

# African Research Review

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An International *Multidisciplinary Journal, Ethiopia*

*Vol. 7 (4), Serial No. 31, September, 2013:66-78*

ISSN 1994-9057 (Print)

ISSN 2070--0083 (Online)

DOI: <http://dx.doi.org/10.4314/afrrv.7i4.5>

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## **Investment and Project Economics: Contemporary Lessons for Nigeria's Transformation**

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### **Abstract**

*Ideally, projects constitute the nexus of strategic national transformation and sustainable development. Taking up the contemporary challenge to sensitize and synergize instructional, industrial and governmental functionaries along this line are leading global faculties such as the Academy of Project Management (APM), Project Management Institute (PMI), and Business Analyst (BA) Times, amongst others. This work is designed to succinctly dissect the Nigerian context with a view to conceptually bringing to the fore, those standardized project analytical ideals that are imperative for*

*actualizing the much-sought-after dream of Nigeria's transformation and national drive to global reckoning. It is recommended that the critical economies of time, money and other precious resources be well appropriated through effective deterministic and stochastic scheduling with justifying anticipated non-discounted and discounted project financial outcomes as underscored in this work.*

**Key Words:** Project analysis, Project economics, Project management

## **Introduction**

Philosophically, it was asked in one of America's classic literary treats, if economics does make one happier. Pertinently, in this conceptual research adventure, we begin by asking: *can the economics of money, investment and project management make Nigeria better?* A renowned American economist, to whom the question about economics was thrown, thoughtfully addressed the poser in the background to his literary master-piece by saying:

Economists might not be the first people you would think of to give you advice on parenting, the intricacies of etiquette, or the dark arts of seduction. Even at best, the economist can seem a remote figure; infinitely rational, untroubled by indecision or weakness of the will, a spoke-like creature too perfect to be able to relate to mere human concerns. At worst, the economist can look like a social naïf, if not an outright socio path, a man (or occasionally a woman) who knows the price of everything and the value of nothing (Harford, 2009: xi).

Making a case further for speed dating with money back guarantees, the renowned economist had course to advise a seventy four - year - old man who described himself as *vigorous, wealthy and boringly married*, to be willing and ready to plan and overcome two obstacles. These are:

- Milton Friedman's *permanent income hypothesis* which requires temporary windfalls to be considered in terms of the income they could generate in perpetuity; and
- Impracticability of writing an *enforceable contract* by setting out what is expected from the considerable outlay in his specified context.

Basically, analysts and economy watchers are very much interested in keeping close watch of four cardinal objectives of macroeconomic policy, namely:

- Full employment,
- Price stability,
- Economic growth, and
- Balance of payments.

The daunting challenge lies in the proper articulation coordination of appropriate (national circumstance - suited) macroeconomic policies. This is in utmost recognition of the inherent conflicts or trade-offs associated macroeconomic targets (Gbosi, 2009; Olamitunji, 2009). In the submissions of Jhingan (2010), significant macroeconomic allergies find manifest traces in:

- *Full employment and economic growth*, because economic growth leads to reallocation of resources in the economy which results in work displacements thereby causing unemployment;
- *Economic growth and price stability*, because higher demand for goods and services leads to increase in investment and income which trigger inflationary price alterations;
- *Full employment and balance of payments*, because a balance of payment deficit elicits expenditure reduction which increases unemployment; and

- *Price stability and balance of payments*, because macroeconomic policies are directed at controlling inflation and redressing disequilibrium by discouraging imports and encouraging exports which do not help the unemployment situation in the economy.

Contextual relativism will practically identify the Nigerian economy with occasional windfalls resulting from her enormous oil/gas and allied monetary economic resources (Sackley, 2011, Nsudoh, 2011; Eneanya, 2010). This is akin to the afore-stated seventy four - year - old man's scenic dilemma. A cursory consideration of strategic macroeconomic imperatives in the subsequent segments of the paper seeks to charge national/institutional wealth managers with the innovative task of transformational leadership which is distinctly discharged by making the people's money work in carefully selected projects that would ultimately make things work for the people in very visible and indelible terms.

### **Project cases and key success factor functionality**

The contemporary annals of APM clearly associate some globally high rated project strides with the professional feats of Martin Gosden, Helen Timperley and Water Cube. In terms of exceptional professional depth:

- *Gosden* is credited with automotive research and development, training simulator, missile defence, personnel training and development and project management capability improvement projects with the Ministry of Defence (MoD);
- *Timperley* is credited with automotive, computer software, local government and aerospace projects, well engaged with Rolls-Royce Energy on power generation projects in the oil and gas sector; and
- *Cube* is credited with multi-discipline coordination and fast-track, on time and on budget programmes, emerging as an icon of the Beijing Olympics. His Aquatics Centre was

described as the visitors' amazement and athletes' inspiration, as it excellently hosted swimming, diving and water polo.

Harnessing the above mega project management experiences for institutional/national transformation in Nigeria requires a pragmatic reconsideration and redefinition, particularly of macroeconomic project lines and this should take into account the two key features of uniqueness and transience. Strategic projects should of necessity comprise activities that meet desired specific transformational objectives and are programmed and packaged to succeed and spring up new standards of living in the economy. Cardinal macroeconomic objectives have to be formally stipulated (and not merely speculated) in terms of time, cost and quality. All of these key success factors (KSFs) critically compel the transformational project manager to appreciate the dynamics of scope. He is to equally exercise control and maintain focus on the well-defined priorities in order to expeditiously realize the projects and conscientiously actualize the desired transformation. Thus, construction management, project administration and allied contractual concerns are all about change (Agundu, 2011; Olusegun, 2011; Neebee and Ihenyen, 2010; Omes and Eze, 2008). The *Gosden – Timperley – Cube* outstanding outcomes earlier exemplified clearly demonstrate efficiency and effectiveness in project management. Fundamentally, project success requires:

- Understanding stakeholders' needs;
- Planning what needs to be done, when, by whom, and to what standards;
- Building and motivating the team;
- Coordinating different people's tasks;
- Monitoring the work being done;
- Managing possible modifications/changes to the plan; and
- Ultimately delivering the desired results.

The Corporate Education Group (*corpedgroup*), reviewing the contributions of Hass (2007) and Doug (2006), affirms that:

$$PS = f( PM, BAS) \quad \dots \quad (\text{Equation 1})$$

$$PS = PM + BAS \quad \dots \quad (\text{Equation 2})$$

Where: PS = Project Success

PM = Project Management

BAS = Business Analysis Skills

Where project success is achieved and sustained in various sectors of the economy, it will synergistically aggregate to macro-effects that will eventually translate to the expected national transformation. This is pragmatically in the affirmative because managers and sundry stakeholders will help to ensure that:

- Project work is better done right first time in order to reduce rework;
- Project is better holistically engineered and administered from start with proper definition of purpose, objectives, associated risks and necessary adjustments/reviews;
- Project changing/conflicting priorities are better monitored and controlled so as to meet deadlines and stay on budget; and
- Project essential requirements are better articulated and communicated among promoters and team members, leaving no missing with respect to the interface of information technology, business analysts and project teams.

On the contrary, project failure may arise as a direct consequence of poor technical and general requirements gathering, business analysis and management (Hass, 2007).

## **Analytical Tools for Project Optimization**

Project management is purposefully directed at the planning and management of change, which is synonymous with transformation. In this work, the intellectual resource base of *mindtools* and *Business Balls* is harnessed to provide auspicious illumination regarding the conceptual scope of project and the analytical tools of project management. This is complemented by the contributions of Patel (2000) and Andabai (2013). To this end, the focal horizon of project and project management may range from the simple and straightforward to the large and complex. It categorically has to do with introducing, changing, or affecting various phenomena and institutional concerns. These, among others, include people, staffing and management, products and services, materials, manufacturing and production, information and communication technology (ICT).

Also earmarked for optimization are plant, vehicles and equipment, storage, distribution and logistics, buildings and premises, finance, administration, acquisition and divestment, purchasing, sales, selling and marketing, human resource training and development, customer service and relations, quality, health and safety, research and development, new business development, and other undertakings that need strategic planning and management in organizations. Essentially, the process of project management requires:

- Agreeing on the terms of reference,
- Planning the time, team, task, etc,
- Communicating the plan to the team and other stakeholders,
- Agreeing on and delegating the specific actions,
- Managing and motivating the team,
- Checking, measuring, monitoring and reviewing the progress,
- Completing the project, reporting on overall performance and appreciating the team, and

- Following-up with necessary training, support, measurement and reporting results and benefits.

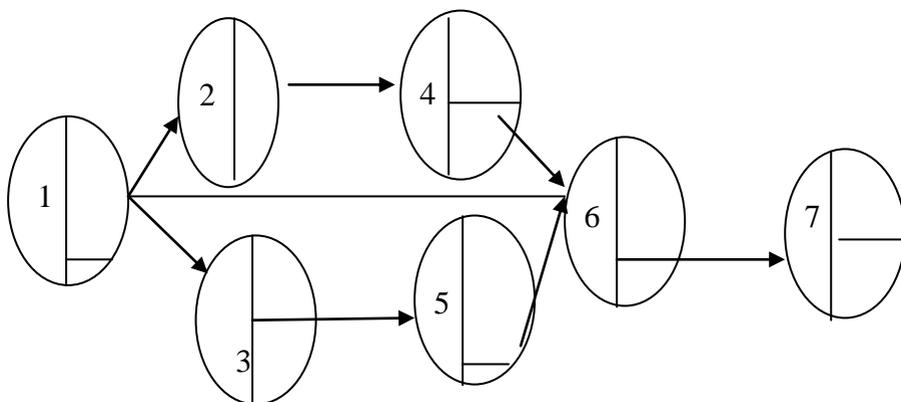
The analytical tools for meaningful project planning and management outcomes have been identified to fundamentally include Gantt Charts (GC), Critical Path Analysis (CPA), and Programme Evaluation and Review Technique (PERT). Also noteworthy are Work Breakdown Structure (WBS), Graphic Evaluation and Review Technique (GERT), Cost Benefit Analysis (CBA), Project Sensitivity Analysis (PSA), Fishbone/Ishikawa Diagram (FID), and Brainstorming Approach (BA). The GC, CPA, and FID are diagrammatically illustrated as Figures 1, 2 and 3; PERT is facilitated by Equation 3; while the consideration of BA, CPA and GC is guided by the matrix (represented by Tables 1 and 2):

**Activity**

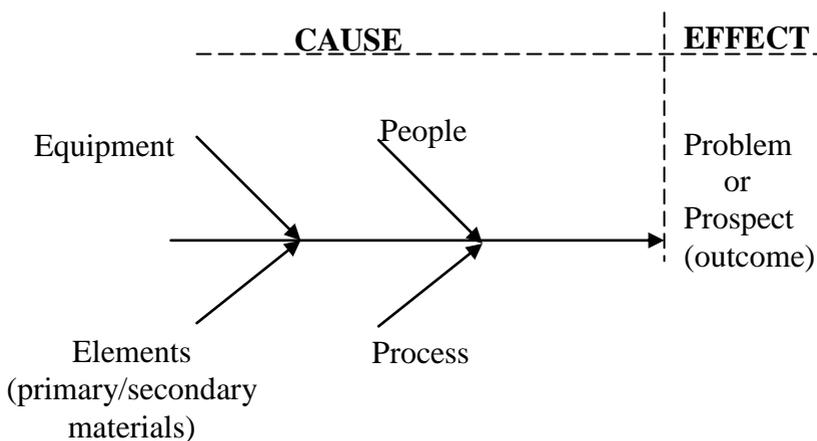
<b>1</b>	.....							
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**Duration (Weeks)**

**Figure 1: Hypothetical Project Network (GC)**



**Figure 2: Hypothetical Project Network (CPA)**



**Figure 3: Hypothetical Project Network (FID)**

For the PERT, the analytical function is:

$$TE = [SHT + 4 (LKT) + LGT]/6 \quad \dots \quad (\text{Equation 3})$$

Where: TE = Time estimate

SHT = Shortest time

LKT = Likely time

LGT = Longest time

**Table 1: Guiding Matrix for Analytical Tool Application**

Process Stage/Activity	BA	FID	CPA	GC
Project brainstorming/concepts	***	**		
Elements gathering/identification	*	***	**	
Scheduling/timescales			**	***
Identifying/sequencing activities	*		***	*
Financial projections/variations	*	*	**	***
Monitoring/reporting		*	**	***
Problem diagnosis/solutions	**	***	**	*
Non-scheduled/non-sequential overview	**	***		
Communication/presentation format		*	*	***

**Key:** \*\*\* = Main tool; \*\* = Optional/secondary tool; \* = Occasional tool

**Table 2: Hypothetical Project/Task List**

Task	Earliest Start	Length/Duration	Type	Dependent on:
1	Week 0	1 week	Sequential	-
2	Week 1	1 week	Parallel	Activity 1
3	Week 2	2 weeks	Parallel	Activity 1
4	Week 3	1 week	Parallel	Activity 2
5	Week 3	1 week	Parallel	Activity 3
6	Week 4	2 weeks	Sequential	Activity 1, 4, 5
7	Week 6	1 week	Sequential	6

## **Conclusion**

Basic economics sensation has made many generations of people to come to terms with fact that resources are scarce and precious and that they should be expended judiciously in well thought-out, benefit – promising and fortune – enhancing programmes and projects for the transformation of institutions and nations. A *South London Mum (SLM)* once confessed to the afore-referred renowned economist that she felt guilty for paying \$200 to co-host a birthday party for her five-year-old with another mother and getting at about \$300 of gifts in return. That as a guest, on account of the above experience, she does not like such parties especially as somebody (the guest) would bring two gifts only to end up getting one party bag in return from the organizer. To help address and fix that feeling, the renowned economist replied her saying:

Congratulations on your move to more efficient birthday parties, it seems to be a happy accident, since you have failed to realize the true scarce resource here. It is not doggy bags or disposable toys, but time. By hosting a joint party with a friend, you are saving time for parents who would have had to attend two such parties in quick succession. The children may feel hard done by, but then they may not. Even five-year-olds do not want a party everyday (Harford, 2009:124-125).

Time indeed is of the essence institutional/national transformation. The economist's congratulatory disposition in the above consultative case may be strategically extended to well-meaning analysts and managers who by the convictions and submissions in this work have moved to be more efficient in dispensing and deploying the corporate/national wealth. For the efficient management of transitional and transformational time, the main analytical tools of project management for consideration include the Gantt Chart (GC), Critical Path Analysts (CPA), and Programme Evaluation and Review

Technique (PERT). The synergy of time and money is contracted and sustained where standardized long-term investment (capital budgeting) tools are made to complement the project management process. These should take the form of:

- Discounted Initial Capital recovery tenor (ICRT) analysis,
- Discounted return on stakeholders equity (ROSE ) analysis,
- Discounted financial outflow-inflow ratio (FOIR) analysis, and
- Discounted financial yield proprietary index (FYPI) analysis.

Consequently, the projects profile *match-in* and *mark-out* benchmarks underscore preference for short ICRT, attractive ROSE, above-unity FOIR, and hurdle-exceeding FYPI. These conceptual analytical submissions constitute the quintessential professional power lines for a brighter light on Nigeria's transformational super highway.

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