Issues and Strategies for Conducting Cross-National E- Government Comparative Research*

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ABSTRACT
This paper addresses and discusses the central issues that researchers have to deal with when conducting cross-national comparative research within the area of e-government. The issues are classified into two main categories. The first category represents the issues and challenges that may affect the reliability and the quality of data being collected for comparative studies. The second category represents the remaining issues related to the research objective, the selection process of countries and the analytical strategy. The paper discusses the major alternatives of these issues and provides a rationale for the selection process among them. The paper concludes by discussing the interrelations between the identified issues and clarifying the main decisions that researchers have to take when conducting cross-national comparative research.

Categories and Subject Descriptors
A.0 [General Literature]: General.

General Terms
Reliability, Design , Documentation , Management.

Keywords
Comparative e-government research, cross-national comparison, methodological problems, managing comparative research, international research.

1. INTRODUCTION
In recent years, conducting cross-national comparative research has become one of the major directions of academic research in the e-government area. While this type of research has the potential to lead to fresh and deeper understanding of issues that are of central concern to the field, it is not always easy to refine since it has many unique salient pitfalls that researchers must deal with [4, 11].

This paper discusses and addresses some of the methodological and theoretical problems in comparative e-government research. It starts by defining what cross-national comparative research is. From there, the promises and the advantages of this type of research are highlighted. Following this, the paper discusses the challenges of this type of research through two main parts.

The first part addresses the methodological problems and challenges that researchers may encounter during the data collection process. Researchers have to be familiar with these challenges to handle them properly since they have direct impacts on the quality of data in most cross-national comparative studies. These challenges include: Nonequivalence of key concepts, language of data collection, translation process, matching of samples, timing of data collection, and the comparability of the research process and instruments.

The second part introduces different types of challenges that are related to the whole research process. It is based on a proposed logical sequence for the main stages that researchers follow when conducting comparative studies. Discussion in this part starts by arguing the importance of having a clear goal for the research work. From there, researchers can identify the research approaches that can be followed. Based on the selected research approaches, the remaining sections discuss how to select countries to be included and choose the analytical strategy. The paper identifies the different alternatives of each stage and discusses the strengths and limitations of each.

Before starting the first section of this paper, it is important to highlight two important challenges that have been encountered while researching this topic. These challenges are results of some of the limitations of e-government as a field of study. While some domains have already developed a well-established subfield of comparative research such as political science [22], sociology [8, 13, 19], and public administration [4, 12], e-government has not yet identified general roles and guidelines for conducting this type of research. In fact, the e-government literature lacks any sources that discuss comparative e-government from methodological and theoretical perspectives. To handle this issue, the paper relies on some sources that are related to other domains of study. This way might be considered as the norm in the e-government area which " is seen as sitting at the cross-roads between a number of other research domains, particularly computer science, information systems, public administration, and political science" [9,

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p.252]. However, by relying on the literature of many different domains, identifying what is relevant to the e-government area has been a challenge encountered while researching this topic.

The lack of a clear definition of what e-government is [7] adds more complexity to the process of identifying what is relevant to the e-government area of research. This issue has been described as one of the limitations of e-government as a domain of study [25]. Consequently, the relevance of any methodological and theoretical problem would vary according to which definition we accept for e-government. To handle this issue, the paper follows a strategy of presenting these theoretical and methodological problems of cross-national comparative research from a general perspective.

2. COMPARATIVE RESEARCH

Comparative research is a broad term that refers to the use of qualitative and quantitative research techniques to compare any particular issue within two different contexts. When "cross-national" is added to the term "comparative research", the definition will seem more specific. Hantrais and Mangen indicate that cross-national comparative research is performed when countries are compared in respect to the same concepts with the intention of making generalizations or gaining a better understanding of the phenomena under study [8].

Generally speaking, researchers refer to cross-national research as a study that aims to compare particular issues of phenomena in two or more countries according to their different sociocultural settings. Some authors distinguish between concepts such as cross-country, cross culture, cross-societal, cross-systematic, and cross-institutional, while others substitute 'trans' for 'cross' to suggest that they are focusing on the macro-structures, and yet others use the various terms as if they were synonymous [19].

For example, Grootings distinguishes between the two terms "cross-national research" and "international comparative research". Grootings categorizes cross-national (universalist and culturalist) comparative research as descriptive and deductive whereas international comparative research as analytical and deductive research since it is seen as establishing the relationship between macro and micro levels [6]. However, in the English Language literature such distinguishing between terminology has not been widely followed, and the prefix 'cross' is always used ubiquitously to describe studies that cross-country, cross culture, cross-societal, cross-culture, cross-systematic, and cross-institutional or even cross-disciplinary [19].

In this section, the debate among researchers was introduced to show how these terminologies may reflect different meaning among researchers. However, the paper relies on Hantrais and Mangen definition already referenced, where the expectation is that researchers have to collect and analyze comparable data from multiple countries. The following section highlights some advantages that e-government as a domain and its researchers are supposed to gain when conducting cross-national comparative research.

3. ADVANTAGES OF CROSS-NATIONAL COMPARATIVE RESEARCH

The expectations when conducting this type of comparative research in the e-government area is to gather data about an object, phenomena, or main government organizational process within different contexts, and then to use comparative methods to test a theory across diverse settings, examine transnational processes across different contexts, learn from policy initiatives of others, improve the international understanding of e-government issues, identify marginalized cultural forms, challenge claims of universality, evaluate scope and value of certain phenomena, or to achieve any goal among those discussed by many different researchers [13]. Hence, cross-national comparative research is rich in term of its capabilities to add different types of knowledge to the e-government domain.

Additionally, Hantrais and Mangen [8] have discussed many advantages that can be obtained through cross-national comparative research. They argue that cross-national comparative research can:

- Lead to deeper understanding of the most critical issues that are of central concern in different countries.
- Open new directions and useful avenues for future research about which the researchers may not previously have been aware.
- Help to sharpen the focus of analysis of the subject under study by suggesting new perspectives.
- Lead to the identification of gaps in knowledge.

Finally, it is clear that there is an agreement among researchers of different domains with regard to the great value that cross-national comparative research can add to any domain of study. Therefore, the question is not whether this type of research is important. The main question is how to conduct this type of research in a way that has the potential to guide researchers to the advantages that have been discussed. There is no explicit answer to this question; that is why researchers conducting cross-national comparative research have to be aware of the challenges that might be encountered while conducting cross-national comparative studies. The following section introduces some of these challenges and proposes solutions to overcome them.

4. CHALLENGES IN CONDUCTING CROSS-NATIONAL COMPARATIVE RESEARCH

A question that has to be addressed when researchers conduct cross-national research is how they can ensure that their research is rigorous. While all types of research involve pitfalls that researchers have to overcome in order to ensure that their studies produce reliable results, cross-national research has its own unique pitfalls [4, 11].

Before the paper discusses these pitfalls it is important to identify the scope of this discussion. The paper talks about cross-national research which refers to the study that aims to compare particular issues of phenomena in two or more countries according to their different socio-cultural settings. The assumption here is that there would be a multi-national research team that is going to handle the research. This assumption would allow us to avoid some challenges that may be encountered when a cross-national comparative study is conducted by a single researcher or a team that lack understanding of the cultures of the countries being considered.

The basic assumption is that at least one person in the research team has experience with the cultural aspects of each country in order to facilitate the creation and execution of the research project in a proper way. Lim and Firkola recommend the existence of a multi-cultural research team in order to reduce the amount of cultural bias in cross-national comparative research. In addition they argue that when a member of a society is to be used to collect the data, then that would reduce the fear of the respondents and allow access to data that might be inaccessible to foreigners [14].

By adding this constraint to the scope of the discussion, issues that need to be addressed can be classified into three main categories. The first category represents the issues and challenges that may affect the reliability and the quality of data being collected by different researchers from different countries. The second category represents challenges and issues related to all other parts of the research process that include specifying the research objective, selecting countries and selecting the analytical strategy. The third category represents the issues that are related to the dynamics of the multi-cultural research team. Unfortunately, the issues of the last category are beyond the scope of this paper. The first two categories are discussed in the following sections.

4.1. Data collection and methodological considerations

The reliability and quality of data play significant roles in the success of any research project. Most researchers are familiar with the techniques that lead to reliable data when they select and design their research methods. However, collecting data from multiple countries for the purpose of comparative research may involve different types of challenges that may lead to unreliable data for comparison purposes if researchers fail to address and propose proper solutions to overcome these challenges.

In this section, six issues and challenges that may affect the reliability of data for comparative research purposes are discussed in detail. These issues include: Nonequivalence of key concepts, language of data collection, translation process, matching of samples, timing of data collection, and the comparability of the research process and instruments.

4.1.1. Nonequivalence of key concepts

The nonequivalence of key terms or concepts represents a major challenge for any cross national comparative research [21]. Mangen states that “each language is not only a medium for intercourse but a particular style of discourse. Thus, the linguistics dimensions interact with cultural as well as associated intellectual and professional specificities to form a problematic of comparative analysis” [16, p.111].

Many researchers in domains related to e-government area of research have provided much evidence of the hindrance to achieving linguistic equivalence in seemingly unproblematic terms. In their comparative study of collaboration across multiple organizations, Egline and Dawes reported this as one of the main challenges of comparative public management research [4]. For instance, the concept of leadership has been reported as one of those concepts that may refer to different things among different cultures. While leadership refers to the personal skills and ability to trigger trust among participants in the study of information sharing for Americans respondents, for their Quebecois counterparts it refers to the authority that a leader can employ to enforce a set of rules and to make sure all participants follow them strictly [4]. Hence, researchers conducting-cross national comparative research must ensure that their questions have equivalent meaning among all respondents to guarantee that the variations in the data they collected is not a result of the respondents´ varied interpretations of the questions [11].

This example shows that, while the nonequivalence of key concepts may represent a challenge when collecting data from countries that speak the same language, researchers have to expect additional obstacles when data is being collected from countries that speak different languages [3]. In this case, researchers have to make two important decisions that would have major effects on the quality of the data being collected. The first decision is related to the selection of the research instruments´ language, and the second decision is related to the translation process.

4.1.2. Language of data collection

In many cases, researchers conducting cross-national comparative research may face the challenge of collecting data from countries that speak different languages. The expectation here is that researchers would translate research instruments to respondents´ native languages when respondents are unfamiliar with other languages. However, there might be cases in which respondents or groups of the sampling frame are familiar with other languages. That would allow researchers to avoid the translation cost by collecting data using their native languages instead of those of the respondents.

In this case, researchers have to be aware that obtaining conceptual equivalence will be more difficult when they rely on respondents´ familiarity with other languages to interpret and respond to the research questions. Mangen declares that "impressive competence in English on the part of foreign respondents can prove deceptive and, moreover, may introduce certain ethical considerations in research terms" [16, p. 113]. As cited by Mangen, Peter Lawrence insists that the linguistic onus should be on researchers rather than respondents and consequently researchers should interview in the informants´ language even when researchers are not fluent. However, if the language of the respondents is beyond the researcher's competence, he suggests the use of extensive translation of the key vocabulary [16].

4.1.3.The translation problem

When data has to be collected from countries that speak different languages, translation of data and research instruments would be considered as one of the main tasks that researchers must handle properly. Birbili insists on the importance of considering the translation issues seriously as they have a direct impact on the quality of cross-national comparative research [2]. While the literature of comparative research contains effective guidelines for the appropriate translation of survey instruments, the applications of the rules from these guidelindes is not easy in most cases [23].

The quality of the translation process depends on the degree to which the equivalence of key concepts is achieved. Therefore, the task of cross-national researchers in translating instruments into another language is to achieve equivalence in meaning rather than in literal forms [14]. In cases where the concept or the term cannot be translated exactly, researchers should avoid any attempt to have lexical equivalence and try to locate a term that meets the definition of that concept [2].

In order to obtain the highest degree of equivalence between key concepts, Eglene and Dawes have identified three competences that a translator should have. First, he must speak the two languages involved fluently. However, some researchers add more constraint to this by pointing out that it would be better when translation is done in the translator's native language [1]. For instance, if the translation is from Arabic to English, the translator should master both languages besides being a native English speaker.

Second, the translator should be knowledgeable about the cultures involved. Third, he should be familiar with the field of the research study. Eglene and Dawes argue that the selection of a translator with an appropriate specialization is essential to avoid errors that stem from specialized vocabulary or specialized use of otherwise common terms [4].

Before ending this discussion, it is important to note that while some researchers have recommended the use of a second translation process in order to back translate into the original language to ensure the quality of the initial translation process, others oppose this method and describe it as an expensive task that doesn´t solve the problem completely [4, 17].

4.1.4.Matching of samples

Another issue that the members of a research team must consider upon conducting cross-national comparative research is to identify how closely the samples should be matched for the comparability purposes. Cross-national comparative research has to maintain a high level of matching between respondents among the nations considered by the study [18]. However, it is often not easy to obtain closely matched samples in a large number of countries when the research team depends to some degrees on personal contacts for data collections [23].

Personal contact for obtaining data is essential especially when the sample frame contains those with high authorities in different organizations. Teagarden et al. argue that personal contacts were essential to gain access to organizations and to obtain the required data for their comparative study of the best practices of human resource management among different countries [23]. Accordingly, members of the research team should have the same level of access or at least levels of access that are close enough to collect appropriate data for comparative purposes.

The determination of the level of access that each member in the research team has is not an easy task in most cases. It varies among researchers depending on personal aspects, nature of the domain, and the regulations that exist in each country. Therefore, researchers conducting cross-national comparative research have to ensure that they have an adequate level of access to the population of the sampling frame that would allow them to make an appropriate comparison between the countries covered by their study.

4.1.5.Timing of data collection

Timing of data collection may affect the quality of data and consequently the comparability of data collected. This issue has to be considered especially when conducting studies that rely on data being collected from different countries at different time periods. This issue becomes more critical as the gap of time increases."What if a project involves ten countries beginning with data collected in the USA in 1992 and ending with data collected from Japan in 1997? Is it appropriate to include these data in a research study when there is such a long time span between the different countries? How much of a time lag is acceptable between samples?" questions Milliman [18, p.139].

With these questions in mind Milliman and Glinow suggest a solution to handle this challenge by examining the major events that have occurred and affected the data since the time of data collection [18]. These events have to be explored at national, industry, organizational and all other levels depending on the type of the study being conducted. In the areas that change very fast such as e-government,

this solution might be expensive in terms of time and effort. Therefore, it might be better if the research team tries to reduce the time span between the collected data to avoid this additional cost.
Additionally, in some cases it would be impossible to figure out all the factors that affect data over a long period of time. Milliman and Glinow state that "even when such an analysis is conducted it is still not clear what the real impact on the data is" [18, p.139]. Here, they recommend that the field has to develop more specific guidelines regarding the timing of data collection especially as the number of large scale projects increases rapidly.

4.1.6.Comparability of research instruments

The last issue that has to be considered is the consistency among research instruments. It is possible that researchers find themselves dealing with inappropriate data for comparative purposes simply because they utilized different research instruments or processes for data collection. However, it might be difficult in some cases to maintain a high level of consistency between research methods especially when these methods are used to collect data from different countries. Researchers conducting cross-national comparative research have to realize that some methods of data collection may not work as well or be as appropriate in certain countries. For instance, surveys can be processed by mail in the USA, but in countries which require more personal connections, the survey may need to be handed out by and returned to the research group [18].

Additionally, in some cases researchers might need to apply certain adaptations of the research instruments when conducting cross-national research. For instance, the best practices of Human Resource Management (HRM) team found that a long and complex survey may be considered normal in most developed countries such as the USA, but complex and difficult to be used in countries where the education level is lower and there are different cultural norms [23]. To handle this issue researchers might be pushed to delete some sections of the survey in order to make it more acceptable for certain countries.

This issue creates other challenges with regard to the comparability of the collected data. Milliman and Glinow [18] express these challenges in the form of questions that members of the research team have to address before they make any decision that would produce variation between data collection methods. These questions are important and will guide researchers to estimate the impact of any variation in the research process and instruments among the countries covered by the study. The questions are:

- How do these different methods affect one's ability to interpret the results in a large cross-national study?
- What level of differences is acceptable and at what level are the changes too excessive for comparability purposes?
- Is it possible that researchers can conduct comparative studies by relying on data that has been collected using different data collection methods? If the answer is yes then what guidelines have to be established concerning specifically what is an acceptable difference in the data collection process?

4.2. Managing cross-national comparative research

This section clarifies and discusses the strategies and techniques for conducting e-government comparative research. Proposing strategies and techniques for conducting this type of research is essential for a variety of reasons. One of the main reasons is the fact that comparative research represents one of the major themes within the area of e-government. A recent study conducted by the Center for Technology in Government (CTG) at the University at Albany reveals that most of the international research that has been conducted in this area of e-government falls into this category of research work [10].

Additionally, knowledge in this field of study is based mostly on observations, expert opinions and experiences, previous practices and aggregate data. This creates the challenge of how to discover ways to utilize this wide range of sources in order to advance our knowledge of the field. Comparative research has the potential to help us achieve this goal if researchers become able to control and manage this type of research in a way that would allow the possibility of applying the operational knowledge to the different contextual conditions. At that point researchers will be able to develop generalizations that are useful to theory and application.

Jreisat argues that the ability to describe and establish patterns as generalizations require an appropriate framework that is capable of dealing with various research challenges. The decision for the selection of an appropriate framework is not an isolated decision; it is connected to issues such as research objectives, unit of analysis, type of contextual influences, and the familiarity with alternative comparative methods [12].

Previous sections address some of the issues that researchers conducting cross-national comparative research have to acknowledge and handle properly. However, there still are many other issues and decisions that a research team conducting cross-national research has to handle and decide. Understanding these issues and their surrounding alternatives is the first step in managing any cross-national comparative research. The following sections address these issues and discuss their alternatives.

4.2.1.Research objective and strategy

The most basic question that researchers conducting cross-national comparative research have to decide is what they are looking for. Based on the answer, they can proceed and propose solutions for all the issues and challenges presented by this paper. Cross-national research may have many different aims [19, 24]. It can be used to test a theory across diverse settings, examine transnational processes across different contexts, learn from policy initiatives of others, improve the international understanding of e-government issues, identify marginalized cultural forms, challenge claims of universality, evaluate scope and value of certain phenomena, and many other goals. However, researchers have to identify clearly which of these aims they are targeting.

Based on the research goal, researchers can then move to the next step in which they identify an appropriate approach for their comparative study. Kohn [13] identifies four approaches to cross-national comparison: nation as object of study, nation as context of study, nation as unit of analysis, and nation as component of a larger international or transnational system. These approaches are distinguished based on their primary focus. Livingstone [15] discusses Kohn's proposed approaches in more detail. The following four paragraphs summarize Kohn's approaches based on Livingstone's discussion.

The first approach focuses on nations as the objects of the study. Following this approach, researchers do not conduct any direct comparative analysis. Therefore, comparison is used as a strategy for "seeing better" rather than to draw more comparative conclusions.

In the second approach, nations are used as the context of the study. This approach is appropriate to test the generality of any hypothesized findings across nations. Researchers following this approach may not attempt to capture the complexity of each country compared, although they know that their goal is to test the hypothesized universality of a particular phenomenon. As a result, their task is accomplished by collecting and presenting data from many countries to show how a theory applies in each one of those countries.

The third approach deals with a nation as a unit of analysis. In this approach, systematic relations are sought among different predefined measurable dimensions that vary among nations. Following this approach, cross-national theory can be sought and tested as with the second approach. However, in this approach theory seeks to understand the diversity of different national contexts by representing the specificity of each country through common conceptual language.

The fourth approach treats each nation as a component of a larger international or transnational system. This approach can be demonstrated by theories of cultural dependency, imperialism, and globalization. Therefore, when researchers choose to follow this approach, they compare nations as they are systematically interrelated due to some underlying process such as capitalism. This approach is similar to the third approach in that it pays attention to the context of each nation, but researchers following it go further by seeking external explanation by means of a larger hypothesized transnational or global process, rather than an internal one of relations among key diminutions defining each national context [15].

Each of the above discussed approaches of comparisons prioritizes particular aims, follows distinct conceptual and methodological principles, and facilitates different types of findings and explanations [15]. Therefore, the implementation of any framework or model to guide cross-national comparative study has to identify clearly one of the previously discussed approaches to be followed based on the research objective. From there, researchers can proceed and identify which countries should be included in their study.

4.2.2. Selecting countries for comparison

In truly comparative research there should be a rationale for the selection process of the countries. This selection process will have major implications on the findings. Livingstone argues that findings will center more on similarities or on differences based on the countries compared. Therefore, when researchers rely on data collected from vastly different countries, "they may have difficulty identifying the fine-grain differences which research on similar countries will reveal" [15, p.17]. Accordingly, researchers have to seek an adequate level between similarities and differences among countries being studied.

Based on Kohn´s proposed approaches of cross national comparison, researchers can determine what level of similarities and differences they should seek. Livingstone argues that when researchers treat each nation as an object of analysis, comparing fairly similar countries may prove most useful. However, when a nation is the context of analysis, countries with maximum diversity allow researchers to explore the scope or universality of a phenomenon. Similarly, when researchers decide to follow the third approach which treats a nation as unit of analysis then they will select countries that would allow them to capture diversity within a common framework. Finally, when researchers treat a nation as a component of a larger international system, then they will select countries by seeking to maximize range and diversity [15].

Once the research team identifies the countries that will be included in the study, it can set strategies for data collection and data analysis processes. Data collection has been discussed in detail in previous sections. The following sections highlight issues related to the data analysis process.

4.2.3. Analytical strategy

The selection process of the level of analysis represents an important issue in any cross-national comparative research. One of the most basic questions that researchers must decide while conducting studies in the area of e-government is at which level they will conduct their analysis. This decision is important since the e-government area of research covers a wide range of aspects that can be at macro or micro levels.

The comparative studies literature is filled with macro level concepts and analyses that focus attention on many organizational, political, cultural, and social issues. Also, the field has a huge amount of literature that covers micro level aspects that focus on individuals and their behaviors. While there is no right or wrong answer about what research strategy or level of analysis a comparative study has to follow, it is important to note that the selection of the level of study does imply something about the type of findings the research by comparative methods can produce [20].

Gauthier identifies three analytical strategies that researchers can follow when they conduct cross national comparative research: Aggregate level research strategy, individual-level research strategy, and multilevel research strategy [5]. Selection among these strategies has to reflect the goal of the research and specific assumptions about how researchers treat nations based on Kohn approaches discussed in the previous sections.

Aggregate level approach strategies are used to compare similarities and differences among countries in terms of specific macro-level characteristics and multivariate analysis of relationships between macro characteristics. Analysis following this strategy can be based on either aggregate data or individual level data that has been aggregated at the country level. These studies present findings in terms of country ranking in order to attract attention to the best or the worst-ranking countries.

While studies that follow this strategy have the potential to led to some excellent clarifications of the relationships between various components at the macro level, they have failed to consider possible cross-national differences in the degree of within-country variation. Additionally, this analytical strategy doesn't recognize the effects of outliers, especially when dealing with small samples of aggregate data.

Individual-level research strategies are carried out at the micro level. Researchers follow this strategy to test whether results obtained on the basis of one country can be replicated in another country in order to generalize results cross-nationally. Different methodologies can be used when researchers follow this strategy. The most common one is to carry out parallel analysis by analyzing the same variables in all countries. This methodology allows researchers to examine similarities and dissimilarities across countries in term of relationships between variables.

Multilevel research strategies are used by researchers when they are looking to integrate micro and macro level variables in order to recognize the possible role of different levels of determinants in an individual outcome or behavior. Gauthier states that "Although the possible impact of social structure and other hierarchical structures on individual behavior has long been acknowledged, it is only since the early 1980's that appropriate modeling techniques have become available" [5, p.17]. However, even with these techniques, most studies using multilevel analysis are based on a single country design and rarely are multilevel strategies followed cross-nationally [5].

Based on the previous discussion of the analytical strategies discussed by Gauthier, it is obvious that the selection among them would determine the type of knowledge generated by the research regardless of the level at which data is being collected.

Decision	Alternatives
Research Objective	-Examine transnational processes across different contexts -Learn from policy initiatives of others -Improve the international understanding -Identify marginalized cultural forms -Challenge claims of universality -Others
Research Approach	-Nation as object of study -Nation as context of study -Nation as unit of analysis -Nation as component of a larger international or transnational system
Analytical Strategy	-Aggregate level research strategy -Individual-level research strategy -Multilevel research strategy

Table 1 – Decisions and Alternatives Summary

While the paper argues the necessity of familiarity with the objectives, strengths, and limitations of all the issues related to cross-national comparative research in order to make right decisions, it argues that this is not enough. A full understanding of how these issues affects each other is highly recommended for any team of researchers conducting this type of work.

Generally, cross-national comparative research has to start with an explicit goal. The goal will have implications on the selection among four different approaches [Table 1]. The selection of an approach will affect the selection of the countries. The selection of countries will have different types of implications on the data collection process, and so on. Hence, making right decisions regarding any issue requires full understanding of the affects of those decisions on the remaining stages of the research process. This framework requires additional work to incorporate those issues that are related to the dynamics of the research team. As mentioned before, this part is beyond the scope of this paper but in future work these issues will be included.

5. CONCLUSION

While there is a need for more cross-national research in the area of e-government, this type of research work continues to be challenging and problematic. Each stage in cross-national comparative research involves different types of challenges that researchers have to address and handle properly. Dealing with each challenge in isolation from other challenges would create problems. Therefore, it is crucial to understand the ways in which these challenges influence each other.

This paper attempts to integrate many different central issues in cross-national comparative research. The goal is to present a whole picture that would allow better understanding of this field. Additionally, it is essential to understand the variety of alternatives upon conducting each stage of the research process. The paper discusses these alternatives and highlights the strengths and limitations of each choice.

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