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Non-Traditional Research Methods and Regional Planning Needs in Developing Countries: Is there an Ideal Methodology?.

By

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Key Words

Research Methods, Developing Countries, Critical Problems, Regional Planning Needs, Ideal Methodology, Rapid Assessment, Qualitative Comparative Analysis.

Abstract

Data and non-data limitations which complicate the methodological handling of critical regional problems in developing countries are listed. It is argued that the ideal methodology to deal with those complex issues under such limiting conditions must have the following characteristics: a) be flexible so it can be applied under different sets of constraining factors; b) be issue specific so it can be used to target specific critical problems or combination of them; c) be cost-effective so that it can be used or replicated easily according to local conditions and needs; d) be simple so it can be adapted and disseminated by local actors; e) be holistic so it can deal consistently with the local and regional conditions at the same time; and f) be based on conjunctural causation so that the complex nature of the problem is more realistically reflected; and g) be theoretically sound so as to provide a scientific rational consistent or comparable with that of traditional research methodologies.

Then, it is pointed out based on the advantages and dis-advantages of traditional and non-traditional research methodologies that each of them fails one or more of the ideal characteristics and therefore are not consistent with the ideal methodology. Finally, another non-traditional methodology is described as the ideal methodology to deal with complex regional issues in developing countries. This ideal methodology is based on combining Rapid Assessment Research(RAR) and Qualitative Comparative Research(QCR). It is concluded that with a simple research tool based on the ideal characteristics, local and regional planners and decision makers in developing countries could be able to support or reject scientifically existing official positions

on local and regional social, economic and environmental issues and discourse.

1.0) Introduction

It is well known that most problems in developing countries, social, economic, or environmental or a combination of them, are considered critical problems with recognised local and regional consequences and relevance. However, in practice the local consequences and relevance of critical problems are not as well documented as their regional or global counterparts are because mainly they are of little or no interest at the international level. For example, in the case of deforestation, global aspects are well represented in the literature as international development agents appear to be more interested in global actions (Brown and Pearce, 1994).

Critical problems in general share some of the following characteristics: a) their existence is known and their main drivers are recognised. Deforestation is a clear example (Utting 1993; Grainger 1993). Hence, critical problems may be better reflected by problem specific research methodologies as they may undermine specific or general theoretical constructs; b) their statistics are usually not kept and maintained properly or are scattered in different sources (OECD 1993) or if centralised, they may still not be accessible to most users like small NGOs, Agricultural Cooperatives and so on due to cost factors (Lopez 1995). This relates to the need of methodological cost-effectiveness and flexibility to facilitate the wide dissemination and use of research outputs on these critical problems; c) they are changing constantly and the nature of their statistics is heterogeneous (Casley and Lury 1987), which limits the applicability of traditional sampling theory and approaches to tackle critical problems; d) they need immediate attention (Lietmann 1994a), which underlines the needs of having research outputs on these critical problems as quick as possible; and e) they need ongoing monitoring programs (USDS/USAID 1978; Grainger 1993), which reflect the dynamic nature of these critical problems. Data limitations are usually accompanied by other limitations such as time, skill, economic, and technological limitations, which complicates the methodological handling of these complex critical problems.

The above indicates that the regional and local information needs in developing countries are better served by methodologies that can overcome those limitations better. In other words, the ideal methodology to deal with complex issues under such limiting conditions must have the following characteristics: a) be flexible so it can be applied under different sets of constraining factors; b) be issue specific so it can be used to target specific critical problems or combination of them; c) be cost-effective so that it can be used or replicated easily according to local conditions and needs; d) be simple so it can be adapted and disseminated by local actors; e) be holistic so it can deal consistently with the local and regional conditions at the same time; and f) be based on conjunctural causation so that the complex nature of the problem is more realistically reflected; and g) be theoretically sound so as to provide a scientific rational consistent or comparable with that of traditional research methodologies.

Methodologies with these characteristics are not just desirable, but also necessary to support local/regional information needs and decision making processes in those countries.

Chambers(1984) highlights the need to design research methodologies capable of fitting available resources, relevant problems and specific needs of developing countries. However, experience has shown that for any project to be successful in developing countries, it must fulfil two conditions: it must address a critical or relevant problem to them and it must be cost effective in terms of costs and available resources in those countries(SAREC 1987).

The characteristics of the ideal methodology mentioned above are used in this paper to determine whether or not traditional and non-traditional research methodologies fit the regional and local research conditions and information needs in less developed countries. They are also used to highlight the methodological basis which may lead to the development of other non-traditional methodologies, perhaps more suited to deal with local critical issues in a way consistent with regional realities.

2.0) Traditional Research Methodologies

The research methodologies most commonly encouraged and used to deal with the complex issues faced by developing countries are summarised in Figure # 1 below.

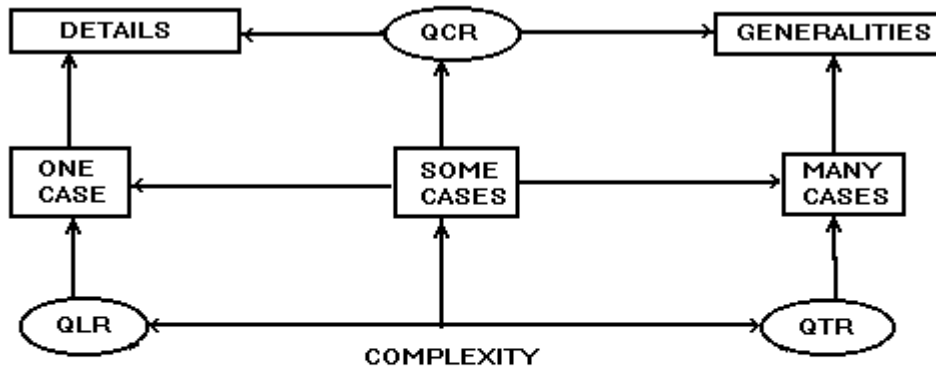


Figure # 1 TRADITIONAL RESEARCH METHODOLOGIES
 As the level of complexity varies from one case, to some cases, and then to many cases, the appropriate methodology changes. At the extreme, we have Qualitative Research(QLR) and Quantitative Research(QTR). In the middle we have Qualitative Comparative Research(QCR).

Based on the number of cases under study, this figure indicates that at the lowest end(one case), we have Qualitative Research(QLR), at the middle end(some cases), we have Qualitative Comparative Research(QCR), and at the highest end(many cases), we have Quantitative Research(QTR). This figure also indicates that complexity increases as the number of cases increases. Below, there is a general description of the advantages and dis-advantages of each of these different methodologies and an assessment of whether or not they are a good fit to research conditions and needs in less developed countries.

2.1) Qualitative Research

As indicated in figure # 1 above, Qualitative Research(QLR) uses the complexity of one or few cases to uncover their relevant individualities. It is aimed at providing details,

theoretically and empirically, about those cases. Qualitative Research Outputs are usually case specific or group specific, and they are rich in peculiarities. Ragin(1994) states that qualitative research has a data enhancing function, which permits us to generate important details that would be lost otherwise.

However, Qualitative Research Outputs are criticised for several reasons: a) because they do not provide information outside the individual case or group of cases under study, which may be relevant to other individual cases or group of cases or to the population of cases as a whole. Hence, there is a gap or lack of link between generalities and individualities; b) because they are not a product of methodologies as rigid as Quantitative Methodologies are in terms of the use of sampling theory and testing and replicability; c) because it takes a long time to produce them and they are resource intensive(money, skills, and technology). Therefore they are not easily affordable in less developed countries; and d) because as the number of cases and complexity increases, their quality decreases as Qualitative Methods become unworkable.

As shown in figure # 1 above, as the number of cases increases, Qualitative Methodologies are not longer appropriate. This is consistent with Ragin(1987; 1994) observation that as the number of cases goes up the ability of qualitative research to handle complexity goes down or is affected.

2.2) Quantitative Research

Quantitative Research(QTR) is the methodology of choice in developed countries as it is able to break up complexity in order to produce average information about a large population of cases or groups of cases or group specific details. As show in figure # 1 above, as the population of cases increases to the maximum Quantitative Research(QTR) is used to produced or uncover generalities about a specific population or set of populations.

Quantitative Research Outputs are criticise for several reasons: a) because they do not provide the relevant individualities present in specific cases as they are eliminated when complexity is broken up during the generality generating process. The more cases, the more complexity is likely to be lost. Hence, again there is a gap or lack of link between individualities and generalities which are relevant to the wellbeing of particular elements of the same population;

b) because they are the by product of the most rigid and inflexible methods of analysis, they may not reflect the limitations that are binding in developing countries; c) because they take time and they are resource intensive(money, skills, and technology) too. Hence, they are not easily affordable in less developed countries too; d) because as the number of cases goes down they break down and stop being appropriate.

Kummer and Sham(1994) point out that research outputs coming from well-known quantitative cross-country studies contain very little useful information for specific members within the sample of countries. Hence, what is important for the average case or element of the population may not be important for a particular case. Chambers (1984) points out that both Qualitative and Quantitative approaches do not match the actual research issues in developing countries since they are not effective in term of costs nor consistent with research needs and available resources(flexibility, money, time, and technical skills). Finally, Ragin(1987; 1994)

highlights that the peculiarities of specific cases are lost when quantitative research approaches or moves toward dominant causality.

As shown in figure # 1 above, as the number of cases decreases, Quantitative theoretical constructs break down and Quantitative Methodologies become inappropriate.

2.3) Qualitative Comparative Research

Ragin(1987) highlights the existence of a traditional conflict between quantitative/qualitative research, especially between professionals in the social sciences. Qualitative researchers take cases as whole units selected based on specific purposes, not as randomly selected units from large samples of cases with equal probability of selection. Quantitative researchers take each case as a specific variable or score, and when doing this, there is a loss of social value and peculiarities(Ragin 1991).

This methodological conflict has fuelled the search for methodologies capable of balancing the Quantitative/Qualitative discourse(See Ragin 1987; Janoski 1991; Wickham-Crowley 1991; Griffin et al 1991; and Ragin 1994). As shown in figure # 1 above, at the point where Qualitative Methods and Quantitative Methods break down, Qualitative Comparative Methods work the best at ease. In many complex situations in developing countries, the number of cases available can be handle by means of qualitative comparative research.

Besides providing a way to balancing methodological discourse, Qualitative Comparative Methodologies have other advantages: a) they provide both the generalities of the population and the relevant individualities of particular members of the population; b) they are capable of handling a reasonable among of complexity and conjunctural causality in a holistic manner, and they are more flexible than Qualitative Methods are;

c) They also eliminate the sense of precision attached to primary or secondary quantitative data produced and used in the analysis;

d) their results can be communicated easier to skilled and unskilled researchers and decision makers; d) they enhance the comparability and consistency of otherwise heterogeneous data at a particular point of time or across time.

Rudel and Roper(1996) indicates that two advantages of Qualitative Comparative Methods are that they filter the sense or illusion of precision attached to data collected and that they allow for conjunctural outcomes. Conjunctural causation means that causal factors work in groups in complex situations. Alone, they may not be responsible for the outcome. But, the same outcome can be the result of different groupings of these causal factors(Becker 1992).

The disadvantages of Qualitative Comparative Research Outputs are that a) they are not very well-known, specially in less developed countries; and b) they take time and they too are resource intensive(money, time, and technology).

Sometimes, instead of Qualitative Comparative Methods the combination of Quantitative and Qualitative Methods are used in order to uncover the generalities and details in a systematic manner(See Vosti et al 1998). However, besides that the limitations of Quantitative and Qualitative Methods are still present, the Quantitative and Qualitative outputs may not be strictly

comparable or consistent. For example, generalities and details may be combined and complement each other, but direct links between them can not be traced due to, for example, methodological differences.

3.0) Non-Traditional Research Methodologies

Dissatisfaction with traditional approaches in the 1970s led to the search for more cost-effective and realistic methodologies to deal with critical issues such as agricultural issues (Schonhuth and Kievelitz 1994), which are generally known as Rapid Assessment Methodologies. These methodologies today are divided in two groups, Non-participatory or Participatory Methods. Participatory Methods are an extension of Non-participatory approaches since in general terms the only difference between them is that local populations have a greater say on the different aspects relevant to the research process (Mukherjee 1993; Schonhuth and Kievelitz 1994).

Figure # 2 below indicates that Rapid Assessment Research (RAR) can be considered as a mean of making traditional research methodologies more effective in cost terms and more consistent with local needs and realities, as Chambers (1980; 1984) suggested.

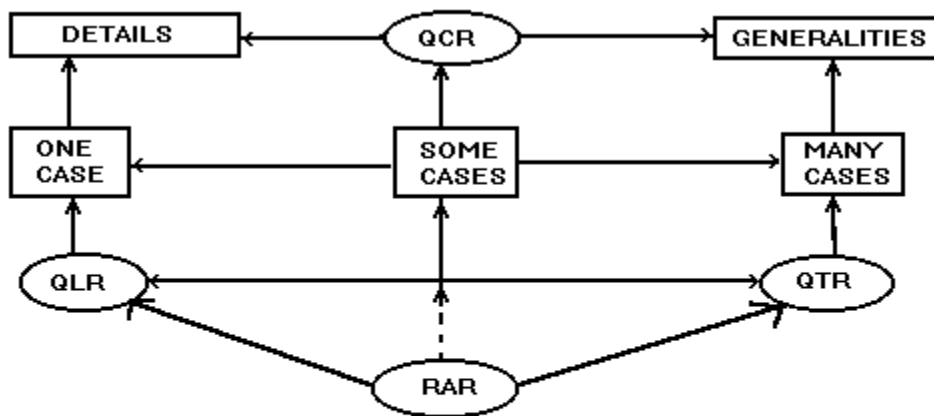


Figure # 2. NON-TRADITIONAL RESEARCH METHODOLOGIES
 Rapid Assessment Research (RAR) has been combined with Qualitative Research (QLR) or Quantitative Research (QTR) or with both to produce non-traditional research methodologies. The combination of Qualitative Comparative Research (QCR) and Rapid Assessment Research (RAR) appears to be the ideal approach to explore, and apparently untouched.

This figure help us to understand the following aspects:

- a) non-traditional methodologies in which Rapid Assessment Research (RAR) and Qualitative Research (QLR) are combined, eliminate most of the limitations of Qualitative Methodologies, but still produced details not consistent with or separated from relevant generalities belonging to the cases under study;
- b) non-traditional methodologies in which Rapid Assessment Research (RAR) and Quantitative Research (QTR) are mixed, also eliminate most of the limitations of Quantitative approaches, but still produced generalities not consistent with or uncoupled from relevant peculiarities;
- c) non-traditional methodologies that combine Rapid Assessment Research (RAR), Qualitative Research (QLR), and Quantitative Research (QTR) at the same time also make these methodologies more cost-effective and closer to local conditions,

but they produced complementary and systematic outputs, and not holistic ones. Still there may not be a direct link between generality and individuality or between regional and local conditions; and d) non-traditional methodologies that combine Rapid Assessment Research(RAR) and Qualitative Comparative Research(QCR) are ideal methodologies to deal with research conditions in developing countries, but they are not well explored yet.

To my knowledge, there is no research in progress combining RAR and QCR in and outside developing countries. Most non-traditional research appears to be directed at mixing Qualitative and/or Quantitative Research with Rapid Assessment techniques(see Schonhuth and Kielvelitz 1994, Pp. 51-71).

4.0) The Ideal Non-Traditional Methodology

Figure # 3 below indicates that the ideal research methodology to deal with critical problems in developing countries must have the characteristics of Rapid Assessment Research(RAR) and the characteristics of Qualitative Comparative Research.

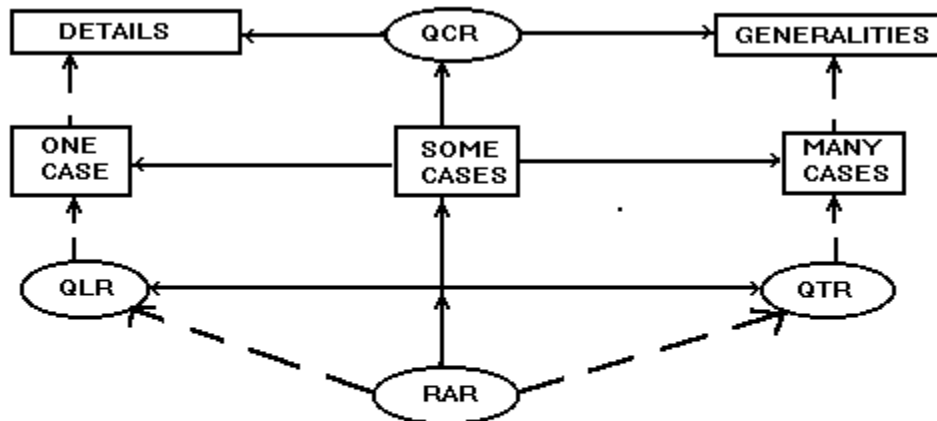


Figure # 3 IDEAL NON-TRADITIONAL RESEARCH METHODOLOGY
The combination of Rapid Assessment Research(RAR) and Qualitative Comparative Research(QCR) is the methodology consistent with the limitations and local needs in less developed countries assigned to the ideal non-traditional research methodology. The other non-traditional methodologies still have some limitations.

This new methodology has the following general characteristics: a) it balance the discourse between Qualitative and Quantitative research; b) it provides both generalities about the population of cases and relevant individualities of specific cases; c) it keeps the advantages of Rapid Assessment Research(cost-effectiveness, flexibility and simplicity; d) it keeps the advantages of Qualitative Comparative Research(holistic nature, conjunctural causality, and complexity handling); and e) it is theoretically sound and empirically feasible, both in terms of development, implementation and validation.

This line of research appears to be the logical course in the never ending process of looking for methodological cost-efficiency and output usability. Its main challenge will be the traditional limitations that new ideas usually face, but change, as everybody knows, is usually inevitable.

5.0) Conclusions

The research limitations and information needs in less developing countries are well-known as indicated by the characteristics of their critical problems (social, economic or environmental). Those limitations and information needs have a tremendous burden on the validity of using traditional research methodologies in developing countries to deal with the practical and theoretical implications underlying their critical problems. The introduction of Rapid Assessment Research has made Quantitative and Qualitative Research Methodologies more cost-effective and flexible, but still unfit to deal with the local and regional complexity and with the conjunctural and holistic nature associated with those critical problems.

The combination of Rapid Assessment Research (RAR) and Qualitative Comparative Research (QCR) appears to be the ideal methodology to deal with critical problems in less developed countries in a cost-effective, flexible, and holistic manner; and in such a way as producing local outputs consistent with regional conditions. Therefore, this new methodology could be a good aid to help less developed countries to support and/or reject existing environmental experiences, theories, and perceptions in a recognised scientific manner.

References

- Becker, Howard S., 1992. **Cases, Causes, Conjunctures, Stories and Imaginary.** *In: What is a Case? Exploring the Foundations of Social Inquiry.* Cambridge University Press.
- Brown, Katrina and David W. Pearce, 1994. **The Causes of Tropical Deforestation: The Economic and Statistical Analysis of Factors Giving Rise to the Loss of the Tropical Forest.** UBC Press. Vancouver.
- Casley, D.J., and D.A. Lury, 1987. **Data Collection in Developing Countries.** Clarendon Press. Oxford. Second Edition.
- Chambers, Robert, 1980. **Rapid Rural Appraisal: Rationale and Repertoire.** IDS/Sussex. DP # 155.
- Chambers, Robert, 1984. **Rural Development: Putting the Last First.** Longman.
- Grainger, Alan, 1993. **Controlling Tropical Deforestation.** Earthscan, London.
- Griffin, Larry J., Christopher Botsko, Ana-Maria Wahl, and Larry W. Issac, 1991. **Theoretical Generality, Case Particularity: Qualitative Comparative Analysis of Trade Unions Growth and Decline.** *In: Issues and Alternatives in Comparative Social Research.* E.J. Grill.
- Janoski, Thomas, 1991. **Synthetic Strategies in Comparative Sociological Research: Methods and Problems of Internal and external Analysis.** *In: Issues and Alternatives in Comparative Social Research.* E.J. Grill.
- Kummer, David and Chi Ho Sham, 1994. **The Causes of Tropical Deforestation: A Quantitative Analysis and Case Study from the Philippines.** *In: The Causes of Tropical Deforestation: The Economics and Statistical Analysis of Factors Giving Rise to the Loss of*

Tropical Forests. UBC Press, Vancouver.

Lietmann, Josef, 1994a. *Rapid Urban Environmental Assessment: Lessons from Cities in the Developing world. Volume 1. Methodologies and Preliminary findings*. Urban Management Program.

Lietmann, Josef, 1994b. *Rapid Urban Environmental Assessment: Lessons from Cities in the Developing world. Volume 2. Tools and Outputs*. Urban Management Program.

Lopez Ornat, Arturo, 1995. *Estrategias para el Desarrollo Sostenido: America Latina*. Union Internacional para la Conservacion de la Naturaleza(UICN).

Mukherjee, Neela, 1993. *Participatory Rural Appraisal: Methodology and Applications*. Concept Publishing Company, New Delhi.

Organisation for Economic Cooperation and Development(OECD), 1993. *Economic Instruments for Environmental Management in Developing Countries*. OECD Documents, Paris.

Ragin, Charles C., 1987. *The Comparative Method: Moving Beyond the Qualitative and Quantitative Strategies*. University of California Press.

Ragin, Charles C., 1991. *Issues and Alternatives in Comparative Social Research*. E.J. Grill.

Ragin, Charles C., 1994. *Constructing Social Research: The Unity and Diversity of Method*. Pine Forge Press.

Rudel, Tom and Jill Roper, 1996. **Regional Patterns and Historical Trends in Tropical Deforestation, 1976-1990: A Qualitative Comparative Analysis**. In: *AMBIO*. Vol. 25. No. 3, May 1996.

Schonhuth, Michael and Uwe Kievelitz, 1994. *Participatory Learning Approaches: Rapid Rural Appraisal and Participatory Rural Appraisal*. RoBdorf. Germany.

Swedish Agency for Research Cooperation with Developing Countries(SAREC), 1987. *SAREC's First Decade: Swedish Support for Research in Developing Countries*. A Progress Report with some Guidelines for the Future.

Wickham-Crowley, Timothy P., 1991. **A Qualitative Comparative Approach to Latin American Revolutions**. In: *Issues and Alternatives in Comparative Social Research*. E.J. Grill.

United States Department of State and United States Agency for International Development(USDS/USAID), 1978. *Proceedings of the U.S.Strategy Conference on Tropical Deforestation*, Washington, D. C.

Utting, Peter, 1993. *Trees, People and Power: Social Dimensions of Deforestation and Forest Protection in Central America*, Earthscan Publications Ltd, London.

Vosti, Stephen A., Julie Witcover, and Chantal Line Carpentier, 1998. *Arresting Deforestation and Resource Degradation in the Forest Margins of the Humid Tropics: Policy, Technology,*

and Institutional Options for Western Brazil. International Food Policy Research Institute. Final Report. March.

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