

Factors that Affect Successful Implementation of Development Projects in Amhara Region: A Case of Amhara Building and Menkorer Construction Enterprises

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Abstract: All most all projects that are development oriented in different areas and different countries, even if they are completed, they will not be successfully implemented on the scheduled time or may not be on the budgeted time frame or they will not be on the expected quality due to different factors. The major objective of this study is to determine factors that affect the successful implementation of development projects in Amhara national regional state. To come up with this objective the raw data was collected from Amhara building construction enterprise, Menkorer construction enterprise and Amhara national regional state administration office. The researcher used a mixed research approach which is both quantitative and qualitative research approaches. The sampling technique used was Stratified judgmental non probability method to select proportional number of samples from the target population of the study. The raw data was analyzed by using multiple linear regression analysis method. The findings of the research output were identified as problems which are related with the release of project funds on time, shortage of raw materials during construction and poor project planning and preparation negatively affects the successful implementation of development projects within the region. After identifying the problems based on the output of the study, the researcher suggests the most possible ways to alleviate the problems.

Keywords: Project, Success, Project Funds, Implementation, Amhara Region

1. Introduction

1.1. Background of the Study

The basic definition of a project is just its a temporary work (struggle) undertaken by the cooperative of individuals who work together to create a unique product or service [1] within the scheduled time frame and within a prepared budget to produce identifiable products or to deliver services.

The success of a project has been defined by the variables of time, budget and deliverables or quality [2]. According to the other scholar [3] a project is said to be successful only if it comes on schedule, on budget, it achieves the deliverables

originally set for it and it is accepted and used by the clients for whom the project was intended or targeted.

The inability to complete projects on the scheduled time frame or too costly projects has been sometimes led to total project abandonment or failure. The question now is, “why are more and more projects failed?” And, what can the project manager or management do to avoid the menace? The reasons for failure may be numerous or many. They could elate from technical problems associated with poor project conceptualization and design, to economic problem

associated with their implementation according to many scholars. Others include political, environmental and cultural factors, etc.

According to the research conducted by as cited by Blen damtew [4] the extent of success of donor funded or nongovernmental not for profit projects is determined by technical and managerial capability of the human resources of the implementing agencies or organizations. Furthermore, appropriate supportive infrastructure is a basic necessity. In addition it's noted that, projects fail too often due to the projects scope is not fully appreciated and/or user needs not fully understood. According to the research results [5], identified that, there are many areas that should be emphasized by project managers who are committed to the success of the projects. According to their outputs the three variables that leads to success of the project are good planning, clear responsibility and accountability, and schedule control. In their studies finding, they noted in addition of the above that there are top five factors found in successful projects and these are, user involvement, executive management support, clear statement of requirements, proper planning and realistic expectations. Their finding concludes that these were the elements that are most often pointed to as major contributors to project success.

In the same study they listed out other factors or determinants that foreshadowed a failed project. These are, lack of efficient internal communication links, lack of responsive decision making, and lack of effective teamwork, incomplete requirements, lack of user involvement, lack of resources, unrealistic expectations, lake of executive support, changing requirements and specifications, lack of effective planning and technical illiteracy are the major once.

1.2. Statements of the Problem

In the world wide, a number of project performances fail below their targets or intended objectives. Many invested funds in these projects have failed with no tangible outcomes or results. In a study of Geneva [6], only 47% of the teams achieve 70- 89% of their goals. Nearly 20% of the teams said that they only achieve 50- 69% of their goals (Geneva, [6]. Similarly, Only 64% of projects meet their goals [7]. 70% of companies report having at a minimum of one failed project in 2009 [8, 9].

The project failure contributed to whatever source, it may increase the sunk cost of the country since fixed investments of the projects are specific to intended goals and difficult to liquidate or require high shifting cost. In addition, it depletes the fund held for loan that the Bank could finance other projects that may have significant advantage for economic growth of any country. To be able to respond to both internal and external variables or factors in a project environment that have an effect on a project implementation, it is necessary to investigate, identify and understand these variables or factors and establish to what extent they individually or collectively contributed to project implementation, that is for success and failure of a project.

According to reference, [10] factors related to the category of project leadership and management, organizational structures, team and cost related factors to the project itself were found the most success affecting factors of projects implemented by the NGO.

Blen Damtew [11] by using descriptive research design find out that lack of effective planning and clarity on complex internal and external procedures affect successful project implementation at save children international projects and The results also identified that communication and managerial factors have an impact on implementation of projects at save children international projects.

Mekdes Getaye, [12] indicated that factors related with the managers competency, Project fund availability, adequacy and management, project equipment, project integration which includes Relationship with stakeholders, problem solving when disagreements arise has high influence on road construction projects Completion in AACRA, ferensay biret dildiy-satellite tabiya project.

1.3. Research Objectives

1.3.1. Main Objective of the Research

The main objective of the research was to determine the challenges that impact the successful implementation of development projects in Amhara national regional state, Ethiopia.

1.3.2. Specific Objectives of the Research

- 1) To identify the effect of poor project planning and preparation on the success of development projects.
- 2) To determine the effect of shortage of raw materials for the success of projects.
- 3) To determine the effect of the shortage of skilled manpower for the success of projects.
- 4) To determine the effect of lack of coordination between different projects on the success of development projects.
- 5) To identify the effect of project funds on the success of project implementation.

1.4. Hypothesis of the Study

- 1) *Poor project planning has no significant relationship with the successful implementation of development projects.*
- 2) *Shortage of raw materials has no significant relationship with successful implementation of projects in Amhara national regional state.*
- 3) *Shortage of skilled man power has no significant relationship with successful implementation of projects in Amhara national regional state.*
- 4) *Lack of coordination between different projects has no significant relationship with successful implementation of governmental projects in Amhara regional state.*
- 5) *Project funds has no a significant relationship with the successful implementation of governmental projects.*

1.5. Conceptual Framework of the Study

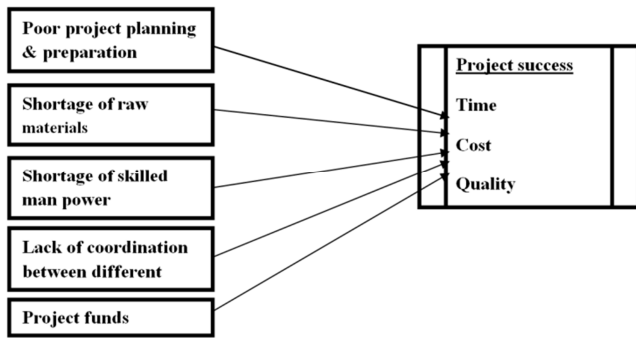


Figure 1. Developed by the researcher for this study.



Figure 2. Ethiopia (the study area is shaded by red).

2. Methodology

2.1. Study Area

This study is conducted in Amhara national regional state. Amhara, is one of the regional states in Ethiopia located in the northern Ethiopia and is the location of Amhara people. Previously it was known as region three. The capital of amhara national regional state is bahirdar city. Ethiopia's largest body of water Lake Tana, which is the source of Blue Nile River, exists within this regional state. Semen national park also exists within this region which includes Ras dashen, the highest mountain in Ethiopia. Amhara region is bordered by the state of Sudan by the west and northwest and on the other directions its boarded by other Ethiopian regions as follows, Tigray to the north, Afar to the east, Benishangul gumuz to the west and southwest and Oromia to the south.

2.2. Research Design

This study employs explanatory type of research design to show the effect of change in dependent variables on the dependent variable.

2.3. Research Approach

The study employed mixed research approach, which is

both quantitative and qualitative research approaches. Most of the time the research approach used will be selected based on the method of the instrument to collect the data. Here, the researcher uses questionnaires mainly to collect the data and unstructured interview in some way.

2.4. Population of the Research

Populations for the research consists 4127 (Amhara building construction enterprise 2142, Menkorer construction enterprise 1362, and Regional administration 623).

2.5. Sample Size of the Study

By using Yamane, (Yamane, 1967) formula at a confidence level of 95% and the margin of error of 5% the researcher determines the number of respondents.

$$n = \frac{N}{1+N(0.05)^2}, n = \frac{4127}{1+4127(0.05)^2} = 365$$

Table 1. Proportionate sample determination.

Name of the organization	Target population	Proportion
ABCE	2142	2142/4127*365=189
MCE	1362	1362/4127*365=121
AAO	623	623/4127*365=55
Total	4127	365

2.6. Method of Sampling

The researcher employed judgmental /purposive/ sampling technique after classifying the target populations in to strata.

2.7. Source, Type and Data Collection Instruments

As the researcher used questionnaires as a method of data collection instrument, the type of data is primary. The data was obtained from ABCE, MCE and AAO employees.

After preparing the questionnaires, it was distributed to the sample respondents to collect the required data. In additions the researcher used unstructured interview to support the questionnaires.

2.8. Data Analysis Methods

After collecting the raw data from sample respondents, was analyzed and interpreted by running STATA version 13. Multiple linear regression analysis method was used as data Analysis Techniques

2.9. Econometric Model

Successful implementation of development projects (SUCCPRO) is a function of poor project planning and preparation (PoorPPP), shortage of raw materials (ShortROMA), shortage of skilled manpower (shortSKMP) lack of coordination between different projects (LackCBDP) and project funds (PF).

$$\text{Succpro} = f(\text{profundpoorPPP}, \text{shortROMA}, \text{shortSKMP}, \text{lackCBDP}, \text{PF}) \quad (1)$$

$$\text{Succpro} = \beta_0 + \beta_1 \text{poorppp} + \beta_2 \text{shortroma} + \beta_3 \text{shortskmp} + \beta_4 \text{lackcbdp} + \beta_5 \text{pf} \quad (2)$$

2.10. Ethical Consideration

During data collection all the respondents were participated voluntarily. Before start the researcher explains the purpose of the study with their full right to withdraw without explaining their reason. After the data is collected from the respondents any one of the sample unit will not incur any risk because of participating with in this study. All responses by the sample unit will be kept secretly.

3. Data Analysis and Interpretation

3.1. Multiple Linear Regression Outputs

Multiple linear regression models is employed to analyze the impact of independent variables like, poor project proposal and preparation, problems related with the release

of funds, shortage of raw materials, lack of skilled man power and coordination between different projects on the dependent variable project success.

The dependent variable (project success) can be measured in terms of time, cost and quality. The researcher collects the data in likert scales (strongly agree, agree, neutral, disagree and strongly disagree) After the data is collected and coded by using SPSS, version, 20, the mean value of the dependent variables were calculated. When we calculate the mean value of the variables, they will be converted in to factious continuous variables. So, that, we can use the multiple linear regression model to show the effect of independent variables on the dependent variable. But during interpretation we can't interpret the same way that we interpret continuous variables in the dependent variable.

. reg proscus PFR SRM LSMP LCBDP PPPP						
Source	SS	df	MS	Number of obs = 351		
Model	36.891293	5	7.3782586	F(5, 345) =	22.89	
Residual	111.191012	345	.322292787	Prob > F =	0.0000	
Total	148.082305	350	.423092299	R-squared =	0.2491	
				Adj R-squared =	0.2382	
				Root MSE =	.56771	
proscus	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PFR	-.0547705	.0228796	-2.39	0.017	-.0997716	-.0097693
SRM	-.4858284	.0736717	-6.59	0.000	-.6307306	-.3409262
LSMP	.0191895	.0248442	0.77	0.440	-.0296756	.0680546
LCBDP	.1931228	.0342007	5.65	0.000	.1258546	.2603911
PPPP	-.3065649	.079209	-3.87	0.000	-.4623583	-.1507716
_cons	3.482509	.2072958	16.80	0.000	3.074786	3.890232

Figure 3. Regression result (computed by the researcher).

Figure 3 displays the goodness of fit of the regression model which shows that the impact of independent variables on the dependent variable of successful implementation of development projects. The multiple linear regression model is statistically significant in describing changes in project success as demonstrated by a 'P' value of 0.000 which is less than the acceptable alpha value of 0.05. From the regression outputs on the above Figure 3: the value of adjusted 'R' squared (coefficient of determination) is 0.2382 which is an indication that there is a variation of 23.82% on the successful implementation of development projects due to changes in project planning and preparation, raw materials, funding system, coordination between different projects and skilled man power at 95% confidence interval. This shows that 23.82% changes on project success could be accounted for by changes in the above listed independent variables under study.

The study established and determined results that problems related with the project fund release ($\beta = -0.05477$ & $P = 0.017$), shortage of raw materials during construction ($\beta = -0.4858$ & $P = 0.000$), shortage of skilled manpower ($\beta = 0.01918$ & $P = 0.440$), lack of coordination between different projects ($\beta = 0.1931$ & $P = 0.000$) and poor project planning and preparation ($\beta = -0.3065$ & $P = 0.000$). From these all, the variable which is shortage of skilled manpower is found to be

insignificant factor but the remaining four variables become significant determinant factors for the success of development projects according to this study's output.

From the independent variables shortage of raw materials during construction, problems related with on time release of funds and poor project planning and preparation have been found negative and significant determinant at 5% which explains that projects that experience shortage of raw materials during construction, problems related with the release of funds on time and poor planning and preparation will be negatively affected. On the other hand the variable lack of coordination between different projects is found a positive determinant or has been found a positive significant factor even though it should be negative.

3.2. Hypothesis Confirmation and Discussion of the Results

The hypothesis developed in the introduction part of the study is confirmed here one by one. The co-efficient of determination is 23.82% which explains that 23.82% of the increment or decrement in the performance to success on development projects is indicated by the explanatory (or predictor) variables in the model. From the model we can find the P value which is 'prob> f=0.000, suggesting the overall model fits the data correctly.

3.2.1. Problems Related with the Release of Funds on Time (PFR)

Problems with the release of funds have a value of $\beta = -0.05477$ & $P = 0.017$. That means problems related with the release of funds have a negative significant relationship with the successful implementation of development projects in Amhara regional state. So, the null hypothesis (H_0) is rejected in favor of the alternative hypothesis, of that problems with related to the release of funds do not have any significant relationship with the successful implementation of development projects in Amhara national regional state.

The result of the study is consistent with [13] in which he find out that inadequate funds for the project lead to time over run thereby negatively affecting on construction project implementation. On time and enough regular funding guarantees reasonable cash flow. So, there should be effective funding of project by project owners to avoid unnecessary time overrun with its attendant effect on cost. The study findings also agree with [14] who founds that financial resources are the most prominent critical factors effecting project implementation. He describes more that insufficient capital and process payment negatively affects the process of work in a construction project. And the study is also agreed with mekdes getaye [12] that project funds has great influence for successful implementation and achievement of project objectives.

3.2.2. Shortage of Raw Materials (SRM)

From the results figure above we can notice that the beta coefficient for shortage of raw materials is $\beta = -0.4858$ & $P = 0.000$ which means that during construction if there is no on time delivery or availability of raw materials, the successful implementation of projects will be negatively affected. This shows that raw materials are a significant contributor for the successful implementation of development projects in Amhara national regional state. So, the null hypothesis (H_0) is rejected in the favor of the alternative hypothesis, of that shortage of raw materials don't have significant relationship with the successful implementation of development projects in Amhara national regional state.

This result is consistent with behailuaye woldesemaite [15], ten (10) factors that affect successful implementation of development projects are, Aligned supply chain of goods/materials and services Site related factors, Risk identification and allocation, Troubleshooting/ problem solving, Adequate project feasibility study, Adequate project control and change

management, Realistic project cost and time estimates (scheduling), Organizational / corporate culture, Physical environmental factors, Adequate project funding/ budget to completion.

3.2.3. Lack of Skilled Manpower (LSMP)

Lack of skilled man power, the coefficient of beta, coefficient of determination is, $\beta = 0.01918$ & $P = 0.440$ which indicates that lack of skilled manpower do not have a significant relationship with successful implementation of development projects in Amhara national regional state. Due to this, the researcher fails to reject the Null hypotheses of (H_0) in the favor of alternative hypothesis, that lacks of skilled manpower don't have any significant relationship with successful implementation of development projects in the region.

3.2.4. Lack of Coordination Between Different Projects (LCBDP)

Based on the regression result this variables coefficient of determination and 'P' value is ($\beta = 0.1931$ & $P = 0.000$), which indicates, if there is no coordination between different projects, development projects will succeed well. But in theory, the reverse is true. If there is a coordination between different projects, they will effectively or successfully implement, so, the result here even if it is significant to show the relationship between the independent variable lack of coordination between different projects and dependent variable of successful implementation of development projects, the relationship is positive, which is unexpected result.

3.2.5. Poor Project Planning and Preparation (PPPP)

The variable poor project planning and preparations beta coefficient and 'P' value is ($\beta = -0.3065$ & $P = 0.000$), which indicates, if the project plan and preparation is poor, the successful implementation of development projects will be negatively affected. This shows that project planning and preparation is a basis for the successful implementation of development projects within the region. Due to this, the null hypothesis (H_0) is rejected in the favor of the alternative hypothesis; of that poor project planning and preparation do not have any significant relationship with the successful implementation of development projects in Amhara national regional state.

This finding is consistent with the result of blen damte [11]; poor planning in projects affect projects completion time, cost and its quality, clarity on project work plan for staff members affect the projects implementation.

3.3. Summary

Table 2. Prepared by the researcher for this study.

Variables	Significance (P)	Decision
Problems related with the release of funds on time (PFR)	0.017	Reject H_0 @ 5%
Shortage of raw materials during construction (SRM)	0.000	Reject H_0 @ 1%
Shortage of skilled manpower (SKMP)	0.440	Fail to reject H_0
Lack of coordination between different projects (LCBDP)	0.000	Reject H_0 @ 1%
Poor project planning and preparation (PPPP)	0.000	Reject H_0 @ 1%

4. Conclusions and Recommendations

4.1. Conclusion

The main objective of the research was to identify the factors that affect the successful implementation of development projects in Amhara national regional state. In line with the major objective, five specific objectives were developed. From these the first one was to identify the effect of problems which is related with the release of project funds on the successful implementation of development projects. Based on the multiple linear regression result, the researcher founds that problems with the release of project funds negatively affects the successful implementation of development projects within the region. That means if there is a problem of releasing project fund installation payments, the timing or duration of project completion will be extended in line with the time lag of the fund payment and in turn it affects the successful implementation of projects.

Based on the second specific objective, the researcher identified that problems which is related with raw materials or simply construction materials delivery negatively affects the successful implementation of development projects within the region. That is, if there is no appropriate supply or delivery of construction materials on time, the time schedule to complete the project will be extended and on the other side contractors may use unqualified materials in order to continue their work at the idle time, and this may affect the quality of the project.

Based on the second specific objective of the study of, determining the effect of shortage of skilled manpower on the successful implementation of development projects within Amhara national regional state. Accordingly, the researcher identified this variable as a nonsignificant factor or it doesn't have any significant relationship with the successful implementation of development projects within the region, it's suggested to be verified by the next researchers.

Determining the effect of lack of coordination between different projects on the successful implementation of development projects in Amhara national regional state was the fourth specific objective of the study. And accordingly the researcher identified this variable as a significant determinant of project success with in the region. But it's expected that if there is no coordination between different projects, the successful implementation of projects will be affected negatively. But here, according to the regression result, this variable has a positive relationship with the successful implementation of development projects, which is unexpected result. So, again here, it's suggested to be verified by the next

researchers.

The fifth and final specific objective of the study was determining the effect of poor project planning and preparation on the successful implementation of development projects in Amhara national regional state. And accordingly, it's identified that poor project planning and preparation has a negative significant relationship with the successful implementation of development projects in the region. That means if the project is poorly planned and prepared from the beginning its success will be in danger. If there is a problem related with planning and preparation of the project, the timing to complete the project, the cost to complete the proposed project and at the same time the quality of the project will not be the same with the plan.

4.2. Recommendation

A problem with the release of project funds is identified here in the study and it's determined the variable affects the successful implementation of development projects within the region. So, the solution will be if there is no budget it's suggested up to getting the full amount of fund, the projects shouldn't be started. If there is an enough fund, according to the cost budget of the project, the amount should be kept in a separate account and someone who will be responsible for the installment payment of the project fund should be assigned.

A problem with the shortage of raw materials is identified a negative determinant factor for the successful implementation of development projects. And here again before the construction has been started, the organization should find loyal suppliers of the construction input that can supply without interruption and as the same time someone should assigned as a purchaser or procurement officer who will be responsible to purchase and deliver any input for the project.

A problem which is related with the poor planning and preparation of projects is identified as a negative determinant of successful project implementation within the region. And accordingly the researcher suggests that, the basis for the success of projects starts from the beginning plan and preparation. As a result, projects should be planned and prepared by an individual who have experienced in such activity. Projects shouldn't be held for construction by relatives and families, rather a competent professional should hold it. Measurements, tests, experiments, exams and any other mechanisms should be taken to identify the competent individual for the project in addition with experiences.

Appendix

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. reg proscus PFR SRM LSMP LCB DP PPPP
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Source	SS	df	MS	Number of obs =	351
Model	36.891293	5	7.3782586	F(5, 345) =	22.89
Residual	111.191012	345	.322292787	Prob > F =	0.0000
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				Adj R-squared =	0.2382
Total	148.082305	350	.423092299	Root MSE =	.56771

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PPPP	-.3065649	.079209	-3.87	0.000	-.4623583 -.1507716
_cons	3.482509	.2072958	16.80	0.000	3.074786 3.890232

Figure 4. Logit Results.

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. swilk r
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Shapiro-Wilk W test for normal data					
Variable	Obs	W	V	z	Prob>z
r	351	0.99260	1.812	1.406	0.07983

Figure 5. Shapiro Wilk, of normality test.

```
. ovtest
Ramsey RESET test using powers of the fitted values of proscus
Ho: model has no omitted variables
F(3, 342) = 1.25
Prob > F = 0.2910
```

Figure 6. Ramsey model fit test.

```
. hettest
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of proscus
chi2( 1) = 0.76
Prob > chi2 = 0.3819
```

Figure 7. Breusch –Pagan, test of Hetroskedasticity.

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