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A STUDY ON SUCCESSION MANAGEMENT AND ITS IMPACT ON PERFORMANCE OF THE EMPLOYEES IN THE BHEL ANCILLARY UNITS TO TRICHY DISTRICT, TAMIL NADU BY USING NEURAL NETWORK (NN) METHOD

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ABSTRACT

Succession planning is an important part of the talent management process. It provides a clear-cut way to identify key roles, people with the right skills and positions that may need filling in a short space of time. It also provides a way to cut the costs of recruitment, enabling firms to manage recruitment in-house. Succession Planning is important because at the Talent Management process is identifying key roles and mapping out ways to ensure the organization has the right people with the right skills and experiences. Talent development defines all process and programs that an organization make use of to assess and develop talent. Succession planning is the process for reviewing key roles and determining the readiness levels of potential internal and external employees to fill the roles. It is an important process that act as a link between talent development and talent acquisition. About this, there were some studies undertaken in both the urban and rural areas about the succession planning. But there were no study for BHEL industries, Trichy. In order to identify the impact of succession planning towards employee performance and to find out the employee attitude about succession planning an attempt was made to study the employee's perception in BHEL. The present study tries to make an approach in this direction to offer effective details to the company which will help them to face the problems related to leadership and succession issues.

Key words: Succession Management, Talent, impact, performance, NN Method.

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1. INTRODUCTION

Succession management is a systematic approach to identifying, selecting, and developing key employees and talented new hires to assume critical roles and prepare the organization for the future. This practice ensures that skilled and engaged people fill key leadership roles. As business conditions become increasingly challenging, skilled leaders must tackle them and continue to drive the organization forward. However, the role of leadership often leaves employees feeling ill-equipped in their skills and qualities to take on the position. That's hence succession management tools and planning have become a core focus for many businesses.

Succession management is ultimately the responsibility of the CEO and board of directors but HR will assist in and facilitate the process. Succession planning is a strategy for identifying and developing future leaders at your company — not just at the top but for major roles at all levels. It helps your business prepare for all contingencies by preparing high-potential workers for advancement.

2. SUCCESSION PLANNING AND MANAGEMENT FIVE-STEP PROCESS

Succession planning and management is an essential component of the broader human resources planning process. It involves an integrated, systematic approach for identifying, developing, and retaining capable and skilled employees in line with current and projected business objectives.

STEP 1. Identify Key Areas and Positions

- Key areas and positions are those that are critical to the organization's operational activities and strategic objectives.
- Identify which positions, if left vacant, would make it very difficult to achieve current and future business goals.
- Identify which positions, if left vacant, would be detrimental to the health, safety, or security of the Canadian public.

STEP 2. Identify Capabilities for Key Areas and Positions

- To establish selection criteria, focus employee development efforts, and set performance expectations, you need to determine the capabilities required for the key areas and positions identified in Step 1.
- Identify the relevant knowledge, skills (including language), abilities, and competencies needed to achieve business goals
- Use the Key Leadership Competencies profile
- Inform employees about key areas and positions and required capabilities

STEP 3. Identify Interested Employees and Assess Them Against Capabilities

- Determine who is interested in and has the potential to fill key areas and positions.
- Discuss career plans and interests with employees
- Identify the key areas and positions that are vulnerable and the candidates who are ready to advance or whose skills and competencies could be developed within the required time frame
- Ensure that a sufficient number of bilingual candidates and members of designated groups are in feeder groups for key areas and positions

STEP 4. Develop and Implement Succession and Knowledge Transfer Plans

- Incorporate strategies for learning, training, development, and the transfer of corporate knowledge into your succession planning and management.
- Define the learning, training, and development experiences that your organization requires for leadership positions and other key areas and positions
- Link employees' learning plans to the knowledge, skills (including language), and abilities required for current and future roles
- Discuss with employees how they can pass on their corporate knowledge

STEP 5. Evaluate Effectiveness

Evaluate and monitor your succession planning and management efforts to ensure the following:

- Succession plans for all key areas and positions are developed;
- Key positions are filled quickly;
- New employees in key positions perform effectively; and
- Members of designated groups are adequately represented in feeder groups for key areas and positions

3. REVIEW OF LITERATURE

Odhiambo, J. O., Njanja, L., & Zakayo, C. (2014) Succession planning in the recent past has received more attention not only as a concern for the management of human resources, but also as institutional strategic management component for ensuring performance and growth. Succession planning's main objectives can be described as; to improve job filling for key positions through active development of longer-term successors through ensuring their careers progress, and making sure that they get the range of work experiences they need for the future to encourage a culture of progression. This study assessed the effects of succession planning practices on organizational performance among Non-Governmental Organisations (NGOs) in Kenya. The specific were to: establish the extent to which succession planning influences the realization of stakeholder's expectation, explore the role of succession planning on internal business process and determine the extent to which succession planning contributes to the growth of NGOs in Kenya. The research designs adopted were descriptive and quantitative. A total of 270 NGOs based in Nairobi participated in the study. The study consolidated both primary and secondary data. Secondary data was collected from relevant records from the NGOs under study and NGO coordinating board of Kenya. The main instrument for collecting primary data was a questionnaire. Each participating organization filled one questionnaire. The statistical analysis included; descriptive statistics and inferential statistics to determine the strength of a relationship between variables to establish the strength of association between

dependent and independent variables. The findings through tests of hypothesis revealed that: succession planning have significant effects on internal business and significantly contributes to institutional growth of Non-Governmental Organisations. However, findings revealed that succession planning have no influence on realization of stakeholder's expectations.

Jennifer Lin Russell Jennifer Lin RussellLL SabinaLL Sabina (2014) Many school districts struggle to recruit sufficient high-quality principals for their schools. A variety of conditions contribute to this challenge, including the retirement of the baby boom cohort and diminishing interest in administrative careers due to the expanded responsibilities of school principals. In response, districts enact a range of policies and programs explicitly aimed at identification and development of school leaders. Our study examined the actions taken by six districts drawing on the succession-planning perspective, which is common in the public and private sector management literature but less represented in education research. We found that intentional succession planning enabled districts to develop a pool of high-potential administrative candidates through integrated attention to candidate selection and development. While analyzing the effectiveness of "homegrown" leaders is beyond the scope of this inquiry, leaders in our six focal districts believed that they were able to increase the quality and effectiveness of their principals through intentional succession planning. We present a model for principal succession planning in education based on our empirical findings and on literature-based principles that can guide program design and future research.

Gothard, Suzanne & Austin, Michael. (2012). Informed by the existing literature on executive exit in the for-profit, public, and nonprofit sectors, this analysis identifies the key elements of succession planning with implications for nonprofit human service organizations. It focuses on self-leadership, executives-board relations, and comprehensive succession management and concludes with the importance of aligning succession-based efforts and strategic planning.

Chan, Chee-Ming & Shamsuddin, Alina & Wahab, Eta & Kassim, Angzzas. (2012). Succession planning in IHEs is inextricably associated with talent pool cultivation, where leaders of the future are being groomed today, in-house. It is imperative that means of cultivating the talent pool be acclimatized from the beginning to meet the needs of an organisation. It starts at the entry point of recruitment, followed by induction, continuous training and development of the talents. Each stage interacts with one another in a dynamic close-loop cycle. Regular health check of the loop is also necessary to ensure that each component remains effective in the smooth operation. In this paper, a number of strategic approaches are highlighted on how to create and sustain the talent pool within the close-loop cycle. Proper execution of these strategies could bring a threefold benefit: hidden talents identified, star potentials further developed and under-performers rejuvenated. It is an integrated system that caters not only for the future but the present too, for tomorrow is shaped and sustained by the actions of today.

Al-Samman, Eyad. (2012). Purpose – The concept of succession planning is essential for top level of management in non-family and family businesses. Subsequently, the purpose of this paper is to investigate if this concept should also be expanded for all levels of management and generations in different businesses. Design/methodology/approach – The paper reviews the available literature about the succession planning in both non-family and family businesses.

4. RESEARCH METHODOLOGY

The research design is defined as a strategy used by the researcher to conduct the study and the various variables logically taken for the study. It will explain the research problem. Research design is considered as the blueprint for the collection, measurement, and analysis of data

collected. The research design of this study is Descriptive in nature, which includes accurate descriptions of variables used in the decision being taken without demonstrating the existence of relationship between variables. The main purpose of the research design is always to give a large picture of the research study. Descriptive designs is one which gives a detail phenomenon without creating the association between factors. It is often used for conclusive, preliminary, and exploratory studies; hypothesis will be provisional and speculative.

4.1 Objectives of the Study

To study on succession management and its impact on performance of the employees in the BHEL ancillary units to Trichy district, Tamilnadu by using Neural Network Model.

4.2 Method of Data Collection and Sampling

In this research study, Primary and Secondary data methods have been used for collection of data. Primary data is the one which is collected by researchers, to obtain the answer for the research question when the researcher observe the employee's opinion on succession management, socio-economic characteristics of the employees and the impact of succession planning towards employee performance. The primary data collection method has structural closed ended questionnaire. Secondary data is collected from journals, websites, and magazines. Under the primary data collection method structured questionnaire has been used to collect data from the sample respondents. The questionnaire consists of questions which explain about the demography of the respondents like age, marital status, monthly income, experience, etc., and all the other questions related to the dimensions were taken for the study. After pretesting with 30 employees, appropriate modifications were made in the questionnaire. And also 75 samples are taken for this study.

Area of the Study

Tiruchirappalli District is one of the 38 districts, located along the Kaveri River, in Tamil Nadu, India. The headquarters of the district is the city of Tiruchirappalli. It is located in southeastern India. Tiruchirappalli, situated on the banks of the river Cauvery is the fourth largest city in Tamil Nadu. Tiruchirappalli district lies almost at the exact centre of Tamil Nadu. The district has an area of 4,404 square kilometres. It is bounded in the north by northwest by Namakkal district, in the northeast by Perambalur district, in the east by Ariyalur District and Thanjavur district in the southeast by Pudukkottai district and Sivagangai district, in the south by Madurai district, in the southwest by Dindigul district and, in the west by Karur district. The Kaveri River flows through the length of the district and is the principal source of irrigation and drinking water. Tiruchirappalli district has eleven taluks. Thuraiyur taluk, Manapparai taluk, Marungapuri taluk, Srirangam taluk, Tiruchirappalli West taluk, Tiruchirappalli East taluk, Thiruverumbur taluk, Lalgudi taluk, Manachanallur taluk, Musiri taluk and Thottiyam taluk. With its excellent infrastructure facilities Trichy is serving as a good base to see central Tamilnadu. This District has given great scholars and leaders whose contributions to the society have been very significant.

Questionnaire

Structured questionnaires were constructed to get the primary data from the respondents. The questionnaire consists of questions which explain about the demographic profile like age, marital status, educational qualification, etc., as well as questions related to succession planning and all the other questions related to the study. After pre-testing with 30 employees appropriate modifications were made in the questionnaire.

4.3 Neural Network Model

The Neural Network architecture, used in this study, is a multilayer feed forward network using SPSS 20. The architecture which provides the best fit for the data is the network with three hidden layers and an output layer. The learning and momentum parameters are 0.6 and 0.9 respectively and error convergence falls below 0.01 Percent. Tan sigmoid is the activation function chosen for the hidden layers, and the pure linear function is used to get the output layer which is the real time values.

5. ANALYSIS AND FINDINGS

The architecture which provides the best fit for the data is the network with five input layers, ten covariate variables and one hidden layers and one output layer, as shown in figure 1. The neural network model stems from the studies on the working of human brain systems, and serves as an associative memory between the input and output patterns. These models contain many densely interconnected elements called Neurons or Nodes. The neuron has a set of "n" inputs "x"j, where the subscript "j" takes a value from 1 to "n" and indicates the source of the input signal. Each input "x"j is weighted before reaching the main body of the processing elements, by the connection strength or weight factor "wj". (Multiplied by"wj"). In addition, it has a bias term "w"0, a threshold value that has to be reached or exceeded for the neuron to produce a signal, a non-linearity function F that acts on the produced signal (or activation) R, and an output O. The non-linearity function used in this network is the sigmoid. The sigmoid is very popular because it is monotonic, is bounded, and has a derivative: f"'(s) = kf (s) [1-f(s)].

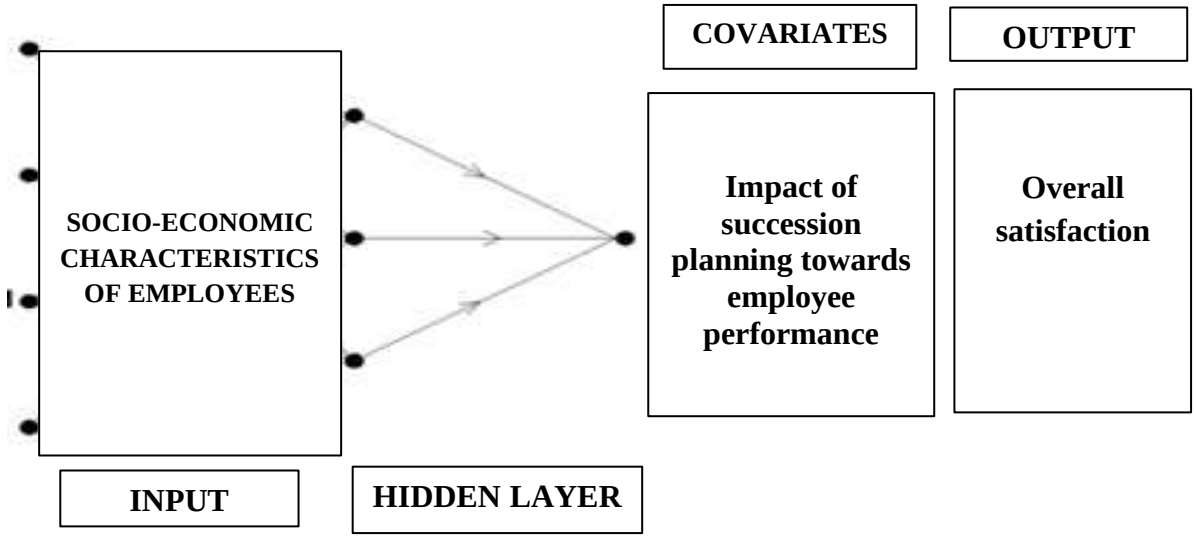

Figure 1 Basic Neuron Model for overall satisfaction on impact of succession planning towards employee performance

The model used in this work is the Feed Forward Multilayer perception, using the Back Propagation Algorithm. Where (4-3-1)

- 5-Input layers
- 10-Covariates layers
- 1-Hidden layers
- 1-Output layer

All inputs are analyzed in the experimental validation part, with appropriate output results by the illustration of graphs so that the influences of the parameters of tensile strength are taken into consideration. The network information is presented in the table. The validation of the estimated NN and Experimental value illustrations is shown in Figure.

Table 1 Model Summary for Neural Network Model for impact of succession planning towards employee performance

Training	Sum of Squares Error	242.385
	Relative Error	.947
	Stopping Rule Used	1 consecutive step(s) with no decrease in error[a]
	Training Time	0:00:00.70
Testing	Sum of Squares Error	122.265
	Relative Error	.960
Dependent Variable: Overall satisfaction		
a. Error computations are based on the testing sample.		

Source: Output generated from SPSS 21

Table 2 Neural Network Model for overall satisfaction on impact of succession planning towards employee performance

Input Layer	Factors	1	Gender
		2	Age
		3	Marital Status
		4	Monthly Income
		5	Experience
	Covariates	1	Develops the skill and talent
		2	More confident
		3	Morale and motivates the employee
		4	Understands the purpose of his work
		5	Employee Turnover is reduced
		6	Improve employee commitment and retention
		7	Increases efficiency
		8	Increases overall performance
		9	Feels secured
		10	Positive impact
	Number of Units[a]		27
	Rescaling Method for Covariates		Standardized
Hidden Layer(s)	Number of Hidden Layers		1
	Number of Units in Hidden Layer 1[a]		8
	Activation Function		Hyperbolic tangent
Output Layer	Dependent Variables	1	Overall satisfaction
	Number of Units		1
	Rescaling Method for Scale Dependents		Standardized
	Activation Function		Identity
	Error Function		Sum of Squares
a. Excluding the bias unit			

Source: Output generated from SPSS 21

Table 3 Independent Variable importance for Neural Network Model for the overall satisfaction on impact of succession planning towards employee performance

Independent Variable Importance	Importance	Normalized Importance
Gender	.049	33.1%
Age	.082	55.3%
Marital Status	.024	16.3%
Monthly Income	.064	43.0%
Experience	.100	67.3%
Develops the skill and talent	.047	31.6%
More confident	.058	39.3%
Morale and motivates the employee	.116	78.5%
Understands the purpose of his work	.051	34.8%
Employee Turnover is reduced	.080	54.2%
Improve employee commitment and retention	.031	21.2%
Increases efficiency	.041	28.0%
Increases overall performance	.042	28.7%
Feels secured	.066	45.0%
Positive impact	.148	100.0%

Source: Output generated from SPSS 21

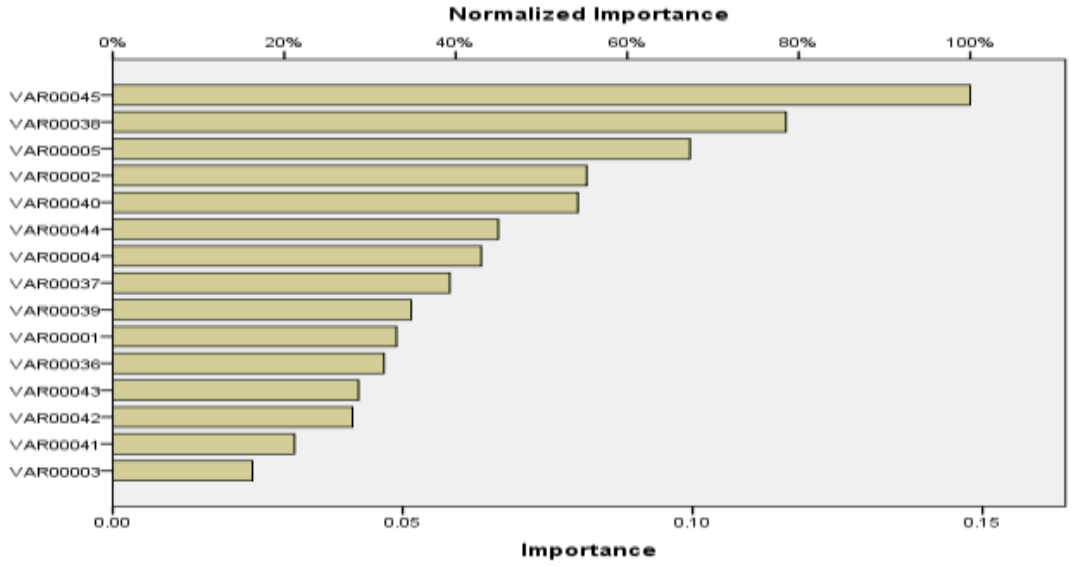

Figure 2 Normalized importance for the overall satisfaction on impact of succession planning towards employee performance

The table and diagram shows the impact of succession planning towards employee performance in respect of "Positive impact" is contribute more towards the output of overall satisfaction.

6. CONCLUSION

The factors of the impact of succession planning towards employee performance model parameters are modelled by using the Neural Network Method. The parameters are optimized so as to determine the set of parameters, which will influence the increase in the overall satisfaction on impact of succession planning towards employee performance by using Neural Networks Architecture and network information. In overall the succession planning process has a big impact on employees' performance in he organization. Neural Network Model for overall

satisfaction on impact of succession planning towards employee performance implies that all the variables taken for the study has in one way or the another has an impact on employee performance. The table and diagram shows the impact of succession planning towards employee performance in respect of "Positive impact" is contribute more towards the output of overall satisfaction.

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