Research Methodologies for Management Sciences & Interdisciplinary Research in Contemporary World

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Abstract

The charismatic trend attributed in the domain of interdisciplinary research and management sciences has resulted in the notable increase of research activities in these fields. The manifesto of this paper is to identify the major research methodologies in the management sciences in the contemporary world and specifically in Asian academic space. Based upon the research findings, this paper categorically presents the specific categories of research classification with empirical evidence and further explains various new trends in contemporary scientific publications in context to management sciences and interdisciplinary research.

Keywords: Research Methodology, Management Sciences, Interdisciplinary Research, Contemporary Scientific Publications.

1. Introduction

Interactions between the scientific domain and information systems have paved the way for interdisciplinary research, which refers to most of the management sciences. Probably the most water shed moment for the interdisciplinary research was when the management sciences came into inception. In early 90s management sciences gained their autonomy and became hotcakes in the universities of the world.

IT technology of course has played a pivot role in the development of management sciences and hence interdisciplinary research while the dynamic growth of computer capability allowed complexities to be solved (Orlokowski & Baroudi, 1991). In the area of international studies, Journal of Economic Literature (JEL/ EconoLit), (http://www.aeaweb.org/jel/jel_class_system.php) is considered as a reference point for documentation in terms of classifications of research and scientific publications in the domain of management sciences. This documentation source paves the route for viewing of works indexed according to specific keywords. The key manifesto of this paper is to

interrogate the various specific categories of research classifications while pondering over the varieties of new trend in the scientific publications in the field of management sciences.

2. Literature Review

Various authors have concluded and given various opinions about the possible research classifications in context to variety of methodologies used in the subject of management sciences. Cecez-Kecmanovic (2007) concluded that there are the numerous methods of empirical research, which encompasses the positivistic, interpretive and critical approaches. They further identified the three distinguished lines of methodology: the first being able to choose from a variety of critical questions; the second applications method which is evaluated on the basis of epistemological assumptions, while the third possible method harmonizes the process and principles of building scientific knowledge. Chua (1986) also identified the three categories of research classifications i.e. positivistic, interpretive and critical perspectives. In the domain of management sciences the purpose of positivistic approach is to investigate and test the theories and causal realities that predict the phenomenon which impact an organization. This methodology relies on hypotheses/ hypothesis testing on the basis upon population sample (Myers, 2004). In the interpretative approach , unlike the positivistic research, researchers combined the results of their own subjective opinion, considering the reality as a social product that cannot be understood independently of social actors (including researchers), who are also "builders" and who influenced the design of the subject of studies (Klein & Myers, 1999). Cecez-Kecmanovic (2007) believed that instead of formulating conclusions as the established facts, interpretative research provides interpretational analysis on the subject. On the other hand, critical research aims to lift the critiques on organizations, societies and systems for the efficiency reasons, rationality, progress and development (Cecez-Kecmanovic, 2007). He also believed that the critical research methodology is compound of four interrelated components which includes:

a) detailed and intensive examination of local situations and problems that affect real people, working conditions and organizations,
b) critical explanation and comparative structural generalization
c) open discourse and transformative redefinition or action, and
d) reflexive dialectic orientation.

3. Research Methodology

Several databases were used to achieve the objective of this research, which includes ISI Thomson Reuters, RePEc, EconoLit (JEL), Mendeley and SSRN. All articles related which were published during the period of 2008 to 2010 to the thematic area of Economics and Management Sciences were included for the investigation. The ECIS (EndNote ECIS) was also used as a source of relevant information in order to reflect the trend of scientific research in management sciences while keeping an eye on interdisciplinary research.

3.1 Data Analysis

Issues addressed in the scientific research regarding management sciences and interdisciplinary research is quite extensive, which are attributably composed of model design, measuring of effectiveness, conclusions and policy implications. As a research topic at the border of several interdisciplinary sciences, the research in management sciences is influenced by:

a) The dynamics to analyze and evaluate any existing phenomenon in the search of new knowledge.
b) Evolution of research in related fields (accounting, management etc).
c) Linguistic turn (Beged-Dov & Klein, 1970).

The linguistic turn has already impacted management sciences and this impact may well increase. The language game of re-naming is practiced to a certain extent within the discussion of knowledge management and the transition of Enterprise Resource Planning Systems to Enterprise Systems. Importantly, the linguistic turn not only impacts at the "application level", but also on the methodological level. If the nature of language is considered, then positivist methodological dominance in the domain of management sciences must be questioned (Dreiling, 2007). Banker & Kauffman (2004) have proposed the classification of scientific research in the domain of management sciences, based on papers published until 2006. This classification was later adapted in the study by Galliers & Whitley (2007).

Table 1: Categories used to classify research in Management Sciences

Categories	**Methods**	**Keywords**
Economics (Marketing, HRM, Finance, Supply Chain Management)	Analytical modeling, empirical analysis, cross-sectional and longitudinal design, experiments, simulation	Economy, Consumer Economics, Labor Economics, Financial Economics, Logistic Economics.
Issues in Research	Case studies, Experiments, Empirical analysis	Case studies, Research in Management Sciences, Knowledge.
Society/ Societies	Analytical models, statistical analysis, simulation, empirical Analysis	Governance, Public sector, Public services, Society.
Electronic Markets	Analytical models, statistical analysis, simulation, empirical Analysis	Commerce, Markets, Electronic commerce, Electronic markets
Technology	Analytical modeling, empirical analysis, cross-sectional and longitudinal design, experiments, simulation	Networking
Decision support Systems	Mathematical programming, forecasting, simulation, expert Systems	Systems to assist decision, Models, Decisions

4. Results

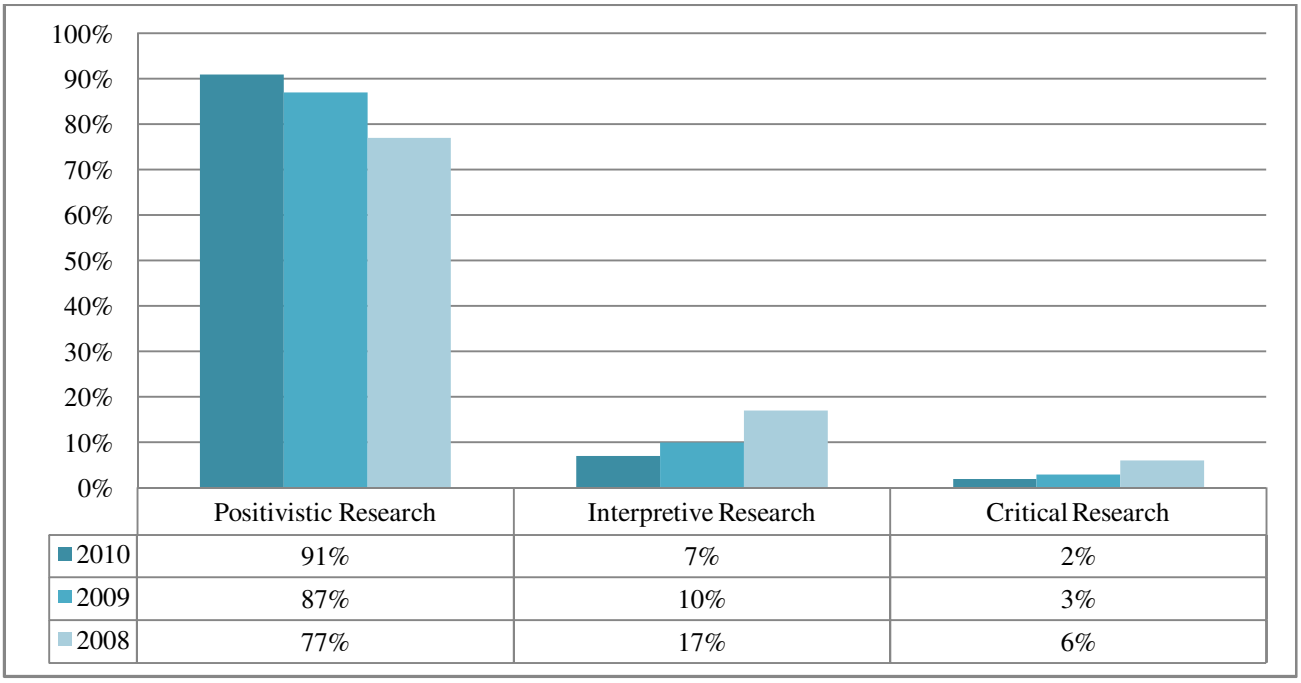
The results conclude some very interesting and peculiar findings as highlight in table 1 and 2. The table 1 reveals the numbers of Research Publications by each category of Research in Management Sciences which include positivistic research, interpretive research and critical research. The most publications for the period of 2008 to 2010 fall into category of positivistic research i.e. 91% in 2010, 87% in 2009 and 77% in 2008. Precisely in terms of research type, positivistic research is found as the most common style in the published articles within the international space. While the scientific publications with interpretive methodology of research hold the second rank. The numbers of publications with critical research methodology are found comparatively so meager for the all outlined years.

The table 2 reveals the numbers of Research Publications in Management Sciences which includes Economics (Eco), Applied Economics, Marketing (Mkt), Human Resource Management (HR), Finance (Fin), Supply Chain Management (SC), Issues in Research, societies, Electronic Markets, Technology and Decision Support System.

This paper further finds as shown in table 2 that among the various core area of domain of management sciences and interdisciplinary research the subjects of economics, marketing, human

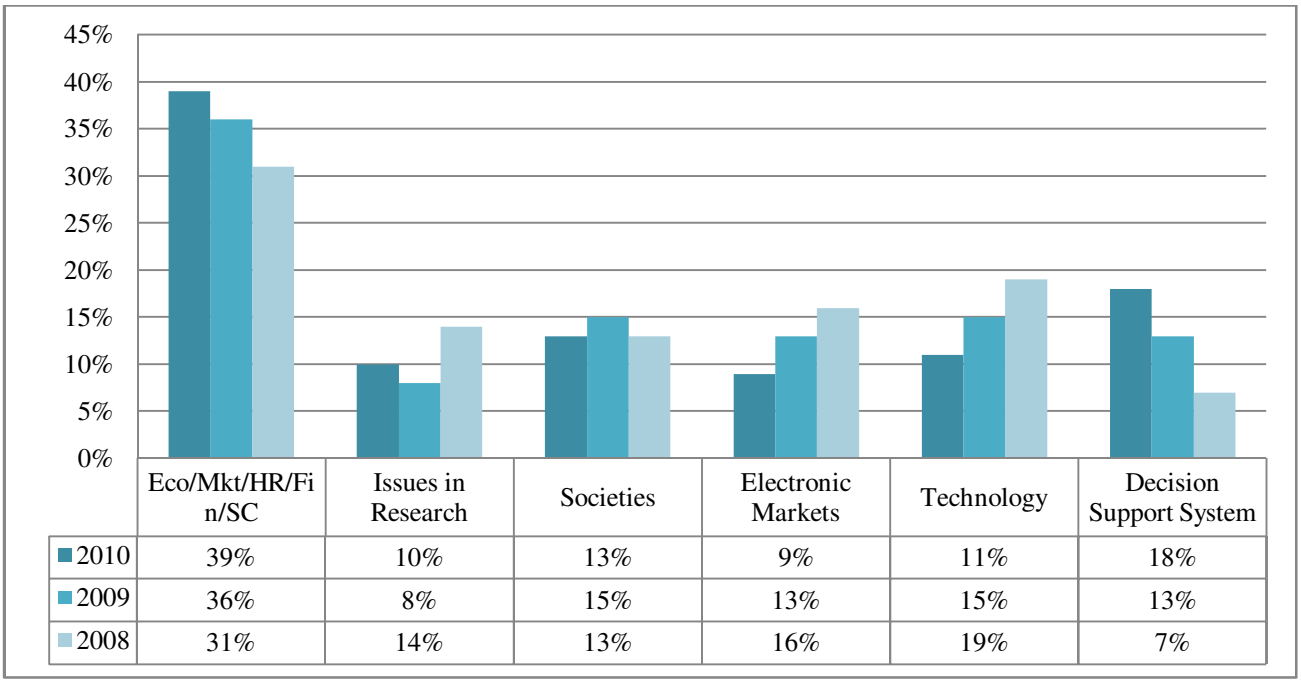
resource management, finance and supply chain management have produced most of the scientific publications for the all outlined years while the subjects/areas of issues in research, societies, electronic markets, technology and decision support system also rendered the significant contribution in knowledge creation for stated years.

Table 2: Numbers of Research Publications (in percentage) by each category of Research in Management Sciences



	Positivistic Research	Interpretive Research	Critical Research
2010	91%	7%	2%
2009	87%	10%	3%
2008	77%	17%	6%

Table 3: Numbers of Research Publications (in percentage) in Economics and Applied Economics (Management Sciences)



	Eco/Mkt/HR/Fin/SC	Issues in Research	Societies	Electronic Markets	Technology	Decision Support System
2010	39%	10%	13%	9%	11%	18%
2009	36%	8%	15%	13%	15%	13%
2008	31%	14%	13%	16%	19%	7%

5. Conclusion

This paper is an attempt to interrogate and confirm the possible categories/ approaches of research in management sciences along with the numbers of scientific publications which fall in the outlined approaches of research and the subjects of domain of management sciences, while pondering over the empirical conclusions which are extracted from the various research data base. This paper concludes that the positivistic research methodology is the most popular approach of research in the domain of management sciences while the interpretive and critical approaches have some space in this discipline. Whereas, the core subjects of management sciences which includes economics, finance, marketing, HR and supply chain management have more contributions in the creations of scientific knowledge than the any other subjects of domain of management sciences.

In short, this paper is a venture to shed light via empirical evidence on the various possible new and existing trends and approaches, which are into practice in the arena of research in management sciences with a touch of interdisciplinary research.

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