

# Chapter 1

## Introduction to Research Evaluation

### ABSTRACT

*With the availability of large corpus of potential indicators and their extensive use, it is imperative to examine and scrutinize the features of these indicators in order to make them eligible for use by researchers, evaluators, and administrators. The significance of the book is to draw attention of research community towards the huge number of scientometric indicators that are available and are applied to evaluate the research content at various levels. It aims to provide a “one stop shop” to the future researchers where they can learn about the full range of research indicators available to them for the purpose of the evaluation and assessment of scientific literature.*

### INTRODUCTION

Research is the scholarly quest of novel and innovative knowledge, invention, or resourceful activity in a subject area with the aim of developing, evolving and sometimes evading the subject's boundaries or limitations. But, without objectivity, research is insignificant, becomes works of fiction, and does not have effectiveness. Research plays a decisive role in national development. Scientific research output has become so massive and intricate that personal experience and knowledge cannot be used for understanding developments or for making decisions. The requirement to be choosy and using high level substantial research measurement techniques is increasing. The authorities in

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universities, boardrooms, government offices, labs, administration whether private or public, must have a justification for their performance as part of professional or national liability conventions. Therefore, a prodigious consideration is given to consistency, validity and rationality in research techniques. For the purpose of signifying the reliability and validity of research, evaluation and assessment of research is important to depict its quality, significance, impact, utility and relevance of research content (Morse, et. al, 2002).

## **RESEARCH EVALUATION**

Every research assessing unit is necessarily required to have an evidence based, strong understanding of its performance towards the research mission and goals. This need and understanding of performance measurement is attained and upheld through the system of evaluation of research. The evaluation of scientific research is an extremely sophisticated and elusive endeavour (Braun, Schubert & Glanzel, 1985; Haiqi & Yuhua, 1996). The 'evaluation' is a methodological area that when practiced provides the worth and significance of a piece of work. Thus, research evaluation is a requisition of any academic discipline as it reveals the value and quality of academic research. Research evaluation is of specific importance particularly in the era of knowledge economy because knowledge leads economic development, and knowledge-generation. It reveals the progress of the national research accomplishments, suggests signs for policymaking, and assists as a motivation for scholars to develop the eminence of their research (Huang & Chang, 2008). The guidelines provided by the European Research Centre (n.d.a) regarding the evaluation of research programmes and projects, there are two chief reasons of evaluation: to brace and recover their execution and to pronounce their results. Due to differences in the nature of academic disciplines, the diversity of publishing activities and content substances, and differences in expectations of researchers of different fields, research evaluation requires different methods for different disciplines. Various methodologies have been put forth by researchers to assess the research output and each method has its own pros and cons. Therefore, efficient and effective research evaluation needs to consider and specify which approaches are most applicable for an unambiguous evaluation context. The European Research centre (n.d.a) provides two broad categories in which methods of evaluation tend to fall

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