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**EFFECT OF COVID-19 CONTAINMENT MEASURES ON PROJECT PERFORMANCE IN RWANDA: CASE OF SEAD WEST PROJECT.**

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**ABSTRACT:**

Coronavirus Disease (COVID-19) was caused by the Severe Acute Respiratory Coronavirus 2 (SARS-Cov-2) first case declared in December 2019, originated in Wuhan, China has spread worldwide unprecedentedly. The general objective of this study was to assess effect of COVID-19 containment measures on project performance in Rwanda: a case of SEAD West Project while the specific objectives were to assess the effects of COVID-19 containment measures on project performance, to investigate the post COVID-19 recovery measures in reawakening projects and to ascertain future lessons learnt from COVID-19 containment measures. Total equaled to 228 and sample size were 144. Type of data was cross sectional while the study adopted adopt descriptive and inferential statistics. Questionnaire, interview and documentary review were engaged as three tools for data collection. Quantitative data were analyzed by the use of Statistical Package for Social Sciences (SPSS) while Qualitative data were analyzed and discussed using thematic analysis. The findings showed 92.36% of total interventions offered by the projects has stopped as a result of COVID-19 containment measures. About 68,1% concurred that restriction of movement led to wastages of resources while 61.1% consented working at home had affected unmet time delivery of project outputs and 59.9% agreed the statement that sanitary measures led to increase of project cost. Finally, yet important, 43.1% consented lockdowns led to increase unemployment. Lockdowns, working at home, restriction of movement and imposed sanitary measures has had negative relationship with project performance. As post COVID 19 recovery measure, 40.3% planned to request soft loan from Saving and Credit Association, 22.9% planned to request loan in Microfinance institutions, 19.4% planned to apply for grant and donation from development partners, 14.6% planned to borrow in commercial banks while only 2.8% should use their deposited money (savings). Majority preferred to request loan from saving and credit association because most frequently, the requirements for collateral, interest rates, and repayment procedures are what prevent many less advantaged persons from obtaining loans from formal banking institutions. The study recommended government of Rwanda to strengthen its ministries to always be ready to respond to every situation smoothly, saving and credit associations should be promoted and strengthened as was the preferable source of recovery fund to small businesses, finally, yet importantly, the great lessons learnt in the era of COVID-19 is for both public, private and civil society organizations to invest in the use of technology.

**Key-words:** *COVID-19; SEAD West project and Project performance.*

## 1. INTRODUCTION

Coronavirus Disease (COVID-19), caused by the severe acute respiratory coronavirus 2 (SARS-Cov-2) first case declared in December 2019, originated in Wuhan, China has spread worldwide unprecedentedly. 11<sup>th</sup> March, 2020, World Health Organization (WHO) declared the rapidly spreading “A pandemic” and called upon countries to plan preparatory and response actions in line with the Global Strategic Preparedness and Response Plan. Countries have responded in different ways to the pandemic, including the introduction of total or partial lockdowns like for other past pandemics (Spanish Flu, Asian Flu, SARS, Ebola, Swine Flu, etc.) (FDA, 2020).

Africa was not left behind to experience the consequences of the global pandemic due to Africa’s first case of COVID-19 was confirmed in Egypt on February 4, 2020. By mid-August 2020, Africa’s COVID-19 numbers had spiked to 1,084,904 confirmed cases and 24,683 deaths (Osei Baffour Frimpong R. M., 2020). Mid 15 June 2022. The country confirmed the first case of COVID-19 on March 2020. Government of Rwanda through the convened cabinet meetings has kept announcing containment measures then to be reviewed either for releasing or reinforcing them after two weeks. COVID-19 containment measures that were imposed.

COVID-19 has disrupted the global economies, measures adopted to contain the spread of the pandemic have affected countries and project

## 2. STATEMENT OF THE PROBLEM

According to Franzese (2020), Some of the COVID -19 pandemic containment measure affected many projects causing to delay due to (1) supply chain disruptions, (2) change of consumer preferences (3) workforce restrictions, (4) stay at home, (5) contractual implications and claims, (6) suspension of projects, and (7) lack of available tools, materials and equipment, (8) lockdowns and (9) curfews.

The implications of lockdown in the era of COVID-19 influence project managers to adopt remote working system and applied technologies to perform works, though this has affected some of the project employees to lose job as a result of using technology (Hostettler, 2021). According to the latest edition of the International Labor

management at different magnitude (Osei Baffour Frimpong, 2020).

The Rwandan government has also taken an engaged and innovative approach to respond to the new global pandemic of COVID-19. As a part of COVID-19 responses, Rwanda announced the formation of a Joint Task Force on 3 March 2020, which created the Rwandan Coronavirus National Preparedness and Response Plan, with the primary objective of “stopping the human-to-human transmission of the virus and caring for those affected” (MoH, 2020). A number of projects have fallen into failure due to damage of resources that were reserved to be used in the implementation of designed projects and during the pandemic resources were underutilized mainly human resources (Al-Mhdawi, 2021).

In 2020, Rwanda Development Board (RDB) recorded investment of new projects worth US\$ 1.30 billion down from US\$ 2.46 billion in 2019. Jobs expected to be created by new investments also fell from 35,855 to 24,703 jobs which was declined from projects that have closed due to travel restrictions and lockdowns and it was representing a decline of 31%. Few empirical tackled on the effect of COVID-19 containment measures to project performance and no study has been undertaken with regard to the said case study. Therefore, this study seeks to assess the impact of COVID-19 containment measures to project performance, the case of SEAD West Project.

Organization (ILO) in 2020, lockdowns led to working hour losses equivalent to 525 million jobs. In early March 2020, government of Rwanda has put in place the measure of containing COVID-19 including social distancing which was an obligation in all major public buildings and shopping centers; however, to society, social distancing presents the dangers of increasing social rejection, growing impersonality and individualism and the loss of a sense of community (Himalaya, 2021).

It has prevented people from effectively socializing which has led to close of projects implemented through entrainment in the era of the pandemic. For project managers, the effect of COVID-19 on operations has been catastrophic.

A reliance on remote work caused by working at home has prevented the cooperation tactics frequently used in a traditional team-based organization. Supply chains have been severely disrupted by lockdowns and border closures, and the danger of managing projects and overseeing a company has worsened (Simplilearn, 2020).

FOA Report, 2020 showed that, since the declaration of COVID-19 as a global pandemic, many challenges started to face transportation due to travel restriction to contain the spread of the pandemic and this has had a great effect to international projects (projects that works in more than two countries) specifically to the projects that distribute food to target beneficiaries.

Travel restriction imposed by lockdowns, change of consumer demand, blocked access to the business sites, unusual demand shift from food service to retail which has affected some food suppliers to leave in the market. Consumers preferred takeaways and home delivery option because of social distance, some foods were not an option during the pandemic whereby consumers started to consume food which correlates fighting against COVID-19 (Bakalis et al, 2020).

#### **4. RESEARCH QUESTIONS**

Research questions is an approach that enable the researcher to specify the issues or problem he/she wants to focus on. They break down the project into more manageable tasks that would need to be investigated and completed. The following are the questions formulated for further investigation:

#### **5. CONCEPT OF VARIABLES**

This is about the definition of the main terms of our research topic namely *COVID-19; SEAD West project and project performance*, the time resource management practices and public according to different authors. Its main purpose is to help the reader to easily have the general understanding of used concepts, (OECD, 2012).

#### **COVID -19**

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Coronavirus disease 2019 (COVID-19) is defined as an illness caused by a novel coronavirus now called severe acute respiratory syndrome

To date, few related studies related have been conducted to assess the effect of COVID-19 in the area of project management, to mention few: The impact of COVID-19 on GEF project preparation and implementation: Overview of responses from across the GEF partnership. (GEF, 2020). The economic impact of COVID-19 lockdowns in Sub-Saharan Africa (Matthieu, 2020). Rwanda's response to COVID-19 and future challenges (Jonathan, 2020). However, no study has been undertaken to assess the effect of COVID-19 containment measures on project performance, considering the case of SEAD West Project.

#### **3. OBJECTIVES OF THE STUDY**

This study's main aim was to assess the effect of COVID-19 containment measures on project performance analyze. The study sought to:

- [1] Assess the effects of COVID-19 containment measures on SEAD West project performance.
- [2] Investigate the post-COVID-19 recovery measures on the SEAD West project performance.
- [3] Ascertain the future COVID-19 containment measures on the SEAD West project performance.

**Q.1.** What are the effects of COVID-19 containment measures on SEAD West's performance?

**Q.2.** What are the post-COVID -19 recovery measures in reawakening SEAD West projects?

**Q.3.**What are the future COVID-19 containment measures on the SEAD West project performance

coronavirus 2 (SARS-CoV-2; which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. It was initially reported to the World Health Organization on December 31, 2019. On January 30, 2020, the WHO declared the COVID-19 outbreak a global health emergency. On March 11, 2020, the WHO declared COVID-19 a global pandemic, its first designation since declaring H1N1 influenza a pandemic in 2019.

Illness caused by SARS-CoV-2 was termed COVID-19 by the WHO, the acronym derived from "coronavirus disease 2019." The name was

chosen to avoid stigmatizing the virus's origins regarding populations, geography, or animal associations. On February 11, 2020, the Coronavirus Study Group of the International Committee on Taxonomy of Viruses issued a statement announcing an official designation for the novel virus: severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

### **Project performance**

Project performance denotes the attainment of expected program objectives (Harris, 2020). Or Project performance implies the capability to

## **6. THEORETICAL REVIEW**

### **Theory of Pareto 80/20**

The Pareto principle was developed by Italian economist Vilfredo Pareto in 1896 and linked with COVID-19 by Feras & Abdeleaha, 2020. The Italian economist Vilfredo Pareto who observed that 80% of the wealth in his country was owned by only 20% of the people invented Pareto's principle. This led to the development of the 80:20 Rule, which claims that we can frequently do 80% of tasks with 20% of the work. The order of the activities to complete can be prioritized using Pareto's principle. One can ensure that they give priority to these tasks by determining the crucial 20% of actions that produce 80% of the results they are trying to attain.

A manager can evaluate and pinpoint the actions that result in the 80% desired results using Pareto's rule. As a result, more time may be dedicated to these worthwhile endeavors at the price of time-wasting ones. It is feasible to free up a significant amount of time (up to 80%) using Pareto's principle, which may then be employed for other beneficial activities.

Pareto's 80/20 principle is considered a tool to improve quality and this is crystallized by the large majority of problems 80% are caused by a few main causes and must be identified and work on the vital few (affecting and important to the process) 20% of all causes, and thus we get rid of the 80% of the problems and dilemmas.

One of the seven global telecommunications corporations employed Pareto analysis when they plotted all of their issues that caused losses in a Pareto diagram, where it became clear that wires

perform the mission in the efficient and effective way by using the available resources.

### **SEAD West Project**

The Strengthening Education for Agricultural Development (SEAD) West Project is 5 years (1 June 2019 – 31 March 2023) Netherlands Initiative with the mission of contributing to achieving sustainable food security in Rwanda. The project is designed to improve education and training; research and community services in Agricultural production; value chain management and land and water management.

were the main cause of communication breakdowns damage and it also showed that 40% of the wire damage is due to construction works, on this golden information, the company developed a plan to prevent and reduce wire cuts.

Actually, these cuts were reduced to 25% per year, and this was reflected in financial savings of seven million US dollars. Theory of Pareto 80/20 has benefits including identifies priorities, sources and types of problems and dilemmas, is usually used to analyze the data resulting from the checklists, and effective tool to facilitate the cooperation among all stakeholders.

There is the use of Pareto 80/20 rule to save lives from the COVID-19 by dealing with all groups of society in the same way and with the same measure, the preventive policies will be excessively restrictive for people, costly, and very difficult to provide adequate protection for everyone. Implementing a single framework of the same size for everyone will not only lead to failure to control the virus, but will also cause personal and economic pain in a large way for everyone.

### **Theory of change**

The historical roots of a theory of change come from the field of theory driven evaluation that came to prominence in the 1990's (Chen, 1990; Coryn, Noakes, Westine, & Schoter, 2011). A theory of change is a purposeful model of how an initiative such as a policy, a strategy, a program, or a project contributes through a chain of early and intermediate outcomes to the intended result. Theory of change help to navigate the complexity of social change (Serrat, 2017). Concisely, a theory of change explains how and why a

sequence of logically linked events should lead to an ultimate outcome. Theory of change articulate assumptions and the beliefs and hypotheses they rest on, about how short-, medium-, and long-term change happens in specific external context, and stipulating how early and intermediate outcomes toward the long-term change is brought and documented with indicators that suggest how much of, for Whom, and when outcome is to be realized.

## 7. EMPIRICAL REVIEW

Coronavirus Disease (COVID-19), caused by the severe acute respiratory coronavirus 2 (SARS COVID-2) has not only disrupted health sector but it had affected the sector of project management. As a global pandemic, COVID-19 affects work-related processes, stressing out many team members in projects.

Lockdowns and other measures taken by different governments to contain the spread of the disease have disrupted economic activities globally and these linked to project management in particular. What we have seen through this crisis in the career of project management is what we need to become better at dealing with turbulence and uncertainty (Wilson, 2022). Number of formal online conversations led to poorer outcomes in terms of transfer of understanding.

During the pandemic, the amount of activity to be coordinated and evaluated were disrupted anytime as result of certain containment measure published. In the era of COVID-19, proper planning, adaptability and flexibility were the keyword for project managers to strive achieving their project goals and outcomes.

During the COVID-19, a lack of coordination resulted in repetition, inefficiency, frustration and possibly making the wrong decisions. In the context of the COVID-19 unprecedented crisis, all managers have to face new challenges and to adapt to a work environment with less social interactions (Danila & Adam, 2022).

The study undertaken by Gabriel (2020) in Rwanda entitled "How COVID-19 Pandemic Affected Rwanda Businesses" showed that in February 2020, before lockdown, the median firm

Kurt Lewin supported the theory of change by developing a model that linked to theory of change which involving three steps: unfreezing, changing and refreezing. For, Lewin, the process of change entails creating the perception that a change is needed, then moving toward the new, desired level of behavior and finally, solidifying that new behavior as he norms

had three employees and earned average 8 million Rwf in annual revenue; as a result of containment measure, firms were strongly affected by the lockdown measures implemented to contain the spread of COVID-19, the findings found that, In March and April 2020, 80% percent of firms' report being at least temporarily closed.

Report published by Trade Mark East Africa (2020) showed that due to closure of boarder as a way of preventing the spread of COVID-19, Rwanda' imports from China decreased 23%. 16<sup>th</sup> edition Rwandan Economic Update published in 2021 undertaken by Work Bank showed that the longer closure of schools the more students drop out from school.

Travel restriction imposed by lockdowns, change of consumer's behaviors and quantity demanded declined to some foodstuffs, blocked access to the business sites, closure of restaurants and limited service of eating places affected the purchasing habits were among the many challenges faced by Rwandan food related projects as a result of COVID-19 containment measures (FOA, 2020).

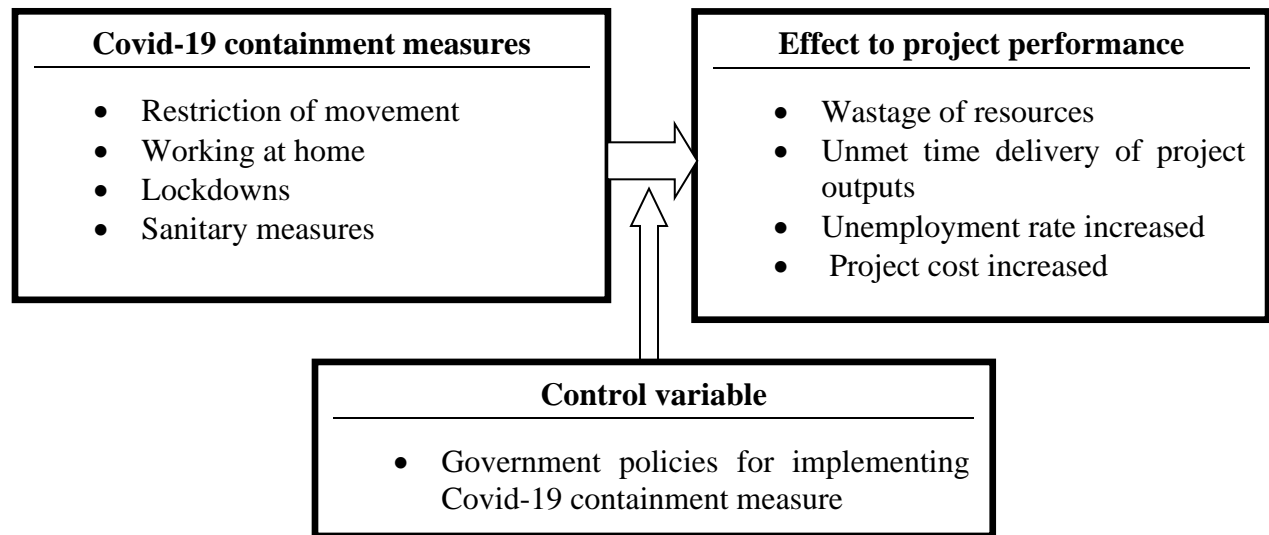
In Rwanda, meetings in the hotels were limited, and the number of people to participate in the meetings was reduced following set up containing measures of preventing the spread of the COVID-19 which has directly affected entrainment projects or companies and contractors of hotels and restaurants. Number of Hotels and restaurants has closed due to the movements of people in the hotels and restaurants have reduced to shifting the work from office to home (UNCTAD, 2021).

## 8. CONCEPTUAL FRAMEWORK

From the discussion provided above, the conceptual framework showed the logical relationship between independent variable which is Covid-19 containment measures is measured by the sanitary measures, restriction of movement, adopting new technology system and working at home, lockdown and the power of saving in relation with the wellbeing of the

project team. The independent Variable is expected to relate the dependent variable through Wastage of resources, Unmet time delivery of project outputs, Unemployment rate and increased Project cost. The researcher developed a conceptual model which guided this research shown in the figure 1.

**Figure 1: Conceptual Framework**  
**Independent Variable**



Source: Researcher, 2022

## 9. MATERIALS AND METHODS

This research project employed a cross-sectional research design. From the sampled population, both quantitative and qualitative data were collected. both quantitative and qualitative data from primary and secondary source. The targeted population were 144 respondents (beneficiaries and staffs).

Stratified and Purposive sampling techniques were sampling techniques whereas stratified sampling strategy used to determine ordinal respondents and purposive sampling strategy used to determine key informants' interviewees. Quantitative data were analyzed by the use of Statistical Package for Social Sciences (SPSS) while Qualitative data were analyzed and

## 10. Findings and Discussions of the Results

Data were collected through questionnaires addressed to 144 respondents, and a document review especially the progress of reports on this

discussed using thematic analysis. Quantitative results produced in form of frequency tables, percentages and these percentages showed to what extent COVID-19 containment measures have affected projects management in Rwanda considering responses from SEAD West project.

Data entry, manipulation, cleaning done using SPSS. The collected data were coded and edited in SPSS to be analyzed and interpreted. Quantitative data captured in the tablet by researcher and the researcher generate the outcomes on the basis of the tabulation plan. The correlation coefficient matrix analysis was applied to test the relationship between variables.

project in previous years ago. Data obtained were analyzed quantitatively using computer software of SPSS IBM version 23.0. The participation rate

was 100.0% in responding to the questions, and this helped to continue research with editing, coding, recording, classifying, and tabulating data towards the analysis.

Results were interpreted and presented in accordance with the study objectives. The findings showed that, majority of the respondents represented by 88.19% have been affected by COVID-19 containment measures while 11.81% have no longer affected. The findings revealed that majority of the plans set by project itself and plans of the beneficiaries has been disrupted up to 97.22% while only 2.7% were not disrupted. The result also showed that, 92.36% of total interventions offered by the project has stopped as a result of COVID-19 containment measures including restriction of movement, lockdowns, and working at home.

The findings moreover showed that 73.6% of some implemented projects were affected in their operations, 9% were seriously affected and it has led to serious loss, 9% has no significant effect while the least which is 8.3% has been blessed by the pandemic through providing new opportunities for development. In addition, the results showed that, the forefront of operation pressures was postponement of planned activities represented by 68.1% followed by wastage of

resources represented by 22.2% while management of team occupied 9.7% on the list. Furthermore, the findings showed 68,1% strongly agree that the restriction of movement constrained the physical delivery of some commodities which led to wastages of resources, 61.1% strongly agree working at home hindered physical contacts which resulted to unmet time delivery of project outputs, 59.9% agree that sanitary measures required unplanned expenses which led to the increase of project cost while 43.1% strongly agree lockdowns led to increase unemployment.

The findings from collected data showed that, 40.3% planned to request soft loan from Gramaen banks or Saving and Credit Association, 22.9% planned to request loan in Microfinance institutions, 19.4% planned to apply for grant and donation from development partners, 14.6% planned to borrow in commercial banks while only 2.8% should use their deposited money including savings. The findings showed that, majority of the respondents planned to request loan from saving and credit association because farmers, food suppliers, food processors have formed saving and credit associations as a way of easing requesting loan and as a way of easing saving even little amount money to the citizens (without travelling to commercial banks).

### Correlation matrix

A correlation matrix is simply a table which displays the correlation coefficients for different variables. The matrix depicts the correlation between all the possible pairs of values in a table. It is a powerful tool to summarize a large dataset and to identify and visualize patterns in the given

data. The correlation matrix shows the correlation values, which measure the degree of linear relationship between each pair of variables. The correlation values can fall between -1 and +1. If the two variables tend to increase and decrease together, the correlation value is positive.

**Table 1: Correlation matrix**

Correlation between COVID 19 containment measures with project performance		COVID 19 containment measures	Project performance
COVID 19 containment measures	Pearson Correlation	1	-.956**
	Sig. (2-tailed)		.000
	N	144	144
Project performance	Pearson Correlation	-.956**	1
	Sig. (2-tailed)	.000	
	N	144	144

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

The study showed that, there is high negative relationship between COVID-19 containment measures specifically: restriction of movement,

### Regression analysis

Regression is a statistical method used in finance, investing, and other disciplines that attempts to determine the strength and character of the

lockdowns, engaged of unplanned cost for sanitary materials and working at working to poor performance during COVID 19 in Rwanda.

relationship between one dependent variable (usually denoted by Y) and a series of other variables (known as independent variables).

**Table 2: Regression analysis**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.956 <sup>a</sup>	.914	.914	.5031
a. Predictors: (Constant), COVID 19 containment measures				

The model summary indicated that, restriction of movement, working at home, imposed sanitary measures and lockdown affected project performance at

91.4%. The finding is accurate to the mean because standard error of the estimate is less than 2.

### CONCLUSION

The aim of this study was to assess the effect of COVID-19 containment measures on project performance The case of SEAD West Project performance. The findings displayed that there is a high negative relationship between COVID-19

containment measures specifically: restriction of movement, lockdowns, engaged of unplanned cost for sanitary materials and working at working with performance of projects during COVID 19 in Rwanda.

### RECOMMENDATION

Based on the findings the study recommends Private, public and civil society organizations to invest in technology and shift from manual work culture to digital work culture. They should empower and strengthen Grammaen Banks or savings and credit associations. They should include risk planning and provide specific budget during project planning phase as a way of reducing the effects of uncertainty to project implementation.

emphasize on sustainability and risk management. SEAD West project needs to provide financial facilities to beneficiaries as a way of reviving project implementation post COVID-19. Government and development partners need to offer more grants opportunities as a way of stimulating projects implementation post COVID-19. Last but important, Citizens needs always to respect rules and regulations set by government especially during hard time similar to COVID-19.

Project managers, sponsors and implementers are recommended to resign their project proposals and

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