

Situational Analysis of Time and Cost Performance of World Bank-assisted Local Empowerment and Environmental Management Project (LEEMP) in Imo State, Nigeria

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Abstract

The major problem facing many developing economies has been the issue of rural migration to urban centres in search for better standard of living. Efforts at curtailing this trend have centred on provision of basic amenities in partnership with some donor agencies, the World Bank being the major partner. In the light of this, it is important to undertake the analysis of the performance of the World Bank-assisted Local Empowerment and Environmental Management Projects (LEEMP) in Imo State as to the success or failure of this intervention. The aim basically is to assess the performance of these projects with regards to cost and schedule requirements and the possible causes of variation, if any. Earned value analysis (EVA) model was the major tool used for the project monitoring and it was also used to analyze the performance of these projects between 2004 and 2008. Fourteen completed projects and thirty-eight uncompleted ones were selected for the analysis using stratified random sampling. The analysis revealed that most of the projects show some elements of “fatigue” as they experienced cost and time overrun. This problem seems to come from funding arrangement which appears in the form of funding gap and timing.

Keywords: World Bank, rural development, LEEMP, cost and time performance, earned value analysis.

1. Introduction

Community or rural change is an on-going global phenomenon which commands the attention of policy makers in virtually all the nations of the world. It embraces the myriad of adjustments in the areas of economic, social, and infrastructural provisions in the rural areas under the impact of development. The pace of rural development has quickened in recent times, primarily with respect to industrialization, urbanization, development in communication and transportation, technology transformation in agriculture, education, land reform, politics and social revolution. Some rural areas have experienced more changes/development in the recent past than in the previous centuries (World Bank, 2008).

Recent discussions among the developing nations seem to revolve around the attainment of the Millennium Development Goals (MDGs). Various efforts have been made by governments and international organizations to develop the rural areas in order to achieve these objectives. The need to assess the level of project performance of World Bank-assisted programmes in Nigeria tagged “Local Empowerment and Environmental Management Projects (LEEMP) with regards to cost, schedule requirements and possible causes of variation, if any necessitated this study. International debate on the need for total development in developing countries, Nigeria inclusive, has centered on economic restructuring with emphasis on strengthening the rural areas through infrastructural development, capacity building, and so on. This is based on the fact that the objective function on national development has rural development as a dominant factor with very high level of correlation (Nwachukwu, 2003).

Recently, the state of poor development project delivery of less developed countries (LCDs) and the extent to which this has created problems of underdevelopment in these economies have been of general concern. Many scholars have associated this with poor project management principles which are bedeviling Nigeria, with particular reference to low technical, technological and managerial capacity to implement projects effectively (Okereke, 1995; Olayide, 1999 and FMWR, 2003).

To achieve the needed development, the World Bank has been collaborating with the Federal Government of Nigeria in the development of the country through the implementation of development programmes. The World Bank has planned to achieve all these by establishing development agencies across many countries among which is the LEEMPs, a programme to tackle various problems of development in Nigeria and other developing countries. The main goal of this World Bank agency is to strengthen the rural communities through the provision of infrastructure to improve the social and economic wellbeing of the people. In order to realize this goal, the World Bank adopted the Community Driven Development (CDD) approach, LEEMP being one of them in the planning and implementation of its development projects. With this approach, the benefitting communities champion their developmental agenda by identifying and prioritizing their needs, deciding and preparing the projects required to address the identified needs, co-financing the projects, continuing to operate and maintain the project, thereby ensuring sustainability, and learn to do things for themselves and in so doing build their capacities and ownership of the projects are guaranteed by active participation of beneficiaries in all phases of the project life cycle. The funding pattern used is 90% contribution from the World Bank (LEEMP) and 10% from the community of the total project cost.

Development project is a composite variable that measures the domestic capability to achieve national development. Any nation that has a high capability to implement successful development projects is expected to achieve rapid national development and improved standard

of living. The reverse is the case for nations with low capability of implementing successful development projects (Echeme, 2015). It must be appreciated that the World Bank and even the national governments have sunk in a lot of money in the planning and implementation of these development projects, yet there seems to be no positive impact on the rural poor arising from these efforts. It is believed that most of these projects ended up experiencing time and/or cost variations with some being completely abandoned.

Nigeria with an estimated population of 140 million as at 2007 has over 60% of the populations living in the rural areas (NPC, 2007). There is therefore the need to develop the rural areas through sound project implementation practices in order to make social infrastructure available to the rural populace which in turn would curb urban migration with its adverse consequences. It is obvious that this cannot be achieved without the application of holistic and integrated project management technique designed to achieve successful project delivery for socioeconomic development (Echeme, 2015).

The United Nations agreed that the major parameter for describing an area as developed or undeveloped is based on the availability of social infrastructure. When such basic infrastructure are lacking in an area, it is obvious that such a place is underdeveloped. It is in the bid to provide such basic amenities that the World Bank through its various agencies strive to improve the livelihood of the people through the provision of basic infrastructure. Despite all the efforts, the implementation level of World bank-assisted development projects is still low in Nigeria and has not impacted positively on the lives of the people as attested to by World Bank (2009) and Echeme and Nwachukwu (2009).

2. Project Success Factors

There is no doubt that project realization coming on time, cost, quality specification and user acceptance are known criteria for judging project success. This is also confirmed by Kezner (2003) who stated that a successful project implementation occurs if the project, comes on time, within budget, achieves all the goals originally set for it, and is adopted and used by the clients for whom the project is intended. This should be the basis under which the project should be judged to be either successful or not. Turner (1994) is also of the same opinion with respect to these parameters while Erling, Andersen, Svein, and Money (1996) stated that the overall project success deals with the wider and longer term impact of the project, which means both project management success and project product success. They noted that project management can be determined at the end of the project, which means in many cases, success criteria will be determined months or years after finishing the project, especially public projects. Hence, determining if a project is successful is difficult if viewed from these criteria. Baccarini (1999) use the concept of project success in a different approach, viewing it as product success, which implies the quality and impact of the end product to the end user (in terms of satisfaction of user'

needs, meeting strategic organizational objectives, satisfaction of stakeholders' need) when a project execution is finished. Ashley, Clive and Jaselskis (1997) defined project success as the results much better than expected or normally observed in terms of cost, schedule, quality, safety and participant satisfaction.

However, Lim and Mohamed (2012) cautioned that project managers should not only look at project success as the achievement of some predetermined project goals like time, cost, performance, quality and safety, but also consider the users who do not have similar predetermined goals regarding the project at all. Hence, the expectation on the outcome of the project and the perception of project success or failure will be different for everyone, if viewed in the context of Lim and Mohamed (2012). Dangayach and Mittal (2011) even suggested the inclusion of ethics as one of the factors of project success because according to them this factor will result in the sustainability of the project by increasing satisfaction and loyalty of the customers as well as create harmony, trust, brotherhood, values and morality among team members. Quite a number of papers relating to critical success factors have appeared in the open literature especially in the 1980s. Pinto and Slevin (2007) concentrated on success critical factors of time-budget-quality triangle and added as well the client satisfaction. One may even wonder whether the contractor is expected to do more than what was specified in the contract document (client requirement/specification) in order to satisfy the client. This fourth aspect is quite unnecessary if these three success factors are satisfactorily met as client satisfaction is a part and parcel of quality specification.

The above reviews point to the conclusion by Steinfort and Walker (2007) that success needs to be investigated from the perspective of active project team stakeholders as well as from that of their client/recipient's benefit and in the theoretical and empirical/practical review of critical success criteria and factors on any project. Even the Books of Knowledge (BoKs) of the two leading professional bodies in the field – the Project Management Institute (PMI) and Association of Project Managers (APM) seem to place much emphasis on project outcome, that is the profitability and the marketing strategy of the product of the project (post-project aspect) which should have been considered before the project is accepted (i.e. pre-project based on feasibility and viability analysis), rather than on project implementation which is the fulcrum on which project rests. There is basically no measuring yardstick in these two BoKs as to the success factors just like these other ones enumerated above at the implementation stage since the emphasis is placed more on the outcome of the project which can only be appraised after implementation. However, the outcome is influenced by the operation strategies which are outside the scope of project management according to Akpan (2009). A project may successfully be executed and delivered on time, within budget and quality specification but suffers from management inefficiencies during its normal operations. So there should be a boundary of what constitutes project management and operations management in order to determine project success criteria. Based on the above literature reviews, this study deemed it fit at this point in

time to make a theoretical and empirical review of the critical success factors based on time and cost criteria in the implementation of World Bank-assisted LEEMP development projects which ended in Imo state six years ago.

3. Materials and Methods

The method of research design adopted is the survey technique which is observational and explanatory. The total number of projects undertaken by LEEMP from 2004 to 2008 is 227 consisting of 29 for Education, 24 for Health, 41 for Water, 18 for Road/Transport, 27 for Electrification, 56 for Socio-economic and 32 for Environment/Natural Resource Management. This figure forms the population of the study. From the above population, using the sample size formula by Yaro Yamani and stratified random sampling technique, the study sampled 14 out of the 44 completed projects and 38 of the 183 uncompleted projects. This was based on the projects that have time and cost indices needed to conduct the analysis. Hence, the data analysis focused on the activities of fifty two (52) LEEMP projects in Imo State, Nigeria based on different sectors of Education (2 completed and 5 uncompleted), Health (1 completed and 4 uncompleted), Water (5 completed and 8 uncompleted), Road/Transport (1 completed and 2 uncompleted), Electrification (1 completed and 5 uncompleted), Socio-economic (3 completed and 7 uncompleted) and Environment/Natural Resources Management (1 completed and 7 uncompleted).

Data collected from World bank-assisted LEEMP projects as specified above consist of both the completed and uncompleted projects in which Earned Value Analysis (EVA) model was used to analyze the level of performance as it relates to cost and time specifications, since they are the main criteria for judging the project implementation success. This analysis also afforded us the opportunity to determine the level of variations and possibly forecast the amount of fund and time needed to complete the projects. This model according to Akpan (2013) is used to compare the planned amount of work with what has actually been completed, to determine if the cost, schedule and work accomplished are progressing in accordance with the plan. Based on this methodology as given by Payne et al (1999), we have

$$\text{Schedule Performance Index (SPI)} = \text{BCWP/BCWS} \dots\dots\dots(1)$$

$$\text{Schedule Variance (SV)} = \{(\text{BCWP}-\text{BCWS})/\text{BCWS}\} * 100 \dots\dots\dots(2)$$

$$\text{Cost Performance Index (CPI)} = \text{ACWP/BCWP} \dots\dots\dots(3)$$

$$\text{Cost Variance (CV)} = \{(\text{ACWP}-\text{BCWP})/\text{BCWP}\} * 100 \dots\dots\dots(4)$$

where

BCWS is budgeted cost of work scheduled or planned budget,

BCWP is budgeted cost of work in place, i.e. earned value at the time of evaluation,

ACWP is actual cost of work in place.

From the equation 2 and 4 above, the forecast of the eventual project cost and duration can be derived and these are given as

$$T_F = T_S(1-SV) \dots\dots\dots(5)$$

$$C_F = C_S(1-CV) \dots\dots\dots(6)$$

Where T_F and C_F are the forecasted time and cost while T_S and C_S are the scheduled time and cost respectively.

A positive schedule variance calculated at a given point in time means that the project is behind schedule while a positive cost variance means that the project is over the budget.

Earned value analysis model is mostly applied to uncompleted projects to monitor progress and in the case of these uncompleted projects the above equations are applied thus:-

If $ACWP > BCWP$; forecast the estimated cost; otherwise ignore. BCWS is for Budgeted Cost while ACWP is the contribution from LEEMP and the Community. BCWP is the Budgeted cost multiplied by the actual percentage completion.

The data collected are analyzed as shown in Table 1 and Table 2; one for the completed projects and the other for the uncompleted projects.

Table 1: Selected World Bank (LEEMP) Completed Micro-projects and Their Cost and Schedule Variances from 2004 to 2008

S/N	Micro-project Title, Community and L.G.As.	Initial Project Cost (N)	Actual LEEMP Contribution (N)	Actual Community Contribution (N)	Cost Variation (N)	Cost Variation (%)	Initial Project Period (Days)	Actual Project Period (Days)	Time Variation (Days)	Time Variation (%)	Project Status (%)
1	Market Rehabilitation, Onicha Nwenkwo, Ezinihitte	3,482,760	2,437,932	1,044,828	-	-	330	351	21	6.36	100
2	Water Borehole, Amagbo, Ezinihitte	3,121,850	2,809,665	312185	-	-	330	370	40	12.12	100
3	Rehab. of Primary School, Ezigaragu	1,522,900	1,442,652	308,000	227,752	15	540	603	63	11.67	100
4	Road Rehabilitation, Onicha Nweafor, Ezinihitte	6,611,415	5,950,274	661,141	-	-	720	765	45	6.25	100
5	Ayaa Spring Water Development, Umuhu Okabia, Orsu	3,700,000	3,330,000	367,500	2,500	0.07	240	258	18	7.50	100
6	Cmpl of 1 Story Sch Block and 8 rm VIP Toilet, Eziawa, Orsu	3,883,675	2,965,307	544,700	373,668	9.62	180	204	24	13.33	100
7	Eke Amaebu Market Development, Amaebu Ebenator, Orsu	3,325,740	2,328,520	271,000	726,220	21.84	180	258	78	43.33	100

8	Water Borehole, Amazu Ebenator, Orsu	3,311,000	2,979,900	242,000	89,100	2.69	180	196	16	8.89	100
9	Construction of Amanogu Health Centre, Amanogu, Orsu	3,794,550	3,368,370	157,600	-268,580	7.08	300	330	30	10.00	100
10	Construction of Modern Oil Mill with Water Borehole, Umunokwu Okwato, AbohMbaise	2,905,300	2,620,800	150,000	-134,500	4.63	210	254	44	20.95	100
11	Expansion of Electricity project. Odenkume 2, Obowo	2,880,000	2,002,000	0	-878,000	60.79	330	381	51	15.45	100
12	Water Borehole, Amaisi Ndigbo, Aboh Mbaise	2,867,040	2,637,540	229,500	-	-	540	585	45	8.33	100
13	Construction of 22 Lock up Stores with 4 VIP Toilet, Amuzu, Aboh Mbaise	4,006,390	2,804,473	970,000	-231,917	5.79	360	392	32	8.89	100
14	Provision of 6 toilet at Amankwo Primary School, Orlu	489,140	440,220	0	-48,920	10	240	265	25	10.45	100

Source: Status Report and Profile of Micro-projects to be commissioned during the 3rd Year Anniversary Celebration, (2008)

The negative (-) or zero values in cost variation column as shown in Table 1 imply that the projects were completed below or within the initial project cost while those with positive (+) cost variations were completed above the initial project cost (cost over-run). The table revealed that most of the projects ended up incurring extra cost than budgeted. Only four (4) projects out of the fourteen (14) selected ones met the cost consideration. All the selected projects were delayed resulting in time overrun. The implication is that most of these World Bank assisted projects failed to meet the cost and time considerations. On average the cost overrun is given as 6.85% and the time overrun as 13.11% respectively.

Table 2: Selected World Bank (LEEMP) Uncompleted projects and Their Cost and Schedule Variances from 2004 to 2008 Using Earned Value Analysis Model

S/N	Benefiting Community	Title of Projects	Budgeted Cost of the project (₦)	Actual Community Contribution (N)	Actual LEEMP Contribution (₦)	Actual percentage completion	Forecasted Cost of Completion (₦)	Additional Funds for Completion (₦)	Initial project duration (month)	Project duration as at date (month)
1	Amaebu Ebenator	Construction of Library	1508297	13000	1085973.90	80	-	-	12	12.7
2	Ezenac hIgwé	Rehab. of classroom 6 block	1876000	134000	506520	30	2103631.80	227631.8	13	13.9
3	Umuokane II	Rehab. of 4 c/r block & 3 toilets	1490180	-	462515.55	30	1541386.67	51206.67	11	12.6
4	Ohoba I	Renovation of class block	1487180	-	401437	10	4014343	2527163	9	10

5	Elelem	Const. of 1 block of class room project	5531325	60000	1493457.75	25	5997833	466508	15	16.8
6	Umunachi	Modern health centre	7270420.74	300000	1950000	30	-	-	14	14.4
7	Alike obowo	Const. of health centre	7696200	50000	194264	50	11368057	3671857	13	14.8
8	Nrukwu Amaimo	Health centre	3696535.40	-	1071774.50	40	4713451	1016915.60	14	14.9
9	Abueke	Health centre	7286361.74	-	1950,000	30	-	-	16	17.4
10	Umukabia	Health centre	4988116.20	350000	1346791	30	5656523.77	668407.57	18	19.6
11	Okwumaraihe	Water dev. Project	3311000	307000	2979900	20	396.36	6435804	21	22.2
12	Umuoma	Water borehole	7145844	10000	1929375.04	35	-	-	24	25.4
13	Obizi	Water rehab./reticulation	5528450	-	2487902.61	30	6585348.50	1056898.50	18	19.6
14	Uhi	AjaboUhi water project I	3205428.50	-	1442441.93	10	11251054.1	8045625.54	20	21.6
15	AcharaNjiaba	Water borehole	2833430	133000	1185040	15	18870644	16037214	16	18.4
16	Umuezeagu	Water borehole	2840818.80	-	1888278	15	12584827.3	9744008.48	13	13.9
17	Umunamah	Road rehab. / erosion control	2111500	-	570105	30	-	-	14	14.5
18	Ofeohia Okwuohia	Road rehabilitation	5622880	-	2783865.20	30	9277752	3654872	25	25.3
19	Oforola	Opening & grading of new road	3604750	110000	2805954.74	70	4181510	576760	13	13.9
20	Nkumeato	Road rehab./erosion control	7205990.04	30000	3242895.52	10	32715194.8	25509204.74	15	16.0
21	Umukoto Dike	Road rehab/erosion control	5438248.90	130000	2583168.27	10	27136862	21698613	16	16.3
22	UmuhuOkwuato	Road rehab/erosion & flood control	4601484	-	2280695.54	70	-	-	13	14.8
23	Okwunaezi Igwe	Electricity project	3050000	10000	2198400	50	4422500	1372500	12	13.6
24	Umuifem Avutu	Electricity project	4770000	140000	4293000	80	5533200	763200	14	15.8
25	Alulu	Completion of Electricity project	7834830	1497199	5200000	80	8383268.1	548438.10	21	21.6
26	Ezimba	Completion of Electricity project	7237680	10000	5200000	38	13679215	6441535	20	21.8
27	Umuapu	Electricity project	2396900	20000	647163	10	6663382	4266482	18	19.1
28	AmaAssa	Completion of Electricity project	3767500	-	1017225	10	10172250	6404750	15	16.6
29	Amagbo	Palm oil mill	3460000	-	1799,200	30	5985800	2525800	15	15.3
30	Amazu Ebenator	Computer Biz. Centre	3017965	129000	2092949.20	45	4949462.6	1931497.6	16	16.9
31	UmuOsochie	Palm plantation	1595000	-	330750	0	-	-	11	12.4
32	OwerreOkwe	Rehab. Of Eke Owerremkt	2191445.52	212900	480233.68	40	-	-	14	15.5
33	Imenyi Orsu	Mkt dev. (36 lock up shops)	7734026	415300	5434819	75	7811366.3	77340.3	22	23.1
34	Isiama	Erosion control	3312000	122500	2384640	85	-	-	19	20.4
35	Amanogu	Culv. Const. & Drainage	3473927.60	114000	1058355.45	30	3890798.9	416871.3	14	15.1
36	Etiti Okabia	Culvert construction	594220	-	17828010	10	1782660	1188440	8	9.6
37	Opuoma	Flood control	1007500	-	28713810	10	2871375	1863875	9	9.4

38	Itu	Amaiya road/ erosion control	2732500	-	2849400	80	3552250	819750	12	13.4
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Source: Status Report and Profile of Micro-projects to be commissioned during the 3rd Year Anniversary Celebration, (2008).

Table 2 also revealed that most of the selected uncompleted projects show some elements of “fatigue” in that they are experiencing cost and time overrun as analyzed using Earned Value Analysis (EVA) model. The study shows that at the end of the LEEMP programme, a lot of projects embarked upon were abandoned at various levels, out of 227 projects, only 44 were labeled “completed” while 183 were “abandoned” or at different stages of completion. The completed projects represent only 19.38% of the total number of projects planned. Meanwhile, a good number of these uncompleted projects have already incurred very high cost and time overrun, for example that of Amaiya Road/Erosion Control project in Itu Autonomous Community (S/N. 38 of Table2), the total cost disbursed is more than the planned cost even at 80% level of completion. It is also noticed that all the projects experienced time overrun at the different levels of completion. Caution must be applied when interpreting the results obtained from the EVA model as the results are meant for management consumption, not for the contractors. If there is a favourable CV, that means that the project would be completed below the budgeted cost, this does not really confer any advantage to the management/client as the contractor is very unlikely to accept a sum lower than the contact sum which is basically the budgeted cost. In this case, the issue of calculating the forecasted cost does not arise as it is just meaningless in reality.

It is difficult to talk about schedule variance for the whole project as this term seems to apply to individual work packages or units. It is even absurd to use cost information to determine the schedule performance index and schedule variance. In a situation where the work plan is presented in the network scheduling format to help in determining among others the project duration, the project with work units having floats/slack and experiencing negative schedule variance which indicates a longer time duration for the work unit in question, the project as a whole may not necessarily experience time overrun. There is therefore no need to calculate the forecasted time when the whole project is involved and this information was left out in Table 2. It could also be observed that projects yet be completed are experiencing time overrun.

Table 3: Sectorial Ranking of the Completed And Uncompleted World Bank-assisted LEEMP Projects Based on the Cost Variations From 2004 To 2008

S/N	Sector	Percentage with respect to Total Cost (%)	Total budgeted cost of all projects (₦)	Total budgeted cost for completed projects (₦)	Total Disbursed Funds for Projects (₦)	Total Disbursed Funds To Completed Projects (N)	Cost Variations For completed Projects (%)	Project Completion Ratio	Ranking The Sectors Based On Project Completion Ratio
1	Education	11.76	100,449,471.38	27,894,818.40	62,405,328.83	32,718,711.70	17.29	8/29 = 27.59	3
2	Health	13.09	111,840,892.97	19,802,524.60	52,631,742.30	19,808,010.60	0.03	5/24 = 20.83	4

3	Water	22.56	192,711,737.00	70,156,385.70	121,538,985.2	60,924,010.15	-6.68	13/41=31.70	2
4	Road /Transport	8.00	68,354,352.40	28,580,667.80	49,397,620.74	32,205,743.50	12.68	6/18=33.33	1
5	Electrification	14.64	125,248,848.40	23,388,528.00	76,877,448.49	18,946,187	-18.99	5/27=18.52	5
6	Socio- economic	17.13	146,288,561.20	22,621,305.10	89,661,528.70	19,951,809.37	-11.80	4/32 = 12.50	6
7	Environment/ Natural Resources Management	10.56	90,220,120.29	2,524,290.00	49,402,591.74	1,587,744.50	-37.10	3/56 =5.36	7
Total			854,113,984	194,968,520	501,915,246	186,142,217			

Source: Status Report and Profile of Micro-projects to be commissioned during the 3rd Year Anniversary Celebration, (2008)

It is discovered in Table 3 that the total cost variation for completed projects seems to be favourable, a 95.47% of the total budgeted cost during the period under review. This outcome may seem to be encouraging but there may be some hidden facts; the scope may not have been fully covered and the quality of work might have suffered in the process. It is interesting to note that some communities/World Bank do not at times fully contribute their quota of the funding and for the projects not to be abandoned, some have contributed more than the expected (see Table 1 above) even though some of the funds might have come late with its consequences (see Akpan & Igwe, 2001) . This scenario might have played out on those uncompleted projects and this might have been the reason of the low performance of the World Bank-assisted development projects in Nigeria

Ranking the performance of completed LEEMP projects sector by sector based on the percentage of completion has revealed that Road/Transport is ranked first, followed by Water and the last being Environment/Natural Resources Management. This should be expected in a rural environment where emphasis is always placed on the immediate need of the people. Other parameters could equally be used such as cost variation with Environment/Natural Resource Management exhibiting the best result while Education has the least with 17.29%.

4. Discussion

From the facts available to us and even based on the analysis, it could be deduced that the main factor stalling the development projects in Nigeria and probably the other developing economies is funding which takes the form of funding gap and its timing. These funds may not come at the appropriate time (based on the work accomplished to be paid for) to enable the contractors to work according to the planned schedule and this might have contributed to increases in project duration. What was somehow surprising was the inability/reluctance of the funding partners to fully contribute their own quotas for the successful implementation of the projects. In a survey

carried out by Echeme (2015) on the project stakeholders, it was found out that personal conflicts, political interference, lack of use of appropriate project management techniques, lack of community involvement/support contributed partly to the poor project performance. He then went on to rank these factors in terms of severity using factor analysis model which gives political interference as the highest and community involvement/support as the least ranked factor. It must be appreciated that these projects were implemented in conjunction with the communities concerned to provide basic amenities to these rural poor and these people were to be carried along in some decision making process of the type of project to be carried out, where they should be sited, etc. but it is difficult to precisely confirm whether these conditions were met.

5. Conclusion

For the standard of living of people to improve in the rural communities and to check the influx of rural migration, basic amenities must be provided. This requires a move towards the application of a holistic and integrated project management approach designed to achieve successful project delivery within time and cost constraints and ensuring that prompt release of funds are made available. The funding was majorly provided by the World Bank, the interventionist agency and the community in which the project is sited. From the analysis, it was observed that the funds in some cases were not fully provided either by the communities or the interventionist agency and that might have led to low project completion rate even with substantial time overrun as at the time of the appraisal.

The project management tool used for project monitoring is in doubt to guarantee project success. There is no rationale why cost information should be used to determine the schedule performance index (SPI) and schedule variance (SV) which was in turn used to forecast the eventual completion time of the project. In the analysis undertaken, this information was left out as all the uncompleted projects were experiencing time overrun. From the above, it could be concluded that for the successful project outcome, the funds envisaged for the project should be made available according to plan and that an appropriate project management technique should be utilized.

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Table 1: Selected World Bank (LEEMP) Completed Micro-projects and Their Cost and Schedule Variances from 2004 to 2008

S/N	Micro-project Title, Community and L.G.As.	Initial Project Cost (N)	Actual LEEMP Contribution (N)	Actual Community Contribution (N)	Cost Variation (N)	Cost Variation (%)	Initial Project Period (Days)	Actual Project Period (Days)	Time Variation (Days)	Time Variation (%)	Project Status (%)
1	Market Rehabilitation, Onicha Nwenkwo, Ezinihitte	3,482,760	2,437,932	1,044,828	-	-	330	351	21	6.36	100
2	Water Borehole, Amagbo, Ezinihitte	3,121,850	2,809,665	312,185	-	-	330	370	40	12.12	100
3	Rehab. of Primary School, Ezigaragu	1,522,900	1,442,652	308,000	227,752	15	540	603	63	11.67	100
4	Road Rehabilitation, Onicha Nweafor, Ezinihitte	6,611,415	5,950,274	661,141	-	-	720	765	45	6.25	100
5	Ayaa Spring Water Development, Umuhu Okabia, Orsu	3,700,000	3,330,000	367,500	2,500	0.07	240	258	18	7.50	100
6	Cmpl of 1 Story Sch Block and 8 rm VIP Toilet, Eziawa, Orsu	3,883,675	2,965,307	544,700	373,668	9.62	180	204	24	13.33	100
7	Eke Amaebu Market Development, Amaebu Ebenator, Orsu	3,325,740	2,328,520	271,000	726,220	21.84	180	258	78	43.33	100
8	Water Borehole, Amazu Ebenator, Orsu	3,311,000	2,979,900	242,000	89,100	2.69	180	196	16	8.89	100
9	Construction of Amanogu Health Centre, Amanogu, Orsu	3,794,550	3,368,370	157,600	-268,580	7.08	300	330	30	10.00	100
10	Construction of Modern Oil Mill with Water Borehole, Umunokwu Okwato, AbohMbaise	2,905,300	2,620,800	150,000	-134,500	4.63	210	254	44	20.95	100
11	Expansion of Electricity project. Odenkume 2, Obowo	2,880,000	2,002,000	0	-878,000	60.79	330	381	51	15.45	100
12	Water Borehole, Amaisi Ndigbo, Aboh Mbaise	2,867,040	2,637,540	229,500	-	-	540	585	45	8.33	100
13	Construction of 22 Lock up Stores with 4 VIP Toilet, Amuzu, Aboh Mbaise	4,006,390	2,804,473	970,000	-231,917	5.79	360	392	32	8.89	100
14	Provision of 6 toilet at Amankwo Primary School, Orlu	489,140	440,220	0	-48,920	10	240	265	25	10.45	100

Source: Status Report and Profile of Micro-projects to be commissioned during the 3rd Year Anniversary Celebration, (2008)

Table 2: Selected World Bank (LEEMP) Uncompleted projects and Their Cost and Schedule Variances from 2004 to 2008 Using Earned Value Analysis Model.

S/N	Benefiting Community	Title of Projects	Budgeted Cost of the project (₦)	Actual Community Contribution (N)	Actual LEEMP Contribution (₦)	Actual percentage completion	Forecasted Cost of Completion (₦)	Additional Funds for Completion (₦)	Initial project duration (month)	Project duration as at date (month)
1	Amaebu Ebenator	Construction of Library	1508297	13000	1085973.90	80	-	-	12	12.7
2	Ezenac hIgwé	Rehab. of classroom 6 block	1876000	134000	506520	30	2103631.80	227631.8	13	13.9
3	Umuokane II	Rehab. of 4 c/r block & 3 toilets	1490180	-	462515.55	30	1541386.67	51206.67	11	12.6
4	Ohoba I	Renovation of class block	1487180	-	401437	10	4014343	2527163	9	10
5	Elelem	Const. of 1 block of class room project	5531325	60000	1493457.75	25	5997833	466508	15	16.8
6	Umunachi	Modern health centre	7270420.74	300000	1950000	30	-	-	14	14.4
7	Alike obowo	Const. of health centre	7696200	50000	194264	50	11368057	3671857	13	14.8
8	Nrukwu Amaimo	Health centre	3696535.40	-	1071774.50	40	4713451	1016915.60	14	14.9
9	Abueke	Health centre	7286361.74	-	1950,000	30	-	-	16	17.4
10	Umukabia	Health centre	4988116.20	350000	1346791	30	5656523.77	668407.57	18	19.6
11	Okwumaraihe	Water dev. Project	3311000	307000	2979900	20	396.36	6435804	21	22.2
12	Umuoma	Water borehole	7145844	10000	1929375.04	35	-	-	24	25.4
13	Obizi	Water rehab./reticulation	5528450	-	2487902.61	30	6585348.50	1056898.50	18	19.6
14	Uhi	AjaboUhi water project I	3205428.50	-	1442441.93	10	11251054.1	8045625.54	20	21.6
15	AcharaNjiaba	Water borehole	2833430	133000	1185040	15	18870644	16037214	16	18.4
16	Umuezeagu	Water borehole	2840818.80	-	1888278	15	12584827.3	9744008.48	13	13.9
17	Umunamah	Road rehab. / erosion control	2111500	-	570105	30	-	-	14	14.5
18	Ofeohia Okwuohia	Road rehabilitation	5622880	-	2783865.20	30	9277752	3654872	25	25.3

19	Oforola	Opening & grading of new road	3604750	110000	2805954.74	70	4181510	576760	13	13.9
20	Nkumeato	Road rehab./erosion control	7205990.04	30000	3242895.52	10	32715194.8	25509204.74	15	16.0
21	Umukoto Dike	Road rehab./erosion control	5438248.90	130000	2583168.27	10	27136862	21698613	16	16.3
22	UmuhuOkwuato	Road rehab./erosion & flood control	4601484	-	2280695.54	70	-	-	13	14.8
23	Okwunaezi Igwe	Electricity project	3050000	10000	2198400	50	4422500	1372500	12	13.6
24	Umufem Avutu	Electricity project	4770000	140000	4293000	80	5533200	763200	14	15.8
25	Alulu	Completion of Electricity project	7834830	1497199	5200000	80	8383268.1	548438.10	21	21.6
26	Ezimba	Completion of Electricity project	7237680	10000	5200000	38	13679215	6441535	20	21.8
27	Umuapu	Electricity project	2396900	20000	647163	10	6663382	4266482	18	19.1
28	AmaAssa	Completion of Electricity project	3767500	-	1017225	10	10172250	6404750	15	16.6
29	Amagbo	Palm oil mill	3460000	-	1799,200	30	5985800	2525800	15	15.3
30	Amazu Ebenator	Computer Biz. Centre	3017965	129000	2092949.20	45	4949462.6	1931497.6	16	16.9
31	UmuOsochie	Palm plantation	1595000	-	330750	0	-	-	11	12.4
32	OwerreOkwe	Rehab. Of Eke Owerremkt	2191445.52	212900	480233.68	40	-	-	14	15.5
33	Imenyi Orsu	Mkt dev. (36 lock up shops)	7734026	415300	5434819	75	7811366.3	77340.3	22	23.1
34	Isiama	Erosion control	3312000	122500	2384640	85	-	-	19	20.4
35	Amanogu	Culv. Const. & Drainage	3473927.60	114000	1058355.45	30	3890798.9	416871.3	14	15.1
36	Etiti Okabia	Culvert construction	594220	-	17828010	10	1782660	1188440	8	9.6
37	Opuoma	Flood control	1007500	-	28713810	10	2871375	1863875	9	9.4
38	Itu	Amaiya road/erosion control	2732500	-	2849400	80	3552250	819750	12	13.4

Source: Status Report and Profile of Micro-projects to be commissioned during the 3rd Year Anniversary Celebration, (2008).

Table 3: Sectorial Ranking of the Completed And Uncompleted World Bank-assisted LEEMP Projects Based on the Cost Variations From 2004 To 2008

S/N	Sector	Percentage with respect to Total Cost (%)	Total budgeted cost of all projects (₦)	Total budgeted cost for completed projects (₦)	Total Disbursed Funds for Projects (₦)	Total Disbursed Funds To Completed Projects (₦)	Cost Variations For completed Projects (%)	Project Completion Ratio	Ranking The Sectors Based On Project Completion Ratio
1	Education	11.76	100,449,471.38	27,894,818.40	62,405,328.83	32,718,711.70	17.29	8/29 = 27.59	3
2	Health	13.09	111,840,892.97	19,802,524.60	52,631,742.30	19,808,010.60	0.03	5/24 = 20.83	4
3	Water	22.56	192,711,737.00	70,156,385.70	121,538,985.2	60,924,010.15	-6.68	13/41=31.70	2
4	Road /Transport	8.00	68,354,352.40	28,580,667.80	49,397,620.74	32,205,743.50	12.68	6/18=33.33	1
5	Electrification	14.64	125,248,848.40	23,388,528.00	76,877,448.49	18,946,187	-18.99	5/27=18.52	5
6	Socio-economic	17.13	146,288,561.20	22,621,305.10	89,661,528.70	19,951,809.37	-11.80	4/32 = 12.50	6
7	Environment/ Natural Resources Management	10.56	90,220,120.29	2,524,290.00	49,402,591.74	1,587,744.50	-37.10	3/56 =5.36	7
Total			854,113,984	194,968,520	501,915,246	186,142,217			

Source: Status Report and Profile of Micro-projects to be commissioned during the 3rd Year Anniversary Celebration, (2008)

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