# A Review of Methodological Crisis and Challenges of Research in Industrial Sociology and Related Social Sciences

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#### Abstract

This study presented research as the way of arriving at dependable knowledge to grow the subfield of Industrial Sociology in the Sociology family. It highlighted scientific methods and its steps, as well as research designs useful and common in Industrial Sociology and Social Science as a whole, such as: action, longitudinal, casual, experimental, historical, case study archieval, observational, cohort, meta-analysis, etc. Major issues of methodological crisis were discussed in terms of variability of Human Nature, choice of design and methods, ability to conceptualize, quantify and avoid biases. It was concluded that without handling the crisis properly, it is difficult for growth and development to persist in the subfield and Social Sciences. It was recommended that the curriculum of industrial sociology and social sciences be enlarged with social research methods having prominent place.

**Keywords:** methodological crisis, challenges of research, Industrial Sociology, Social Sciences.

# Introduction

Industrial sociology is a sub-discipline of sociology which Focuses on scientific study of industrial society and analysis of social organization of work. The area of Industrial Sociology involves the application of sociological approaches to the reality and problems of industry, in which scientific method, techniques and tools of inquiry are utilized in solving workplace problems, as they affect Society and vice versa.

Success of any field of inquiry is a function of success in ability to apply methods and techniques of science properly in its discovery of knowledge. Where methods, tools and procedures are not properly followed, research and investigations are distorted, which invariably affects the growth of a discipline or its usefulness, as an area of knowledge. Industrial Sociology is a Social Science area and shares methods and techniques with other Social Sciences, such as economics, psychology, industrial relations, political science, demography, developmental studies, library and information sciences (Bassey, Bassey and Bassey, 2023).

Any discipline is considered a science subject to the extent in which scientific methods are applicable in its mode of investigation and search for knowledge. All Behavioral Sciences that study human behavior, in which Industrial Sociology is one are grouped under social sciences. Industrial Sociology as a study of the motivations and behaviors of people at workplace is an important Social Science sub-discipline, as the subfield is directed at the analysis of institution and social relationships within industrial organizations, diversities of work groups and settings.

Industrial sociology focuses on employees works performance, productivity of employees and organization, effect of work and Industry on society. The solve discipline also examines the direction and implications of trends in technological changes, globalization, labor market, managerial practices, employment relations etc. Has the relate with changes in patterns of inequality in modern societies, changes in experiences of individuals, family and workers' attitude. The resistance of workers in workplaces to policies, which shape work institutions and society are of great importance to industrial sociologist. It is based on the broad scope of industrial sociology that this study was designed to examine application of scientific methods in research, as well as challenges and problems encountered by researchers in the field of Industrial Sociology in particular and Social Sciences in general.

### Statement of the Problem

Anikpo (1988) noted that researchers and students of social sciences faces the difficulty of determining which method of science to utilize in a given study. This is because of the availability of different methods, tools and techniques of research in Social Science. This problem is affecting Industrial Sociologists in the task of choice of research design tools, method and technique to be applied.

It is this problem that Anikpo (1988) referred to as methodological crisis in social sciences investigation. Industrial sociologist focus and guide in their investigations is to lead to growth and development of the sub-discipline.

### **Definition of Terms**

Scientific method: A particular technique in the process of Investigation in a given field of science. For example, survey, interview, qualification, etc.

Methodology: this refers to all the methods and techniques of science available for investigation in a given science.

Social Research: This is the systematic application of scientific methods in investigation to gain new knowledge about social phenomenon, gain understanding about social problems and also provide solutions to problems.

## The Concept of Research Method

According to Cohen and Manion (1980), research method refers to the range of approaches used in investigation to gather date which are to be used as a basis for inference, interpretation, explanation and prediction. Research method is associated with positivistic (scientific) model designed for eliciting responses to predetermine statements, measurement records, describing phenomena and performing experiment.

Cohen and Manion (1980) also states that methodology is applied to describe and analyze techniques, which throws more light on their limitations and resources, clarifying their presuppositions and consequences. Research method is routed in scientific methods, which key elements include: the assumption of some empiricism, systematization and objectivity as used in the study of library services and tourism industry development in Bassey, Bassey and Bassey (2024) including: observation, prolem identification, conceptualization, variable construction and operationalization; hypothesis formulation; test and verification of hypothesis; theory formulation

and generalization of law. The steps and stages are revealed in the research design adopted in a particular study.

## **Theoretical Framework**

This study is supported by functional theory of Robert K. Merton. Functionalism generally is based on the premise that every aspect or component of a society serve a particular purpose that is unique and indispensable for the long-term survival of the society (Wilterdink & Form, 2024). According to Merton (1968), social function is a consequence of pattern of action in a system that the action takes place or phenomenon occurs. Merton (1968) identified manifest function which is intended consequences and latent function which is unintended consequences. Merton also noted eufunction which makes for progress, development and survival of the society and dysfunction which makes for decay, destruction and discontinuity. It is in this context the research in Industrial Sociology is considered as it can make for growth and development of Industrial Sociology as a discipline or otherwise.

## A Review of Research Designs and Methods of Investigation in Industrial Sociology

Industrial sociology makes use of many research designs as applicable in social sciences. Research design is a comprehensive outline or layout of how investigation or enquiry will be carried out which includes how to collect data, instrument specification and application, as well as method of analyzing data collected in the field. It is a general strategy which when decided upon integrates the different components of a study in a coordinated and logical manner, which ensures that the problem is effectively addressed. Research design is the blueprint for collection of data, measurement of variables of the data collected and analysis of same.

Major research designs useful in industrial sociology include: Archival design, content analysis, historical analysis, experimental research, longitudinal research, observational studies, exploratory studies, action research, case study, cohort studies, cross sectional design, descriptive studies, meta-analysis and sequential design (De Vaus, 2021). Achieval research involves the use of factual evidence from variety of records. Content analysis is the indepth analysis of context of books, mass media or other materials that are studied extensively and analyzed. Historical method involves the search for information and knowledge about the past to predict the future event, situation etc. In experimental method, effect of one variable on another is analyzed to develop a theory of their relationship, which entails treatment and control.

Longitudinal study involves extensive examination of a specific group over a long period of time through survey. Mix method involved the application of qualitative (interview, indepth interview, key informant interview etc.) with qualitative technique (survey). Case study is an indepth study of a particular problem, which is a quantitative study that measures the impact of a specific change on existing norms and pattern. Cohort design is a study conducted over a period of time involving members of a population which the subject or representative members come from and are united by some common characteristics. Cohort may be open where entry and exit are free or closed where entry and exit are restricted.

Action design is in form of a story or observation without a standardized format to follow. It is exploratory in nature and follows a cycle, void of quantification. Exploratory design is carried out when there is no or few earlier studies to help predict occurrence and is common in preliminary studies. Longitudinal studies follow identical sample over time, while meta-analysis is an analytical

methodology design to systematically evaluate and summarize the results from a number of previous studies.

All these methods and designs are applicable in studying work, work organization, work groups, employment relations and their impacts on society and vice versa which Industrial Sociology entails. Research in Industrial Sociology involves measurement, quantification and application of statistical tools and software, such as: ANOVA, Regression analysis, Correlation Coefficients, T and F distribution of inferential statistics, as well as descriptive statistics and graphical tools.

## **Methodological Crisis and Challenges**

Industrial sociologists, students and researchers in this area are often at lose of which method or technique to apply at which time. Nguyen (2020) noted major methodological issues researchers faced to include: sample size determination, biases, data analysis, categorization and theory building.

It is extremely difficult for social scientist in particular to remove the interest and personal biases from the investigation they are carrying out. This post a major problem to objectivity which is a primary essence of science. Where objectivity cannot be upheld and subjectivity sets in. scientific value is undermined, which is the problem of Industrial Sociology and other Social Science.

The ability to control human behavior is also a major problem. Industrial organization is made up of workers and work groups and human being in truth cannot be subjected to control. This affects strict scientific experimentation, returning Social Sciences to quasi-experiment without control, posing a major challenge to scientification of Sociology as a whole (Bassey, Bassey & Bassey, 2024).

Conceptualization and variable making are subject to manipulation of Social Scientist. These concepts are difficult to measures and conceptualization barriers also eminent, as such conceptual framework and transformation of concepts to variables a difficult task to many researchers in Social Science fields. The choice of research design and methods or techniques for data gathering also post major problems to social researchers in conducting research for the growth and development of the field. Application of statistical models and software causes some researchers to abandon research processes, which in academic research leads to termination of studies.

Other major problems and challenges of research in the field of Industrial Sociology in particular and Social Sciences in general include: lack of research funding, lack of data, neglect of research by government and public institutions, negative attitude of the public towards research and researchers, illiteracy, religious and cultural barriers. This problem shinders the growth and development of the sub-discipline.

#### **Conclusion and Recommendation**

The scope of interest in Industrial Sociology and Social Sciences from this study is broad and vast, that research in the area will not only tend to the growth and development of the field, but work organizations, work process performance and the society as a whole. Failure to improve research will act as impediment to development. Industrial Sociology curriculum should be expanded in the area of social research and application of scientific method. This will improve students and researchers' understanding and comprehension of research for development and growth of the subfield of Sociology. Without adequate attention to research to demystify its application Industrial

Sociology will suffer decay in the future or discontinuity of the sub-field in the Sociology family and Social Sciences lineage.

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