The Impact of Quality Signals on the Performance of COVID-19 Related Crowdfunding

(Kesan Signal Kualiti Ke Atas Prestasi Pendanaan Awam Yang Berkaitan Dengan COVID-19)

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ABSTRACT

This study aims to examine the impact of quality signals on crowdfunding performance. The data are based on 80 projects gathered from three Malaysian donation-based crowdfunding platforms that use a keep-it-all funding approach. OLS regression is used to estimate the relationship between quality signals on crowdfunding performance. The data was collected during the early stages of the COVID-19 pandemic. The study finds that crowdfunding performance is influenced by six quality signals: funding goals, word count, social networks, updates, comments, and campaign duration. This study adds to the empirical literature in signaling theory within the context of donation-based crowdfunding. It enriches the specific information about quality signals that are capable of increasing the performance of COVID-19-related crowdfunding in Malaysia which has remained unidentified in the previous studies. The success of campaigns is important to fundraisers, and to increase the chances of obtaining more fundimg, fundraisers should send quality signals to the potential funders.

Keywords: COVID-19; crowdfunding; donation; Malaysia; quality signals

ABSTRAK

Kajian ini bertujuan untuk mengkaji kesan pendanaan awam kesan isyarat kualiti terhadap prestasi pendanaan awam.Data adalah berdasarkan kepada 80 projek dikumpulkan daripada tiga platform pendanaan awam berasaskan derma di Malaysia yang menggunakan pendekatan pembiayaan simpan-kesemuanya. Regresi OLS digunakan untuk menganggarkan hubungan antara isyarat kualiti ke atas prestasi pendanaan awam. Data tersebut dikumpulkan pada peringkat awal pandemik COVID-19. Kajian mendapati bahawa prestasi pendanaan awam dipengaruhi oleh beberapa isyarat kualiti iaitu sasaran dana, bilangan perkataan, rangkaian sosial, kemaskini, komen dan tempoh kempen. Kajian ini menambah kepada penulisan empirikal berkaitan dengan teori isyarat dalam konteks pendanaan awam berasaskan derma. Ia memperkayakan maklumat khusus berkaitan isyarat kualiti yang boleh meningkatkan prestasi pendanaan awam yang berkaitan dengan COVID-19 di Malaysia yang masih belum dikenalpasti dalam kajian terdahulu. Kejayaan kempen adalah penting kepada pengumpul dana dan untuk meningkatkan peluang mendapatkan lebih banyak dana, pengumpul dana harus menghantar isyarat berkualiti kepada pembiaya yang berpotensi.

Kata kunci: COVID-19; pendanaan awam; derma; Malaysia; signal kualiti

INTRODUCTION

The COVID-19 pandemic seriously impacted the Malaysian economy. Malaysia GDP declined from 3.6% in Q4 2019 to 0.7% in Q1 2020 (Nik Azman et al. 2021). Major economic sectors were shut down when the Movement Control Order (MCO) was in effect. Many workers had to be laid off, and many companies had to close. The highest unemployment rate in Malaysia was in the second quarter of 2020 at 5.1% (Department of

Statistic Malaysia 2021). Household savings and income were affected when workers were laid off (Thinagar et al. 2021; Mohammad Zin et al. 2021). Health care systems were also severely affected. Hospital capacity and the availability of urgent medical supplies and personal protective equipment (PPE) for critical care staff were inadequate (Sun et al. 2021; Amaran et al. 2021).

Donation-based and reward-based crowdfunding were among the most popular platforms used to combat the impacts of the COVID-19 pandemic (Igra et al. 2021; Saleh et al. 2021; European Crowdfunding Network 2020). In Europe, COVID-19 campaigns were primarily driven by the donation and reward side (European Crowdfunding Network 2020). Americans turned to charitable crowdfunding during the first year of the COVID-19 crisis for assistance with medical bills, burial costs, lost wages, small business support, food assistance, and other needs (Saleh et al. 2021). After March 2020, COVID-19-related crowdfunding responses skyrocketed on platforms such as GoFundMe (Saleh et al. 2021), a platform that is donation-based. In Malaysia, non-governmental organizations (NGOs) also launched charitable crowdfunding campaigns to support the most affected vulnerable groups and to lift some burdens off the healthcare system (Abd Samat et al. 2022).

It has been found that many campaigns are proven successful while others do not achieve their goals as a result of the presence of information asymmetry. The funders have limited information regarding the feasibility of a campaign due to information asymmetry, which eventually affects their decisions to support a project or not (Ahlers et al. 2015; Belleflamme et al. 2015; Mollick 2014). According to the signalling theory, one way to mitigate and reduce information asymmetry is sending signals to the donors by which they can gauge the quality of the project. Sending the right signals allows individuals to attract support for their cause and improve perceptions of the quality of their organisation (Anglin et al. 2018).

Studies by Amaran et al. (2021) and Abd Samat et al. (2022) conducted within the context of Malaysia provide insights about COVID-19 donations. However, the discourse surrounding COVID-19 donations predominantly focus on donations to the medical and healthcare sectors. Apart from that, these studies do not engage their discussions with quality signals. Even though Abd Samat et al. (2022) claims that social media, which is recognized as a quality signal, plays an important role in garnering considerable support for fundraisings, they do not provide empirical evidence to support this finding. There has been no information as to whether crowdfunding has been successfully used during a pandemic crisis to support COVID-19-related causes in Malaysia. It has raised a question: taking into account COVID-19-related crowdfunding campaigns in Malaysia, what quality signals embedded in COVID-19-related campaigns' funding goals influence crowdfunding performance?

This study aims to investigate the effect of project quality signals on crowdfunding campaign performance. The signaling theory is the main theory used to develop a theoretical model linking the quality signals of a project with crowdfunding performance. Data are extracted from the donation-based crowdfunding platforms in Malaysia that use a keep-it-all approach. Eighty COVID-19 related projects were analyzed using OLS regression, and six quality signals affect the performance of crowdfunding.

Given the fact that donation-based crowdfunding emerges as a viable funding channel in times of emergency and crisis, this study adds to the existing literature by identifying the quality signals associated with the performance of COVID-19 crowdfunding initiatives in Malaysia. Even though Ho et al. (2021) investigated the extent to which quality signals impact the performance of GoFundMe, a donation-based crowdfunding platform, to support COVID-19-related causes, this study shows that different studies may identify different quality signals on crowdfunding performance.

Following an introduction in section one, the paper continues with a literature review in section two, followed by the methodology in section three. Findings are given in section four and discussion in section five. Section six concludes this paper and provides future research direction.

LITERATURE REVIEW

CROWDFUNDING

Crowdfunding refers to a practice wherein a substantial sum of money is collected from a vast number of individuals through an internet-based platform, eliminating the need for a financial intermediary (Wahjono et al. 2021). This method of fundraising is typically classified into four distinct categories: reward-based, lending-based (peer-to-peer lending), equity-base,d and donation-based or charitable crowdfunding. The absence of financial motivation in donation-based crowdfunding differentiates it from the other types of crowdfunding. There is no element of financial returns or compensation given by the fundraisers to the donors via donation-based crowdfunding platforms (Chen et al. 2023).

Success is important for each campaign. Attracting and encouraging more funders is a major concern for fundraisers. A greater number of funders leads to a higher probability of obtaining funds, ultimately contributing to the success of such campaign. However, at the end of the campaign period, the financial implication depends on the model or policy of the crowdfunding platform. In the event of the fixed-funding mechanism or all-or-nothing approach, if the fundraisers or campaign creators are unable to meet funding targets, the fund will be returned to the funders. On the contrary, the second model, which is a keep-it-all or flexible mechanism, implies that the fundraisers receive any amount they are able to raise even

if the amount does not reach the target (Bi et al. 2019). Despite the type of the model, the target amount still matters. In addition to the financial implication, failing to reach the funding target can also have other consequences. Campaign creators or fundraisers are motivated by raising funds. They receive validation, connecting with others and expanding awareness about their projects throughout the fundraising process (Koçer 2015). Hence, receiving less than the target amount can demotivate the fundraiser to carry out the project or campaign.

INFORMATION ASYMMETRY AND THE SIGNALING THEORY IN CROWDFUNDING

To funders, there are many uncertainties associated with crowdfunding campaigns. In the crowdfunding context, funders usually do not have complete and perfect information about the fundraisers' abilities, whether they are trustworthy, and the prospect of success of the projects or campaigns proposed by the fundraisers on the crowdfunding platforms (Colombo et al. 2015). That will eventually affect the amount of money they contribute (Zheng et al. 2014). This problem is due to information asymmetry. It happens when one party is not fully aware of the quality and behavioural intentions of the other party (Vismara 2016). Information asymmetry has been a dilemma for project owners seeking funding through crowdfunding. Sound decision-making necessitates giving the right information to the funders so that they can decide whether they will support the project in the absence of perfect information (Belleflamme et al. 2015; Mollick 2014). It is necessary to build trust between two parties before supporting a project; therefore, information asymmetry must be reduced as much as possible. A past study finds that according to the signaling theory, information asymmetry can be reduced by delivering the right or quality signals to the funders (Courtney et al. 2017). This theory elucidates the fact that the informed party can send observable signals to the party possessing less information and reveal information regarding unobservable features to facilitate the process of interchange (Spence 1974). Thus, crowdfunding campaigns must display noticeable and comprehensible signals to potential funders which eventually are able to improve the chance of receiving funding (Pan & Dong 2023). The signals should also be an ongoing process and frequently communicated (Ho et al. 2021). These signals are regarded as 'quality signals.'

Trust and confidence from donors towards charities have consistently been a major area of focus for these charity activities. The establishment of trust is of utmost importance for the success of donation-based crowdfunding, and this can be achieved by reducing the information asymmetry between the charity seeker and the donor (Majumdar & Bose 2018).¬A charitable request must have certain features that can enhance the likelihood of receiving a donation, and these features are regarded as 'quality signals.' However, research on the signaling theory within the context of donation-based crowdfunding is not receiving much attention in comparison with equity- and reward-based crowdfunding (Pang & Dong 2023).

QUALITY SIGNALS

Past studies find various quality signals in crowdfunding campaigns from fundraisers to funders to assess the projects' quality and determine how much they wish to support them (Belleflamme et al. 2015; Mollick 2014). Concerning COVID-19-related campaigns, Ho et al. (2021) found 195 out of 652 campaigns (29.9%) on GoFundMe from 1 March 2020 to 31 July 2020 were successful in raising equal or higher than the mínimum target. Ho et al. (2021) explains the extent to which quality signals are able to influence the success of the campaigns empirically using data from GoFundMe.

There has been a comprehensive discourse regarding the function of social capital as a quality signal in crowdfunding. It should be noted that the literature shows this signal has been examined differently. Colombo et al. (2015) examined the influence of social capital on crowdfunding, specifically by making a distinction between internal and external social capital. This study also observes Zheng et al. (2014) as the first study that posits social capital as a multidimensional construct, and expands upon the narrative surrounding social capital's impact on crowdfunding by incorporating the theory of multidimensional social capital. They assert that the influence of social capital may vary depending on the specific dimension of social capital under consideration. The same approaches are adopted in Madrazo-Lemarroy et al. (2019) and Sabarudin et al. (2021). Based on the theory, social capital encompasses three distinct dimensions: the structural dimension, the relational dimension, and the cognitive dimension (Madrazo-Lemarroy et al. 2019; Zheng et al. 2014; Sabarudin et al. 2021). With regard to determinants of crowdfunding COVID-19-related campaign success, all dimensions of social capital have been tested by Ho et al. (2021). Pan and Dong (2023) only include relational dimension social capital in their work; however, their basic premise of the social capital concept has nothing to do with the multidimensional social capital theory. This study attempts to integrate all social capital components in this research on the ground that the influence of social capital may vary depending on the specific dimension of social capital under consideration as contended by Zheng et al. (2014).

The structural dimension of social capital is related to the network (Madrazo-Lemarroy et al. 2019; Zheng et al. 2014; Sabarudin et al. 2021). In the context of the signaling theory, networks are portrayed by social contacts, which serve as signals boosting trustworthiness (Colombo et al. 2015). The internet has replaced offline networks with social media. Thus, Facebook and Twitter are regarded as social networks of a project Courtney

et al. (2017). By reducing ambiguity and uncertainty surrounding crowdfunding projects, the use of social media can enhance the project owner's credibility and project quality (Courtney et al. (2017).This is due to the fact that social media allows project owners and funders to have frequent and real-time communication (Cha 2017; Fong et al. 2020). One of the advantages of a crowdfunding platform is that the campaigns can be shared through social media accounts linked to the platform accounts. The communities created by means of social networking platforms have the capability to function as intermediaries disseminating information about the initiatives. Social media facilitates the dissemination of project information to the public and ultimately increases the amount of money received through crowdfunding (Vismara 2016). The impact of social networks on the GoFundMe donation crowdfunding campaign success during the COVID-19 crisis in the U.S is similar to past studies that include this quality signal as a determinant for success (Ho et al. 2021). This study posit:

H_1 Campaigns shared through social media are more successful.

H_2 The number of shares on social media is positively associated with crowdfunding performance.

In the crowdfunding context, the project description in words, videos, or images is regarded as a cognitive aspect of social capital to convince potential funders (Madrazo-Lemarroy et al. 2019; Zheng et al. 2014; Sabarudin et al. 2021). The cognitive aspect pertains to the social capital development through shared language and narratives that create a sense of affinity among individuals within a network (Nahapiet & Ghoshal 1998). Texts, such as the project's purpose and deliverables, furnish more information to funders and supporters. Put differently, the more comprehensive the introduction, the more inclined donors are to contribute (Bi et al. 2017). Madrazo-Lemarroy et al. (2019) believe funders trust projects described with more words. Therefore, the difference between high- and low-quality projects lies in the fact that high-quality projects' descriptions use more words. In addition, Ho et al. (2021) present findings that merit careful consideration. Their study reveals that when the campaign description exceeds 900 words, it leads to a detrimental impact on the crowdfunding campaign's overall success.

H_3 The number of words is positively associated with crowdfunding performance.

Fundraisers also communicate with funders through images and videos. Unlike texts, images and videos are visual media formats (Ho et al 2021). Still, they serve the same purpose – to provide a better description of the projects, aiming to convince the potential backers about their relevance, viability, and credibility (Sulaeman & Lin 2018). Both are signals of the project owner's

competencies and motivations, which have an impact on the extent to which the funders place trust in the project owners (Cha 2017). The utilization of media in addressing information asymmetry in crowdfunding becomes increasingly crucial in situations where project owners do not have prior success in crowdfunding. (Courtney et al. 2017). Concerning video, producing a video is the most basic step a project must undertake as it serves as an indication of a higher quality project (Mollick 2014). Both visual presentation of picture and video are found to positively affect the success of crowdfunding campaigns (Ho et al. 2021; Mollick 2014; Cha 2017).

H_4 Campaigns with the presence of an image are more successful.

H_5 Campaigns with the presence of a video are more successful.

The relational aspect of social capital in crowdfunding manifests itself through updates and comments which can serve as active communications that are visible to potential funders looking for high-quality campaigns (Sabarudin et al. 2021). Project owners updates on fundraising progress and past studies suggest that a higher frequency of projects updated during a crowdfunding campaign is associated with a greater likelihood of success (Courtney et al. 2017; Madrazo-Lemarroy et al. 2019; Sabarudin et al. 2021; Ho et al. 2021 and Pan & Dong 2023). Updates are important in the context of disaster relief crowdfunding campaigns since it is the fundraiser's dedication and competence in fulfilling their promise to help those who are affected (Pan & Dong 2023). Apart from that, funders can also post comments and receive responses from other users. Being network members, they have similar goals and ideals. They support each other, and such support could be in the form of comments made during the campaign (Madrazo-Lemarroy et al. 2019). Madrazo-Lemarroy et al. (2019), Sabarudin et al. (2021), and Ho et al. (2021) verify that providing comments has a positive impact on crowdfunding success. Hence, this study posits:

H_6 Campaigns that have updates are more successful.

H_7 The number of updates is positively associated with crowdfunding performance.

H_8 Campaigns that have comments are more successful.

H_9 The number of comments is positively associated with crowdfunding performance.

Volunteers dedicate their time, resources, and expertise to assist those affected by disasters. They engage in voluntary activities either on an individual basis or as part of a team. Team size indicates the extent of available human resources and is correlated with campaign success (Jung & Ha 2021; D'Agostino et al. 2022)., In terms of indicating human resources, the formation of a team offers several advantages in commencing a project. The primary advantage is that a team combines different individuals' human-capital endowments (Cha 2017). As

a result, a crowdfunding project launched by a group is more likely to succeed compared to one initiated by a single person. However, this study observes that in some instances, even though an individual submits a project, it might also involve a team in the implementation phase. Accordingly, this study hypothesizes that:

H_{10} Campaigns submitted by a team or involved with a team are more successful.

Funders seek quality signals incorporated within the funding goals (Cicchiello et al. 2021; Paschen 2017). However, there are two contradictory findings regarding these signals in past studies. Bento et al (2019) and Sabarudin et al. (2021) found that successful crowdfunding projects tend to ask for less money and are more appealing to a crowd. Thus, it can be understood that crowdfunding projects with lower funding targets are more successful than those aiming for higher funding targets. On the other hand, Sulaiman & Lin (2018) believe ambitious projects with larger financing targets demonstrate that fundraisers are more dedicated to provide aid to those in need. They contend that potential donors are likely to view such fundraisers as better quality. Thus, charitable crowdfunding campaigns with higher funding targets attract a greater collective sum of donations. Thus, the following hypothesis is posited:

H_{11} The funding goal is positively associated with crowdfunding performance.

Previous research has highlighted the positive impact of the length of time on the achievement of a crowdfunding initiative (Hörisch 2015). Duration has been perceived as a signal of the project quality (Behl et al. 2021). This is among important quality signals which can reduce information asymmetry. According to Courtney et al. (2017) and Pang & Dong (2017), shorter project duration exacerbates the information asymmetry problem. The positive relationship between duration and the success of crowdfunding campaigns was also observed by Hörisch (2015). This suggests that if a project permits a greater duration to achieve the desired funding goal, it is more likely to attain its target amount (Hörisch 2015). On the contrary, other past studies show that longer durations are a sign of a lack of confidence and consequently decreases the chances of success (Mollick 2014). Hence, this study posits that:

H_{12} Duration is positively associated with crowdfunding performance.

Crowdfunding during a crisis is more difficult. In a rapid and strategic response to lessen the effects of the COVID-19 pandemic, individual crowdfunding platforms addressed this issue by reducing or waiving the crowdfunding platform's fee to stimulate donations (Chiesa & Handke 2020). For instance, even amidst

the COVID-19 crisis, Facebook innovated a solution to solicit funds in some countries at no cost (Sirisawat et al. 2020). Crowdfunding platforms in Europe implemented measures foreseeing reduced or cancelled fees for using the platforms for specific COVID-19-related funding calls and channels. At present, most payment fees are set by each platform separately. Upon approval, most platforms impose fees on funders, amounting to 3–12% of donations received by the platform (Sirisawat et al. 2020). However, reducing or eliminating fees to increase campaign performance has never been empirically tested. Consequently, this paper examines whether this affects crowdfunding performance.

H_{13} Campaigns which are given reduced or cancelled fees are more successful.

METHODOLOGY

For this research, cross-sectional data were collected from primary sources. Various internet searches were conducted to find donation-based crowdfunding platforms in Malaysia used for COVID-19-related campaigns between March and December 2020. Three Malaysian-based donation-based platforms mostly used for such campaigns were identified. This study examined 84 projects posted on these platforms: 59 projects on Kitafund, 24 projects on SimplyGiving, and five projects on JomDonate. These platforms usea keep-it-all approach for COVID-19-related campaigns. Subsequently, some substantial projects acting as outliers were identified and removed. The final sample contained 80 projects.

This study cannot rely on the data of COVID-19 campaigns on GoFundME even though it is one of the most popular crowdfunding platforms used in the previous research. GoFundMe does contain COVID-19-related campaigns coming from Malaysia and for Malaysians, but until August 2021, there were only eight campaigns for this cause on that platform.

Donation-based crowdfunding emerges as a viable funding channel in times of emergency and crisis, owing to its distinctive attributes. First and foremost, the project-based nature of this form of fundraising enables the fundraisers to direct resources towards meeting the specific needs of individuals and groups. Furthermore, donation-based crowdfunding distinguishes itself by its cost-effectiveness, expeditious implementation, and extensive reach to a diverse audience. Consequently, donation-based crowdfunding has become a crucial channel in providing financial aid for disaster-relief campaigns (Pan & Dong 2023). Given the suitability of donation-based crowdfunding in emergency and crisis situations, it is worthwhile to explore the quality signals associated with the performance of COVID-19 crowdfunding initiatives in Malaysia.

Sample of this study in Table 1 show that the funds raised from crowdfunding were mobilised mainly to provide food assistance to vulnerable people experiencing

severe food insecurity and other necessities (51.25 per cent) and for frontliners to protect themselves against the spread and impact of the pandemic (28.75 per cent). The sampling campaign by Ho et al. (2021) extracted from GoFundMe was primarily for food relief campaigns in the United States; however, campaigns for frontliners were not indicated in their sample. Data of this study are beyond food relief campaigns as we also included all campaigns as long as they were related to COVID-19. Surprisingly, even though there was a sense of urgency in

these categories of campaigns, only six campaigns (7.5 per cent) were successful in reaching their funding goal. The majority of the campaigns were shared on social media (67.5 per cent), provided images (70 per cent), updates (56.25 per cent), and comments (57.5 per cent), and were initiated by or involved with a team (95 per cent), but they still could not reach their funding target. Thus, it would be more beneficial to empirically study the magnitude of each quality signal on the funding amount.

TABLE 1. Summary of descriptive statistics of the qualitative variables (*n*=80)

	Reached funding target		Did not reach funding target		Total number of campaigns	
	N	%	N	%	N	%
Total	6	7.5	74	92.5	80	100
Category of campaign						
Food	2	33.3	21	28.4	23	28.75
Food and other necessities	2	33.3	16	21.6	18	22.5
Frontliners	2	33.3	21	28.4	23	28.75
Frontliners and public	0	0.0	8	10.8	8	10
Education	0	0.0	3	4.1	3	3.75
Communication	0	0.0	2	2.7	2	2.5
Cost and health service	0	0.0	2	2.7	2	2.5
Animals	0	0.0	1	1.4	1	1.25
Sharing Social Media						
Yes	4	66.7	50	67.6	54	67.5
No	2	33.3	24	32.4	26	32.5
Image						
Yes	4	66.7	52	70.3	56	70
No	2	33.3	22	29.7	24	30
Video						
Yes	0	0.0	10	13.5	10	12.5
No	6	100.0	64	86.5	70	87.5
Update						
Yes	4	66.7	41	55.4	45	56.25
No	2	33.3	33	44.6	35	43.75
Comment						
Yes	2	33.3	44	59.5	46	57.5
No	4	66.7	30	40.5	34	42.5
Team						
Yes	5	83.3	71	95.9	76	95
No	1	16.7	3	4.1	4	5

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Fees						
Yes	1	16.7	0	0.0	1	1.25
No	5	83.3	74	100.0	79	98.75

Note: Data period was from March to December 2020.

THEORETICAL MODELLING

The first underlying theory used in developing the hypotheses was the signaling theory. The signaling theory postulates that senders convey signals to receivers so that they can understand the sender's intention and message (Connelly et al. 2011). Due to the ambiguity regarding the quality of each fundraiser's project output, potential donors in charitable or donation-based crowdfunding platforms may find it challenging to decide on which campaigns to support. Their knowledge of the fundraisers' capacity to keep their commitments and the quality of benefits delivered to the beneficiaries is limited. As a result, they rely on signals to determine a project's quality, which the signaling theory may account for (Spence 1974). It is presumable that these signals indicate a project's underlying quality, guaranteeing that projects of higher quality obtain more money than those of lower quality (Mollick 2014). With regard to social capital signals, the multidimensional social capital theory was engaged in the research model.

Two ordinary least squares (OLS) models were developed to link the quality signals of a project with the campaign's success. The models were modified from the original model used in Pan and Dong (2023), Sabarudin et al. (2021), Chen et al. (2023), Ho et al. (2021), and Cha (2017). Based on the model in Pan and Dong (2023), OLS regression was employed because the dependent variable, Log Funding Amount (LnFundingAmount), is a continuous measure. Sabarudin et al. (2021) and Ho et al. (2021) employed logistic regression since their dependent variable was a binary variable. However, given the fact that only six (7.5%) of the total sample of this study reached a funding target, logistic regression is impossible for this study.

$$\text{LnFundingAmount} = \beta_0 + \beta_1 \text{Sharing}_{\text{social}}\text{media} + \beta_{2I}\text{Words} + \beta_3 \text{Image} + \beta_4 \text{Video} + \beta_5 \text{Update} + \beta_6 \text{Comment} + \beta_7 \text{Team} + \beta_8 \text{Funding goal} + \beta_9 \text{Duration} + \beta_{10} \text{Fees} + \varepsilon \quad (1)$$

$$\text{LnFundingAmount} = \beta_0 + \beta_1 \text{No of sharing}_{\text{social}}\text{media} + \beta_{2I}\text{Words} + \beta_3 \text{Image} + \beta_4 \text{Video} + \beta_5 \text{No\_updates} + \beta_6 \text{No\_comments} + \beta_7 \text{Team} + \beta_8 \text{Funding goal} + \beta_9 \text{Duration} + \beta_{10} \text{Fees} + \varepsilon \quad (2)$$

Table 2 describes the variables used in this study and their descriptive statistics.

TABLE 2. Variables and descriptive statistics

Dependent variable	Symbol	Obs	Mean	SD	Min	Max	Variable description
Log Funding Amount	LnFundingAmount	80	3.4237	0.8925	1.301	5.6182	The total amount raised at the end of the campaign. The variable was logarithmised to reach normal distribution.
Independent variables							
Multidimensional social capital							
Structured dimension							
Social network	Sharing_social media	80	.675	.4713	0	1	Dummy = 1 if the campaign is shared via Facebook or Twitter; 0 otherwise
	No of sharing of_social media	80	11.825	27.7574	0	153	The total number of sharing via Facebook or Twitter.

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Cognitive dimension							
Words	Words	80	488.925	184.7276	79	1275	The total count if words in the particular campaign.
Image	Image	80	.700	.4611	0	1	Dummy = 1 if the campaign has an image; 0 otherwise
Video	Video	80	.125	.3328	0	1	Dummy = 1 if the campaign has a video; 0 otherwise
Relational dimension							
Updates	Updates	80	.563	.4992	0	1	Dummy = 1 if the campaign has updates; 0 otherwise
	No_updates	80	1.950	3.0602	0	16	The number of updates
Comments	Comments	80	.575	.4975	0	1	Dummy = 1 if the campaign has comments; 0 otherwise
	No_comments	80	12.163	25.4078	0	99	The number of comments
Human capital quality signal							
Team	Team	80	.950	.2193	0	1	Dummy = 1 if the campaign is submitted by a team/involves a team; 0 otherwise
Other signals							
Funding goal	Funding_goal	80	98929.03	147947.660	600	850,000	The funding goal set by the project's owner.
Duration	Duration	80	60.350	58.9984	8	261	The length of the campaign, measured in days, at the end of the campaign
Control variable							
Fees	Fees	80	.263	.4428	0	1	Dummy = 1 if the platform's or payment gateway's fees are reduced or cancelled; 0 otherwise

VARIABLES

In a study by Pan & Dong (2023) and Cha (2017), continuous measurements of money raised were employed to evaluate fundraising performance; however, according to Cha (2017), the variable was logarithmised to reach normal distribution. Thus, the Log Funding Amount (LnFundingAmount) dependent variable was the logarithm of the amount of money raised for COVID-19-related projects by the closure of the crowdfunding campaign. Regardless of whether or not their initial funding targets were achieved, fundraisers from all three Malaysian-based donation-based platforms, which are the sample of this study, received the whole amount of the donation.

There are nine variables under investigation that represent the quality signals as shown in Table 2. Six

of them represent social capital quality signals, one represents human capital quality signals, and the other two variables are regarded as other signals. Following Madrazo-Lemarroy et al. (2019), Zheng et al. (2014), and Sabarudin et al. (2021), these social capital quality signals were divided into the three dimensions of structured, cognitive, and dimensional on the grounds that social capital is a multidimensional concept.

The social network of the project (Sharing social media and No of sharing_social media) aspects were assessed in two ways. First, referring to Courtney et al. (2017), the number of social media shares was used in model 2. Secondly, in model 1, if the project was not shared with any social network, it was coded 0 as can be found in Sabarudin et al. (2021) and Ho et al. (2021). Social network represents the structured dimension of social capital. Based on Madrazo-Lemarroy et al. (2019)

and Ho et al. (2021), words (Words) were also measured as a continuous variable. The quantity of words was determined by employing Text Analyser software, based on the textual depiction of the project, drawing on earlier research by Madrazo-Lemarroy et al. (2019). Referring to Mollick (2014) and Ho et al. (2021), the existence of a video (Video) was coded 0 if a project had no video. Image (Image) was coded according to Courtney et al. (2017) and Ho et al. (2021), in which the variable image equals 0 if a project had no image. Words, Video and Image are quality signals indicating the existence of cognitive dimension of social capital.

Concerning updates (Updates), in model 1, referring to Courtney et al. (2017) and Pan & Dong (2023), this variable equals 0 if the project owner did not post any updates. In model 2, this variable was also measured in the form of the number of updates (No_Updates) as can be found in Madrazo-Lemarroy et al. (2019) and Sabarudin et al. (2021). As for comments (Comments), in model 1, this study coded 0 if there were no comments for the project left by funders during the active campaign as measured in Pan & Dong (2023). Referring to Courtney et al. (2017), Madrazo-Lemarroy et al. (2019), and Ho et al. (2021), this variable was also measured in the form of the number of comments (No_Comments) in model 2.

Updates and Comments are a component of social capital that pertains to the relational aspect.

This study included the human capital quality signal in the model since this signal has been ignored in the donation-based crowdfunding context as can be observed in Ho et al. (2021) and Sabarudin et al. (2021). On the contrary, it has been widely investigated in equity crowdfunding success (Shneor & Vik 2020). The signal is relevant in the context of donation-based crowdfunding since voluntary work can be initiated and done individually or in a team. Referring to Cha (2017), if the project was not submitted to the crowdfunding platforms by a team or involved with a team (Team), it was coded 0.

The funding goal (Funding_goal) was measured as a continuous variable, as used by Bento et al. (2019) and Sabarudin et al. (2021). The duration was measured as a continuous variable according to Hörisch (2015), Mollick (2014), and Pan & Dong (2023). One control variable was included in the model (Fees). A campaign which was not given reduced or cancelled fees was coded 0. From the literature and theoretical framework elucidated earlier, the research framework was formulated as depicted in Figure 1.
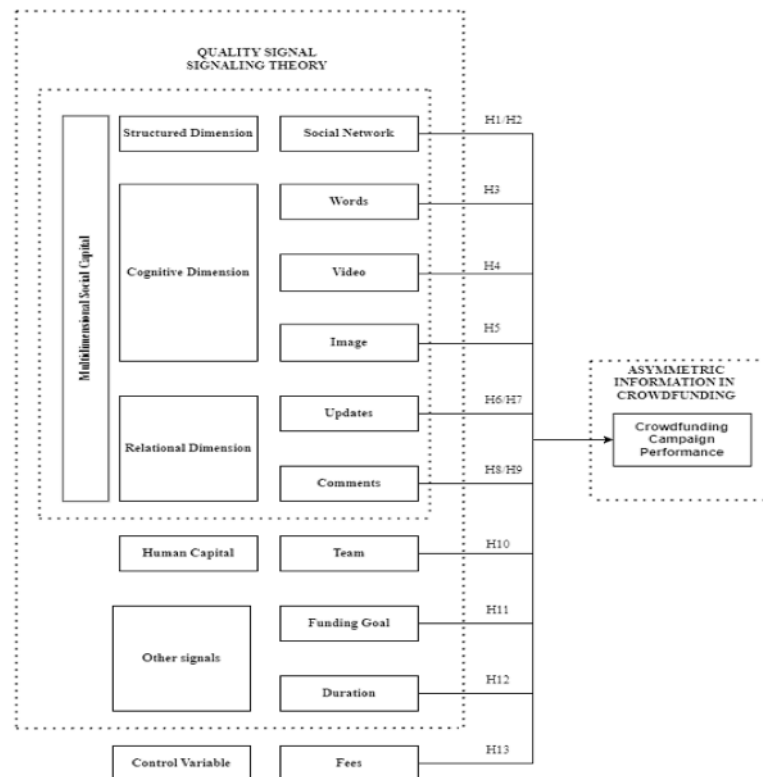

FIGURE 1. Research model

RESULTS

Tables 3 and 4 present the correlations. The correlations are generally small in magnitude, and the variance inflation factors (VIF) are below 3, indicating that multicollinearity is unlikely to be a problem.

TABLE 3. Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. LnFunding Amount	1.000													
2. Sharing_social media	.128	1.000												
3. No of sharing_social media	.237*	.827**	1.000											
4. Words	.114	.300**	.382**	1.000										
5. Image	.220	.128	.151	.159	1.000									
6. Video	-.062	-.222*	-.090	-.068	.082	1.000								
7. Updates	.225	.087	.158	.460**	.027	-.048	1.000							
8. No_updates	.400**	.179	.294**	.537**	.102	-.009	.903**	1.000						
9. Comments	-.072	.159	.248*	.389**	-.066	-.057	.567**	.505**	1.000					
10. No_comments	.251*	.214	.359**	.371**	-.008	-.139	.596**	.596**	.892**	1.000				
11. Team	-.043	.086	.148	.035	.225*	.087	.029	.034	.151	.106	1.000			
12. Funding_goal	.152	.256*	.329**	.240*	.088	-.179	.142	.148	.294**	.309**	.217	1.000		
13. Duration	.271*	-.063	-.093	.009	-.042	.155	-.068	.047	-.225*	-.112	-.032	.012	1.000	
14. Fees	-.045	.050	.205	.328**	.143	-.054	.240*	.297**	.398**	.332**	.137	.113	.012	1.000

$* \ p < 0.05$
$** \ p < 0.01$
$*** \ p < 0.001$

TABLE 4. Multicollinearity test

Variables	VIF	1/VIF
Sharing_social media	1.422	.70301
No sharing_social media	1.553	.64390
Words	1.522	.65707
Image	1.220	.81980
Video	1.219	.82021
Updates	2.040	.49013
No_updates	1.872	.53416
Comments	1.883	.53111
No_comments	1.797	.55634
Team	1.190	.84004
Funding_goal	1.224	.08171
Duration	1.269	.78781
Fees	1.334	.74948
Mean	1.504	

The regression analysis results with dependent variables indicating the performance of a crowdfunding campaign are presented in Table 5. All hypotheses H_3, H_4, H_5, H_{10}, H_{11}, H_{12}, and H_{13} were examined in models 1 and 2. Hypotheses H_1, H_6, and H_8 were tested in model 1, while model 2 examined H_2, H_7, and H_9. First, model 1 was run to test the hypotheses. Results show that this model suffers from heteroscedasticity and autocorrelation problems. Unlike model 2, when various measurements, namely No of sharing_social media, No_updates, and No_comments, were adopted for independent variables, and the findings were improved. Thus, results from model 2 are presented here to conclude whether the hypotheses tested in model 2 are accepted or rejected.

Founders of campaigns with a greater number of sharing through social media, and more updates and comments are associated with a higher funding amount of donation. Overall, this study found six significant explanatory variables: Social network (No of sharing_social media), Updates (No_updates), Comments (No_comments), Words (Words), Funding goal (Funding_goal), and Duration (Duration).

Both Social network (No of sharing_social media) and Comments (No_comments) were significant at a 1% level, while Updates (No_updates) was significant at a 5% level. These results confirm hypotheses H_2, H_7, and H_9 and support the relevance of the social capital theory in the donation-based crowdfunding context. For every one-unit increase in these independent variables, dependent variables increase by about 0.7%, 7.9%, and 1.1%, respectively.

Concerning Words (Words), even though the result was significant at a 1% level, the evidence does not support hypothesis H_3. The number of words was found to be negatively associated with crowdfunding performance. One additional word on the campaign platform decreased the funding amount by 99%. This study also observed that target funding conveyed positive signals of commitment to donors. A one-unit increase in Funding goal (Funding_goal) increased the funding amount received by 32373.2%. This result is significant at a 1% level. Thus, it supports hypothesis H_{11}.

Duration (Duration) is positively correlated with the performance of a campaign, indicating that this factor serves as a positive signal of a campaign's ability to deal with uncertainty. The result implies that one additional day in Duration (Duration) increased the funding amount by 0.3%. It is significant at a 1% level and confirms hypothesis H_{12}. Finally, hypotheses H_4, H_5, H_{10}, and H_{13} are not supported due to insignificant results.

TABLE 5. Regression results

Variable	Model 1	Model 2
Constant	2.821 (.507)	3.314 (.437)
Sharing_social media	.306 (229)	
No sharing_social media		.007*** (.003)
Words	.000*** (.001)	-.001*** (.001)
Image	.511 (.221)	.521 (.183)
Video	-.103 (.326)	-.064 (.267)
Updates	.580 (.238)	
No_updates		.076** (.030)
Comments	-426 (.249)	
No_comments		.011*** (.004)
Team	-.471 (.449)	-.647 (.368)
Funding_goal	1.225*** (.000)	5.783*** (.000)
Duration	.005*** (.002)	.003*** (.001)
Fees	.206 (.234)	-.040 (.188)
Overall Evaluation Model:		
F-statistic	2.990	6.874
Prob (*F*-statistic)	.004	.000
Durbin-Watson statistic	1.784	1.945
R^2	.322	.522
Sample size	80	80

Note: Robust SEs in brackets *** $p < 0.01$, ** $p < 0.05$; * $p < 0.1$.

DISCUSSION AND POLICY IMPLICATIONS

This study focuses on how people reacted to crowdfunding campaigns after the COVID-19 outbreak in Malaysia, using Malaysian donation-based crowdfunding platforms to provide unique research contributions. The aim is to figure out which types of quality signals really help the performance of crowdfunding campaigns. Donations are primarily influenced by several factors associated with the quality signals.

Regarding funding goal as a quality signal, the finding of this study is consistent with Pan and Dong (2023) and Sulaeman and Lin (2018). Even though a significant and positive relationship between higher funding targets and overall sum of donations were found, this study suggests that fundraisers carefully set the funding goals. Fundraisers are recommended to set reasonable goals that reflect the campaign needs as suggested by Pan and Dong (2023). Setting a higher goal is not recommended even though it might signal that the fundraisers are very ambitious and committed to the projects. Setting higher target funding requires more effort and time to achieve the target than setting lower goals (Sulaeman & Lin 2018) while the COVID-19 emergency relief must be given quickly to the target beneficiaries of the campaign.

This study does not expect that increasing the word count of descriptions in a crowdfunding campaign would decrease the funding amount. Even though logically one might think that more words are needed to convey sufficient information about the campaign to potential donors, it is not necessarily the case. This may be attributed to the possibility that an excessive amount of words could result in a diminished level of patience among individuals attempting to comprehend the campaign, as contended by Ho et al. (2021). Thus, it is believed Ho et al.'s study is worth considering. Their findings imply that a campaign is most likely to succeed if the description is prepared with an appropriate number of words. They suggest it should be written within 600–900 words. Data of this study show only two campaigns with word counts exceeding the recommended number of word counts by Ho et al. (2021).

Using a dummy variable for the social network to identify whether campaigns with the presence of any social network link perform better than the campaigns that are not linked to any other social network does not provide robust results, as seen in model 1. The same problems appear for variable updates and comments. When they are changed to continuous variables, the results align with the previous findings. These three variables confirm that they are important quality signals to ensure that crowdfunding campaigns perform better. As identified in previous studies, when fundraisers share and circulate their campaigns to the general public via social networks, it leads to higher online searchability and affects donors' decision-making. It will result in a successful crowdfunding campaign (Ho et al. 2021).

Hence, this study recommends that fundraisers share their campaigns as many times as possible on social networks.

The same approach must be taken into account when leveraging comments and updates. The positive relationship between the number of comments and updates and the amount of funding received reflects that funders trust the projects (Sabarudin 2021). The former functions as a means of communication between fundraisers seeking to raise funds and funders or donors who have the potential to provide financial support..-This finding is in line with Sabarudin et al. (2021). At the same time, the latter indicates to the funders the extent to which the fundraisers monitor their campaign. This finding is similar to Pan and Dong (2023) and Sabarudin et al. (2021). Findings with regard to these quality signals imply the importance of encouraging engagement between funders and fundraisers. Fundraisers can do this by posting regular updates, giving feedback, and acknowledging contributions made by funders. Active engagements can alleviate the problem of asymmetric information and finally translate into the donation made to the campaign.

Concerning the variable duration, the result of Hörisch (2015) was confirmed by the analysis in this paper. However, it contradicts with the findings of Pan and Dong (2023). Campaigns with a longer duration are able to increase funding amounts. The fact is that because crowdfunding receives small funds from the crowd, sufficient time is required to raise funds. However, duration varies across platforms. For example, Kitafund gives 30 days to fundraisers to promote their campaigns according to its terms and conditions. Kitafund allows fundraisers to extend their campaigns not more than three times if they have ended but have not reached the targe,t provided that there is high transparency of the projects (Kitafund 2023). Hence, the platform providers know the most appropriate duration for the campaigns. However, this study recommends that the platform providers observe this finding when considering whether to extend, and how long to extend, the duration of the campaigns if requested by the fundraisers.

Unfortunately, the results of this study cannot confirm and support the relevance of images and videos in the donation crowdfunding context. The crowdfunding campaign should perform better if presented with an image or video because both provide additional information about the fundraiser or organisation behind it, thus augmenting the authenticity of the campaign. The insignificant results could be due to the measurement of the variables. Again, this study perceives the variables should be measured in the form of continuous variables instead of dummy variables. This study also cannot confirm and support the relevance of human capital as a quality signal. Projects either involve a team or are initiated individually. Logically, projects involving a team have a higher capability to realize the projects because each team member possesses knowledge and skills that can

complement the others. Hence, they are perceived to be more capable of realising the project (Anglin et al. 2018). The plausible explanation could be that this signal is only relevant in the context of other types of crowdfunding, such as equity, reward, and peer-to-peer (P2P) that have empirically proven to have a positive relationship on crowdfunding performance or success when the backers are entrepreneurs launching a project and asking for venture capital or financing. Launching and carrying out donation-based campaigns for COVID-19 does not require specific skills and knowledge.

Reducing or waiving fees also does not influence campaign performance even though this approach has been used by platforms to stimulate the usage of those platforms. Sirisawat et al. (2022) discovered that, in the eyes of donors, their level of satisfaction when contributing funds holds greater significance than the fees imposed by the platforms. Furthermore, these donors may, to some extent, convert from a free platform to becoming a premium user who pays fees if they are content with the outcomes of their previous donations. A number of limitations must be acknowledged in relation to this study. First, we have solely focused on donation-based crowdfunding, despite the fact that reward-based crowdfunding was also utilized to gather funds for emergency relief initiatives during the COVID-19 pandemic in Malaysia. Second, datasets are limited to include only campaigns launched on local donation-based crowdfunding platforms and for a domestic cause.

CONCLUSION AND FUTURE STUDY

This study provides evidence on the impact of quality signals on crowdfunding performance. Funding goals, word count, social networks, updates, comments, and campaign duration are quality signals that effect crowdfunding performance. Drawing on a unique dataset of crowdfunding campaigns launched across different donation-based crowdfunding platforms practicing a keep-it-all policy, this study provides valuable information for a more thorough understanding of donation-based crowdfunding for emergency response in Malaysia. While the large crowdfunding platform GoFundMe attracts more researchers to study factors associated with the crowdfunding performance or success, we rely on a local, smaller scale having limited scope of international operations donation-based crowdfunding platforms. Hence, this study cannot rely entirely on the past studies that were devoted exclusively to campaigns conducted on large crowdfunding platforms such as GoFundMe to understand how other local platforms facilitate need in times of emergencies and crises. Thus, this study calls for more research focusing on these important yet under-studied platforms.

In times such as the COVID-19 pandemic, donation-based crowdfunding serves as a popular method to connect those willing to give with those in need. In Malaysia, the rise of informal donation crowdfundings run by individuals or groups via social media channels such as #kitajagakita has been observed. This constitutes an alternative crowdfunding method as fundraisers launch and promote their campaigns through their Twitter accounts. Other direction for further study should pay equal attention to this alternative crowdfunding method. People still donate to support COVID-19-related causes in Malaysia during this challenging time, and apparently this study empirically proves their donations are primarily influenced by several factors associated with the quality signals. Further examination can take into account the role of endorsements from the regulator as a quality signal on crowdfunding performance. Being a certified charitable organization has been found to give positive impact on total donation amount (Pan & Dong 2023)

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