

Chapter 83

Introduction to HR Research Using Statistics

Dipak Kumar Bhattacharyya

Xavier University, India

ABSTRACT

HR research through collection, collation and analysis of data, using statistics, immensely help. Even in day to day HR decision making, we need statistics. HR managers can take decisions, and so also a HR researcher can frame suitable hypothesis for getting deeper insights on specific research issue. In all HR functions, we see use of statistics can help. While for some HR researcher statistics help in finding answer to a research issue or a problem; for HR manager statistics can help in taking critical HR decisions with minimum chances of error. Thus, statistics promotes fact based approach in HR research and HR decision making. With statistics, it is also possible to take predictive HR decisions, when we simultaneously make use of HR analytics. Predictive HR decisions help in understanding the future implications of HR decisions, which help HR managers to initiate corrective actions well in advance, before the catastrophic failure in organizations.

INTRODUCTION

With the application of statistics in HR, we can explore unknown facts, and these can help in understanding applications of theory. For example, what would be the menu in Google's canteen, can greatly help Google's HR to study the impact on employees' performance. Hindustan Unilever in India (as part of Unilever Group) never had major problem of voluntary attrition. However, with the recent restructuring effort, i.e., putting out of shelves those products that sell less than one billion Euro, they could observe middle level managers are voluntarily leaving the company. Reasons that could be verified were attributable to managers' typical feeling that putting products out of shelf, which were anchored by them, is like orphaning their children. Obviously, such phenomena can be better understood with the application of statistics. HR managers, with statistics, can build knowledge and theory and get deeper insights to HR issues through the process of identification, critical examination and generalization. Obviously,

DOI: 10.4018/978-1-7998-2460-2.ch083

these help in successful human resource management (HRM) practices in organizations. Scientific HR research is now important for strategic significance of HR functions in organizations. Statistics in HR can broadly help organizations in understanding the way they are structured and function, practices followed in decision making, people-centric issues in organizational operations, selection of right-fit strategies to enhance organizational effectiveness, etc.

HR RESEARCH AND SCOPE OF STATISTICS IN HR

Traditionally organizations use statistics in HR for descriptive purposes. For example, when costs of some operations are higher than other, collating data and then using statistical analysis, we can identify possible causes; based on which managers can intervene to rationalize costs bringing desirable changes in the operation. Use of statistics in HR is very much situation specific. Broadly it can be theoretical, academic, or action-oriented.

Through pure basic HR research, we intend to resolve, illuminate, and exemplify theoretical HR issues. Through objective HR research, we try to find a solution to a HR problem with established knowledge. Evaluative HR research focuses on assessment of some aspects of organizational function, analysing effectiveness of a given problem. Applied HR research tries to solve a specific HR problem through application of appropriate knowledge. Through action research in HR, we not only try to solve a problem, also in the process of solving, we also try to improve existing knowledge repository on the subject. Depending on the nature of HR research issue, we can categorize them in any specific type.

Before we think on use of statistics in HR research, another important aspect is initial concept mapping exercise. A concept map is a formative assessment and research tool, and it helps in visualizing relationships between concepts. It is also known as cognitive map both for the organization and the person. HR managers benefit from a concept map from different perspectives. These are like; understanding research issue, exploring new information and relationships, accessing prior knowledge, gathering new knowledge and information, designing structures or processes, and finally dealing with the problem solving.

With initial concept mapping, once research issue become clear, HR managers can ground research, based on the available knowledge repository on the issue. Research may require the need for developing suggestive model for solution, understanding cause and effect between different relationships. With statistical tools, we can develop such models to portray key concepts and proposition of a theory.

For classifying various types of HR research, we use three important dimensions; applied vs. basic research, exploratory vs. confirmatory research, and quantitative vs. qualitative research. Applied research solves a problem circumstances, while basic research helps us in understanding the underlying principles behind the research problem. Exploratory research is research into the unknown, while for a confirmatory research, HR researcher must have pretty good idea about the research issue. Quantitative research measures variable using numeric scales. Qualitative research studies are based on direct observations of behaviour. Irrespective of the types of HR research, we can apply statistics. Basic HR research helps us to understand interrelationship between various HR variables. Applied HR research helps us to solve an immediate HR problem. In applied HR research, we can make effective use of inputs from front-line managers, particularly in employee management, management of operational costs, allocation of work, monitoring work progress, coaching, performance evaluation, discipline and grievance handling, and recruitment and selection.

9 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/introduction-to-hr-research-using-statistics/252101

Related Content

Diagnosis Rule Extraction from Patient Data for Chronic Kidney Disease Using Machine Learning

Alexander Arman Serpen (2020). *Cognitive Analytics: Concepts, Methodologies, Tools, and Applications* (pp. 1165-1174).

www.irma-international.org/chapter/diagnosis-rule-extraction-from-patient-data-for-chronic-kidney-disease-using-machine-learning/252076

Managing Seven Dimensions of ICT4D Projects to Address Project Challenges

Devendra Potnis (2020). *Cognitive Analytics: Concepts, Methodologies, Tools, and Applications* (pp. 615-637).

www.irma-international.org/chapter/managing-seven-dimensions-of-ict4d-projects-to-address-project-challenges/252048

Exploring Intermediate Modes of Memory Representation and Resignification

Frederico Dinis (2024). *Performativity and the Representation of Memory: Resignification, Appropriation, and Embodiment* (pp. 290-310).

www.irma-international.org/chapter/exploring-intermediate-modes-of-memory-representation-and-resignification/354728

Sentiment Analysis with Text Mining in Contexts of Big Data

Carina Sofia Andrade and Maribel Yasmina Santos (2020). *Cognitive Analytics: Concepts, Methodologies, Tools, and Applications* (pp. 922-942).

www.irma-international.org/chapter/sentiment-analysis-with-text-mining-in-contexts-of-big-data/252063

Password-Less Authentication: Methods for User Verification and Identification to Login Securely Over Remote Sites

Rahul Singh Chowhan and Rohit Tanwar (2019). *Machine Learning and Cognitive Science Applications in Cyber Security* (pp. 190-212).

www.irma-international.org/chapter/password-less-authentication/227582