GSJ: Volume 10, Issue 12, December 2022, Online: ISSN 2320-9186 www.globalscientificjournal.com

#### ASSESSMENT OF COMMUNICATION CHANNELS AND THE PERFORMANCE OF

## CONSTRUCTION PROJECTS AT GASABO DISTRICT HEADQUARTERS, KIGALI,

## RWANDA. UMUHOZA ROSINETTE

Business Administration, Project Management, University of Kigali (Rwanda)

P.O BOX 2611, Kigali-Rwanda, Venue: KACYIRU Sector, GASABO District, Kigali-Rwanda

Mail Id: murozine@gmail.com; Mobile No +250 786 131 395

#### ABSTRACT:

Achieving high performance on the construction site is a challenge project managers face. This research's main objective is to assess the relationship between communication channels and performances of construction projects at Gasabo district headquarter Kigali, Rwanda. This study used both stratified and purposive sampling methods. The population was made of public agencies, contractors, consultants, and contracting firms involved in construction projects. The target population of 160 was considered where purposive sampling technique was used in which the researcher relies on his or her own judgment when choosing members of the population to participate in the study and was used to select the participant of the interview. The primary data was obtained using questionnaires while the secondary data was gathered from the literature. Quantitative data was analyzed using computer software Statistical Package for Social Sciences (SPSS) version 23.0 to enable mathematically computations since analyzing of data manually would be tedious and would lead to errors. The analyzed data was presented using regression analysis, test the hypothesis, and correlation coefficient. In reporting the study findings, the highest percentage and mean was considered. Based on the results from the field  $\beta$ = .159. means that interactive communication contributes 15.9% on the performance of construction projects. The ratio of  $\beta$  test modal results into t value, t value is 3.581.

Thus, interactive communication has influence on the performance of construction projects.  $\beta$ = .216. means that push communication contributes 21.6% on the performance of construction projects at Gasabo district Kigali-Rwanda. t value is 4.440 and it is greater than 1.96. Therefore, push communication has influence on the performance of construction projects. So, the second alternative hypothesis of this study which says that there is no significance relationship between push communication and construction project performance at Gasabo District Kigali-Rwanda is rejected.  $\beta$ = .361. It means that pull communication contributes 36.1% on the performance of construction projects at Gasabo district Kigali-Rwanda. The ratio of  $\beta$  test modal results into t value is 4.833 and it is greater than 1.96. Therefore, pull communication factors have influence the performance of construction projects. Considering the Rwandan construction industry, there is a strong need for improvement in project communication management for the enhancement of project performance and delivery. Studies have established that lack of proper communication between the consultants and contractors has a significant contribution on project success in Rwanda.

**Keywords:** Communication, Project Communication and Performance.

## GSJ: Volume 10, Issue 12, December 2022

Communication is the soul of the project. In the world of project management today, it has become increasingly more important to turn efforts toward more effective means of communication. As blood flows, it pumps oxygen through the body to sustain life. Likewise, communication is the lifeblood of projects and organizations. Effective communication performance is seen as a critical requirement for meeting delivery success in arguably intense collaborative, interdependent and multidisciplinary project project-based sectors that managers, contractors, design team all can keep in touch during project life cycle (Wolfe, 2021).

The construction industry is very important to the EU economy. The sector provides 18 million direct jobs and contributes to about 9% of the EU's GDP. It also creates new jobs, drives economic growth, and provides solutions for social, climate and energy challenges. The goal of the European Commission is to help the sector become more competitive, resource efficient and sustainable (Blees, 2021). Reports showed that 74% of European organizations complete a formal project delivery and contract strategy analysis, prior to approval and 84% utilize financial and risk analysis to screen projects whereas 80% say the majority of capital projects are planned (Geno, 2015).

Projects in Africa fail not only because of mismanagement but also because of the sheer complexity of these specific project settings. Specifically, projects fail because of lack of

also because of corruption, poor policy planning and implementation and their complex contexts. In the face of many "unknown unknowns" and where success and failure are not "black and white" issues, they have to learn not only to think out of the box but also to learn from failure in order to succeed more often. Africa is too big to follow one script (Ogutu, 2014).

According to Rwanda Development Board (RDB), construction spending in 2015 was \$546 million, growing at 10 percent, while real estate spending was \$471 million, growing at 7 percent. The construction industry contributes more than seven percent to the national GDP. Private and public works were growing at 9.4 percent starting 2014 (Moses Gahigi, 2017). Rwanda's construction sector has been pegged as one of the four vibrant sectors that would propel the country to rebuild itself 22 years after the genocide and spur economic development targets by 2020. While the construction industry is one of the fastest-growing sub-sectors of the economy, accounting for almost 30% of the total turnover of the industrial sector, a big part of the population cannot afford to buy, build or even rent a decent house. Real gross domestic product (GDP) growth averages 8.2% annually, which translates into a GDP per capita growth of 5.1% per year. At the heart of this growth was the industrial sector, which grew at an average of 9.8% per year during the First Economic Development and Poverty Reduction Strategy (EDPRS 1), driven by the rapid expansion of construction whose growth rate averaged 15% annually. In the same period, the industrial sector GSJ: Volume 10, Issue 12, December 2022 psockage d1865.4% of national output, (Daniel Sabiiti, 2017).

In Rwanda, performance reports on public projects are annually analyzed and presented by the Office of Auditor General. As a matter of fact, the problem of poor performance was also observed in the report of Office of Auditor General of 2019 which revealed the poor performance in several infrastructure construction projects including delayed completion of contracts for public building projects, cost overrun, poor reporting among other (OAG, 2019).

#### STATEMENT OF THE PROBLEM

One of the most critical issues in construction project management that have drawn lots of attention in recent times is the management of information flow among project team members (Emmett, 2013). Due to the multiplicity of professionals that often form construction project team, communication has always been a challenge among team members. The need to effectively utilized appropriate communication media and channels to ensure accuracy, completeness, and understandable transfer of information among project team members is critical for the successful completion of construction projects. Several studies have shown that effective communication improve teamwork, reduce conflicts. and rework and contribute significantly to project success (Emmett 2013; Thomas, 2000).

The Auditor-General's report for 2015/16. "Delayed and abandoned projects always come with a cost as it involves continuing to pay the entrepreneur and incurring extra payments caused by the rise in prices

and lack of effective communication," Kalihangabo said. Between 2013/14 and 2015/16 financial years, 98 contracts, worth Rwf 95.67 billion, were either abandoned or significantly delayed, according to the AG's report. Some 24 of those contracts, worth Rwf13.39 billion, were abandoned and contractors disappeared after receiving payments of Rwf5.62 billion. The abandoned contracts were in the areas of infrastructure, including water, energy and roads, health, and agriculture. According to the 2012/2013 Rwanda national budget, 46% of construction projects were donor-funded, and worse again where the effort to increase taxpayers' contribution to the budget has resulted in reducing the aid from 85% in 2000. Absent or inadequate risk assessment, lack of effective communication and management are, in themselves, an important source of risk for projects. Because, until now, no reliable measure has been available for estimating risk in urban construction projects, effective risk assessment, and management have been impossible, (Auditor general report, 2016). Kalihangabo said delayed work contracts have been rising from nine in 2014 to 16 in 2015 and soared to 73 in 2016, which she said is a problem as there are wasted funds, (Emmanuel Ntirenganya, 2017).

In Rwanda, communication at ASSETIP construction project sites faces many difficulties. Among these challenges include lack of effective communication tools and platforms, lack of management commitment appropriate communication systems, to poor communication skills. language and cultural difference and other personal characteristics. Against the backdrop of communication problems among

projects, it is important to understand how the effectiveness of communication among project team member's influences project performance. While this is very important, very little empirical studies have been done to assess communication roles on project performance at ASSETIP by creating a deficiency or gap in knowledge. This study was conducted to bridge the gap in knowledge by assessing the roles of communication among project team members influence construction project performance on site in Gasabo District in Rwanda (OAG, 2018).

#### **SPECIFIC OBJECTIVE:**

- To identify the influence of interactive communication on construction project performance at Gasabo District Kigali-Rwanda.
- ii. To assess the effect of push communication on construction project performance at Gasabo District Kigali-Rwanda.
- iii. To evaluate the effect of pull communication on construction project performance at Gasabo District Kigali-Rwanda.

#### LITERATURE REVIEW:

#### **Concept of interactive communication**

Communication is considered as the starting point of all activities in the construction project management industry (Zulch, 2016). The word communication has originated from a Latin word communicate which means "to make common". While we communicate during projects its purpose is to make a common

understanding with the stakeholders. Project communication involves various project information to be collected, created, shared and monitored either internally or externally which facilitates addressing stakeholders needs and communication, resolving issues and managing conflicts. It shall flow vertically up and down in various organization levels and horizontally among the peers (Zulch, 2016). Interactive communication is effective in conveying sensitive and important information in a way that can be best understood and acted upon immediately. Interactive communication often means meeting in person, however if face to face meetings is not possible, communicating over the phone or through video conference can help ensure that messages are communicated clearly and will still allow you to use your tone, facial expressions, pitch and visual aids to convey the intended message. Through this method the project manager also has the ability to interpret whether the message has been clearly understood (David and Skitmore, 2019).

#### **Concept of Push Communication**

Push communication entails sending information to the recipient while not expecting a response immediately Some examples of push communication include Emails, Project newsletters and Project documentation. Push communication is useful when you need to convey information to others, however the message is not time-sensitive or urgent. Project managers can use push communication in the form of information updates or reports. While providing stakeholders with updates on a project is important, ensure that not all your communication is push GSJ: Volume 10, Issue 12, December 2022 interpreting the project manager as not being receptive to their needs. Push communication is best when providing senior executives with an update of the progress of a project through a monthly email and when sending through changes to any documentation to ensure that these changes have been communicated to all relevant parties (Cobley, 2008).

### **Concept of Pull communication**

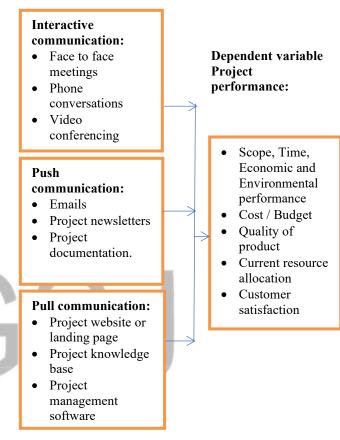
Pull communication is a method of allowing stakeholders to access information at their leisure. Pull communication can provide a sense of trust between stakeholders and the project manager, as it provides transparency. Some examples of pull communication include project website or landing page, project knowledge base, and project management software that facilitate the design in construction projects. Pull communication is best when you want the client to be able to view project information at their leisure, such as the project plan and when the information is not urgent; however, it needs to be available to other stakeholders, such as contractors or project team members (Cobley, 2008).

#### **CONCEPTUAL FRAMEWORK**

The study of assessment of communication roles on construction project performance in Rwanda has as dependent variable of construction project performance and independent variables are communication types and their roles on the success of the project. The conceptual framework shows the most important factors in relation with performance in construction projects, and the relative importance of

communication were grouped into four major groups. Three types of project communications and their influence as well as key performance indicators on construction projects.

#### Independent variable Communication channel:



Source: Researchers, 2022

#### **EMPIRICAL REVIEW**

# Interactive communication and construction project performance

A study conducted by Philip, 2010 on performance of construction in Australia found that numerous factors hinder improved performance in building sector. The existence of several indicators was identified as challenges to achieving higher performance in building sectors combined with management shortfalls. The data also provides input into a variety

GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, December 2022

19\$Next 2019 | GSJ: Volume 10, Issue 12, Dece determining the future engineering projects affected by a range of infrastructure funding scenarios (Hunt, 2002).

Another study conducted in South Africa in 2017 stated in its conclusion that Communication in construction is vital to achieving a successful construction process from inception to completion. Good communication within a team can improve team working skills, lead to positive collaboration and result in an optimistic project journey for the client. The same study elaborated how to improve communication on a construction project for higher performance (Cooper, 2019).

## Push communication and construction project performance

While interactive communication is all about engaging with your stakeholders and receiving a response quickly, push communication on the other hand entails sending information to the recipient while not expecting a response immediately Some examples of communication include Emails, Project push newsletters Project documentation. and Push communication is useful when you need to convey information to others, however the message is not time-sensitive or urgent. Project managers can use push communication in the form of information updates or reports. While providing stakeholders with updates on a project is important, ensure that not all your communication is push communication, as it can lead to stakeholders interpreting the project manager not being receptive to their needs. Push communication is best when providing senior

executives with an update of the progress of a project through a monthly email and when sending through changes to any documentation to ensure that these changes have been communicated to all relevant parties (Cobley, 2018).

Early on in a construction project it is important to establish a clear line of communication and determine a chain of command. Lines of communication become apparent when a contract is put in place between the client and main contractor. The architect is the line of communication between the client and contractor. The architect is responsible for communicating and liaising with various consultants and contractors, who then communicate information to the various suppliers and sub-contractors (Karen, 2009).

## Pull communication and construction project performance

Pull communication is a method of allowing stakeholders to access information at their leisure. Pull communication can provide a sense of trust between stakeholders and the project manager, as it provides transparency. Some examples of pull communication include project website or landing page, project knowledge base, and project management software. Pull communication is best when you want the client to be able to view project information at their leisure, such as the project plan and when the information is not urgent; however, it needs to be available to other stakeholders, such as contractors or project team members (Cobley, 2018).

There are numerous methods of communicating whether it be by phone, video, texting or email. On site communication can be in the form of signals, signs,

dsawings 18 photos, and verbal meetings. However, various methods can have their advantages and disadvantages: sometimes a short matter of fact email is all that is required to communicate a point. On the other hand, this may not be enough and a scheduled meeting on site face to face may be necessary (Karen, 2019).

#### RESEARCH METHODOLOGY

#### Research design

This study was based on cross sectional survey and mixed study research design, this allowed the researcher to study the elements in their natural form and trying to identify the cause-and-effect relationship between two variables. The design also allowed the researcher to come up with descriptive statistics that can assist in explaining the relationship that exists among variables.

#### Sampling design

According to Paul J. Lavrakas (2008), a sample design is the framework, or road map, that serves as the basis for the selection of a survey sample and affects many other important aspects of a survey as well. In a broad context, survey researchers are interested in obtaining some type of information through a survey for some population, or universe, of interest. The sampling techniques that were used for this study is purposive sampling technique. Purposive sampling (also known as judgment, selective or subjective sampling) is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study and was used to

select the respondent for the questionnaire as wedsas participants of interview.

#### **Target population**

The study of assessment of communication roles on performance of construction projects in Rwanda was carried out in, Kigali city, Rwanda. The choice of this location was made based on where the researcher found it easy to get respondents and where target population can be found. The population size for this study covered government officials working in relevant public agencies, project managers, engineers and quantity surveyors working in consultant and contractor's construction in Rwanda. The population of this study is 160 and they are made of construction professionals from construction projects contracting firms involved in the projects who was obtained from public institutions, consultants and contractors' companies.

#### Sample size determination

Sample size refers to the number of participants or observations included in a study. This number is usually represented by n. Sample size determination is the act of choosing the number of observations or replicates to include in a statistical sample (McLeod, 2019). In this research the researcher used a survey for slight populations as sample size determination, this method is to use the whole population as the sample. A census is attractive for small populations (e.g., 200 or less). This enabled the researcher to eliminates sampling error and provides data on all the individuals in the population. Finally, virtually the entire population would have to be sampled in small

GSJ: Volume 10, Issue 12, December 2022

IPSPUSATIONS: to achieve a desirable level of precision and access adequate and reliable information from the

#### Sampling technique

respondents.

In this study, random sampling method was employed. As recommended by Salant &Dillman, (2014), the researcher picked a subgroup from a larger group and then used this subgroup as a basis for making inferences about the larger group. The sample was drawn from a population that was composed by government officials, consultants and contractors.

#### **Data Collection Procedures**

The researcher collected data through primary and secondary data. A questionnaire survey was designed based on the objectives of the study, which are: To identify the relationship between of interactive communication on performance of construction project at ASSETIP in Rwanda; To assess the relationship between push communication on performance of construction project at ASSETIP in Rwanda and to identify the relationship between pull communication on performance of construction project at ASSETIP in Rwanda. A questionnaire survey was developed to get the opinion and understanding from the experienced respondents regarding to performance of construction projects. This research adopted documentary review as the process concerned with reading, summarizing, interpreting and integrating information from the existing documents into a fresh and current study at hand.

#### Reliability

Reliability refers to the degree to which an instrument yields consistent result. Researcher achieved reliability by conducting the appropriate research method and design, where future researchers may replicate the study to confirm the conclusions. Reaching data saturation is essential to produce quality research. In this research, measure of reliability included internal consistency, test-retest, and interrater reliabilities as a type of answers the question, to determine whether the scores would be stable over time.

456

#### Data analysis

This study is a correlational research and correlation coefficients that used to determine the relationship between variables. Correlation is the relationship between two or more variables or sets of data. It is expressed in the form of a coefficient with +1.00 indicating a perfect positive correlation; -1.00 indicating a perfect inverse correlation; 0.00 indicating a complete lack of a relationship.

#### **Ethical issues**

This research was conducted for academic purpose. Respect for the dignity and protection of the privacy of research participants was prioritized. Anonymity of individuals and organizations participating in the research was ensured and there was no deception or exaggeration about the aims and objectives of the research. The researcher explained the informed consent process and related form prior obtaining the signatures of the participants for contributing to this research. Researcher was responsible for maintaining

Coding participants influence a company and a participant decision to provide accurate and honest responses. Researcher maintained confidentiality by coding companies for participants and was not disclose names in the final research paper.

#### **Summary of Objectives Finding**

## Regression analysis for the effect of communication channels on the performance of construction projects

ANOVA <sup>a</sup>									
Model		Sum of Squares	df	Mean Square	F	Sig.			
Interactive communicati on	Regression	.283	3	.094	2.177	.003 <sup>b</sup>			
Push communicati on	Regression	.337	3	.112	3.050	.030 <sup>b</sup>			
Pull communicati on	Regression	.277	3	.092	2.541	.049 <sup>b</sup>			

Source: Primary data (2022)

The regression model shows changes that take place on the independent variable and how they the dependent variable. For independent variables to predict behavior changes of both variables, they should be strongly significant. The test for regression was conducted and it was found that the sig. value is 0.003. From the results, the p value in this situation is still less than 0.05 which is going to help in examining the relationship between two variables that are being studied. As a conclusion, the regression model is statistically strong and significant and causes predicted changes in the variables.

The test for regression was conducted and it was found that the sig. value is 0.030. From the results, the p value in this situation is still less than 0.05 which is going to help in examining the relationship between two variables that are being studied. As a conclusion, the regression model is statistically strong and significant and causes predicted changes in the variables.

The test for regression was conducted and it was found that the sig. value is 0.049. From the results, the p value in this situation is still less than 0.05 which is going to help in examining the relationship between two variables that are being studied. As a conclusion, the regression model is statistically strong and significant and causes predicted changes in the variables.

## **Summary of Hypothesis Finding** Model summary for the communication channels on the performance of construction projects

Model Summary									
				Std.	Change Statistics				
Model	R	R Square	Adjuste d R Square	Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
Interactive communic ation	.204 <sup>a</sup>	.041	.022	.20836	.041	2.177	3	151	.003
Push communic ation	.239 <sup>a</sup>	.057	.038	.19189	.057	3.050	3	151	.030
Pull communic ation	.219ª	.048	.029	.19069	.048	2.541	3	151	.049

Source: Primary data (2022)

Firstly, the R value printed out from the data was estimated to 0.204. It shows a positive relationship existing between the interactive communication and the performance of construction projects. This R value shows that the binding point that connects the interactive communication and the performance of construction projects is oriented in a positive sense. Hence, it is concluded that two variables described have a close relationship between them. Secondly, R square value printed out from the data is 0.041. It is expressed as 4.1%. It indicates the total variation that exists between those two variables. Finally, researcher

GSJ: Volume 10, Issue 12, December 2022 ISON 1320-518 that interactive communication influences the performance of the construction projects.

R value of 0.239 indicates that there is a positive relationship that exist between push communication and the performance of construction projects. Therefore, the interpretation of such R value means that there is a strong relationship between push communication factors and the performance of construction projects. Secondly, R square value is used to measure the relationship between variables that are being studied. According to the results, R square value is 0.057 which is expressed as 5.7%. This figure shows that there is variation between described variables. Generally, based on results of data, push communication factors contribute to the performance of the construction projects.

According to the model summary table 4.22, R value for pull communication is 0.219. According to the interpretation of R value, this figure means that the relationship is oriented in a positive sense. Thus, there is a positive relationship between pull communication factors and the performance of construction projects. Again, R square value is important to examine the relationship between pull communication factors and the performance of the construction projects. According to the results, R square value is 0.048 which is expressed as 4.8%. This result means that there is relationship that exists between two studied variables. Generally, pull communication factors have a great role in shaping the performance of the construction projects.

#### **Conclusions**

**Testing Hypothesis: There is statistical significance** of communication channels on the performance of construction projects.

Coefficients								
Model		Unstandardized Coefficients		Unstanda rdized Coefficie nts	T	Sig.		
		В	Std. Error	Beta				
Interactive communicati on	(Constant)	2.951	.824	0.159	3.581	.000		
Push communicati on	(Constant)	3.370	.759	0.216	4.440	.000		
Pull communicati on	(Constant)	2.528	.523	0.361	4.833	.000		

Source: Primary data (2022)

 $\beta$ = .159. It means that interactive communication contributes 15.9% on the performance of construction projects. The ratio of  $\beta$  test modal results into t value. From the table 4.18, t value is 3.581. This value is greater than 1.96. Thus, interactive communication has influence on the performance of construction projects since t value is greater than 1.96 and sig value is less than 0.05. Note: values less than 0.05 are indicated as .000 in SPSS. Therefore, the first alternative hypothesis of this study which says interactive communication has no significance relationship with the performance of the construction project is rejected.

 $\beta$ = .216. It means that push communication contributes 21.6% on the performance of construction projects at Gasabo district Kigali-Rwanda. The ratio of β test modal results into t value. From the above table, t value is 4.440 and it is greater than 1.96. Therefore, push communication has influence on the performance of construction projects since t value is greater than 1.96 and sig value is less than 0.05. Note: values less

GSJ: Volume 10, Issue 12, December 2022 in SPSS outputs. So, the first alternative hypothesis of this study which says that there is no significance relationship between push communication and construction project performance

at Gasabo District Kigali-Rwanda is rejected.

 $\beta$ = .361. It means that pull communication contributes 36.1% on the performance of construction projects at Gasabo district Kigali-Rwanda. The ratio of  $\beta$  test modal results into t value. From the above table, t value is 4.833and it is greater than 1.96. Therefore, pull communication factors have influence on the performance of construction projects since t value is greater than 1.96 and sig value is less than 0.05. Note: values less than 0.05 are indicated as .000 in SPSS outputs. So, the first alternative hypothesis of this study which says that there is no significance relationship between pull communication and construction project performance at Gasabo District Kigali-Rwanda is rejected.

#### Recommendations

Interactive, push, and pull communication has a great contribution to the performance of the construction projects in general. Communication is essential element various project managements because participants need to exchange ideas, be accountable, and be on the same track. To make it more productive in construction projects, specific communication channels including social media means are important to allow the flow of information among people involved. Therefore, it is crucial if there is a staff responsible for effective communication in the project. In hierarchy order, specific information meant for

specific staff given their responsibilities is effective. Furthermore, keep the track and records of previous information and data in construction projects with a safety. This is because the information is needed in the future as reference in similar projects or studies.

Drawn from the results that shows five topmost effective of communication towards performance of construction organization, it revealed that the most significant impacts of an effective communication were common in organizational efficiency. Furthermore, the ranking of improve productivity of an organization and reduction of project delay as the topmost impacts indicates that construction organization were influenced by effective communication. This confirms the perceived low performance of construction organization. In view of the above, it was recommended that stakeholders in the construction organization should adopt the use of effective communication tools and instruments for organizational performance.

Considering the Rwandan construction industry, there is a strong need for improvement in project communication management for the enhancement of project performance and delivery. Studies have established that lack of proper communication between the consultants and contractors has a significant contribution on project success in Rwanda. In this regard, all stakeholders in the industry in Rwanda must put machineries in place to ensure that project communication must always be on the agenda of site workers and management before the commencement of every project. In conclusion, the

GSJ: Volume 10, Issue 12, December 2022 ISPP Listation 6 of information technology in the management of construction project is recommended between professionals in all stages of construction in Rwandan construction industry. This will increase performance levels and improve project success.

#### REFERENCES

Blees, G. (2021). European construction sector observatory. Luxembourg: European Union.

Geno, A. (2015). Global Construction Project Owner's Survey. Greenbrae: KPMG International.

Hunt, P. D. (2002). Road Performance Studies Using Roughness Progression & Pavement Maintenance Costs. Brisbane: Queensland University of Technology.

McLeod, S. (2019). *Sampling Methods*. Manchester: Simply Physcology

Ogutu, D. (2014). Why do projects fail in Africa? Journal of African Business.

APMBoK. (2006). *APM body of knowledge*. 5th edition. Project Management Institute.

Blees, G. (2021). European construction sector observatory. Luxembourg: European Union.

Geno, A. (2015). *Global Construction Project Owner's Survey*. Greenbrae: KPMG International.

Horn, N. (2018). Research Methods, Secondary Data Analysis. Vanderbilt University.

Hunt, P. D. (2002). Road Performance Studies Using Roughness Progression & Pavement Maintenance Costs. Brisbane: Queensland University 4600f Technology.

McLeod, S. (2019). *Sampling Methods*. Manchester: Simply Physcology.

OAG. (2019). Annual report for the fiscal year ended June 30, 2019. Kigali: Office of Auditor General

Cobley, Paul (2008-06-05), "Communication: Definitions and Concepts", in Donsbach, Wolfgang (ed.), The International Encyclopedia of Communication, Chichester, UK: John Wiley & Sons, Ltd

Cervone, F. (2014, May). Effective communication for project success.

Leje, M. I. (2019, August 31). Impacts of Effective Communication Towards Performance of Construction.

Wolfe, S. (2021, September 30). 2020 Report: Construction Suffers from Wasted Time & Slow Payment. LevelSet, pp. 12-15.