Original article

AN IN-DEPTH ANALYSIS OF THE EFFECTS OF THE COVID-19 PANDEMIC ON PROJECT DELAYS, DISRUPTIONS AND COMPLETION – THE CASE OF BOTSWANA

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Received: 28 September 2022 Revised: 20 November 2022 Accepted: 23 December 2022 **Abstract:** Due to Covid-19's negative impact, project completion remains a key topic of conversation in business field. This article examines how the Covid-19 pandemic affected project duration, progress, and completion in Botswana. The study's goals were met by surveying 105 participants using a questionnaire. The study details covid-19's disruptions and delays. Extraneous variables' impact on project success or failure were analysed. The goal was to clarify internal and external factors on active projects during the Covid-19 pandemic. Covid-19 negatively affected many projects. Pandemics cause ineffective communication and coordination, cessation of physical activities, complicated work processes. The Covid-19 Pandemic disrupted supply chain of raw material for many projects. Late deliveries, fluctuating prices, and contractors' inability to finish on time pushed back project deadlines. Workers were less productive. Similar problems arose with project funding. These factors caused project interruptions, delays, and completion in Botswana during Covid-19.

Keywords: Covid-19 pandemic, project success, project management, project delays and disruptions.

1. INTRODUCTION

This article has focused on assessing how the Covid-19 pandemic has affected the timing, continuity, and completion of projects in Botswana. Time and effort saved during the course of a project is highly valued. Undoubtedly, the global economy has been severely impacted by the Covid-19 pandemic. with many different types of business and industry coming to a grinding halt. The international business community has lost a lot of money due to a lack of preparation for this event, which is truly unprecedented in the history of the modern world. As a result of the pandemic, several businesses in transportation, and education have been forced to close. There is now a worldwide economic crisis as a result of the aftermath of Covid-19 pandemic (Borio, 2020). It's important to remember that the Covid-19 pandemic hasn't had the same effect on every sector of the economy; in fact, it's fair to say that some sectors have been hit much harder than others. Consider the online delivery industry, which has seen exponential growth as more and more traditional businesses adopt online-only strategies of doing business (Donthu & Gustafsson, 2020). In contrast, since the pandemic began, businesses related to tourism or travel have taken a significant financial hit (Gursoy & Chi, 2020). Based on these sectors, it is clear that the Covid-19 pandemic has had a profound impact on international trade, and that this impact will persist even after widespread vaccination.

It's also worth noting that Covid-19 has had a more severe impact in some nations than others. It is a crisis that has hit the developed world harder than the developing world. Landlocked Botswana, like many Nations in sub-Saharan Africa suffered from the effects of

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the pandemic as it is reliant on international trade. An estimated 13% of Botswana's GDP has been lost due to the Covid-19 pandemic as per a United Nations study (2020). Reason being, the country's economy is highly dependent on mining, tourism, and the hospitality industry, all of which were rendered unserviceable due to the international lockdown.

The impact of the Covid-19 pandemic on key business indicators like project delays, disruptions, inability to meet the stipulated deadline, etc. is also unclear. These metrics are crucially important for any project. The completion of a project or the delivery of a service is crucial for reviving Botswana's economy, so the country needs to be especially vigilant about these indicators. The quickest way to recover from a pandemic, according to the IFRC study (2020), is to prevent the infection rate from rising above the predicted rate. The business sector, on the other hand, must also demonstrate adaptability and change with the times. As a result, businesses in this sector must demonstrate adaptability and resiliency in the face of adversity. The business world must work together and gain a common understanding of Covid-19 or future pandemics.

Efforts made to make up for financial losses brought on by the pandemic should be brought under a single umbrella. Recent schools of thought have addressed the topic of the importance of taking concrete steps to meet the deadline, prevent project delays, and achieve peak performance. The void left by the pandemic calls for immediate action, according to Foggie (2020). Material requirements, delivery method, and proactive management are all examples of such steps. Realization of these three factors is essential for effective project management, and it is imperative that the business community in Botswana come to this understanding.

It is also important to note that the Covid-19 pandemic has halted all global trade and severely impacted the Global Value Chain. This unforeseen occurrence resulted in substantial economic losses for nations that rely heavily on international trade and supply chains. The economy of Botswana is

intertwined with that of many other countries. Timely completion of the projects despite Covid-19 should be the top priority of the state in order to prevent further economic losses to the country and its businesses. In the absence of such success, the country will remain vulnerable even after the pandemic has ended.

1.1 Theoretical reviews

Packendorff and Lindgren (2014) discuss a narrow theory, which is one of the most important theories in project management. According to this theory, managing a project is a step-by-step procedure that can be broken down into manageable chunks. The same publication, however, claims that linearity is rarely acknowledged because project management is an implicit concept. Project management in the real world, it follows, is typically conceived as a non-linear process multiple involving tasks occurring simultaneously.

However, Kloppenborg et al. (2003) contended that the practise should be carried out without reference to any particular theoretical framework. Since there is no universally applicable framework for managing projects, it follows that any attempt to theorise the topic would have to be extremely narrow in scope and yield no results. Koskela and Howell (2002) contend that project management is a discipline built on management theories. Management theories such as planning and dispatching as well as the thermostat model are discussed. Thomas (1979)describes procedural planning theory in detail, defining it as the process of creating and enforcing plans. As no project can be carried out without proper planning, insufficient planning can lead to total failure. The contingency theory of project management is yet another perspective that can be applied to the pandemic. This theory bolstered the unstated but important idea that project management is not a theoretical concept and should be treated as such. An additional novel theory of leadership, contingency theory emphasises the importance of tailoring one's approach to the specific group one is leading (Abyad, 2017). In the event of a pandemic, it would be necessary to adapt project management to the new circumstances.

1.2 Covid-19 and Project Delays

Alsharef et al. (2021) found that the global spread of the Covid-19 pandemic caused severe economic disruptions and human suffering. Since the pandemic, Covid-19 has become a major concern, and this study examines its effect on risk management. The industry as a whole has adopted the safety measures, which has slowed down the development of the projects. However, it should be noted that the global pandemic has not had a completely negative effect on the schedule of the project. Dannenberg et al. (2020) found evidence to support the claim that certain industries, such as delivery networks and online marketplaces, have experienced dramatic growth after the lockdown was implemented. This suggests that Covid-19 has accelerated the rate of progress on the projects.

To put it more narrowly, reasons such as a conflict in work schedules, delay in approvals, and disruption in labour supply have caused delays in projects across industries during Covid-19. In addition to delaying supply, the pandemic has slowed demand, as consumption dropped dramatically, as discussed by Alenezi (2020). According to Ogunnusi et al. (2020), Botswana's exports and tourism revenue have been falling since the pandemic began. As a result, projects are not being completed by their due dates and the demand side is suffering. According to Mouritz (2020), such delays have occurred in the course of China's Belt and Road Initiative. Since there isn't enough people to work on logistics projects and nobody is visiting because of the travel ban or the lack of tourists, many things have been put on hold. It's important to remember that project deadlines are difficult to keep and that delays are common cause of project scope creep.

However, project managers must address the issue of delays as a top priority because of the significant monetary and non-monetary costs associated with them. Another study on the effects of delays and inaccurate estimates in construction projects is provided by Callegari, Szklo, and Schaeffer (2018), who found that final construction costs end up being more than 98% higher than initial estimates. Project delays are not only a problem in the construction industry, but also in the energy

sector. According to research on energy project delays in Bahrain conducted by Khalfan and Ismail (2020), worker health issues, a lack of available financing, and disruptions in the supply chain are the three most common reasons for project setbacks. These sectors were selected with care because they have direct bearing on the ongoing construction and energy projects in Botswana.

1.3 Project management in Botswana

One of the important themes of the study is project management in Botswana. It is an important research objective since administering a large-scale project can be quite a challenge in a country that lacks proper infrastructure. technology and human resources. An in-depth study is conducted by Swatuk (2005), who analysed the strategies adopted by the Southern African country. As per the study, collective actions and community drive were important tools for project execution. It was as a result of the fact that most third-world projects are based on coercion and undermining the empowerment of the local population. It can be an important finding for Botswana as community participation in natural resources extraction can bring significant development for the nation.

A study examining the public projects in the developing world was conducted by Botlhale (2017), who argued that most of the projects were poorly implemented and thus do not result in benefits or even the desired expectations. It can be solved strategically if the Project Management Triple Constraint is maintained and followed religiously. The Triple Constraints of a project include time, cost, and scope. Only through working on these constraints can a country like Botswana achieve impeccable project implementation. On the other hand, public sector management in Botswana is reliant on two pillars, i.e., democracy and pragmatism. The aspect of democracy, which implies a grassroots organization of the labour force and the necessary community development empowerment, is crucial for successful management of the public sector and is highly linked with the project implementation. As per the authors, coherent and consistent project management can be achieved in Botswana through a skill development program that fosters required skills among the local population to meet the challenges of a project, integration of expatriate staff with the local communities, and blending both the resources in a way that each of it forms an important part in the whole team and finally, localization of a project and ensuring that the local conditions are in accordance with the project deliverables. These three are very important points as most projects in a developing country, especially in Africa, are foreign administered and lack the ground reality, which is essential for the project implementation.

Twyman (2000) also cited the local community's participation, their concerns and environmental preservation as the basis of a successful project in Botswana. It can be achieved by greater accountability motivation among different stakeholders. It is to be noted that accountability forms a key aspect here and is closely linked with the democratization of projects cited in the above study. Until and unless project management is not conducted from a bottom to top approach, there will be gaps affecting the deliverables. Therefore, an integrated and lack of bureaucracy can be defying tools for a successful project. The study also did a case study analysis of community-based natural resource extraction in Botswana. What must be questioned in such projects are the extent of the local population's involvement, the level of dictation imposed by the executives, and the willingness of the natives to manage a project successfully. However, the community-based approach in ground-level projects in Botswana was also studied by Jones (2017), who pointed out the role of external support as a key to achieving a balance with the local participation to achieve flawless project implementation. Such kind of approach has yielded results and, in turn, helped the country remain afloat.

2. RESEARCH STRATEGY

Considering the aim of the research, which is to comprehensively analyse the effect of the Covid-19 pandemic on project delays, disruptions, and completion in Botswana, a 'quantitative approach' is adopted. This particular approach helps to examine the

association between variables (Kothari, 2004). The study correlates the study's related constructs that largely include Covid-19, project delay, disruption, and completion. Hence, the quantitative approach is relevant for statistically analysing the association between the variables. Moreover, the present study opts for a convenience sampling strategy where the criteria for selection are focused on the availability and accessibility of the participants (Schönbrodt & Perugini, 2013; Suen, et al., 2014). The sample size is 100 + together, which includes project managers, executives and other employees of Botswana-based organizations.

The current research has considered two designs, descriptive and correlation design. As per Lambert and Lambert (2012), a descriptive design is applied for explaining a specific event or object in its present state and recognizes the variables based on the observation. On the other hand, the correlation design is applied for determining the level of the relationship between more than two variables (Apuke, 2017; Harrison & Reilly, 2011). As the present research has considered a quantitative approach in analyzing the effects of Covid-19 hence, the correlational design helped to evaluate the link between the variables of Covid-19, project delays, disruptions, and completion in Botswana, while the descriptive design comprehensively supported data collection with the help of a survey. Moreover, the present research opts for primary sources to gather first-hand data to address the research objectives (Ahmed, 2010; Smith, 2017). The present research has conducted an online questionnaire survey with closed-ended demographics (MCQs) and rating scale questions related to the effects of Covid-19 on project management (Saris & Gallhofer, 2014, Taherdoost, 2016).

This form of data collection instrument has gained importance because it is considered convenient and an easy form of data collection method and largely requires endeavor to plan the questions linked to the research issue (Petrillo et al., 2011). An online questionnaire survey is also feasible for collecting primary data in the midst of a global pandemic (Canals, 2017). For data collection, the researcher recruited participants (employees) working in

Botswana-based companies/organizations operating in different industries/sectors using social media platforms, including LinkedIn, WhatsApp, and other online forums.

3. RESULTS

The data analysis was conducted on IBM SPSS with 105 numbers of participants. The results are indicated below. Figure 1 indicates that 58% of participants were males, and 42% of them were females. Moreover, the majority of the participants were aged 41 – 50 years old. However, above 50 years old population remained very low.

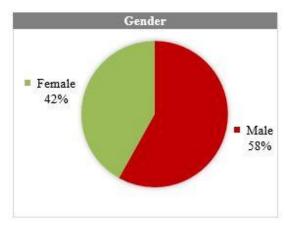


Figure 1: Gender

Figure 2 represents the age demographics of participants. Moreover, 43% aged 41 to 50 years old. Lastly, participants were asked to respond regarding their age brackets.

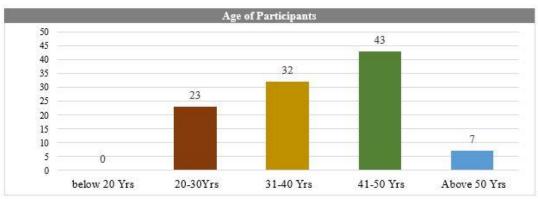


Figure 2: Age

Figure 3 shows that majority of them had qualified bachelors' degree around 70%, and High School was lowest at 2. However, only

3% held Ph.D. degrees. 21% of the participants were educated up to MSs Level.

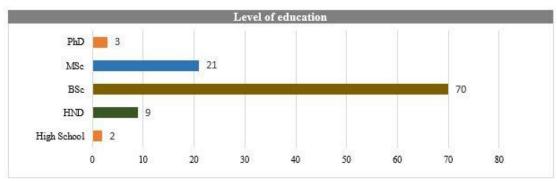


Figure 3: Level of education

In addition, the majority of the research respondents had working experience between 5 to years, and 42% had less than 5 years of

working experience. Interestingly, only 2% had working experience of more than 50 years.

Similarly, 70% of the respondents were project managers, and the lowest percentage were academicians and policy and planning personnel. The type of operating industry is an essential part of demographics in this research, and it was found that 53% of the respondents belonged to housing construction and 23% participants were from the agriculture sector. However, the lowest number of participants was from to IT and mining sectors, around 6%.

The above results depict the demographic characteristics of individuals, which helped in examining the research topic. The responses of the participants are analyzed below.

3.1 Effects of Covid-19

To achieve the objectives of the research, respondents were guided to respond to

questions. At first, they had to identify the effects of Covid-19 on the project's success. As a result, it was found that most of the participants agreed with the propositions of the study. 80% of the results suggested that, in Covid-19, it was difficult to coordinate work with others. Similarly, work from home or remote was the hindrance to the success of the project, which was indicated by almost 80% of the participants. Figure 4 suggests that participants (around 80%) also highlighted visiting the office as a bad effect of Covid-19. They explained that they had to visit the office once in five days due to a pandemic. In brief, the Covid-19 impacted projects negatively had like disturbing coordination, complicated remote working, and limiting office visits.

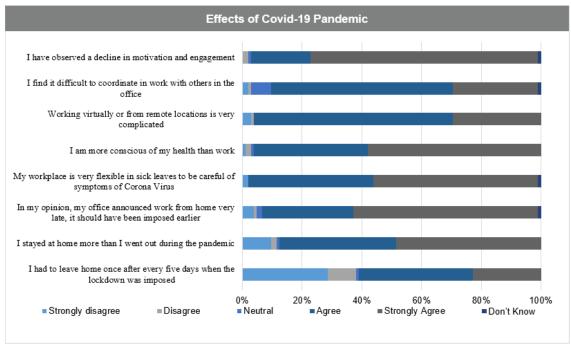


Figure 4: Effects of Covid-19 Pandemic

3.2 External factors of project management

Furthermore, the study asked participants to highlight the factors of management as a part of external factors. Most of the research participants (around 80%) indicated vendor prices remain unstable in their working sectors. Similarly, they showed that vendors in their sector did not complete the orders given by

them on time. Interestingly, respondents also indicated that contractors hardly ask them for changes in design. Figure 5 shows such responses. Hence it is concluded that external factors have disrupted project completions during Covid-19, as highlighted by the participants as well. Moreover, prices remain unstable during the pandemic.

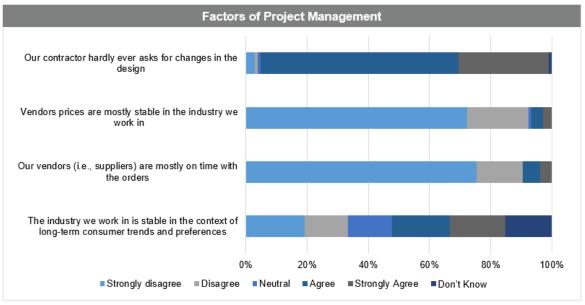


Figure 5: Factors of project management

3.3 Project delays and disruptions

Moreover, it is important to understand project delays and disruption at first. Therefore, this paper asked participants to answer elements of the questionnaire containing project delays and disruption. Interestingly, the study found that most of the participants strongly agreed that level of productivity had lowered significantly after 2019. This means Covid-19 negatively affected the projects' successes. Figure 6 these results. Similarly, reported respondents also indicated that their firms had felt shortages this year as part of the pandemic effects.

Furthermore, this research focused on the examination of staff's responsibility to identify

whether they were responsible or not for the lower performance of firms. As a result, figure 6 highlights that staff, which was responsible for consultancy, was not available. Hence, it is clear that it disrupted the businesses most. This study shows that there have been so many delays in the approval of the contractors, and these delays were mainly caused by Covid-19 during the pandemic. In addition, most of the participants strongly agreed and called the pandemic a stressful period due to many delays in the supply of raw material. The supply was disrupted due to the shutdown of business and public activities physically during the Covid-19 pandemic. In brief, Covid-19 was a major reason behind the failure of many businesses and the lower performance of physically operating the business during the pandemic.

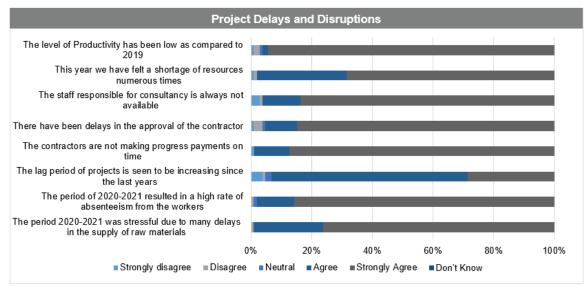


Figure 6: Project delays and disruptions

Furthermore, this article kept a deviant focus on the analysis of trust and shared objectives as part of the factors of project management. Interestingly, 40% of the participants indicated that they knew each other and the contribution made by them. Similarly, it was also found that these participants, while working on the projects, trusted each other, as 70% reported that they could trust their subordinates.

3.4 Project success

Lastly, this paper emphasized the assessment of projects success and its factors after the Covid-19 pandemic. It was found that projects were still facing problems after the end of the pandemic. Respondents reported fewer cash inflows of projects and their completion still in the current period. Similarly, the allocation of project budget still remained an unsolved problem. Moreover, the statements of the study regarding project success were contradicted by most of the participants. The employees' performance also remained below the mark after the Covid-19 pandemic. Hence, it might be the driving factor of decline in the efficiency of projects. Figure 7 clearly indicated that project meetings and deliveries are not being met timely. In last, the contractors still remain unsatisfied in response to the project's success.

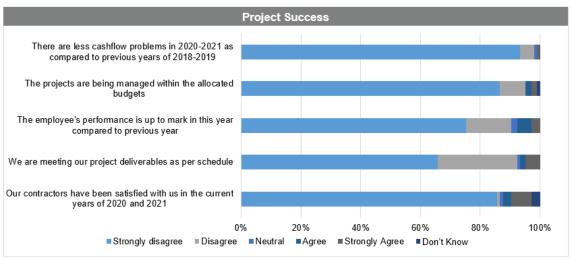


Figure 7: Project success

Overall, the results suggest that, in Covid-19, it was difficult to coordinate work with others

due to so many disruptions. Similarly, one of the most prominent disruptions was work from home or remote, which hindered the success of the project. Moreover, it is indicated that individuals visit offices once in five days due to pandemics. Contractors also did not make progress; the projects faced unavailability of staff and irresponsibility of workers. It is highlighted that businesses were affected highly by the Covid-19, as the supply of raw material was disrupted. Overall, projects are still facing problems, including lower cash inflows, budget allocation problems, lower employee's performance, inefficiency, and not meeting deliveries on time. Therefore, Covid-19 remains a major factor in the failure of projects or unsuccessful completion.

4. DISCUSSION

The purpose of this research was to investigate the ripple effects of the Covid-19 pandemic on time, money, and success rates for projects in Botswana. The primary goals were to raise awareness of the significance of projects being finished on time and the consequences of delays and postponements, to identify the factors that influence project success across industries using existing literature, and to suggest policies that businesses organisations in Botswana can implement to counteract the effects described. Below, we'll continue this in-depth analysis.

4.1 Effects of Covid-19

Many organisations and initiatives still face serious challenges because of the Covid-19 pandemic. According to this research, the Covid-19 pandemic has severely impacted various projects. It messed up the flow of work and caused confusion among employees. The main causes were difficulties communicating and working remotely. Because of their health concerns, most people couldn't make as many trips to the doctor's office. Alsharef et al. (2021) state that Covid-19 is prone to causing significant disruption in both business and projects. Alenezi (2020) echoed these sentiments, writing that Covid-19 made for challenging work schedules and convoluted remote working. Exports from Botswana have been affected. Even more, it was suggested by Dannenberg et al. (2020) that the effects of Covid-19 have been mixed, with some sectors benefiting while others suffering. Therefore, (Alsharef et al., 2021), (Alenezi, 2020), and the present study all tend to support the negative effects of Covid-19 on projects in Botswana (Dannenberg et al., 2020).

4.2 The impact of outside factors on project management

There is widespread agreement that project management is a crucial technique for achieving desired results in a timely and effective manner. Still, it has been severely impacted by the pandemic ever since it first appeared. It was also determined in this paper that external factors were unfavourable throughout the pandemic. With constant delays in deliveries, the price of raw materials remained highly volatile. In addition, vendors did not fulfil the orders by the due date, which greatly prolonged the project's completion. Botswana's project execution and planning are stymied by a wide variety of both internal and external factors (Crawford & Combe, 2010). There is a close relationship between the project's success and external factors like vendor supplies, raw material prices, and customers. Consequently, the results of this research show that construction firms rarely request modifications to designs from their suppliers. In addition, Joslin's (2015) research drew the same conclusion: the supply chain is crucial to the success of any project's implementation and finalisation. As a result, supply chain issues continue to be a leading cause of project delays and failures. Overarching, the Covid-19 pandemic has been marked by supply chain disruptions and an inadequate amount of material resources. These results are directly related to those predicted by (Crawford & Combe, 2010), (Joslin, 2015), and (Olander 2007). Also, the article explained why project coordination and communication broke down. Respondents to the survey expressed frustration with the ineffectiveness of communication since the start of the pandemic. Poor efficiency was displayed in the tender's pricing, timeliness, and general procedures.

4.3 Project delays and disruptions

Because of the Covid-19 pandemic, many business processes, including manufacturing and marketing, were halted. The numerous delays that occurred because of the lockdown were largely responsible for this. Since its inception, it has prevented companies from successfully finishing their operations. The focus of this paper is also on assessing the impact of the pandemic on ongoing projects. As a result, Covid-19 had a significant impact on the vast majority of the projects. Subjects in the study shared this concern. From what we can tell, project productivity plummeted as a direct result of the lockdown. This caused productivity. workers to lose Furthermore, the consultancy's responsible staff remained unavailable. This led to poor performance and delays in the projects. It also took longer for contractors to approve the contracts, which slowed down production. As a result, it is fair to label the years surrounding Covid-19 as tense.

Ogunnusi (2020) claims that the failure of pandemic hype to finish on schedule is causing projects to miss their deadlines. In a similar vein, Mouritz (2020) demonstrated how such setbacks occurred in China's Belt and Road Initiative. Due to labour shortages, he said, many projects are on hold, making it difficult for businesses to meet deadlines. It was also found in this paper that Covid-19 had a significant impact on the availability of raw materials and on the performance of physical labour. There were overruns in construction costs of more than 98% during the pandemic, as suggested by Callegari, et al. (2018), who speculated that this was due to project delays caused by inaccurate estimates. Khalfan and Ismail (2020) also found that the industry's delays were largely attributable to workers' health problems, a lack of available capital, and disruptions in the supply chain.

All of these prior clues are relevant to what this study found. As a result, the findings of the current study corroborate those of previous studies, including (Ogunnusi, 2020), (Mouritz, 2020), (Callegari, et al, 2018), and others (Khalfan & Ismail, 2020).

4.4 Project success

Integrity and efficiency are cornerstones of any project's success. Executives who are willing to put in the time and effort are essential to the success of any project (Jones, 2017). In order

to strengthen the organisation, Raziq et al. (2020) suggested focusing on its centralization, formation, and integrity. It can help the project manager get what they need from their team. According to Duguay, Landry, and Pasin (1999), a project team's agility and flexibility are critical to its success under pressure. Finding out what factors affected a project's success before, during, and after the pandemic was a primary focus of this research. Findings showed that projects were still experiencing issues such as inadequate funding, difficulties with resource allocation, and inefficient operations. Due to the pandemic, many projects had to be delayed. As a result, most companies were unable to generate any income. There are now additional challenges to running a business because of the cash crunch, such as a lack of capital for investments. Meeting deadlines and operating at peak efficiency are crucial to the success of any project, as outlined by Foggie (2020). As a result of the pandemic, risk management on many projects failed. Because of this, we were unable to finish them by the due dates we had set. Project management, according to Packendorff and Lindgren (2014), is a nonlinear process in which it is crucial to work on multiple tasks at once. This study's results are consistent with those of (Jones, 2017), (Raziq et al. 2020), (Duguay, et al., 1997), (Foggie, 2020), and (Packendorff & Lindgren, 2014).

5. CONCLUSION

Project delays, disruptions, and overall completion were examined in detail to determine the extent to which the Covid-19 pandemic affected these factors in Botswana. The primary objective was to bring attention to the problems and the vital role they play. Primary data for this study was gathered from 105 people who were asked to fill out a questionnaire. SPSS was used to conduct a quantitative analysis of the responses. We conclude that Covid-19 had a major and unfavourable impact on projects. In sum, a pandemic caused many disruptions, including ineffective communication and coordination, the cessation of physical activities, and the emergence of a complicated work process. It's also pointed out that many projects had their raw material supplies cut off because of the pandemic. Due dates for the project's

completion kept getting pushed back because of late deliveries, fluctuating prices, and the inability of contractors to complete the work on time. The effects of Covid-19 have been felt in a decreased cash flow. Employees were less productive because they prioritised their health over their work. Similar problems occurred when allocating funds to various projects. As a result, all of these are identified as impediments to project completion and success as part of Covid-19, in conclusion, findings related to earlier scholarly work.

5.1 Theoretical implications

The key principles of project management have been outlined in this research. It's looked at in the context of Botswana. The Covid-19 pandemic, the paper concludes, was a major factor that slowed the progress of ongoing projects. The results of the research in this area lend credence to the theory. On top of that, project management's environment might not be conducive to success. In conclusion, Packendorff and Lindgren (2014) have contributed to a more general implication of narrow theory. Nonetheless, these blunders might be avoided by employing contingency theory, which centres on adapting strategies and tactics to the changing circumstances. The article's analysis of the causes is, therefore, consistent with the predictions of contingency theory.

5.2 Practical implications

Findings in this article are consistent with those of researchers, academics, and practitioners of project management. These results have applications in both the private and public sectors and can be used to mitigate the effects of uncertainty in both government and industry. If the measures uncovered in this study are implemented correctly, they can easily advance in uncertain situations. In addition, it provides a quick overview of the problem and its implications for Botswana's project management industry. Managing projects offers a better chance to boost the economy's employment rate.

5.3 Limitations

The study's main pillar was a survey given to all the right people. Therefore, participants were recruited from the manufacturing sector.

However, each of these people had been engaged in a separate venture with a unique company. This allowed for potential differences in findings. If the people involved in this study were all drawn from the same industry, the findings might be different. Furthermore, there were only 105 people included in the study. The main reason was that both parties were pressed for time (researcher and participants). It was extremely difficult to gauge the accessibility of suitable participants. In a nutshell, expanding the sample size can lead to different findings. Very few people took part in the study, which may have resulted in cultural or individual biases in the results.

5.4 Future research

This article suggests future studies investigate how businesses have adapted since the outbreak of Covid-19. A thorough evaluation of how those alterations affect the project's conclusion will be provided. In addition, researchers can zero in on different aspects of projects to investigate the weight of other factors. In conclusion, secondary data analysis can be used to further examine the research and its implications.

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REFERENCES

Ahmed, J. U. (2010). Documentary research method: New dimensions. *Indus Journal of Management & Social Sciences*, 4(1), 1-14.

Alenezi, T. A. N. (2020). Covid-19 Causes Of Delays On Construction Projects In Kuwait.

Alsharef, A., Banerjee, S., Uddin, S. M., Albert, A., & Jaselskis, E. (2021). Early Impacts of the COVID-19 Pandemic on the United States Construction Industry. *International journal of*

- environmental research and public health, 18(4), p.1559.
- Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. *Kuwait Chapter of Arabian Journal of Business* and Management Review, 33 (5471), 1-8.
- Borio, C. (2020). The Covid-19 economic crisis: Dangerously unique. *Business Economics*, 55(4), 181-190.
- Botlhale, E. (2017). Enhancing public project implementation in Botswana during the NDP 11 period. *Africa's Public Service Delivery & Performance Review*, 5(1), p.9.
- Callegari, C., Szklo, A., & Schaeffer, R. (2018). Cost overruns and delays in energy megaprojects: How big is big enough?. *Energy Policy*, 114, 211-220.
- Canals, L. (2017). Instruments for gathering data. In E. Moore; M. Dooly (Eds), Qualitative approaches to research on plurilingual education (pp. 390-401).
- Dannenberg, P., Fuchs, M., Riedler, T., & Wiedemann, C. (2020). Digital transition by COVID-19 pandemic? The German food online retail. *Tijdschrift voor economische* en sociale geografie, 111(3), 543-560.
- Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of business research*, 117, p.284.
- Duguay, C. R., Landry, S., & Pasin, F. (1997). From mass production to flexible/agile production. *International Journal of Operations & Production Management*.
- Foggie, L. (2020). Managing project delays in response to COVID-19. *Turn and Towers End.* Retrieved from https://www.turnerandtownsend.com/en/perspectives/managing-project-delays-in-response-to-Covid-19/
- Gursoy, D., & Chi, C. G. (2020). Effects of COVID-19 pandemic on hospitality industry: a review of the current situations and a research agenda.
- Harrison, R. L., & Reilly, T. M. (2011). Mixed methods designs in marketing research. *Qualitative market research:* an international journal.
- Jones, B. T. (2017). Chobe Enclave, Botswana Lessons learnt from a CBNRM Project

- 1993-2002. Botswana documents.
- Joslin, R. (2015). Relationship Between Project Management Methodology (PMM), Project Success, and Project Governance.
- Khalfan, M., & Ismail, M. (2020). November. Engineering **Projects** and Crisis Management: A Descriptive Study on the Impact of COVID-19 on Engineering Projects in Bahrain. In 2020 Second *International Sustainability* and Resilience Conference: Technology and Building Innovation inDesigns (51154) (pp. 1-5). IEEE.
- Kloppenborg, T. J., Opfer, W., & Petrick, J. A. (2003). Forty years of project management research: Trends, interpretations, and predictions.
- Koskela, L. J., & Howell, G. (2002). The underlying theory of project management is obsolete. In *Proceedings of the PMI research conference* (pp. 293-302). PMI.
- Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.
- Lambert, V. A., & Lambert, C. E. (2012).

 Qualitative descriptive research: An acceptable design. *Pacific Rim International Journal of Nursing Research*, 16(4), 255-256.
- Mouritz, F. (2020). Implications of the COVID-19 Pandemic on China's Belt and Road Initiative. *Connections*, 19(2), 115-124.
- Ogunnusi, M., Hamma-Adama, M., Salman, H., & Kouider, T. (2020). COVID-19 pandemic: the effects and prospects in the construction industry. *International journal of real estate studies*, *14*(Special Issue 2).
- Olander, S. (2007). Stakeholder impact analysis in construction project management. *Construction management and economics*, 25(3), 277-287.
- Packendorff, J., & Lindgren, M. (2014).
 Projectification and its consequences:
 Narrow and broad
 conceptualizations. South African
 Journal of Economic and Management
 Sciences, 17(1), 7-21.
- Petrillo, F., Spritzer, A. S., Freitas, C. M. D. S., & Pimenta, M. S. (2011). Interactive

- analysis of Likert scale data using a multichart visualisation tool. In IHC+CLIHC (pp.358-365).
- Raziq, M. M., Ahmad, M., Iqbal, M. Z., Ikramullah, M. & David, M. (2020). Organizational Structure and Project Success: The Mediating Role of Knowledge Sharing. Journal of Information & Knowledge Management, 19(02), p. 2050007.
- Schönbrodt, F. D., & Perugini, M. (2013). At what sample size do correlations stabilize?. *Journal of Research in Personality*, 47(5), 609-612.

- Smith, M. (2017). Research methods in accounting. Sage.
- Suen, L. J. W., Huang, H. M., & Lee, H. H. (2014). A comparison of convenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics, 5(1), 1-4.
- Swatuk, L. A. (2005). From "project" to "context": Community-based natural resource management in Botswana. *Global Environmental Politics*, 5(3), 95-124.