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## Strategies for Mitigating Challenges of Delayed Payments in the Implementation of Government Road Construction Projects in Moshi Municipality, Tanzania

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### **Abstract:**

*This study aimed to explore the strategies for mitigating challenges of delayed payments in implementation of government road construction projects. Both qualitative and quantitative designs were used to explore challenges and strategies road construction industry could use to mitigate the problem of delayed payments. Both probability and non-probability sampling techniques were used. Data was collected from 40 respondents comprised of consultants, experts and contractors. Questionnaires were the main tool used to collect data and Relative Importance Index (RII) was used to analyse the subject variables. Findings revealed that proper financial planning, contractor shall not commence project until funds become available and should be clearly stated in contracts before signing it, proper use of funds allocated for the project, demanding payment bond, holding project's funds in an escrow account, establishing prompt payment act, charging of penalties on delayed payment and entering into joint venture are innovative strategies to mitigate the challenges of delayed payments. The findings also indicate that there is significant relationship between such strategies for mitigating the challenges of delayed payments and successful implementation of government road construction projects. The study concluded that to the great extent such innovative strategies will lead to successful implementation of government road construction projects. The study recommends that there is the need to promote wider uses of the payment strategies so that to guarantee successful completion of projects.*

**Keywords:** *Delayed payment, consultants, contractor, projects*

### **1. Introduction**

The Tanzanian Construction Industry Policy (2003) provides that, the government will improve roads network since roads are the dominant mode of transport. Although immense achievements have been made in real estate development, the past initiatives under the Policy were not sufficiently backed by sufficient government strategies to sustain growth of the construction industry. In construction industry, large capital is invested and construction works take significant time to complete therefore the industry considered payment for works completed as the lifeblood of the industry (Naseem, 2006). Likewise, delayed payment practices of completed works are continuous problem to contractors (Davenport, 2010). Payment problems in the construction industry are not a new phenomenon. Such problems have been widely recognized for more than four decades by prior research (Wu, 2010; Rahman and Ye, 2010; Wu, Kumaraswamy and Soo, 2011; Ramachandra and Rotimi, 2015). Due to payment delays to contractors who executed government construction projects, contractors have either abandoned projects or implemented the projects at a very slow pace (Daniel, 2015). The preparation and issuance of payment certificates for completed works and administrative process taken before the certificates are certified and paid to contractors is one amongst many factors resulted to payment delays (Daniel, 2015). In Tanzania, the bureaucratic process that require contractors to submit the demand for value of completed works to the project manager and then wait for approval that takes a longer time than 28 days which allowed by the contract from the date of receipt of the demand from the contractor and after that wait for another 28 days before payment made has turned out to be a cumbersome for road contractors (PPRA, 2016). Payment delays are a serious problem in Tanzanian construction industry. Contractors dread to pressurise the government to pay their demands on time for the works completed because of fear of being isolated from getting government works during the process of bid evaluation (Athumani, 2017).

Delayed payment to contractors has cited as a major hindrance to contractors in Tanzania in implementation of government road construction projects and in developing and sustaining a healthy, professional and competitive construction industry. Therefore, there is a need to explore strategies to mitigate the challenges of delayed payments of government projects in Tanzanian road construction industry in order for the contractors to continue with their construction work despite the problem of payment delayed.

## 2. Statement of the Problem

There are much complains in the road construction industry by clients and other stakeholders that the contractors do not complete and deliver projects within time period and works quality as specified in the contracts. The contractors in Tanzania demand the government more than TZS 400 billion in the financial year of 2016/2017 (Bunge Polis, 2017). Payment delays had constraint the capabilities of contractors to have a stable cash flow to meet day-to-day operations such as payment of wages, purchase of materials and payment of sub-contractors. If the condition of delayed payment continues then it could lead to late completion of government projects (Daniel, 2015). Delayed payment to contractors has cited as a major hindrance to contractors in Tanzania in implementation of government road construction projects and in developing and sustaining a healthy, professional and competitive construction industry. Therefore, there is a need to explore strategies to mitigate the challenges of delayed payments of government projects in Tanzanian road construction industry in order for the contractors to continue with their construction work despite the problem of payment delayed.

## 3. Research Questions

- Which strategies are used in the road construction industry to deal with delayed payments in the study area?
- What challenges does the road construction industry face in the implementation of current strategies that are used to deal with delayed payments in the study area?
- Which innovative strategies could be used to mitigate the challenges of delayed payments in the road construction industry in the study area?

## 4. Research Hypotheses

H<sub>1</sub>: There is significant relationship between strategies for mitigating the challenges of delayed payments and successful implementation of government road construction projects.

## 5. Conceptual framework

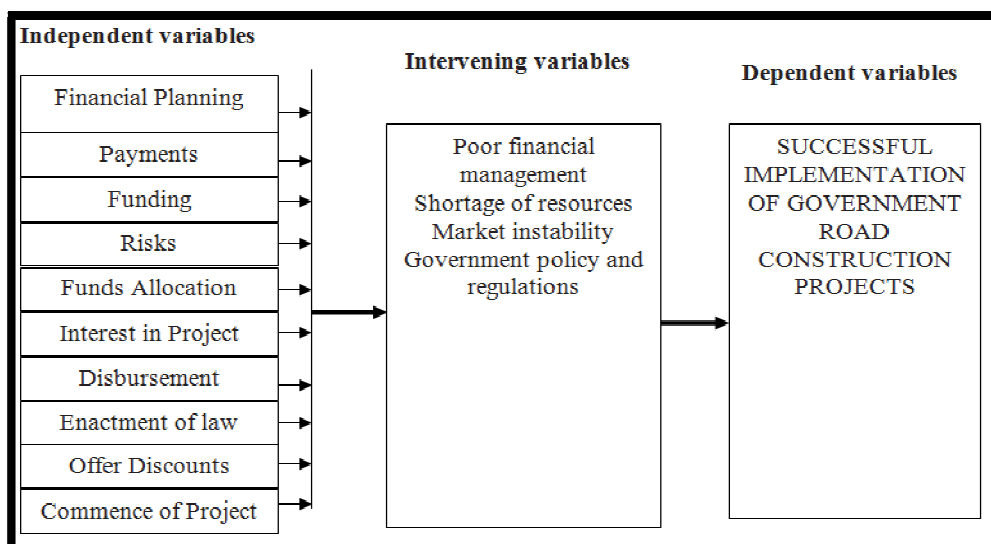


Figure 1: Conceptual Framework Source: Researcher's Own Construction (2019)

Figure 1 illustrates the relationship between dependent and independent variables. It shows the strategies to mitigate challenges of payment delays as independent variables which are proper financial planning, payments according to contractor's cash flow forecast and on time, proof of availability of funding by the client, risks identification on payment before the start of project, funds allocation for the project should be used for that project, timely disbursement of budgeted project funds, interest in project should be a priority to the client and enactment of law prohibiting government to delay payments, incorporate risk of delayed payment into project bids, offer discounts for early payment, demanding payment bond and project should not commence until funds become available. Both dependent and independent variables are intervened with variables that affect the successful implementation of road construction projects, such variables are poor financial management, shortage of resources, market instability and government policy and regulations.

In this conceptual framework, it is observed that if the mentioned independent variables are taken into consideration and that intervening variables such as poor financial management, shortage of resources, market instability and government policy and regulations are properly managed, then result to successful implementation of government road construction projects, road contractors are also complete projects on time and there will be no disputes between government as a client/employer and road contractors. Otherwise, if the independent variables are not taken into consideration and when the intervening variables are poor managed, then road projects will not be completed on time.

## 6. Theoretical Framework

The study was guided by the Liberal theory of contract developed by Kimel in 2003. Kimel insists that construction contract is the promise between parties that are client and contractor who willingly can enter into contractual relationship

whereby client's obligation is to pay for the construction works executed and completed by contractor to the satisfactions of the drawings and specifications stipulated in the contract (Kimel, 2003). Liberal theory of contract assumes that the contract provides a mechanism in which willing parties can enter a contractual relationship based on personal objectivity and that parties to a contract are most often strangers. Liberal theory of contract provides a room for parties in construction contracts to agree the payment arrangements between them (Hembling, 2016). This is the case in Tanzania where there are no statutory or other legal procedures regulating how an employer is to pay a contractor. As such, issues relating to payment are typically decided between the parties and are set out in the contract.

This liberal approach to payment terms is reflected in many standard form contracts. A typical construction contract payment procedure comprises a number of basic steps such as following completion of certain works or at the agreed interval, a contractor submits a statement to the employer showing the amounts to which he considers himself entitled. Then, payment becomes due within an agreed period and the employer pays the amount set out in the contractor's payment application less retention (where applicable) and also any amounts with which the employer has expressed his disagreement. This general approach is followed in International Federation of Consulting Engineers commonly known as FIDIC contracts, which are widely used on international construction projects (Hembling, 2016).

The Liberal theory of contract is vital to the study because the liberal theory explains the contractual relationship between parties in the contract. Liberal theory also pointed out the way in which parties in the contract fulfil the contractual obligations in mutual agreement on how client as government in one side effect payment for the work completed and how contractor execute the construction works as specified in the contract (Kimel, 2003). The strengths of liberal theory based upon drawing attention to differences between promise and contract and the crucial difference is that the contracts are enforceable. Also, liberal theory recognizes that contracts attract the external sanction of the law. Furthermore, the liberal theory provides important bearing on the choice of remedy for breach of contract. In addition, liberal theory examines broader concerns of morality such as the appropriate scope of the freedom of contract (Kimel, 2003). However, the challenges of the liberal theory are that threat of sanction contradicts any role that trust can play in a contract. Also, the idea that entering into contract is not mandatory limits the exercise of contractual obligations and hence often breach of contract (Hembling, 2016).

### *6.1. Strategies Used By Road Contractors to Deal with Payment Delays*

Daniel (2015) conducted a study to identify strategies used by contractors to mitigate the effects of delayed payments. He found that the current strategies used are payment of interest on delayed payment, advanced payment, contractors using their money to complete the project, arbitration for payment of judgment debt, suspension of work, abandoning the project, adjudication, contractors to reject government contracts and meeting the media to enable them retrieve their money from government. However, Nair (2016) found the best strategies to be the PPP (public private partnerships) formula, contractors looking at other funding mechanisms such as joint ventures and BOOT (Build Own Operate Transfer) projects. Further, to ensure their on-going projects do not get affected, construction firms are relying on debt financing to make ends meet. However, suspension of work, abandoning of project and rejecting government contracts can add more project costs to contractors in terms of insurance of plants, security of site and also in Tanzania, road construction projects are financed by government and therefore it is not the best cure for contractor to reject government contracts. Thus, this study aims at addressing this gap.

Similarly, Amoako (2011) considered the current remedy factor to eliminate payment delay as defined time frame for payment. In addition, he found that advance payment as a one of current strategic methods to eliminate payment delay effects. Advance payment is the sum of money paid to the contractor by the employer before the work involved is executed. This practice is usually done in public work contracts (Amoako, 2011). However, the solution is only temporary because the advance fund paid is just part of the whole sum of the contract price. Thus, this study will explore innovate strategies to mitigate payment problem to fill this gap.

In the same way, Nasser (2013) argued that one possible remedy to the payment delay problem by the employer in not paying in time is to allow for the contractor to claim for interest. According to Clause 42 (3) of the General Conditions of Contract (GCC) provides that payments shall be made promptly by the Employer, but in no case later than sixty (60) days after submission of an invoice or claim by the Contractor. If the Employer makes a late payment the Contractor shall be paid interest on late payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made (PPRA, 2016). Contrarily, it must be noted that payment delay also occurs at the end on the construction process (Nasser, 2013). Nevertheless, the study falls short on showing the specific time that restricts the employer to further delay payment from the date by which the payment should have been made, which provides bases of conducting this study.

However, the possible solutions according to contractors are the right to regular periodic payment, the right to a defined time frame for payment, the right to a speedy dispute resolution mechanism e.g.: adjudication, the right to interest due to payment delay, the mandatory creation of a trust account for retention sums, payment bonds, a right to suspend work, the restriction of the right to set-off or withhold sums due, the creation of a right to a lien, the prohibition of pay when paid clauses in contracts (Munaaim, Danuri, Abdul and Hanid, 2006; Ramachandra and Rotimi, 2015). However, some of the solutions have side effects such as suspension of work as explained in previous comments and thus this study is very important to be conducted.

### *6.2. Challenges Road Contractors Face When Dealing With Delayed Payments*

One possible remedy to the payment delay problem by the employer in not paying in time is to allow for the contractor to claim for interest (Nasser, 2013). In addition, Nasser (2013) argued that this affords some relief to the

contractor but this can be a double-edged sword for the contractor for it effectively allows the employer to suspend payment and not commit a breach of contract. Despite the fact the study pointed out such challenge but did not offer suggestion on how to overcome such problem, thus this study aims at addressing this gap.

Similarly, another solution to the payment delay problem is to suspend further performance of his obligations under the contract (Nazir, 2006). Furthermore, Nazir (2006) pointed out that without a clear contractual right to suspend the works, the contractor is not entitled to do so even though the employer has failed to pay him within the time stipulated in the contract. In this respect, if the contractor suspends the work the courts may find the contractor guilty of repudiating the contract. This challenge provides bases of conducting this study to explore the innovative strategies to mitigate the challenges of delayed payment.

Likewise, in Tanzania it has been cleared stated in Clause 42 (3) of the General Conditions of Contract (PPRA, 2016) that payments shall be made promptly by the Employer after submission of an invoice or claim by the Contractor. This seems as solution for delayed payment, on the other hand, despite the clause the contractor's fright to make follow up of payments from client due to fear of being blacklisted and suspended from getting government projects. Thus, this challenge provides bases of conducting this study. However, according to Amoako (2011) many sub-contractors contracts contain pay when paid or pay if paid clauses. Pay when paid clauses are provisions in a contract where payment is made conditional upon payment being received by the client. If the client exercises his right to withhold payment for whatever reasons stipulated in the contract to the contractor, the sub-contractor who may have done his work properly will not get paid if such a clause is in place. The clause pay-when-paid strengthen cash flow of the contractor; however, it is unfair for the sub-contractor for not being paid due to the fault of others. It is also a threat to business relationship between contractor and subcontractors. Thus, this study will explore innovate strategies to mitigate payment problem to fill this gap.

In the same way, a study of Nazir (2006) revealed that contractors borrow money from various sources such as banks to strengthen their cash flows so that they could successfully complete of the project as suspension or termination of work contractually is not an option. In addition, the debt financing is affected by the factor of poor economic conditions such as currency and inflation rate which cause increment of interest rate in repayment of loan hence will give impact to contractor's project cash flow, and hence affect the timely performance of the project. Therefore, debt finance is not the best strategy. Thus, this provides bases of conducting this study to explore strategies for mitigating payment problem to fill this gap.

### *6.3. Proposed Strategies to Mitigate the Challenges of Delayed Payments*

Ezekiel (2011) pointed out that to prevent delay in payment, the employer must ensure there is an adequate financial resource available before the start of the project and if the funding is not available then there is no need to commence the project, the project commencement should be delayed until funds become available. Proof of availability of funding by the employer can only be guaranteed either by a Bank or Insurance Company before the start of the project. This would mean that, should the Employer fail at a point to pay the contractor for a certified work done, the surety firm or bank could be made to pay the contractor to continue and complete the work (Ezekiel, 2011). Despite the best argument of Ezekiel (2011) any constrain in government budget would mean that the surety firm or bank would be responsible which again it would take long time for them to accept responsibility and hence cash flow problem to contractor and project completion delays. Thus, this challenge provides bases of conducting this study.

However, Construction Management Guide (2013) suggested that, in order to avoid lengthy days for which the certificate is prepared and the employer the time to honour certificate, reduce the certification and payment 28-day periods to 14 days apiece. This is commercially reasonable and will reduce the time delay for payment by at least one month and introduction of prompt pay legislation for the construction industry as integral part of the governments' strategy for solving the problem of payment delayed. The finding concurs with that of Wu, Kumaraswamy, and Soo (2011). Even if suggestions by Construction Management Guide (2013) are implemented the problem will still persist simply because the employer now is given 28 days to honour certificate and there is payment of interest on delayed payment but still the employer fail to honour payment on time. Thus, this study will explore innovate strategies to mitigate payment problem to fill this gap.

Similarly, Daniel (2015) identified ten strategies that can be adopted to eliminate delayed payment to contractors for government contracts which were proper financial planning by the client before the inception of the project; client accepting to pay according to contractor's cash flow forecast and on time and funds meant for the project should be used for that project; advanced payment before the project starts and both parties should identify risks that may lead to delay in payment and prepare a plan to address them before the start of the project; adoption of proof of availability of funding by the employer can only be guaranteed either by a bank or insurance company before the start of the project; payment to the contractor within the 14 days after which the project manager submits payment certificate; prompt disbursement of funds from the central government to the public institutions; interest in the project should be a priority to the client and introduction of prompt payment legislation for the construction industry. These are the best solutions to the matter; however, identification of risks will add more costs to the employer and contractor as well since they will need to hire experts and also the works will delay which again it is not viable for emergency works. Thus, this challenge provides bases of conducting this study.

Likewise, Nazir (2006) pointed out the actions taken by contractors to overcome the late payment problems in his study. The highest-ranking action that has been taken by main contractors in case of late payments was to do follow up by direct communication. Not surprisingly, the second highest action chosen would be to follow up with clients using formal procedure. It is seen as a polite strategy to follow up payments and of course the client would like it, but this way needs

contractor to invest in time for follow up purpose which will cause other activities of contractor to delay. Thus, this study will explore innovative strategies to mitigate payment problem to fill this gap.

Similarly, a study conducted by Amoako (2011) revealed that enforcing clauses of late payment in contracts can help improve the current situations. The government, which is the main employer, should introduce payment bonds to enable road contractors to obtain bonds at concessionary terms; establishment of construction industry payment and adjudication Act which will help in the reduction of payment default and dispute resolution. In view of establishment of construction industry payment and adjudication Act as a strategy to mitigate challenges of delayed payment may result to claim culture, with the claimant proceeding to adjudication on the slightest dispute, resulting in precious time and energy being spent on continuous claims instead of focusing on completing the project. Thus, this challenge provides bases of conducting this study.

### **7. Research Gap**

Many of the studies conducted in the past for payment issues are based on causes and effects of late completion of projects and conclude that, difficulties in honouring payment certificate is the most predominant factors resulting in those delays and effects. Studies confirmed that payment delays to contractors have cited as a major hindrance to contractors in Tanzania in implementation of government road construction projects. Notwithstanding this discovering, there are few reports and academic papers that identify parties affected by non-payment, late and under payment. The data and evidences are still lacking in this area. Based on literatures that were reviewed (Nazir, 2006; Amoako, 2011; Ezekiel, 2011; Nasser, 2013; Daniel, 2015; Ramachandra and Rotimi, 2015 and Nair, 2016) there is currently no available data captured on how parties affected by this issue solve their problem in Tanzanian construction industry. The main purpose of this study was to bring to the light, the innovative strategies in mitigating challenges of delayed payments in implementation of government road construction projects in Moshi Municipality - Tanzania.

### **8. Research Design and Methodology**

The study used a quantitative research approach whereby a descriptive survey design was employed. The study was guided by three research questions and one hypothesis which were tested by regression analysis for independent samples at 0.05 confidence level. The study was conducted in Moshi Municipality and it was set out to undertake a survey on 42 respondents to whom the questionnaires were sent. However, 40 questionnaires were returned and therefore the study employed a sample size of 40 respondents. The study used purposive sampling to select a number of consultants and experts whereby simple random sampling was used to select contractors for the survey. The questionnaires comprised of both open and closed-ended questions that were self-administered to the respondents to source information. The research instruments were validated by using peer review and research supervisor to determine whether the instruments items reflect the research questions. In addition, reliability of the research instruments' results was estimated by using Cronbach's coefficient alpha (KR20) which yields reliability coefficient at 0.90 for contractors' questionnaires. The data was then analysed whereby descriptive statistics were used to analyse the demographics while Relative Importance Index (RII) was used to analyse the subject variables. The findings of the study were presented using frequencies, percentages and ranking. Ethical issues were considered so that the researcher does not create harmful conditions for the respondents.

### **9. Presentation of the Findings and Discussion**

The first research question of this study was to determine strategies currently used by road contractors into getting payments when facing the challenges of delayed payments from the Government (client). Respondents were required to rank the various strategies currently taken by road contractors to deal with the challenges of delayed payments from Government in terms of mean responses to a range 1 = Strongly disagree; 2 = Disagree; 3 = Indifference; 4 = Agree; 5 = Strongly agree. The results are presented in Table 1.

No. Strategies currently used	Degree of relative importance quoted by the respondents					Total number of respondents	$\Sigma W$	RII= $\Sigma W/(5*N)$	Rank
	1	2	3	4	5				
	1 Applying interest charge to the overdue payments	0	0	1	9				
2 Demanding advance payment of works	0	0	4	6	22	32	146	0.913	2
3 Follow-up payments by calls	0	1	1	10	20	32	145	0.906	3
4 Sending claim letter through company's lawyer	0	0	4	8	20	32	144	0.900	4
5 Ignore and continue with next month's claim	0	1	3	10	18	32	141	0.881	5
6 Using debt financing to utilise work	0	0	3	14	15	32	140	0.875	6
7 Initiate arbitration or litigation (legal action)	1	1	2	13	15	32	136	0.850	7
8 Suspend the construction process until payment is received	0	2	2	15	13	32	135	0.844	8
9 Slow down work at site until payment is received	2	4	0	10	16	32	130	0.813	9
10 Plead with government for payment even after the due date	0	1	9	17	5	32	122	0.763	10
11 Using contractors' association to demand for payment	0	1	16	11	4	32	114	0.713	11
12 Not bidding again government contracts	4	8	3	11	6	32	103	0.644	12

Table 1: Strategies Currently Used to Deal with the Challenges of Delayed Payments (n=32)

The results for the strategies currently used to deal with the challenges of delayed payments presented that applying interest charge to the overdue payments is one of the major strategies that is currently used by road contractors to deal with the challenges of delayed payments in the road construction industry with a relative important ranking of 0.931. The implication of these findings is that contractors are aware of time value of money so charging interest for the delayed payments is one of the protections to ensure that the value of their money is maintained and it is also one way to discourage client to delay payment. This is consistent with the analysis made by Nasser (2013) and Daniel (2015) who found that the current remedy factor to eliminate payment delay is to allow for the contractor to claim for interest. Likewise, the second strategy with a relative importance ranking of 0.913 which is demanding advance payment of works is another method currently used by road contractors to deal with the challenges of delayed payments in the road construction industry. Basing on these findings it implies that advance payment even before the works commence assure the contractors that in case of any delay in payment for works executed will be deducted against an advance payment.

This strategy is backed by Amoako (2011) and Daniel (2015) who pointed out that when it comes to delayed payment problems in road construction projects then advance payments act as a one of current strategic method to eliminate payment delay effects. Similarly, the third strategy ranked with RII of 0.906 by respondents was follow-up payments by calls. The implication of these findings implies that in Tanzania, most of road projects are funding from international associations; so, the payment process take time at many projects, this is one of the reasons that force the contractor to follow up his payment seriously. This is in agreement with the findings of Nasser (2013) who argued that in order for contractors to avoid payment delay effects they need to follow up payment due persistently. However, the respondents ranked not bidding again government contracts with RII value of 0.644 as the last strategy taken by road contractors when they need to mitigate from challenges of delayed payment. In Tanzania, Government is the major client of road construction works and hence becomes difficulties for road contractors not to bid again government contracts. This is in line with the findings of Daniel (2015) who noted that the strategy of road contracts stopping accepting government contracts was least importance for contractors.

#### 9.1. Challenges Faced by Road Contractors in the Implementation of Current Strategies

The second research question of this study was to identify challenges that road contractors face in the implementation of current strategies which are used to deal with delayed payments from the Government (client). The survey results for numerous challenges contractors faced in the implementation of current strategies are presented in Table 2.

No.	Challenges faced	Degree of relative importance quoted by the respondents					Total number of respondents	ΣW	RII= ΣW/(5*N)	Rank
		1	2	3	4	5				
1	Client failure to pay advance due to poor financial condition	1	1	1	10	19	32	141	0.881	1
2	Client failure to agree with the computation of interest	1	2	3	6	20	32	138	0.863	2
3	Delay in project's progress	0	2	3	14	13	32	134	0.838	3
4	Additional borrowing (more costs)	0	1	5	18	8	32	129	0.806	4
5	Create a negative relationship between client and contractors	0	4	6	12	10	32	124	0.775	5
6	Delays in paying suppliers/creditors	2	4	1	16	9	32	122	0.763	6
7	Delayed payment limiting the number of contracts I can bid on	0	5	5	14	8	32	121	0.756	7
8	Create an environment to encourage corruption	1	3	11	11	6	32	114	0.713	8
9	Inhibits proper planning	0	3	12	14	3	32	113	0.706	9
10	Suspension of work may result to guilty of repudiating the contract	0	9	4	16	3	32	109	0.681	10
11	Loss of productivity due to time spent on collecting delayed payments	4	8	3	11	6	32	103	0.644	11
12	Create fear of being blacklisted and suspended from getting government projects	6	6	4	10	6	32	100	0.625	12

Table 2: Challenges faced by Contractors in the Implementation of Current Strategies (n=32)  
Key: 1 = Strongly disagree; 2 = Disagree; 3 = Indifference; 4 = Agree; 5 = Strongly agree

Data in Table 2 indicates the results of the responses from the participants who took part in the study showed that an importance relative index of 0.881 for failure of the Government to pay in advance for the work due to poor financial condition was one of the major challenges road contractors face. This implies that most government projects are donor funded and hence payments of advance to contractors depend much on how frequently donors release funds. The finding is supported by Ezekiel (2011) who found that delays in honouring advance payment by Government are due to financial hardship. In the same way, respondents ranked with relative importance index of 0.863 client failure to agree with the computation of interest as another major challenge that road contractor face. The implication of these results is that most of the time when road contractors are presenting their interest demands on delayed payments to client rise disagreement between them on how the interest charge is computed. This is in line to the findings by Nasser (2013) who argued that claim of interest on delayed payments can be a double-edged sword for the contractor for it effectively allows the employer to suspend payment and not commit a breach of contract. Likewise, another major challenge ranked with RII of 0.838 by respondents was delay in project's progress due to delayed payment. These findings imply that payment problems primarily affect the cash flow of contractors and consequently affect the completion of projects due to lack of funds to continue with the construction works. These findings correspond with (Amoako, 2011 and Daniel, 2015) who found that delay in project completion is the consequences due to delayed payment. Moreover, additional borrowing to finance project completion resulted to more costs to contractors. This challenge was ranked fourth by the respondents with an RII of 0.806. This finding agrees with that of Nazir (2006) and Daniel (2015) who established that debt financing is affected by the factor of poor economic conditions such as currency and inflation rate which cause increment of interest rate in repayment of loan hence will give impact to contractor's project cash flow.

### 9.2. Innovative Strategies to Mitigate the Challenges of Delayed Payments

The final research question of this study was to identify innovative strategies that could be used to mitigate the challenges of delayed payments to road contractors from the Government (client). The study showed that these were many and varied, among the leading innovative strategies to mitigate challenges of delayed payments that were identified following ranked among were: proper financial planning had an RII value of 0.888 and was ranked 1<sup>st</sup>; The project should not commence until funds available had an RII value of 0.875 and was ranked 2<sup>nd</sup>; project's funds allocation had an RII value of 0.863 and was ranked 3<sup>rd</sup>; Demanding payment bond had an RII value of 0.850 and was ranked 4<sup>th</sup>; Risks identification on payment had an RII value of 0.844 and was ranked 5<sup>th</sup>; Proof of project's funds had an RII value of 0.838 and was ranked 6<sup>th</sup>; Payments according to contractor's cash flow forecast had an RII value of 0.831 and was ranked 7<sup>th</sup>; Incorporate risk of delayed payment into project bids had an RII value of 0.819 and was ranked 8<sup>th</sup>; Timely disbursement

of budgeted projects funds had an RII value of 0.800 and was ranked 9<sup>th</sup>; Interest in project should be a priority to the client had an RII value of 0.756 and was ranked 10<sup>st</sup>; Enactment of law prohibiting government to delay payments had an RII value of 0.631 and was ranked 11<sup>th</sup> and offer discounts for early payment had an RII value of 0.625 and was ranked 12<sup>th</sup>. The implication of these findings is that proper financial planning, contractors should not commence construction work until funds available, client should not use otherwise project's funds allocated and demanding payment bond were the top four ranked innovative strategies that road contractors could use to mitigate the challenges of delayed payments from the Government. On the other hand, the findings show that offering discounts for early payment was the least ranked innovative strategy for contractors.

## 10. Hypotheses Testing

The study sought to investigate the relationship between the variables under the study. The regression analysis (Pearson product moment correlation coefficient) with the level of significance of 0.05 was used to test hypotheses. One hypothesis stated from null hypothesis ( $H_0$ ) was tested.

$H_0$ : There is no significant relationship between strategies for mitigating the challenges of delayed payments and successful implementation of government road construction projects.

$H_1$ : There is significant relationship between strategies for mitigating the challenges of delayed payments and successful implementation of government road construction projects.

The following assumptions were made during hypotheses testing:

- The sample is drawn from a Normal population.
- The population variances are equal.
- The samples are independent of one another.
- The variables are randomly and independently sampled.

Given a significance level of 0.05 a non-directional test, the decision criteria are:

- If the observed significance level (P-value) < 0.05 significance level, reject null hypotheses ( $H_0$ ) in favour of alternative hypotheses ( $H_1$ )
- If the observed significance level (P-value)  $\geq$  0.05 significance level, fail to reject null hypotheses ( $H_0$ )
- Pearson product moment correlation coefficient was used to determine whether strategies for mitigating the challenges of delayed payments have significant relationship with successful implementation of government road construction projects. The results of the analysis are summarised in Table 4.12.

		Innovative Strategies	Successful Implementation of Road Construction Projects
<b>Innovative Strategies</b>	Pearson	1	.704*
	Correlation		
	Sig. (2-tailed)		.0001
	N	32	32
<b>Successful Implementation of Road Construction Projects</b>	Pearson	.704*	1
	Correlation		
	Sig. (2-tailed)	.0001	
	N	32	32

Table 3: Relationship between Innovative Strategies and Implementation of Road Construction Projects (N=32)  
\*Correlation is significant at the 0.05 level (2-tailed).

Rumsey (2016) suggests that when the correlation coefficient ( $r$ ) is near  $\pm 1$ , then it said to be a perfect correlation: as one variable increases, the other variable tends to also increase (if positive) or decrease (if negative). If the coefficient value lies between  $\pm 0.50$  and  $\pm 1$ , then it is said to be a strong correlation. If the value lies between  $\pm 0.30$  and  $\pm 0.49$ , then it is said to be a medium correlation and when the value lies below  $\pm 0.29$ , then it is said to be a small correlation and when the value is zero, then it is said to be no correlation.

The results in Table 3 indicate a significant correlation between the two variables ( $r = .70$ ,  $n = 32$ ,  $p = .0001$ ). Since  $p < .05$  the null hypotheses are rejected in favour of alternative hypotheses and concluded that there is a relationship between innovative strategies and successful implementation of road construction projects. Therefore, it can be argued that the more innovative strategies are taken into consideration they result to successful implementation of government road construction projects, road contractors are also complete projects on time and there will be no disputes between government as a client/employer and road contractors. The findings correspond with the suggestions of Amoako (2011) and Daniel (2015) that strategies identified for eliminating the payments problems have strong relationship with the execution of road construction projects on the scheduled time.



## 11. Conclusions of the Study

The researcher concluded that contractors were facing with the problem of delayed payments. In responding to the problem of delayed payments from Government contractors used several strategies into getting payments which were applying interest charge to the overdue payments, demanding advance payment of works, slowing down the construction works, following-up payments by both calls and formal procedures. However, the study found that these strategies were not effective.

Further, the study concluded that client failure to pay advance due to poor financial condition, client failure to agree with the computation of interest, delay in project's progress, additional borrowing (more costs), interfere budget planned and create room for corruption were the most ranked challenges that road contractors face in the implementation of current strategies which were used to deal with delayed payments from the client.

Nonetheless, the study concluded that proper financial planning was an innovative strategy that could be used to mitigate the challenges of delayed payments. That sufficient finance is the lifeblood to successful completion of the road construction works despite problem of delayed payment. Furthermore, the study concluded that the contractor should not commence project until funds become available and should be clearly stated in contracts before signing it, proper use of funds allocated for the project and demanding payment bond as other innovative strategies that could be used to mitigate the challenges of delayed payments. It was also concluded that other innovative strategies include holding project's funds in an escrow account, establishing prompt payment act, charging of penalties on delayed payment and enter into joint venture. The study concluded that entering into joint venture reduce burden of financial resources and hence successful completion of government road construction projects. Further, the study concluded that to the great extent innovative strategies identified will help in mitigating challenges of delayed payment and therefore, there is a significant relationship between strategies for mitigating the challenges of delayed payments and successful implementation of government road construction projects.

## 12. Recommendations of the Study

There is the need to promote wider use of the innovative strategies identified in the road construction industry. This is because as they applied would guarantee successful completion of road construction projects.

The study findings reveal that contractors charge only interest on delayed payment. It is therefore recommended that the construction contracts should state that both interest and penalties would be charged on delayed payment. Clients and contractors are recommended to have proper financial planning before commencement of project to avoid the financial problems when executing the works.

The government must ensure that funds allocated for the project should be used for the project and not otherwise.

The government should introduce payment bonds to enable road contractors to obtain bonds as a way to mitigate delayed payment problem.

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