The Use of Social Media for Infrastructure Developer Company: Study of a New Revenue Stream

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ABSTRACT

The culture of business construction, which currently focuses on winning new project tenders and revenue based on terms, is significantly affected when activity restrictions occur. What happened during the pandemic in 2019 noting that 25% of construction companies could not survive the pandemic. As a result, various innovations need to be deployed to save the business from bankruptcy, so that new revenue streams are needed outside of the ongoing business, one of which is the development of social media. Social media has an increasingly prominent role in impact interactions, and it has been proven that this sector does not experience a decline when almost all sectors are bad in the pandemic era. This research will examine how social media can have an impact on the construction industry, not only increasing participation and driving public opinion but can also be a new revenue stream for companies. This research will focus on companies engaged in toll road infrastructure developer in Indonesia. The case study was designed to combine both qualitative and quantitative methods. The results show that the use of social media in infrastructure development businesses that focus on corporate branding can be developed into a new revenue stream with a content focus, namely project progress, educational shows, and the use of technology impact the influence and awareness.

INTRODUCTION

According to the International Labor Organization (ILO 2021), the COVID-19 pandemic has had a significant impact on the construction sector, which is triggered by the limitation of human activities. To revive this problem, there are several transformations to support the sector from the crisis which are leveraging social media to create multiple income streams (White 2019). The culture of business construction, which currently focuses on winning new project tenders and revenue based on terms, is significantly affected when activity restrictions occur. What happened during the pandemic in 2019 noting that 25% of construction companies could not survive the pandemic (Indonesian National Construction Entrepreneurs Association 2021). As a result, various innovations need to be deployed to save the business from bankruptcy, so that new revenue streams are needed outside of the ongoing business, one of which is the development of social media.

There are several research regarding to social media growth in business sector during covid-19 pandemic. For example, social media is top agenda for many business executives (D.S. Yadav, M.V. Jagtap 2022). In 2019, it is easy to notice marketing trends all around us changing (White 2019). The era has entered in which digital marketing seems to have become more popular than traditional ways of marketing therefore, companies are starting to spend more budget on digital platforms to generate a revenue than ever before. On the other hand, the construction sector is widely known as not popular for social media use compared to other sectors such as fashion, technology, music, food and other industry since they focus on generating new contract and revenue from project progress. And also, the current use of social media is limited to branding and one-way communication not practicing public participatory (Aaen et al. 2018).

Research about social media use in infrastructure industry has been conducted before (Ninan, J. et al. 2018; Mathur. S. 2021; Lobo, S. et al. 2019) and those research shows that social media could be used for branding, governmentality, evaluates the project, and influence decision making of its followers. This study will explain social media experiment on one of the biggest construction companies that focused on infrastructure development in Indonesia. The article unfolds as follows: First, an overview of literature focusing on the use of social media in impact assessment and planning as well as obstacles is presented. From this overview a framework for understanding the Danish case is derived. Second, the methodology and data collection on the infrastructure developers' experiment

is described. Third, the experiences with and views of social media are analyzed. The analysis focuses on three aspects: 1) how the different social media platforms are used by infrastructure developers and to what purpose, 2) the views, followers and subscribers of each infrastructure developers in Indonesia, and 3) the most popular content for infrastructure developers. Finally, the results are discussed in terms of how social media impinge on practices of public participation among the developers of linear infrastructures in Indonesia.

MEDIA PLATFORMS FOR RESEARCH CAMPAIGN

Social media platform as one of the tools to reach the success factor for the research campaign has given impacts to the other influence of each of the innovation and research

database, including the transfer of knowledge activity. Within this, the development for some curtain scientific study may give a major impact within the society. Hereby are given the network from central activity within the connection between research publication, research campaign, and scientific study.

Research campaign as one of the scopes which assist the other component to support the business and development has create specific impact to the engagement of people. There are three programs on research campaign: webinars, social media monetization and podcasts. Those programs are aimed to widen networks for research collaboration between stakeholders, opening up monetization opportunities and triggering ideas for solving company problems (Constantinides 2013).
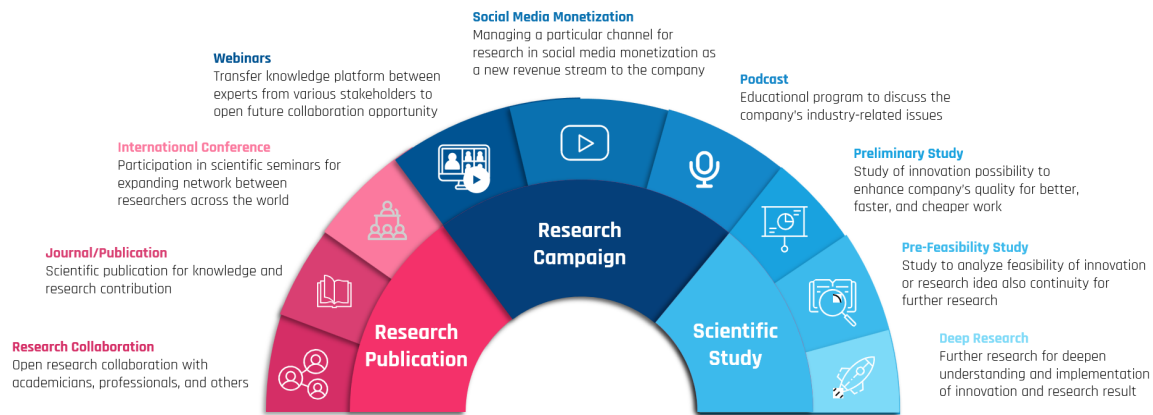

FIGURE 1. Research Campaign Network, focusing on the social Media (Author 2022)

METHOLODGY

There are three research questions as shown in figure 2 of this research and case study method was adopted to explore. The case study was designed to combine both qualitative and quantitative methods. This research use data collections from various channel and social media accounts of biggest State Owned Enterprise (SOE's) in Indonesia and also reinforced with surveys to validate the preferred contents

of social media posts. Then, popular content were identified using content analysis and survey results were analyzed using descriptive statistics. After the new account is created, we can evaluate whether social media could be used as a research campaign and create a new revenue stream for the company. Finally, conclusions were derived based on both the findings and comparisons made with the literature findings.
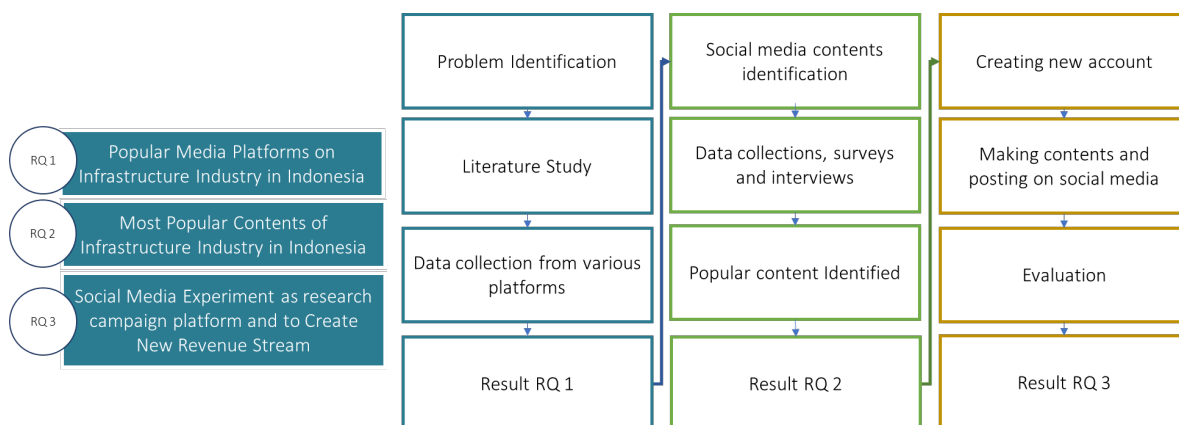

FIGURE 2. Method Scheme to the Analysis (Author, 2022)

RESULT AND DISCUSSION

POPULAR MEDIA PLATFORMS ON INFRASTRUCTURE INDUSTRY IN INDONESIA

As shown in Figure 1, Social media platform is one of the tools for the growth of the business and research performance. It is a tool to be used for acquiring the most limited resource – attention of the public which is a key for reaching the business end-goals (Tamara 2017). There are 6 biggest SOE's companies that focused on infrastructure development in Indonesia as it can be seen in Table 1. Each of them has different followers/subscriber number based on social media platforms as shown on the Table 1 below.

TABLE 1. The engagement platforms between some state-owned enterprise infrastructure companies

Platforms	Followers / Subscribers				
	Adhi Karya	Hutama Karya	Wijaya Karya	PP	Waskita Karya
LinkedIn	70.800	167.000	397.000	69.400	65.700
Instagram	291.000	187.000	306.000	194.000	272.000
Facebook	16.000	15.000	22.000	9.800	35.000
YouTube	63.500	5.120	9.190	4.590	32.800

(Author, 2022)

In short, at least there are 4 platforms that can be used dynamically for infrastructure companies which are LinkedIn, Instagram, Facebook, and YouTube. From here, we know that Instagram plays a significant role to create brand awareness since it shows the biggest active followers. Instagram is widely used by a higher scale of users since not only professionals use this social media, but also a wider range of ages and variety of people's interests.

Instagram, YouTube, and LinkedIn also show a significant number of active followers from these companies. As we know that LinkedIn has segmented people that are mostly professionals. LinkedIn will be very useful to promote our brand, seeking potential business partners and also for recruitment purposes. Followed by YouTube, the data shows that YouTube also attracts many people to follow these companies.

MOST POPULAR CONTENTS OF INFRASTRUCTURE INDUSTRY IN INDONESIA

For the comparison, we take the top 3 companies with the highest social media followers and viewers on YouTube as shown at Table 2 below.

TABLE 2. The comparison of 3 leading state-owned enterprise in the field of infrastructure development in Social Media Branding

	Posts on YouTube		
	Adhi Karya	Wijaya Karya	Waskita Karya
Number of Posts	2.600	3.354	3.075
Viewers	8.164.016	1.160.098	6.235.222
YouTube Contents	- Project Profile - Project Update - Technology Update	- Project animation - Technology Update - Project Update - Webinars	Project Update

(Author, 2022)

The highest viewer of content is Adhi Karya that has the lowest number of posts, yet it gained the biggest viewers. From the YouTube channel we can conclude that what makes this company gained tons of viewers is because their consistency to post their project profile, project progress update and technology update. Followed by Waskita Karya that only focused of project update, they gained second place for most viewed channel of infrastructure developers. From Wijaya Karya, it shows that they try to make a wider content to their channel as shown from their number of posts, yet it has the third place for number of viewers compared to companies that only focused on several contents. We can conclude that wider contents of YouTube channel is not recommended for gaining viewers, compared to account that has content focus. The content that will be suggested to gain viewers for infrastructure developers are project progress update, project profile and technology update.

This research also conducted surveys from approximately 300 respondents, to select their favorite or preferred content for infrastructure developer social media accounts and the result is as shown in table 3 below. From the table, the result shows that respondents are curious about things happening behind every construction fence. And followed by a webinar as a sharing knowledge show. The third place is technology updates as educational shows.

TABLE 3. Survey on preferred Contents Result

Content	Vote
Behind the fence of the construction project	192
Webinar Series	155
Technology	130
Project Progress Update	97
Project Drama Series	71
New Employment	66
Corporate social responsibility	54
Construction Figures	52

(Author, 2022)

A After the new account created for the experiment, the researcher activated YouTube AdSense for generating revenue from the account and the revenue from YouTube AdSense is shown as figure 3 below.
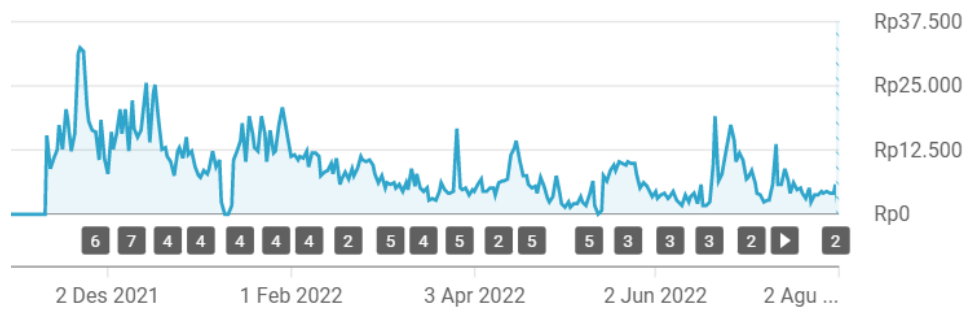

FIGURE 3. YouTube AdSense statistical review

This experiment started in December 2021 and continuously generate revenue from YouTube AdSense. From the picture above, it shows that number of posts is significantly impact the revenue. At the beginning of account created, we gained most of viewers and revenue. But in meantime, we try to reduce number of post and then the graph shows the decreased revenue gained. From here we know that consistency of post is crucial for revenue.
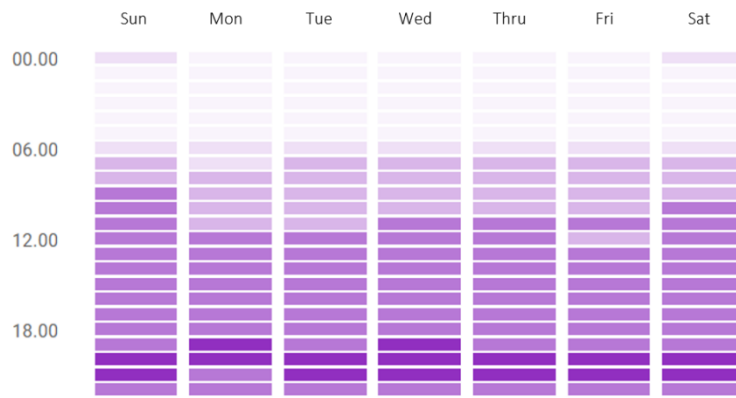

FIGURE 4. Viewers watching time (Author 2022)

Based on Figure 4, we also tried to find out what is the best time to post on YouTube, and from the picture above, we know that most users spending time watching this channel starts from 10 AM and mostly at 7-9 PM which is after working hours. Further research is necessary to investigate whether this channel is only watched for work-related interests or for entertainment. Yet it doesn't show any correlation of the best time to post on YouTube since YouTube has its own algorithm to recommend our videos on users' homepages.

Audience age	Views			Watch time (hours)	
	Woman	Man	User defined	Woman	Man
Total	**11.2%**	**88.8%**	**0%**	**11.3%**	**88.7%**
13−17 years	0.1%	0.3%	−	0.1%	0.2%
18−24 years	2.7%	12.4%	−	3.1%	11.8%
25−34 years old	4.2%	25.9%	−	4.2%	25.3%
35−44 years old	2.2%	19.1%	−	2.1%	19.3%
45−54 years	1.3%	15.7%	−	1.2%	17.0%
55−64 years old	0.7%	11.2%	−	0.6%	11.0%
65+ years old	0.1%	4.3%	−	0.1%	4.0%

FIGURE 5. The gender and age category of users engage in the platform (Author, 2022)

Regarding to figure 5, as far as gender and age of viewers is concerned, most of the viewers are man in productive age which is 18-44 years old which is in line with the construction/infrastructure industry that is dominated by men (Norberg, C. & Johansson, M. 2021).

In the end, based on data collection, it shows that revenue from YouTube AdSense still don't meet the expectation, therefore, we suggest adding other revenue from brand collaboration. One of the easiest ways to start financially benefitting from your social media channel is to reach out and create brand collaborations (White 2019). And after the experiment start to collaborate with several parties to promote its brand, the experiment gained revenue from brand ads. From the experiment, the revenue generated is shown on table 3.

TABLE 3. The nominal of the revenue stream generated to the video upload in Youtube

	Revenue Generated (USD)	Portion of Revenue
YouTube Adsense	171	5%
Brand Collaboration	3.214	95%
Total Amount	3.386	

(Author, 2022)

From the data above, it shows that YouTube AdSense only contribute 5% of the total revenue and the other 95% revenue is gained from brand collaboration such as sponsors from industry-related stakeholders (in-kind company or subcontractors) for webinar content. The experiment shows that there are many of brands looking to sponsor YouTube content to promote their products or services. Additionally, there are several companies we can collaborate, and they are willing to place ads on social media pages.

CONCLUSION

Social media will play a crucial role in the impact of action implementation to the project, program and also event. It is proven that social media could be a new revenue stream for infrastructure companies because it is not only attractive to people related to this industry but also to the company that is willing to be sponsors of the program.

The influence to create enormous impact among people around the world will gain awareness within the field itself. The implementation to the social media for research campaign has become a bridge to the influence worldwide. Especially in the digitalization area. In this case, a further statistical analysis may help to define the engagement and impact to specific sectors.

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REFERENCES

Constantinides, E. 2013. Social media marketing: challenges and opportunities in the web 2.0 marketplace. IGI Global 51-73. 10.4018/978-1-4666-4082-5.ch004. .

D.S. Yadav & M.V. Jagtap. 2022. Impact and usage of social media in business sector during COVID-19 Pandemic. *Indonesian Journal of Entrepreneurship & Technopreneur* 23-28.

ILO, I. L. 2021. Impact of COVID-19 on the construction sector. ILO Sectoral Brief.

Indonesian National Construction Entrepreneurs Association. 2021. Report. Jakarta.

Lobo, S. et al. 2019. The role of social media in Intrastakeholder strategies to influence decision making in a UK infrastructure megaproject: Crossrail 2. *Project Management Journal.* DOI:https://doi.org/10.1177/8756972819864456.

Mathur, S., et al. 2021. An exploratory study of the use of social media to assess benefits realization in transport infrastructure projects. *Project Leadership and Society* 2. DOI:https://doi.org/10.1016/j.plas.2021.100010.

Ninan, J. et al. 2018. Branding and governmentality for infrastructure megaprojects: The role of social media. *International Journal of Project Management* 37: 59-72.

Norberg, C. & Johansson, M. 2021. Women and Ideal Women: The representation of women in the construction industry. *Gend.* Issues 38,: 1-24.

White, R. 2019.. forbes.com. Retrieved from Forbes: https://www.forbes.com/sites/forbesagencycouncil/2019/02/01/leveraging-social-media-to-create-multiple-income-streams/?sh=728b27de19a5

Sara Bjørn Aaen, Ivar Lyhne & Helle Nielsen. 2018. The use of social media in impact assessment: experiences among national infrastructure developers in Denmark, Impact assessment and project appraisal, 36(6): 456-466, DOI: 10.1080/14615517.2018.1500091.

Tamara Grizane and Inguna Jurgelane. 2017 Social Media impact on business evaluation. *procedia Computer Science* 104: 190 – 196. Impact on Business Evaluation.