

The Use of Mixed Methodology To Enhance Monitoring Process of Regional Development Strategies

Marwa Mostafa Ahmad

Lecturer, Department of Architectural & Urban Planning, Faculty of Engineering, Port Said University,
Port Said, Egypt

ABSTRACT: Regional planners and most of the researches in the field of regional development usually use one kind of inquiry methodologies that may be classified into two distinguished kinds: qualitative and quantitative. Those who use quantitative and trial methods to examine hypotheses, normally decreases the entire to less likely elements so as to ease the breakdown analysis. Phenomenological analysis mostly uses qualitative and realistic methods to imaginatively and generally understands human experience in contextual and specific sceneries. This approach is concerned with understanding and explaining a phenomenon, rather than explore the external reasons or basic rules that form it. Qualitative and quantitative methodologies are not contradictory or conflicting; rather they focus on different angels of the same phenomenon. Occasionally, these angels may seem to be harmonized: but even in these occurrences, where they seemingly diverge, the fundamental unity may become noticeable on deeper investigation. The use of multiple categories of data gathering in the field of forming regional development strategies is simply a mixture of the two methodologies in studying the same phenomenon. The hypothesis in this study rely on the idea that the weaknesses in each single method will be compensated by the counter-balancing strengths of another. The theoretical and practical barriers faced when employing such a technique will be discussed via a simple structure starting by recognising the methodology followed by a description and validation of the typical methodologies used in the field of regional development and, finally, a simple example of a real case study that needs to assessing complex and multi-faceted elements of its proposed strategy; this is to proof that the proposed technique offers a balanced, holistic picture than employing a single individual method.

KEYWORDS: Regional Planning, Strategy Assessment, Evaluation Process, Assessment Methods.

I. INTRODUCTION

The trustworthy and effectiveness of monitoring, evaluation and research in regional planning field and regional development programmes basically depends on the capability to collect and analyse quantitative and qualitative data. Monitoring and evaluation of strategies set for regional development, requires assessments, baseline inspections and state analyses. [1] They are all located within a plan cycle and needed high-quality data to apprise evidence-based decision-making and programmatic knowledge. To accomplish this, it is valuable to consider it on research performance, which in a monitoring, evaluation, liability and learning context refers to the methodological investigation of programmes. Although this paper targets monitoring and evaluation specialists- mostly in the field of regional planning and regional development decision makers, it is framed by the paper aim in recognizing the knowledge of using different data collection techniques in regional development field.

More precisely, the paper will discourse the procedure of identifying research questions and choosing suitable methodologies, considerate the variance between quantitative and qualitative data, and allied benefits and barriers. The paper will give an outline of communal approaches and data analysis techniques for both quantitative and qualitative study and finally discourse the clarification of results using multiple data sources. The scope of this paper is limited to

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concepts that should enhance the regional development programmes by proposing and justifying the appropriate methodology of data collection techniques for each case individually.

II. AIMS

This paper aims to frame the used techniques in data collection in the field of regional planning and development. This will be done through:

1. Recognizing, identifying and validating quantitative and qualitative methods, their aspects, influence of use on targeted aims, field of application, obstacle and benefits.
2. Set recommendations for the use of each method based on the given cases.

III. METHODOLOGY

In order to achieve these aims, a research methodology and structure were set so that regional planners, strategies' makers and practitioners in the field should be able to:

1. Formulate research questions and associate them to study designs.
2. Recognize variances between quantitative and qualitative enquiry and their use
3. Be acquainted with different methodologies of accumulating and analysing qualitative and quantitative data and basic concepts of probability sampling.
4. Formulate evidence-based conclusions and recommendations for special cases in the field.

These steps should give a better understanding of the data collection methods and tools that are applicable within the field of regional development and its strategic plans' formulation. For instance, reporting on the compulsory international income/ outcome regional, environmental and sustainable indicators has specific tools and methods for data collection- some qualitative and some quantitative.

IV. LITERATURE REVIEW

Sayer [2] advises that the term 'method' "proposes a cautiously considered means of approaching the real-world so as to we may understand it better." Notions used by the researcher significantly form concepts about the applicable methods for detecting and generating practical data about phenomena. Sayer enlarged his identification of method to include both experiential study and theorizing ones which seems to be very useful as it lights the ways for the interpretation of techniques of data collection and analysis, to be formed as how we hypothesize the world around us. This is important for regional development and regional planning strategies researches as it points to the strain of using one type of research methodologies that may be incompatible with the contexts of subject.

Moreover, Denzin [3] has identified several types of mixed methodologies to collect trustworthy data. One type involves the conjunction of multiple data sources that he identified it by the term triangulation. A third triangulation procedure is an investigation process, in which multiple sources of data are involved in studying the same phenomenon, which has also been referred to as cross-examination. [4] Other processes can be applied to enhance the understanding and/or the trustworthiness of a study. These comprise research or investigation review, peer interrogation, and the seeking of undesirable cases in the field that might disconfirm interpretations.

The core of mixed methods researches can be distinguished by the level of prioritization of one form of data over the other, by the combination of data forms in the research procedure (such as during the assembly or analysis phases), and by the timing of data assembly, such as if the quantitative and qualitative phases are taking place simultaneously or consecutively, and if so, in what order. [5] [6] [7] Some researchers have combined several different approaches to form mixed methods classificatory techniques able to verify results and certify data sources; see for instance, Creswell, Plano Clark, Guttman, and Hanson 2003; Johnson and Onwuegbuzie 2004. [8] In brief, there is no distinct form of mixed methods design, and thus strategies as regional ones should be structured to answer its own research questions within the restraints and limitations of the study context. [9] Some researchers have designed their strategies in investigating a phenomenon on the base of the term mixed methods that intentionally combine both approaches within

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or across the research process phases. [9] They suggest that the term mixed methodologies should be used to differentiate study designs integrating qualitative and quantitative data from those that only apply one type of data.

These comprise transformative method that can modify one form of data to another (mostly qualitative to quantitative data) so that the data composed by mixed methods which can be merged. [10] The term quantitative has been created to define the procedure of changing implicit qualitative data into objective data that can be relied on. However, the term qualitative was primarily created to express the process of translating solid numbers of data into subjective understandable data. [11] Though some current studies have pointed out the importance of utilizing methodologies that integrates qualitative and quantitative data, there is still a need for systematize a process on how to initiate such mix.

V. MIXED METHODOLOGIES

A. NATURE

Mixed methodology approach in collecting data is a mean of use and combine quite a few research methodologies to study the same phenomenon. It can be applied in both quantitative and qualitative researches. It is a method that adopt the right technique for having more credibility in data gathering and data analyses. Moreover, it turns out to be an alternative to traditional standards testing like reliability and validity.

B. TYPES

There are basic types of the use of mixed methodology:

- 1) Mixed methodology in data collection, involving time, space, and persons.
- 2) Mixed methodology in investigation process, which employ multiple, rather than single observers.
- 3) Mixed methodology of theories, which entails the use of more than one theoretical approach in the explanation of the phenomenon.
- 4) Mixed methodology of techniques, which involves using more than one technique and may contain of within-method or between-method strategies.
- 5) Multiple methodology, when the investigator integrates multiple observers, theoretical approaches, sources of data, and techniques in one study.

VI. ADVANTAGES & DISADVANTAGES OF MIXED METHODOLOGY

The use of both quantitative and qualitative data, investigations, theories or techniques in the same study or research program, would seem to be a valuable means to enhance the concept of validity of research [12]. Moreover, from a grounded theory viewpoint, interview data may permit new enquiry questions to be revealed that might be verified in successive quantitative research. [13] The idea of triangulation is not new. [14] But yet, reports of mixed methods research in the published research on management are rare. [12]

Quantitative approaches to research comprise solid numbers and verifiable outcomes, such as experimentations and surveys. Qualitative research is more subjective, often counting observation and interpretation of data through several ways as personal interviews. Current approaches tend to apply both qualitative and quantitative techniques in most aspects of research phases which is defined by a mixed-methodology. There are some advantages and disadvantages to this approach. [15]

A. ADVANTAGES OF USE

Mixed methodology in collecting data, especially in the field of regional planning and development has been debated for many years, however there are few examples of mixed method researches in the published literature. The hypothesis in mixed methodology process is that the weakness in each sole technique will be supported by the strengths of another. [14] Moreover, it can be seen as means of supporting the validity and trustworthiness of research, data and information it highlights. Qualitative and quantitative approach in getting the required data can be linked and crisscrossed against one another to achieve a confirmed conclusion. Subsequently, each approach can be applied individually to gain more in depth and comprehensive picture. Quantitative research characteristically discovers precise and obviously defined questions that inspect the correlation between two variables, or factors, where the second variable is a consequence of the first one. Such a question might be: 'what impact did the New Suez Canal

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development strategy have on regions economic performance?’ To examine the connection or relationship between the development strategy and economic performance, quantitative researchers will pursue to keep a level of control of the several variables that may affect the correlation between strategy elements and respondents aimlessly. Quantitative data is often met through surveys and questionnaires that are judiciously settled and organized to provide the study with numerical data able to be discovered statistically and gave results that can be spread on a wide-ranging level to some larger population.

B. DISADVANTAGES OF USE

Although the use of a single methodology has been supported by a number of authors (for example, Miles and Huberman, 2005; Eisenhardt, 2003; Yin, 2010), many of the supporting arguments are definitely pragmatic such as time constraints, the need to limit the scope of the study and so on. Disadvantages can be addressed in these three points:

1) It costs more waste time. 2) it is expensive. 3) some theorists claimed that some methodologies are unacceptable from their theoretical perspective.

VII. STRENGTHENING REGIONAL DEVELOPING STRATEGIES: USING MIXED METHODOLOGY TO ENHANCE MONITORING AND EVALUATION SYSTEMS

Regional planning and development strategies, when they come to application phase, mostly never implemented exactly as planned and there are often important variations that control and deviate the aimed targets. Consequently, if the analysis resulted in no statistically significant differences between the alteration in indicators of aimed outcomes/impacts between the strategy elements and real-life data, the used evaluation technique will not be able to differentiate between two alternative. This situation would lead to one of two states:

- The strategy -with its different elements- was implemented relatively as planned, so the absence or the lack of statistical outcome differences would indicate that there are weaknesses in strategy logic and design (at least for one or more particular elements) and the preliminary recommendation would be that the strategy should not be repeated or at least not till it has been reformed (alternative policy recommendation A in figure 1).
- There were substantial difficulties or deviations through strategy implementation phases, so it was not conceivable to examine the logic of the strategy design. Thus, the preliminary recommendation might be that another experimental strategy should be designed with more consideration to implementation (alternative policy recommendation B in figure 1).

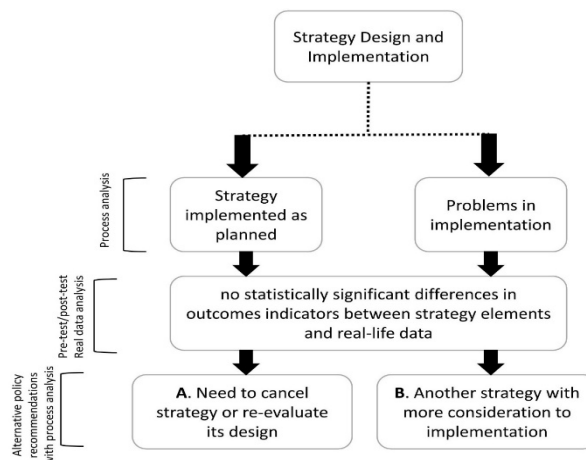


Figure 1. Alternative policy recommendations when pre-evaluation-post-evaluation of real data find no statistically significant differences in outcome indicators

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A weakness of several strategy evaluation designs is that they use a pre-test/post-test real data design that only assembles data at the start and end of the strategy and does not inspect what occurred during the procedure of strategy implementation and how this would have influenced outcomes. Accordingly, as shown in figure 1, these plans are not able to differentiate between the alternative of theoretical (pre-test) failure and implementation failure (post-test). Mixed methodology approach, by combining statistical analysis (quantitative) with techniques for monitoring implementation (qualitative), can examine both hypotheses and hence significantly improve the operational and policy effectiveness of the evaluation process.

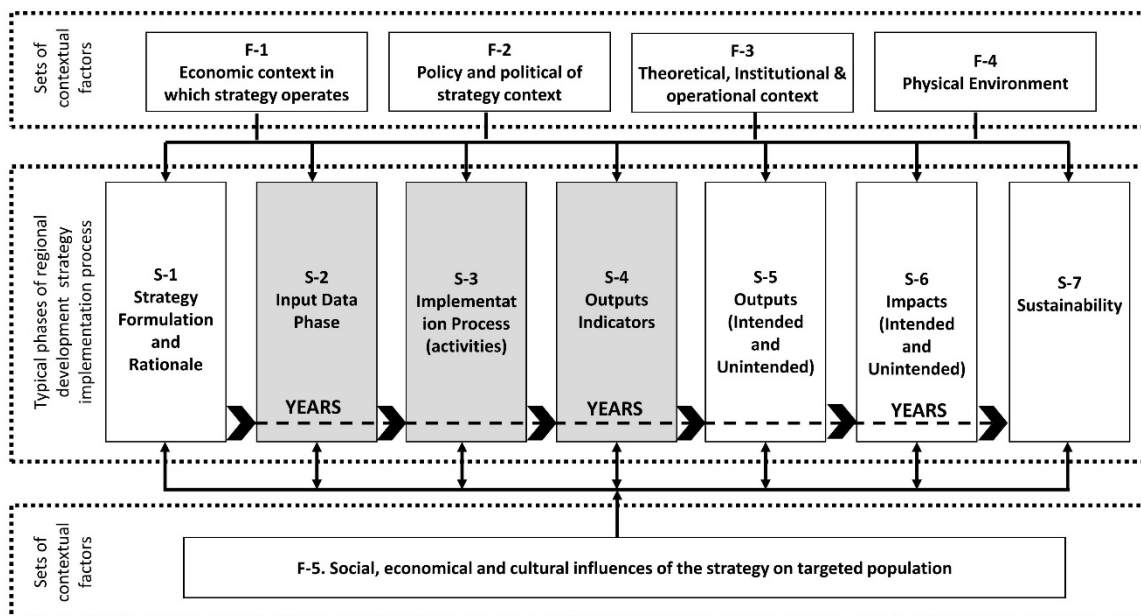


Figure 2. Strategy contextual factors and process analysis

Figure 2 represents a stylized model of an existing strategy that is still in the process of application. The strategy took place in action in 2014 in Egypt and named; “New Suez Canal Development Strategy”. The model in figure 2 offers an outline for assessing both the value of strategy implementation and the level of compliance to the original operation plan and contextual factors that has been proposed by the strategy itself. Steps S-1 through S-7 indicate the typical phases of the strategy implementation process, while boxes F-1 through F-5 categorize five groups of contextual factors such as the local, regional and national economy; the policy and political context; the theoretical, institutional and operational context; the physical environment (micro climate, hazards of floods and soil erosion etc.); and the social, economic and cultural influences of the strategy on targeted populations that can disturb operational processes and predicted impacts in different sites.

Though some related factors can be assessed quantitatively (for instance, percentage fluctuations in indicators as unemployment), others will typically be assessed qualitatively (for instance, assessing if the local political context is caring of, unbiased or conflicting to the strategy; the number and the level of performance of local agencies involved in strategy implementation). The verdict whether to use quantitative and/or qualitative indicators will depend on data accessibility, hence, in one region opinion surveys or citizen questionnaire may offer full statistical data on the performance of involved agencies, while in another region the rating may be grounded on the view of local counsellors or the mutual views of some key informants. For large scale strategies with a longer time frame and more resources, it might be conceivable to employ local researchers to achieve an in-depth analytical study covering these factors, but more usually the ratings are always based on fast data collection. Regularly, mixed methodologies end up to apply data

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transformation techniques. [16] Hence, qualitative assessments are accumulated into variables that can be merged into regression and quantitative analyses.

If the time and resources are allowable, this can be a repeating process (Figure 3) in which investigators revisit the field to oversight in-depth analysis to clarify how the various contextual factors effect operational process and expected outcomes.

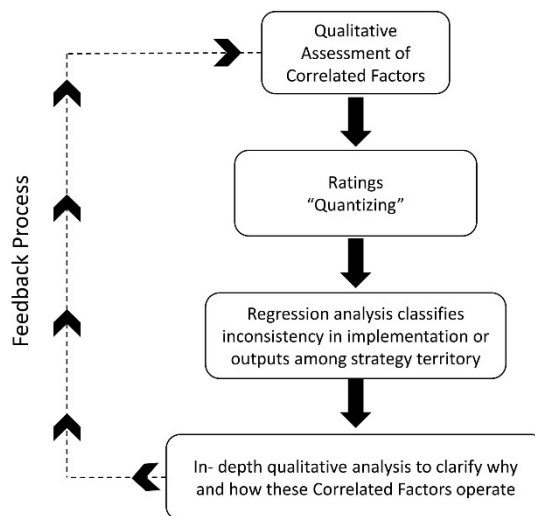


Figure 3: A loop process for applying a regression analyses to clarify how correlated factors affect strategy outcomes

Whereas contextual examination inspects the effect of external factors, process analysis examines the internal executive processes through which the strategy is implemented. [16] Process analysis mostly focuses on steps S-2 (inputs), S-3 (processes) and S-4 (outputs) at figure 2. Some of the key bases of information for process analysis are the strategy’s internal monitoring and organizational systems. Whereas - theoretically- an effective monitoring system could achieve credible information required for process analysis, in practice, monitoring systems often are considered only a narrow liability function that only produce a limited set of quantitative indicators. [2] Often (however not constantly), the value of the information is poor and relies basically on self-reporting, where the assessor mostly has a motivation to evade glitches by checking the satisfactory boxes. However, even when the quality of data is fairly acceptable, most of monitoring systems count on on quantitative indicators with slight consideration for the quality of affordable service, how effectually recipients are participating in planning and management, which sectors of strategy aimed population do and do not benefit, or the views of beneficiaries. A mutual sample of the deficiency in information on beneficiary participation is the fact that many monitoring systems offer slight or no information on the ratio between male and female contribution or access to services, or similar information for employed and unemployed numbers or even ethnic groups.

VIII. USING MIXED METHODOLOGY TO ENHANCE MONITORING AND EVALUATION SYSTEMS

The mixed methodology approach to process analysis will depend on, and attempt to reinforce, monitoring and other managerial reporting systems while accompanying these with quantitative and qualitative techniques. These may include: participant observation; key informant interviews; focus groups; other participatory group interview techniques; selecting a panel of experts and executives who are deeply involved throughout the lifecycle of strategy application; report card surveys or questionnaires (in which a huge and randomly certain sample of aimed population are interviewed about their involvements with, and views about, community service agencies working on applying strategy). The information from these sources should be used to assess how the strategy was executed with the plan as stated in the operational state and other planning forms.

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The outcomes of the analysis can be employed for three equally balanced goals. Firstly; providing feedback to strategy decision and policymakers to reinforce strategy execution phases and to recognize any groups or sectors that are not fully benefiting. Secondly, contributing to the evaluation process by spotlight on deficiencies and failed items to accomplish the aimed outcomes which illuminate the weaknesses points in the strategy design or glitches during execution. Finally; applying combined process methodology and contextual analysis can offer a trustworthy guideline on potentiality of strategy replicability.

Though, the analysis does not certify endorsements on how the strategy would be likely successful with different contexts (socially, economically, environmentally, etc.). The combination of contextual and process analysis has a limit to offer some general guidelines on how the strategy is likely to perform in diverse settings and with varied population groups.

- Suez Canal Region Development Strategy: Applying the mixed methodology

By applying the model on the Egyptian Plan for developing Suez Canal Region after achieving the New Suez Canal project; The policy and mission was set as follows:

- a) Policy: To achieve a well- balanced region that integrates urban, economic and environmental aspects into a proposed sustainable model capable of leading Egypt towards global competitiveness
- b) Mission: Transform Suez Canal Region into a sustainable global competitive region capable of participating in economic, urban development and social justice.

To achieve the policy and implement the mission, a multi factors strategy was set as illustrated in figure 4:

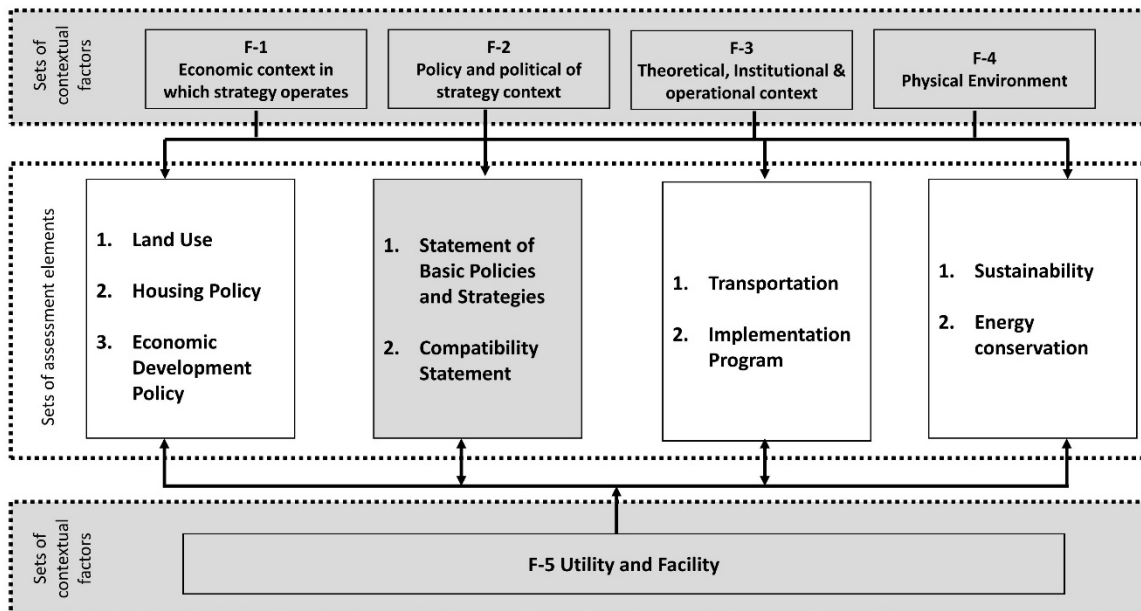


Figure 4: New Suez Canal Developing Strategy: five contextual factors and nine assessment elements

The strategy consists of five contextual factors as explained in figure 2. Each one of them contained a number of assessment indicators for the sake of evaluation. [17] The second factor “Policy and political strategy context” was assessed by the mean of two elements:

- a) Statement of Basic Policies and Strategies which divided into some indicators set in a qualitative manner [17]:
 - o The policy express a clearly articulated statement
 - o The policy express a clearly articulated vision

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- The policy express a clearly articulated mission
- The language used is directive ('must' or 'shall') not suggested ('may' or 'encourage')
- Organization-level document prescribes acceptable methods or behaviors
- The policy can be sub-divided into effective strategies
- The strategy includes a set of guiding principles for growth
- The strategy can be transformed into a set of action plans
- Flexibility of strategy
- Full resource utilization
- Coping with threats
- Effectiveness regarding available expertise, context and financial resources

The second factor was:

- b) Compatibility Statement which also divided into some assessment indicators set in a qualitative manner [17]:
- Does the strategy include an assessment of the impacts that growth and development in adjacent regions may have on the region?
 - Does the strategy an assessment of how its plan for growth and development may affect adjoining regions?
 - Does the strategy shared resources that require coordinated planning?
 - Does the strategy identify cost estimates and funding opportunities?
 - Does the strategy identify lead agency or organization, and potential partners?

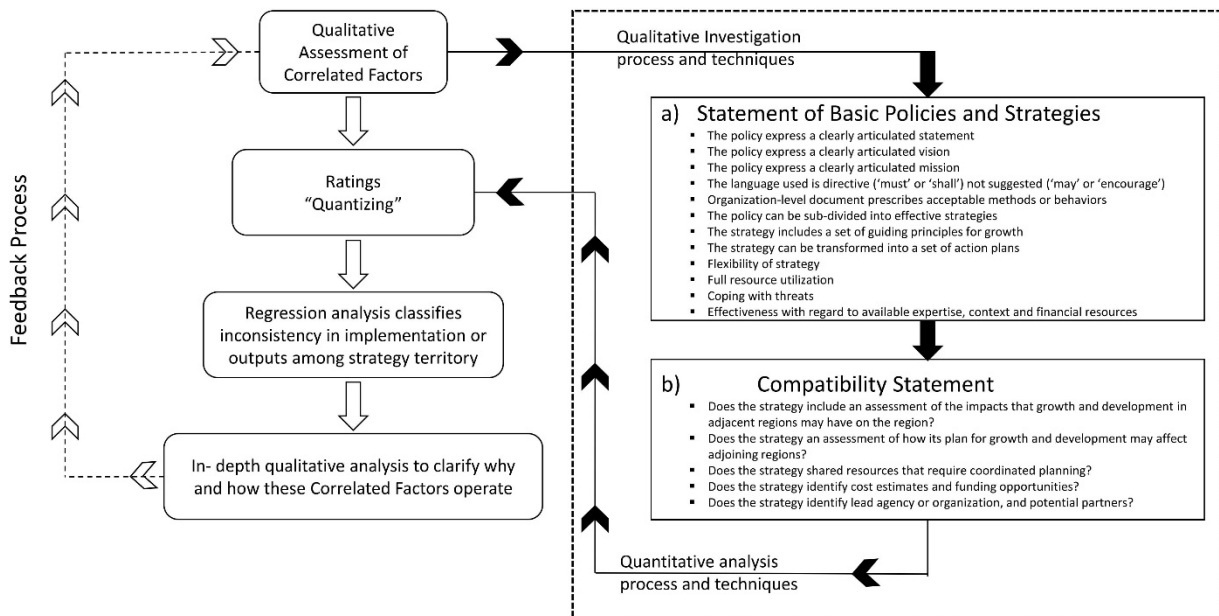


Figure 5: applying “Loop Model” on qualitative factors of *New Suez Canal* development strategy

A common criticism of qualitative methods is that they use limited and often non-representative samples. Mixed methodologies approaches propose some techniques for responding to these apprehensions. For instance, even if it is anticipated (for whatever reasons) to use limited groups as samples, investigators can apply firmly and highly strategic choices in selecting those samples. Selecting a small number of experts that are significantly different in specialization within the field of regional development, decision makers and strategies’ evaluators, can give qualitative investigator a rigours basis of his assessment. Qualitative methodologies sampling has an excessive influence on reinforcing and interpreting quantitative data. A well designed mixed methodology of data collection and analysis strategy allows a

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series of repetitions loops whereby statistical results can be fed back to the qualitative researchers who then can create supplementary hypotheses or indicators that can be discovered statistically and then make additional inquiries to be explored in the field (see figure 5).

Hence, applying a sort of quantitating process seems to be very useful to have a full picture of the given inquiry and to create more in-depth indicators or to modify the current ones. A simple spread sheet for example (as in figure 6) could be set in a quantitative scale from 1 to 5 to be assessed by different groups of experts in the field of strategy application. This groups may include experts as planners, decision makers, executives, economists, etc.

POLICY/STRATEGY EVALUATION CREDITS					
5	4	3	2	1	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Statement of Basic Policies and Strategies min. req. score 36 Points
5	4	3	2	1	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 The policy express a clearly articulated statement 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 The policy express a clearly articulated vision 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 The policy express a clearly articulated mission 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 The language used is directive ('must' or 'shall') not suggested (' 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Organization-level document prescribes acceptable methods or I 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6 The policy can be sub-devided into effective strategies 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7 The strategy includes a set of guiding principles for growth 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8 The strategy can be transformed into a set of action plans 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 9 Flexibility of strategy 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 10 Full resource utilization 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 11 Coping with threats 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 12 Effectiveness with regard to available expertise, context and fina 3
SCORE					
5	4	3	2	1	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Compatibility Statement min. req. score 11 Points
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Does the strategy include an assessment of the impacts that grow 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Does the strategy an assessment of how its plan for growth and c 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Does the strategy shared resources that require coordinated plan 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Does the strategy identify cost estimates and funding opportuniti 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Does the strategy identify lead agency or organization, and pote 1
SCORE					

Figure 6: Quantitative spreadsheet with a numerical score of selected qualitative indicators

The numerical score of assessment set by each one of the experts would join an analytical regression to verify the results and to conclude the phenomena. Based on the recorded results and the total assessment score, there are some elements would achieve the required credit points, some would not and some hardly would reach. The priority here should be considered according to the goal and comprehensibility of the policy. Indicators as those in the paradigm statements (Statement of Basic Policies and Strategies) and (Compatibility Statement) should be assessed precisely to guarantee the results and to assure the achievement of aims.

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Table 1: Qualitative Factors of the Egyptian Strategy for New Suez Canal Development Strategy (Statements of Action)

Policy/ Strategy Factors	Qualitative Indicators used
Statement of Basic Policies and Strategies	The policy express a clearly articulated statement
	The policy express a clearly articulated vision
	The policy express a clearly articulated mission
	The language used is directive ('must' or 'shall') not suggested ('may' or 'encourage')
	Organization-level document prescribes acceptable methods or behaviours
	The policy can be sub-divided into effective strategies
	The strategy includes a set of guiding principles for growth
	The strategy can be transformed into a set of action plans
	Flexibility of strategy
	Full resource utilization
	Coping with threats
Compatibility Statement	Effectiveness with regard to available expertise, context and financial resources
	Does the strategy include an assessment of the impacts that growth and development in adjacent regions may have on the region?
	Does the strategy an assessment of how its plan for growth and development may affect adjoining regions?
	Does the strategy shared resources that require coordinated planning?
	Does the strategy identify cost estimates and funding opportunities?
	Does the strategy identify lead agency or organization, and potential partners?

Hence, indicators such as found in (Statement of Basic Policies and Strategies) that includes vision, mission, policy ability to be sub-divided into effective strategies, the existence of a set of guiding principles for growth, the ability of strategy to be transformed into a set of action plans and its flexibility. Or indicators found in (Compatibility Statement) that includes an assessment of the impacts that growth and development in adjacent regions may have on the region, assessment of how its plan for growth and development may affect adjoining regions, identification of cost estimates and funding opportunities are in fact at the heart of the policy. Any deficiency that affects these indicators could affect the effectiveness of the whole policy and its subtracted strategies.

IX. CONCLUSION AND FURTHER DISCUSSION

The integration of quantitative and qualitative research methodologies can provide a broader understanding of the given phenomenon or situation. Quantitative research can pronounce degree and diffusion of change, for example, while qualitative research provides an in-depth understanding of social, political and cultural context. Mixed methodologies investigation allows triangulation findings, which can reinforce rationality, validity, trustworthy and increase the value of regional development strategies. Integrating quantitative and qualitative methods leads to a much better-off depiction. An additional benefit of combining methodologies, is that though each strategy has its own elements and indicators of measure, there are overlapping parts, which usually cause complication to the process of achieving strategy goals. To evade such a gross oddity between the anticipated outcome and the designated strategy indicators, a mix of quantitative and qualitative approaches was designed based on a "loop Model" designed by Michael Bamberger for the World Bank in 2010.

Depending upon the goals of the strategy (in this case, to give a more multi-faceted picture of developing specific region), mixed methodology approach in investigating or evaluating the process or complex phenomena is a respected and useful. However, the review of the literature highlighted that the use of mixed methodology to confirm validity has questionable theoretical foundations. For example, the benefits obtainable by the employment of mixed methodology overshadow any possible practical problems (such as time, cost, etc). Because of the practical experiences of many of

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the experts, the use of mixed methods in regional planning or regional development strategy applications has been supported with correspondences to those described in this paper.

Finally, it is obvious that there is no exclusively best approach to initiate and manage strategies, either in the natural world or in the regional development and the best that can be presented is to frame the approaches in which research could be carried out in a variety of situations with a considerable level of validation. Additionally, the aim of this paper is not to propose that a mixed methodology is the only appropriate research design for regional strategies application and evaluation, rather than it is a suitable and needed proposal. The overall choice needs, certainly, to be the most appropriate to accomplish the aims of the specific policy/ strategy. A mixed methodology, however, has a number of advantages within the field of urban planning, regional planning and development of specific regions, as well as other fields, and may be able to enhance the quality of data and anticipated results or outcomes in such ways as have been outlined. The above review highlighted a variety of issues that a regional planner researcher or decision maker is probably to face in trying to formulate a sound strategy design. Therefore, an understanding of fundamental approaches related to different types of investigation methodologies is significant, which is probably can disturb the whole process of regional development strategies life cycle, starting from the design, ending with the evaluation, passing the initiation and within processes, or can even go beyond the theoretical frame as the success of the whole project will be largely reliant on the robustness of dominated strategy.

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