = 0.006 is statistically significant at the 95% confidence level).

Regression analysis

Based on the available dataset, as indicated in One-way ANOVA VC vs. non-VC startups, it was not practical in this study to undertake regression analysis as originally intended and laid out in the data analysis.

Conclusion

Based on the preceding, it can be concluded that VC-funded technology startups tend to be better governed in most respects than non-VC-funded ones. It can also be concluded that startups in Africa have varying degrees of corporate governance as they mature. The finding that there is a positive correlation between age and the level of governance among non-VC funded startups, that is that they increased their corporate governance as the matured, while the reverse was found to be true among startups that had raised venture capital in their history. This is at odds with the fact that there was a positive correlation between the governance score and the rounds of funding a startup had - the more the rounds, the higher the level of governance – given that startups raise additional rounds as they age. The seeming contradiction may be a result of the limited data set in terms of startups that had gone through multiple rounds of funding. Majority had raised a single round, a few went on to a second round and only two had a third round. This requires further investigation.
  The fact that the amount of capital being raised in a funding round emerged as the most positively correlated to the level of governance indicates that there may be a higher requirement for good governance by investors on

startups the higher the amount they raise. This could be attributed to a need for greater oversight with more financial resources coming into the company. This may also indicate the possibility that despite the data showing weakly negative correlation between the age of VC-backed startups and governance level, the reality may be the inverse, as was the case among the non-VC funded startups, since startups generally raise more rounds at later stages. On the other hand, it is likely that the startups in this dataset that raised multiple levels of funding did so within a short span of time between funding rounds. Since the age was categorized as below three years, three to eight years and over eight years, it is very possible that startups raised multiple rounds within the span of time in one category. A more granular categorization in future studies may help to clear this up.

The fact that higher stages of revenue generation correlated positively with the level of corporate governance may also be attributed to the need for stronger controls with more financial income, which could also be on the insistence of the startup board. Finally, while the data on the valuation multiple was not sufficient to draw a confident conclusion on the relationship between the valuation and the level of corporate governance, the fact that there was a moderately strong correlation between the pricing (undertaking of valuation) of startups in a round indicates that there could indeed be a link between the actual valuation and the level of CG, in other words, VCs may require more governance from startups in priced rounds versus unpriced ones.

Implications to theory, practice, and policy

From an academic perspective, this study presents a starting point for further investigation specifically into the corporate governance of technology startups in Africa, and contributes to the existing, limited, body of knowledge on the management of startups in relation to how they scale. The study managed to establish the existence of a relationship between whether a startup was VC-funded and the level of governance. VC-funded startups were found to be, on average, better governed than their non-VC founded counterparts. However, the VC-funded startups were only averagely well governed. However, the study was inconclusive specifically as regards governance and valuation; this is in keeping with the findings of Kaplan (2021) who addressed the governance of organizations of a similar nature. That said, the study also resulted in a proposed way to better measure the aspect of valuation in future studies.

The study findings that VC-funded startups were on average better governed than their non-VC-funded counterparts implies that venture capitalists have some sway on the corporate governance of startups in Africa. It is however notable, that the level of influence is only moderately strong, primarily indicated by the relatively

weak to moderate correlation between the level of CG and the pricing (valuation undertaken) and amount of funding. There is therefore room for VCs to impress more on startups to strengthen their governance practices. Startups can also note that growth, at least in terms of revenue growth, comes with a need for better governance. They can therefore prepare for this by instituting appropriate governance measures earlier on in their lifecycle as this might enhance their growth prospects or make them more capable of handling growth.

The study, as designed and the results have minimal direct implications on policy formulation. However, it perhaps can be ventured that, given the positive correlation between the revenue stage of startups and their governance, regulators may consider emphasizing better governance among startups as they mature. This may forestall the potential of crises related to governance lapses, particularly regarding finances, among larger startups that may result is mass layoffs or other negative consequences at an industrial or economic scale.

Limitations of the study

One of the main limitations of this study was the scope that was attempted. The study targeted startups across all of Africa. The survey got responses primarily from Kenya, the country the researcher is based in, and few responses from the other major startup hubs in Africa, that is Nigeria, South Africa and Egypt, which, together with Kenya attract the lions-share of venture capital into the continent. In concert with the limitation on time and the incapacity of the researcher to survey the respondents in person (due to scope), the study ended up only scratching the surface in terms of the number of responses obtained. However, there is potential to continue the study hereafter to update the findings. The same study can also be replicated in more limited scope to investigate localized experiences of startups with regard to their funding and corporate governance. Alternatively, a team of researchers from different countries in Africa collaborating on a study such as this could bear more fruit as there might be more chances of success with locally based researchers surveying their country startup ecosystems, leveraging their networks to reach startups. It may also be that respondents will be more trusting of a locally based researcher that is known to them or to the ecosystem. This might indeed be the case because trust-worthy relationships are highly prized in startup ecosystems and indeed VCs heavily rely on direct referrals to find investment prospects and are more likely to invest through referral. This is commonly referred to as "social capital" in startup circles (Bandera and Thomas, 2019).

The design of the specific question regarding the valuation multiple also emerged as a major limitation of

the study. As earlier indicated, it may be that the calculation of the multiple was too onerous on respondents and they chose to forego it, or they were shy to provide the information despite it not being a requirement to provide a specific valuation. In future studies, this can be mitigated by having respondents select for a range of valuation multiples or actual valuations as opposed to having them calculate or enter an actual figure. This is backed-up by the fact that respondents in this study seemed more likely to answer questions presented as categories or ranges, such as with the questions on the amount of capital raised and revenue stage.

Areas suggested for further research

The limitations discussed in the preceding section have resulted in a limited dataset and the inability to undertake the anticipated in-depth analysis that could provide insight into the nature of corporate governance in startups across Africa with a high degree of certainty. Therefore, as a first step, we could attempt the study, taking into consideration the observations highlighted in the preceding section. This would involve limiting the scope to individual country/startup ecosystems, adopting a collaborative approach among researchers based in several ecosystems, adjusting the research instrument, particularly in the presentation of the question on valuation, and allowing for more time to collect the data. In addition, while the specific objective of this study was to do with valuation specifically, it was evident that other aspects of startups such as their age, and other aspects regarding their funding such as the amount of funding and the stage of revenue of the startup at a given round of funding were significantly correlated to the level of CG among startups. Further studies could also look more keenly into these specific aspects and how they influence CG.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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APPENDIX

Appendix I: Statistical analysis

Table 1. Survey response rate.

	Count	%
Completed	36	53.73%
Incompletes	31	46.27%
Total Responses	67	100.00%
Viewed	397	

Source: Researcher (2022).

Table 2. Governance score descriptive statistics – VC and non-VC.

Variable	BOD score	BOD size score	BOD composition score	Independents score	BOD skills score	Advisory board score	Total score
N	**59**	**59**	**59**	**59**	**59**	**59**	**59**
Min.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	1.00	1.00	1.00	0.00	1.00	1.00	6.00
Max.	1.00	3.00	3.00	1.00	3.00	1.00	11.00
Mean	0.53	1.02	1.05	0.41	1.02	0.51	4.83
Variance	0.25	1.15	1.12	0.25	1.26	0.25	19.80
St. Dev	0.50	1.07	1.06	0.50	1.12	0.50	4.45
Skewness	-0.10	0.48	0.26	0.39	0.65	-0.03	0.07
Kurtosis	-2.06	-1.20	-1.50	-1.91	-1.02	-2.07	-1.81

Source: Researcher (2022).

Table 3. Governance score descriptive statistics - non-VC.

Variable	BOD score	BOD size score	BO composition score	Independents Score	BOD skills score	Advisory board score	Total score
N	**21**	**21**	**21**	**21**	**21**	**21**	**21**
Min.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Max.	1.00	3.00	3.00	1.00	3.00	1.00	11.00
Mean	0.29	0.57	0.57	0.19	0.57	0.48	2.71
Variance	0.21	1.06	1.06	0.16	1.06	0.26	16.61
St. Dev.	0.46	1.03	1.03	0.40	1.03	0.51	4.08
Skewness	1.02	1.62	1.62	1.70	1.62	0.10	1.24
Kurtosis	-1.06	1.30	1.30	0.98	1.30	-2.21	-0.26

Source: Researcher (2022).

Table 4. Governance score descriptive statistics – VC.

Variable	BOD score	BOD size score	BOD composition score	Independents Score	BOD skills score	Advisory board score	Total score
N	**38**	**38**	**38**	**38**	**38**	**38**	**38**
Min.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	1.00	1.00	2.00	1.00	1.00	1.00	8.00
Max.	1.00	3.00	3.00	1.00	3.00	1.00	11.00

Table 4. Cond.

Mean	*0.66*	*1.26*	*1.32*	*0.53*	*1.26*	*0.53*	*6.00*
Variance	0.23	1.06	0.98	0.26	1.23	0.26	18.11
St. Dev	0.48	1.03	0.99	0.51	1.11	0.51	4.26
Skewness	-0.69	0.06	-0.34	-0.11	0.33	-0.11	-0.46
Kurtosis	-1.61	-1.26	-1.38	-2.10	-1.22	-2.10	-1.50

Source: Researcher (2022).

Table 5. Mean governance score.

Variable	BOD score	BOD size score	BOD composition score	Independents score	BOD skills score	Advisory board score	Total score
All	0.53	1.02	1.05	0.41	1.02	0.51	4.83
Non-VC	0.29	0.57	0.57	0.19	0.57	0.48	2.71
VC	0.66	1.26	1.32	0.53	1.26	0.53	6.00
VC/Non-VC	2.30	2.21	2.30	2.76	2.21	1.11	2.21

Source: Researcher (2022).

Table 6. Governance score – standard deviations.

Variable	BOD score	BOD size score	BOD composition score	Independents score	BOD skills score	Advisory board score	Total score
All	0.50	1.07	1.06	0.50	1.12	0.50	4.45
Non-VC	0.46	1.03	1.03	0.40	1.03	0.51	4.08
VC	0.48	1.03	0.99	0.51	1.11	0.51	4.26
VC/Non-VC	1.04	1.00	0.96	1.26	1.08	0.99	1.04

Source: Researcher (2022).

Table 7. Valuation multiples.

RESPONSE_ID	Round 1		Round 2		Round 3	
	Valued	Base Val. multiple	Valued	Val. multiple	Valued	Val. multiple
99709461	Yes	1	No	NA	NA	NA
99713500	No	1	NA	NA	NA	NA
99772243	Yes	1	NA	NA	NA	NA
100009597	No	1	NA	NA	NA	NA
100016497	No	1	No	NA	NA	NA
100020049	NA	1	NA	NA	NA	NA
100037848	No	1	NA	NA	NA	NA
100081858	Yes	1	NA	NA	NA	NA
100082187	Yes	1	NA	NA	NA	NA
100082205	Yes	1	NA	NA	NA	NA
100082227	Yes	1	Yes	1	NA	NA
100082347	Yes	1	Yes	1	NA	NA
100082350	Yes	1	Yes	1	NA	NA
100082352	Yes	1	Yes	1	NA	NA
100082355	Yes	1	Yes	1	NA	NA
100082356	Yes	1	Yes	1	NA	NA
100082512	No	1	No	NA	NA	NA
100084180	No	1	Yes	NA	NA	NA
100085838	Yes	1	Yes	3	Yes	8
100086042	Yes	1	Yes	1	Yes	1
100087782	NA	1	NA	NA	NA	NA
100089586	Yes	1	NA	NA	NA	NA
100098832	Yes	1	NA	NA	NA	NA

Table 8. Full data set - correlation of category, age, funding status and governance score.

Variable	Category	Age	Raised VC	Score
Category	1.00			
Age	0.08	1.00		
Raised VC	-0.17	-0.27	1.00	
Score	-0.03	0.07	0.26	1.00

Source: Researcher (2022).

Table 9. Non-VC - correlation of category, age, funding status and governance score.

Variable	Category	Age	Score
Category	1.00		
Age	-0.17	1.00	
Score	0.03	0.58	1.00

Source: Researcher (2022).

Table 10. VC-funded - correlation of category, age, funding status and governance score.

Variable	Category	Age	Score
Category	1.00		
Age	0.39	1.00	
Score	0.00	-0.24	1.00

Source: Researcher (2022).

Table 11. Correlation by funding round and related attributes.

Variable	Round	Round priced	Valuation multiple	Amount	Revenue	Total score
Round	1.00					
Round priced	0.11	1.00				
Valuation multiple	0.53	0.11	1.00			
Amount	0.39	0.31	0.24	1.00		
Revenue	0.18	0.34	0.10	0.63	1.00	
Total score	0.31	0.39	0.13	0.62	0.50	1.00

Source: Researcher (2022).

Table 12. One-way ANOVA VC vs. non-VC startups.

Summary				
Groups	**Count**	**Sum**	**Average**	**Variance**
NoVC	21	57	2.71	16.61
VC	38	228	6	18.11
ANOVA				

Source of variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between groups	146.0194	1	146.019	8.304	0.006	4.010
Within groups	1002.286	57	17.584			
Total	1148.305	58				

Source: Researcher (2022).