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A DECEPTIVE STUDY OF DATA MINING AND ITS ABSTRACTION TOWARDS HUMAN RESOURCE DEVELOPMENT IN IT INDUSTRY WITH SPECIAL REFERENCE TO COIMBATORE CITY

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Abstract
India has become a global power house in Software and Software services sector. It is also evidence from the view of the eleventh Five Year Plan (2007-2012), Information Technology industry has contributed immensely to the development of Indian economy. The twelfth Five Year Plan (2012-2017) is also forecasting a focused and co-ordinated push in the IT Sector which will help India to achieve faster, sustainable and more inclusive growth. The Information Technology Industry has opened up tremendous opportunity for the promotion of software exports and service in the State of Tamil Nadu in recent times too. The HR department in the present IT sectors pressurizes the HR Managers to employ more advanced and scientific tools, one such noteworthy tool is the application of data mining in HRD. It eases a business person to access and navigate a complexed data warehouse, and makes them to have a clear understanding.

Key Words: Data Mining, Information Technology, Human Resource Development.

Introduction

Data mining is the process of discovering meaningful new correlations, patterns, and trends by digging into (mining) large amounts of data stored in warehouses. Data mining is not specific to any industry. It requires intelligent technologies and the willingness to explore the possibility of hidden knowledge that resides in the data. Most organizations engage in data mining for the purpose of discovering knowledge, visualize the data and correct the data. Data mining, on the other hand, extracts information from a data base that the user did not know existed. Relationships between variables and behaviors that are non-intuitive are the jewels that data mining hopes to find. Technology plays a critical role in enabling the transformation of HR from personnel management to business execution, technology by itself does not create this change. HR leaders must effectively use this technology to drive more business relevant conversation with line leaders.

Objectives of the Study

- To study the concept of Data mining in general and in particular to Human Resource Development.
- To analyze the factors influences to utilize Data mining in HRD.
- To suggest better ways and means for maintaining, accessing the data bases of the organization and applications of Data mining for the continuous development.

Research Methodology

Research Methodology is a way to find out the result of a given problem on a specific matter or problem that is also referred as research problem. In this study, we have used different criteria for solving/searching the given research problem.

Research Design: Descriptive research design is used in this study.

Sampling Design: It is an appropriate method to find out the target population, parameters of interest of for the researcher, sampling frame, sampling method and sample size required for the study.

Size of the Sample: The total number of respondents selected for this study is 560.

Sampling Technique: Stratified Random sampling was used to collect data's from respondents.

Data Collection: Both primary and secondary data's were used for this study.

Data Analysis: The collected data's were analyzed using Structural Equation Modeling and the results are interpreted.

Tools Used in this Study: Structural Equation Modeling was used to find out the model fit of the variables which were chosen for the study.

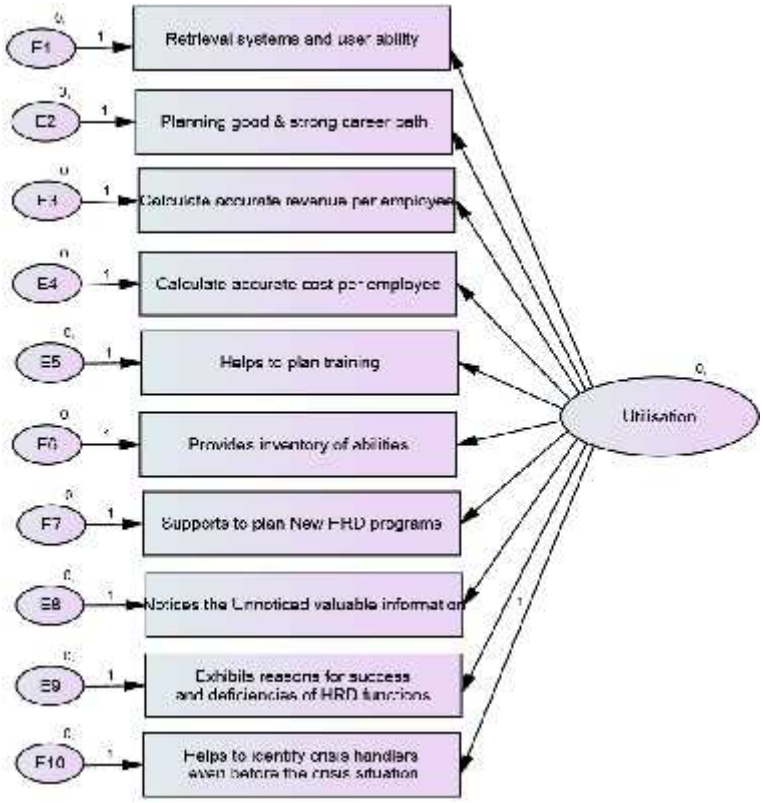
Limitations of the Study

- In this study only ten study constructs were used to measure their impact on utilization of data mining, more study constructs can also be included.
- Sample size may not be exact representation of the universe. There is possibility of some error to a limited extent.
- The time period of study can be extended to gain more inputs.
- The study is purely based on the opinion of respondents, which may be biased at that time.

Data Analysis and Interpretation

Data mining attributes are having positive impact with the utilization of various tools in HRD.

Hypotheses of the Model



Maximum Likelihood Estimates

Regression Weights

Measured Variable		Latent Variable	Estimate	S.E.	C.R.	P
Retrieval systems and user ability	<---	Utilization	1.094	.276	3.959	Significant at 1% level
Planning good & strong career path	<---	Utilization	2.609	.504	5.177	Significant at 1% level
Calculate accurate revenue per employee	<---	Utilization	1.145	.276	4.157	Significant at 1% level
Calculate accurate cost per employee	<---	Utilization	2.149	.418	5.142	Significant at 1% level
Helps to plan training	<---	Utilization	.074	.201	.369	Significant at 1% level
Provides inventory of abilities	<---	Utilization	-2.231	.422	-2.287	Not Significant

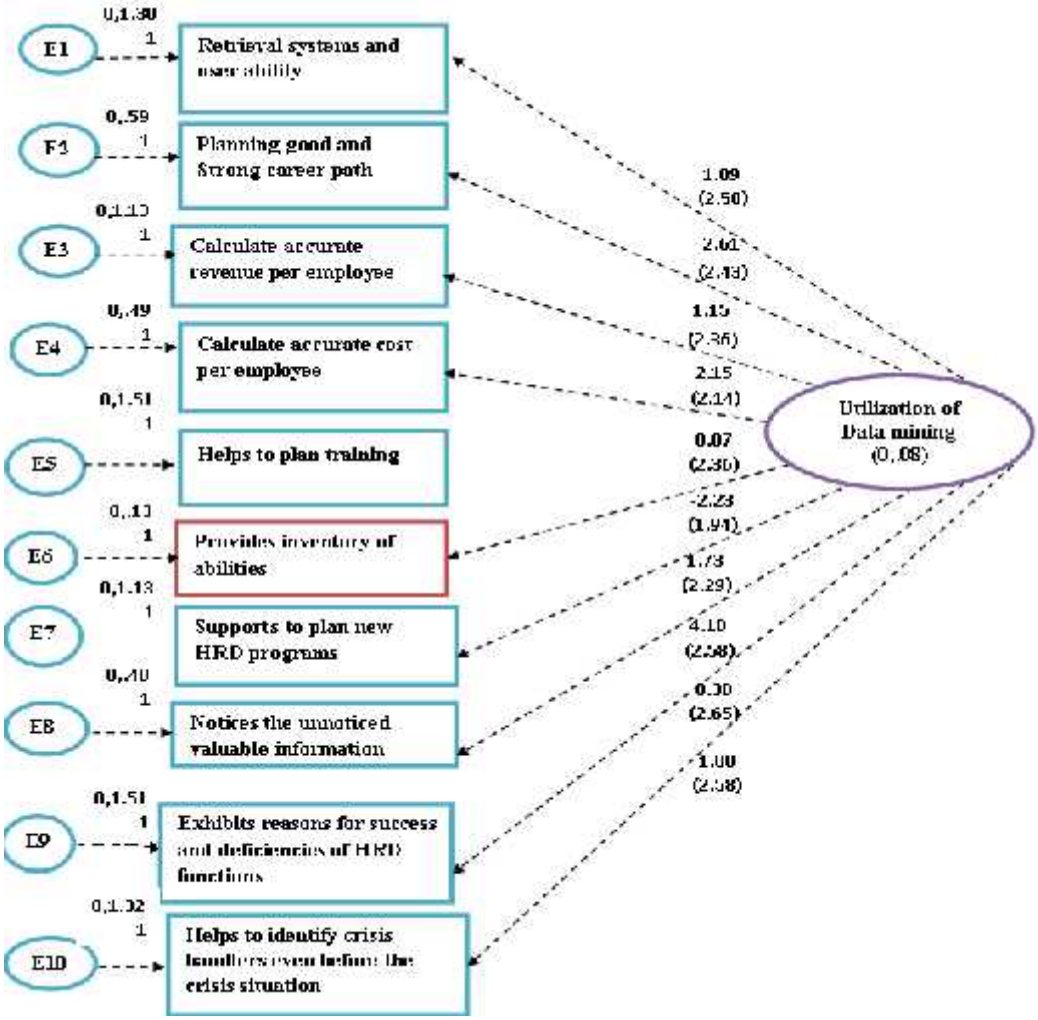
Supports to plan New HRD programs	<---	Utilization	1.728	.367	4.712	Significant at 1% level
Notices the Unnoticed valuable information	<---	Utilization	4.103	.776	5.289	Significant at 1% level
Exhibits reasons for success and deficiencies of HRD	<---	Utilization	.380	.212	3.788	Significant at 1% level
Helps to identify crisis handlers even before the crisis	<---	Utilization	1.000	.342	4.588	Significant at 1% level

The above table shows the regression coefficient of the exogenous variables. It is noted that the critical ratio of Retrieval systems and user ability, Planning good & strong career path, Calculate accurate revenue per employee, Calculate accurate cost per employee, Supports to plan New HRD programs, Notices the Unnoticed valuable information, Exhibits reasons for success and deficiencies of HRD functions and Helps to identify crisis handlers even before the crisis situation are above the table value 3.707 and it is significant at 1 percent level. Among the selected ten attributes, nine attributes are the most influenced factors to utilize the Data mining tool in HRD.

Structural Equation: Methodology and Technical Application

The following path analysis is used to prove the selected hypotheses.

Resulted Hypotheses Model



Testing of Hypotheses

The following table represents the results of the testing of the hypotheses.

Hypotheses	Hypothetical Relationship	Result
H_1: There is a positive impact of Retrieval systems and user ability on utilization of data mining tool in HRD.	Positive	Confirmed
H_2: There is a positive impact of planning good and strong career path.	Positive	Confirmed
H_3: There is a positive impact of Calculate accurate revenue per employee on utilization of data mining tool in HRD.	Positive	Confirmed
H_4: There is a positive impact of Calculate accurate cost per employee on utilization of data mining tool in HRD.	Positive	Confirmed
H_5: There is a positive impact of Helps to plan training on utilization of data mining tool in HRD.	Positive	Confirmed
H_6: There is a negative impact of Provides inventory of abilities on utilization of data mining tool in HRD.	Negative	Not Confirmed
H_7: There is a positive impact of Supports to plan New HRD programs on utilization of data mining tool in HRD.	Positive	Confirmed
H_8: There is a positive impact of Notices the Unnoticed valuable information on utilization of data mining tool in HRD.	Positive	Confirmed
H_9: There is a positive impact of Exhibits reasons for success and deficiencies of HRD functions on utilization of data mining tool in HRD.	Positive	Confirmed
H_{10} : There is a positive impact of crisis handlers even before the crisis situation	Positive	Confirmed

Findings of the Study

From the path diagram, the measured variables with latent variable of level of influence of utilization of data mining of respondents are having positive relationship and also significant at 1 percent and 5 percent level except the variable Provides inventory of abilities. The analysis of the model, from the viewpoint of the most influenced factors to utilize the Data mining tool in HRD, suggests that the variables such as of Retrieval systems and user ability, Planning good and strong career path, Calculate accurate revenue per employee, Calculate accurate cost per employee, Supports to plan New HRD programs , Notices the Unnoticed valuable information of the measured variables, Exhibits reasons for success and deficiencies of HRD functions and Helps to identify crisis handlers even before the crisis situation are showing significant impact on the utilization of data mining tool in HRD.

Conclusion

Data doubles about every year, but useful information seems to be decreasing. Over the last decade, the area of data mining has risen to address this problem. Data mining has become not only an important research area, but also one with large potential in the real world. Current business users of data-mining products achieve millions of dollars a year in savings by using data mining techniques to reduce the cost of day-to-day business operations. Due to the importance of extracting knowledge/information from the large data repositories, data mining has become an essential component in various fields of human life. Advancements in Statistics, Machine Learning, Artificial Intelligence, Pattern Recognition and Computation capabilities have evolved the present day's data mining applications and these applications have enriched the various fields of human life including business, education, medical, research etc. All most every field has become data-intensive, which made the data mining as an essential component and produces the future trends from the past data. Thus, to conclude that with the enormous growth of Information Technology companies in number and size, it forces the present Managers to innovate modern applications and management throughout the Nation. Since the highly automated computer machines are the heart and life blood of IT company it also creates the expectation to use the boon (computer machine) for its management functions too. The survival of the IT Company does not depend only on the technical ability of the company, image or size whether big or small. Forces of globalization and liberalization have significantly changed the traditional management model almost in all

the industries, naturally IT industry is also included in it and also it has the prioritized place in this list and data mining supports and influences the managers to utilize in the human resource development.

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