Impact Assessment and Evaluation: Appraisal Tools in Rural Sociology and Agricultural Extension for Rural Development.

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Abstract

This study is a fundamental overview of impact assessment and evaluation in agricultural and rural development projects. It expounded the term impact; paying particular attention to the fact that the impact could be positive or negative. It maintained that while impact assessment is akin to impact evaluation, they have striking differences in that the former is "before versus after study", while the latter is "with versus without study". It categorically listed some key impact indicators that could be considered for impact studies; however, it maintained that every impact indicator(s) to be considered be measurable. What's more, the paper posits that the Change Theory suffices for explaining change; the crux of impact studies. The study believes that often, program administrators and policy makers have centered on controlling and measuring the inputs and direct outputs of programs rather than on assessing whether programs have accomplished their intended purpose, chiefly improving well-being. Conclusively, lessons drawn from the review show that impact assessment and evaluation are necessity for, and must be integrated into every project management process.

Keywords: Assessment, Change, Evaluation, Impact and Intervention

Introduction

Improved agricultural technologies are persistently being given in the course of intervention programs and projects, driving development and change; for the most part, agricultural related intervention is a significant force in increasing agricultural productivity and income in the long-term (Shideed and Mohammed, 2005). Intervention programs and concomitant projects are vital source of productivity gains when introduced to developing economies; ideally, they increase output from the same inputs, or maintain an identical output from reduced inputs. Key policy issues of agriculture and rural development programs in a number of developing countries are related to sustainable agricultural and rural development and enduring step up of living standard of the rural population (Food and Agricultural Organization of the United Nations (FAO), 2009). As such there is a budding demand for provable substantiation of the consequences and impacts of

development programs. What is more, in recent times, development organizations have faced external demands to become extra efficient, and several of them have launched plans for result orientation.

Apparent from technology adoption surveys, it is unmistakable that adoption of agricultural innovation has contributed to the wellbeing of farmers in many facets (Olaniyan, 1998, Diagne, 2006, Asfaw and Shiferaw, 2010, and Challa, 2013). Recently, survey by Adegbola, Wegh, Ikwuba and Nwafor (2019) on adoption of manual screw press for garri production in Nigeria lays credence to this assertion. Consequently, there is need to dissect the term impact assessment and impact evaluation for the reason that they are integral parts of resonating themes in, and veritable tools for appraisal in rural development, and agricultural related interventions.

Conceptual Clarification

Impact Assessment

There is still no universally accepted set of rules among development practitioners defining "impact", no common method for measuring whatsoever it is, and unending dispute over how to interpret whatever results from impact assessment studies (Jiggins, 1995). Impacts are the ultimate effects of a project; it is "any effect of the service (or of an event or initiative) on an individual or group" (Fitz-Gibbon, 1996). Impact is the peculiarity which is brought about by a project, which may not be there exclusive of the project; it is one and the same as the direct causal effect of a project, program, or policy on an outcome of interest.

The fundamental element of impact is change: the ways in which individuals, groups, communities or organizations are changed by means of programs or interventions; impact is the results of the program or intervention. From the foregoing, it is apt to describe the impact as: any effect of a program or intervention on an individual, group or community. An impact may be wide ranging, affecting many stakeholders, or may be more specific, significantly having an impact on only one group of stakeholders, and can come about on levels from subtle to having a powerful effect. What's more, the impact could be reversible or irreversible, cumulative or non-cumulative. Basically, main levels at which a program, project, or an intervention can have an impact are: change in society and economy; change in quality of life; change in specific behavior; change in perception and confidence; and change in knowledge and skills (Global Libraries, 2015).

Impact assessment (assessment of impact) is the process of recognizing the future consequences of a present or proposed action. It is the practice of identifying and measuring future consequences of a current or proposed project. Impact assessment is carried out to assess the impact of projects, policies and programs; especially tracking results in agriculture and rural development. It is used to guarantee that projects, programs and policies are economically practical, socially and environmentally sustainable. Impact

assessment is a means of measuring the effectiveness of project activities by judging the consequence of changes brought about by those activities. Such changes could be positive or negative, intended or unintended, direct or indirect long-term results in terms of economic, social, cultural, and environmental produced by project activities.

Impact assessment is a planning tool which is used together with project feasibility study to make certain that a project plan is the best it can be economically and otherwise. It is an essential component of manifold resource development planning and feasibility study of the project for the reason that it aids decision making, and provides a basis for development and management measures to mitigate negative impacts of projects, especially projects that have a semblance to rural development. Impact assessment shows: whether projects are being conducted effectively, so as to learn from and get better project activities; whether the program is making a difference to people, groups, organizations or communities; and lastly to use that evidence of impact to advocate for continued support and/or funding from relevant stakeholders.

According to Khan (2016), the objectives of impact assessment include, but are not limited to: properly mobilizing resources for achievement of overall goal ; rectifying the strategies, activities and management styles to enhance the effectiveness of project in terms of overall goal; learning to understand how efforts impact on local communities in order to improve the effectiveness of interventions; making a significant difference in people's lives; demonstrating success, to justify funds received and to solicit further funding; evaluating the effectiveness of project structures, activities and management systems to achieve the overall goal; and assessing the relevance of strategies to overall goal.

Impact assessment is used, and is useful, both for addressing broad questions in development and for comparative questions, both ex ante and ex post (Jiggins, 1995). Ex ante assessment is an essential tool for effectual management. It supports the groundwork for new or renewed developmental interventions or programs. Its primary purpose is to gather information and carry out analysis that can help identify objectives, ensure that these objectives can be met, that the instrument used are cost-effective and that reliable later assessment will be possible. The ex ante assessment allows a proper appreciation of whether the proposed level of funding and resources are in harmony with the expected results and impact; hence responsibility for results and impacts is basically reliant on the quality of the groundwork of the intervention at its outset. Ex ante assessment can take place at different levels of activity, can address a policy, a program or project; it is obligatory for new, renewed programs, and other actions with resource implication.

For ex post assessments, practical peculiarities naturally are made between: the effectiveness of resource utilization, which is quite simple to spot and assess; instant to medium-term effects, which are not regularly easy to identify, gauge, and appraise; and longer period impacts. Nonetheless, experience has led to the supposition that impacts are almost not possible to recognize, measure, or appraise to any agreeable degree (Patton

1986) for the reason that external influences and multifarious interactive effects carry out an increasingly bigger role ultimately. Nevertheless, the attempt to assess impacts goes on continually as a means, however deficient, of maintaining answerability, and to justify funding (Collinson & Tollens, 1994).

A more realistic division is every so often made between: effectiveness, as a gauge of fitness for function; effectiveness, as a gauge of whether the approach, technology, or project does in fact do the work it was intended to do; and effectiveness, as a measure of whether the activity is in fact the right thing to be doing to accomplish stated objectives. Development funding organizations in particular allocate substantial assets to addressing these three questions, occasionally by means of special agencies partially as a way of assuring, however ineffectually, public examination of the development lending process and financial answerability. However, bureaucratic lethargy, political convenience, and excessive dependence on consultants for project and program execution also may add to the tardiness of alteration in institutional behaviors which may perhaps lead to larger development competence, efficiency or effectiveness (Jiggins 1995).

Whatever the intention or crux of ex *post* assessments, broad procedural problems continue to exist. For example, time and again baseline studies are scarce or are out rightly not available for juxtaposition or no time frame or measure has been specified from beginning for the realization of the stated objective(s). In cases where baseline information is available, however, questions are still being raised as to the soundness of the selected starting position and the limitations drawn around the sets of information. The balance between ex ante and ex post assessment has tended to shift over time. For example, there has been a growing focus on methods for ex ante assessment as development funding becomes more scarce, partly in order to direct resource allocation more and to calculate approximately returns to invest more deeply (Jiggins, 1995).

The capability to appraise and demonstrate outcomes and impacts relies on the use of indicators that are based on reliable data, and on the capacity to systematically collect and analyze that information. An indicator is information that helps to monitor progress and to report on objectives. Indicators can be quantitative or qualitative**,** should be easy to monitor and allow credible reporting**,** and should be reliable enough to trigger more detailed evaluation and decisions on follow-up when indicating that objectives cannot be met. It should highlight the most essential aspects of the changes that the program is aiming to achieve, and should help to focus monitoring on those aspects of resource consumption, implementation, outputs and results that are most important to follow-up. Often, failings in the assessment of interventions or project are traced back to mostly the lack of clearly identifiable "trackable" indicators.

Measuring the impact of a development program or project involves the application of an analytic framework in which indicators are dichotomized and classified as performance indicators and results indicators. Performance indicators are used to gauge the effective use of inputs to generate outputs, and to evaluate the actual effects of the inputs

to their expected effects. On the other hand, results indicators are generally classified as outcomes and impacts. That is, people's behavior (often through their response to incentives) that result from their access and or exposure to project outputs.

Indicators according to Khan (2016), include but are not limited to the overall quality of life, self-confidence, self-esteem, independence, potential, capacity to make claims and demands; resilience, peace and security, law and order, declining levels of sexual violence, human rights abuses, destruction of lives and property, women's ownership and control of assets, mobility, access to income-generation activities, and childcare. It also includes, power in household decision making, household division of labor, the ability to control violence, social relations, social capital, unity, changed community norms, food security and production, infrastructure including particularly access to water and sanitation facilities, health; education, literacy and other skills and knowledge, income, expenditure, assets, and access to land and credit. Note, however, not only are there large numbers of indicators, but also, the data that corroborate them, usually cannot be secured with the needed accuracy or regularity. Nonetheless, when choosing indicators, we would want to ensure that they are measurable (FAO, 2009).

Impact Evaluation

Evaluation is imperative to elucidate the impact as it assesses the impact as superlative as possible. Impact evaluations (evaluation of impact) provide information about the impacts produced by an intervention. It can be undertaken for a program or a policy, or upstream work – such as capacity building, policy advocacy and support for an enabling environment (Global Libraries, 2015). This transcends looking only at goals and objectives to also examine unintended impacts. Impact evaluation establishes the causal effect of a project, program or policy on one or several outcome(s). It requires a counterfactual of what those outcomes would have been in the absence of the intervention (Asian Development Bank, 2006). Counterfactual analysis is also called "with versus without analysis", and it is not the same as "before versus after analysis" (the core difference between impact assessment and impact evaluation), as the situation before may differ in aspects other than the intervention.

For example, an impact evaluation might assess the impact of a development project or program that aims to improve food security through the provision of post-harvest technologies to farmers. For this purpose, it analyses how much lower the incidence of hunger is compared to what it would have been without the provision of postharvest technologies to farmers. The most common counterfactual when conducting an impact evaluation is a comparison group. The difference in outcomes between the recipients of the intervention (the treatment group) and the comparison group is a single difference measure of impact. Impact evaluations thus show whether measurable changes in people's lives can be attributed to a particular development project or program.

Impact evaluation is not just about quantifying the effect of a project or program on big artifice development goals that are only indirectly related to a program. Rather the goal of impact evaluations is to improve aid effectiveness by assessing the effects that can be attributed to a particular development project or program (Switzerland Agency for Development and Cooperation, 2013). Results from impact evaluation surveys can be used by international donors and partners at the international, local or country level to guide decisions, and for advocacy.

A duly planned impact evaluation can answer the question of whether or not a program, is effective and hence aid in decisions about scaling up or otherwise. It can also answer questions about program design, which aspect works and which aspect don't, and so provide policy-relevant information for redesign and the design of upcoming programs. Impact evaluation tells why and how a program works, not just if it does; being able to establish if development assistance is working or not, executors of intervention or projects become more answerable to donors.

Impact evaluation is either formative or summative. Formative impact evaluations concentrate on processes, and can be used if an intervention is currently happening. Summative impact evaluations are undertaken to inform decisions about whether to go on with, suspend, copy or improve on an intervention. In principle, a summative impact evaluation not only produces findings about 'what works' but also provides information about what is required to make the intervention work for diverse groups in dissimilar settings, which can then be used to inform decisions (Rogers, 2014). Impact evaluation analyses the (positive or negative, intended or unintended) impact of a project, program, or policy on the target population, and quantifies how large that impact is.

According to Rogers (2014) impact evaluation is part of a broader agenda of evidence-based policy making. It is a systematic causation or attribution study. It answers questions such as: 'how much better off are beneficiaries as a result of the intervention?' or 'does the intervention have a different impact on different groups?', 'did the intervention cause the impact?' and 'what would have happened if the intervention had not taken place?'. Impact evaluation is part of an integrated monitoring, evaluation and research plan that generates and makes available evidence to inform decisions. It is pertinent nonetheless to ensure that planning for an impact evaluation begins early, allowing for the collection of baseline data and the formation of a control group or comparison group or the use of other relevant strategies to examine causal ascription. However, an impact evaluation should only be undertaken when its intended use can be plainly identified and when it is likely to be able to turn out useful findings, taking into account the availability of resources and the timing of decisions about the program or policy under investigation. Putting this into perspective, a formal "evaluability" assessment may first need to be conducted to assess these aspects (Better Evaluation, 2012).

Theoretical Framework

The Theory of Change

Auguste Comte, Herbert Spencer, Godfrey Wilson, Henry Tajfel and C. Wright Mills were the earliest protagonists of the change theory (Form & Wilterdink, 1998). The elemental constituent of impact is a change; hence the theory in the simplest sense is any change in social relations. However, division is sometimes made between the processes of change within the social structure, which serve to sustain the structure, and processes that modify the structure. The theory helps in structuring the thinking of all concerned in processes of development. It is central to, and also an integral part of impact evaluation study (Myles, 2018). It describes all building blocks required to bring about a long term goal. The change theory describes the process of social change by making unequivocal the perception of the current state of affairs, its underlying causes, the long term change desired and the things that need adjustment for change to come about. Most especially, comprehensible expression of change for agricultural research and development concepts and initiatives is imperative for the reason that it tells the thinking that guides the intervention and action as well as the course of change within the system.

The change theory presents a way to express the assumptions that explain the steps that culminate in long term goal of interest. It expounds how activities are understood to create series of results that contribute to achieving the intended impact. The change theory suffices for whichever kinds of intervention, principally where the intervention activities can be identified and planned for ahead of time. With the theory, programs are often easier to sustain, bring to scale, and evaluated, since each step from the conception of ideas all the way through to the outcomes it aims for, to resource requirement are plainly defined in the theory (Rogers, 2014).

The theory of change is a portrayal of how an intervention is thought to bring the preferred results. It explains the underlying reason of how and why a particular project, program, or policy will achieve its wished-for outcomes. It is a major foundation of most impact evaluation studies because of its underpinning principle that centers on the cause-and-effect mantra. The theory is one among the many steps in the evaluation design and shows the chain of events leading to outcomes. It looks at the circumstances and assumptions required for change to take place, makes unequivocal the underlying reason behind a developmental project, and chart developmental interventions along common sensical causal path. Furthermore, theory of change sheds light on, and perks up program design. Fundamentally, for developmental projects, the change theory helps straighten out the inputs and actions that go into delivering developmental projects, their preferred outputs, and outcomes as it affects direct beneficiaries.

A well articulated theory of change helps to, among others, build a common understanding and promote collective thinking with regards to the process needed to achieve desired result, identify potential weakness or gaps in our collective thinking, such

as certain hypotheses or assumption that need to be tested, refined or discarded; develop sound program strategies that are constructed from logically straightforward theories of change and engage in better learning that brings together theory and action (Adekunle & Fatunbi, 2014). These suggest that having the theory in place creates an environment for more adaptable, repeated and non-linear approach to the way we think so that actions can be more logical, dexterous and useful. When required evidence may be assembled to reframe the thinking and actions, the theory is often visualized with the pathway of change diagram which show how each outcome is tied to an intervention.

Development practitioners occasionally observe historical data to better comprehend contemporary changes and effect of such on a group or the society at large. For this reason, a theory of social change has helped development practitioners to understand, and compare what is already there before and after intervention projects. With these playing out, such projects that have relevance to rural development are fast becoming the foremost medium for premeditated social change used by developmental partners and governments, and they have turned out to be an incontestable managing framework for social development practice. Fashioned to help control and monitor the flow of resources, impact evaluation has helped to manage just about every facet of development practice, instilling a default paradigm of practice directly associated with the typical business philosophy. For example, a basic tenet of the theory is that if a rural development project is good enough, such projects will succeed. For developmental project also, change is premised on the direction of simple cause and effect philosophy, which assumes that project interventions themselves initiate the change stimulus, and that preferred outcomes and impact results can be coded into a profound action plan.

Furthermore, the theory of social change holds that change cannot be manufactured but can only be refined, and that development in all its facets is a natural, inherent, ethereal and multifarious process. That is akin to saying that at any state of affairs, people are already developing either negatively or positively, consciously or unconsciously. However, the fact that there will and capability to develop may be stalled or constrained somehow, points to a chief purpose why development practitioners exist, that is, to assist people to more willfully free themselves of encumbrances to their own development, to take increasing and intense accountability for issues that have a bearing on their existence and wellbeing.

When planning for an impact evaluation however, the theory of change should be reviewed and revised as necessary. For instance, the existing theory of change may have gaps or unfeasible assumptions that ought to be revised. It can also be obsolete if the program has evolved since the theory of change was developed. Impact evaluation can be improved by using the theory of change to identify germane variables and potentially relevant contextual factors that should be included in data collection and spot intermediate outcomes that can be used as markers of success, and in setups where the impacts of interest will occur after the evaluation time frame. The change theory will help identify aspects of implementation that should be examined to see if the failure to achieve intended impacts

is due to a failure to implement the intervention effectively. Furthermore, the change theory will help guide data analysis, and make available a framework for reporting findings.

Conclusion

The study has examined impact assessment and evaluation as appraisal tools in rural sociology and agricultural extension for rural development. Impact assessment and evaluation is first and foremost tools for project management, a key element in understanding and effectively tracking and documenting the results of development interventions. For the most part, international donors see impact assessment as an assurance to program management that, from the commencement, includes assessment and adjustment into planning and execution of programs that improve welfare. Development programs, interventions, and policies are typically designed to change outcomes; however, whether or not these changes are truly realized is a fundamental public strategy issue. More commonly, program managers and policy makers have centered on controlling and measuring the inputs and immediate outputs of programs rather than on assessing whether programs have accomplished their intended purposes, chiefly improving well-being. Additionally, impact of developmental projects as it were should not be left to complicated statistics, models, or sophisticated mathematical formulae, but rather such realities are seen directly in the welfare, and from the lenses and the experiences of those projects purportedly directly affect.

Among the lessons drawn from this review is that activities of impact assessment and impact evaluation have become ingrained into the recognized bureaucratic necessities of aid givers and aid receivers and as such, they are necessities for, and must be integrated into every project management process. This is because they are apparatuses for project management and not a duty forced from the outside, with a staff of executing organizations perfunctorily completing forms and project managers seeing their job simply as the gathering of data for making progress reports for development partners and agencies. Furthermore, a sine qua non lesson drawn is that precedence needs to be given to baseline data collection and analysis early in a project life, paying attention to indicators that allow counterfactual analysis of project outcomes, delays in conducting, or not conducting baseline surveys and impact assessment are weaknesses often encountered during project implementation.

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