

Leadership, Organization Culture And Talent Management Leading To Talent Sustainability

Hema Harsha

**Hema Harsha-Research Scholar, Manipal Academy of Higher Education, Manipal, India*

Abstract

Anticipating talent needed for tomorrow and strategically building the system to meet the needs of both today and future is the biggest challenge for every organization. The Human resource managers are facing several work force related problems, which includes reduced level of employee commitment; increased war for skilled and talented workforce; managing diverse workforce; and high cost due to turnover. Talent Sustainability is the 'Capability of an organization to continuously attract, hire, nurture, engage and retain individuals with right competences and exclusive commitment to successfully achieve present and future organizational goals' and that is the advantage they possess over the competitors..

Biggest human capital challenge today is about having the right talent and sustaining it. Talented people are a source of rich intellectual capital and the performance of an organization is largely dependent on it. Scientific research organizations that form the backbone for a nation's progress need to be in the fore in such developmental functioning. Scientific institutions that thrives on continuous learning and innovations, needs a robust system in place in terms of nurturing and sustaining the right talent. The purpose of this research study is to understand and explore how exactly do scientific institutions hire, engage, develop, nurture, retain and promote talented people. And also to analyze what internal factors contribute to create a suitable talent pipeline for sustenance?

This research study aimed at, inter alia, examining talent management practices in scientific research institutions and to determine the internal factors influencing Talent sustainability. Nested within the exploratory research framework, primary data was collected both with the help of schedules and an instrument. Collected data was analyzed using statistical tools and the goal was achieved based on inductive and deductive logic. A theoretical framework was developed for Talent sustainability and the influence of the determinants in ensuring talent sustenance was derived. The Talent sustainability framework considers all the internal components of talent ecosystem. The framework assumes Leadership in the organization, Organization culture and strategy, Learning and networking as critical factors along with talent management practices as the driving forces behind ensuring sustenance of talent A key contribution of the study is the development of TSF which can be further modified considering both internal and external factors.

Key words- Talent sustainability, factoral dimensions, endogenous factors,framework

Article Received: 18 October 2020, Revised: 3 November 2020, Accepted: 24 December 2020

INTRODUCTION

Globalization has driven organizations towards rapid developments in scientific inventions, innovations and development. India being a knowledge driven nation, is emerging as one of the major super power in the world. One factor contributing to this paradigm shift is India's presence in the field of science and innovation, which is growing leaps and bounds by the year. Development in scientific research and innovation is nearing global standards and due credit needs to

be given to the talented individuals who are making this possible. Handling such talented individuals is the biggest challenge faced by every organization today.

Modern HR practices have made their way into most of the organizations and the HR department does not work merely as a paper-pushing department anymore. They are the driving force behind achieving business or organizational goals through continuous upkeep of the assets of the organization, the talented workforce! While HRM

focuses on the most fundamental aspects of employee relations, strategic human resource management (SHRM) links HR and the strategies of the organization and focuses on partnership between both internal and external customers using tools that are more systematic. Talent management is one of the strategies of HRM, which describes an organization's commitment towards hiring, developing, nurturing and retaining highly talented individuals with special skills. The challenges faced by organizations today at macro level are increased complexity in systems, dynamic uncertainty, disruptive technology and globalization to name a few. The Human resource managers are facing several work force related problems, which includes reduced level of employee commitment; increased war for skilled and talented workforce; managing diverse workforce; and high cost due to turnover. Organizations leverage technology to ensure efficiency-oriented outcomes, be it in the hiring process, employee development, performance management or talent retention. It would be very interesting to understand how talent is managed, nurtured and retained in this volatile environment where there is always a war for talent.

Today, most organizations have imbibed talent management (TM) practices as an integral function of Human resource management (HRM). While Information technology (IT) and Information technology enabled (ITE) organizations have adopted talent management practices, retail and hospitality is pacing quickly. Scientific research organizations that form the backbone for a nation's progress need to be in the fore in this developmental functioning. One may get to see the most accomplished and outstanding scientists work in this sector redefining the nation as a knowledge driven country.

The last two decades have seen a phenomenal growth in the field of science, technology, innovation and development. It has taken center stage in an organization's global competitiveness, and this trend is expected to continue. India is in the forerun to make the dream of many great leaders of modern India come true, who envisioned the 'role of Indians to be meaningful in the community of nations', while being the best in the field of science, technology and innovation. Many specialized agencies involved in scientific research and development activities catering to the national needs were established post-independence. Government of India aspires to position India amongst the world's best top five nations with

scientific supremacy with innovations in the field of Science and Technology (STI Policy Report, 2013). True to that, India is quickly progressing towards being one among the top five nations in advanced scientific and technological research.

Scientific institutions that thrive on continuous learning and innovations, needs a robust system in place in terms of nurturing and sustaining the right talent. The purpose of this research study is to understand and explore how exactly do scientific institutions hire, engage, develop, nurture, retain and promote talented people. And also to analyze what internal factors contribute to create a suitable talent pipeline for sustenance?

THE CONCEPT OF 'TALENT'

Talent was considered to be a "Special ability, aptitude or even gift from God" (Hoad 1996, as mentioned by Gallardo 2013) and it was the duty of that gifted person to develop it further. Though the same definition continued in 17th century, a sense of 'divinity' was attached to the meaning of talent. In 18th and 19th century, many used the term Talent in lieu of person or human resource, and they perceived that talented people demonstrated extraordinary skills in certain domains. Talent has also been perceived as a special attitude, faculty or high ability (Davis et al, 2010). After an exhaustive research for the definition of "Talent", Gallardo et al (2013) came up with two distinctive approaches. One is a *subject* approach, where talent is considered as people and the other is an *object* approach, where Talent is the characteristics of individuals, like abilities, knowledge and competencies and that is the differentiator of the "talented" from the "non-talented".

TALENT SUSTAINABILITY

Etymologically, the word sustainability is derived from the words 'sustain' and 'ability' which largely signifies 'the ability to keep up' and also means 'something which is capable of being continued at a certain level'. Though the word is largely used in the social, economic and environmental context, its meaning and usage is multidisciplinary. Sustainability in an organizations' context relates to the successful and perpetual existence. Boudreau (2003) stated that "Sustainability" as a philosophy has to be deeply ingrained into the functioning of an organization. With the Organization's mission, vision and goal reflecting sustenance, proper measures need to be taken in connecting the logical functioning with strategic goals thus strengthening the purpose.

Talent sustainability as an outcome

Biggest human capital challenge today is about having the right talent and sustaining it. Talented people are a source of rich intellectual capital and the performance of an organization is largely dependent on it. Many researchers have studied the direct linkage between talent management and organization’s performance in terms of growth and sustenance. In the present knowledge-intensive economy where intellectual capital is the measure of the success of an organization, talent management strategies addresses the issue with the intention of hiring and holding on to the right talent. Many organizations have incorporated talent management philosophy as a prime HR practice to attract, develop and retain talented individuals. The question lies in understanding whether they are able to constantly sustain the talent that these talented individuals have for utilization in the present as well as future. Does it happen gradually as a part of the system? Or are there other factors which influence talent sustainability? The core of this research is to understand how are organizations able to sustain the existing talent? And what are the determinants which espouse this phenomena? It is imperative to understand the relativity between talent management practices which focusses on hi-pots to occupy future roles and the capability of the organization to sustain the existing relevant talent (skills, capabilities) for futuristic use.

‘Talent Sustainability’ being a relatively new term and no research yet done on the same, the research scholar has attempted to relate the definition of sustainability in HR, deriving the meaning of

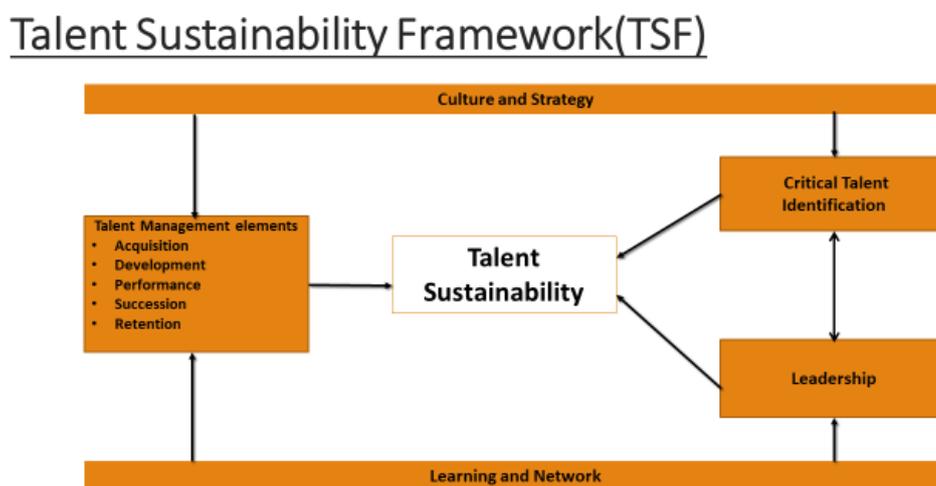
sustainability in terms of talent. Definition of Talent sustainability, though adapted from a few studies conducted by organizations like Centre for Creative Leadership and a study done by PepsiCo, an attempt has been made to link it to sustaining talent in scientific research institutions.

PepsiCo Report (2013) defined Talent sustainability as “an organization’s capability to continuously attract, develop and retain people with the capabilities and commitment needed for current and future organizational success”. They encapsulate factors like providing opportunities for developing leaders, catering to healthy well-being in terms of health and wellness, inclusive culture, efficient governance and ethics as the game changers for talent sustainability model.

TALENT SUSTAINABILITY FRAMEWORK (TSF)

Most of the organizations that follow TM practices focus on two things: one is the TM strategy and the second is its execution. Their success is defined by how well they are able to execute the strategies. With factors like globalization, diversity, technological advances and economic vagaries impacting HR practices today, organizations are moving to redefining ‘talent’ in the new context. Holistic workforce management connecting the business strategy with TM practices and deriving business results as an outcome doesn’t just stop at effective TM execution. Organizations look beyond and relate to the relevance of skills and capabilities of the employees in a futuristic perspective and deal with the challenge of sustaining the right talent for future use.

Fig 1: Talent Sustainability Framework



Source: author

Source: Author

In the present knowledge economy, where intellectual prowess and its application defines the success of an individual, organizations harvest on such capabilities and nurture it for gaining competitive advantage. The knowledge base that is created through such talent is shared in the form of experiences and learnings thus creating a rich talent repository to be explored in the future.

This Talent sustainability framework (Fig 1) proposed here considers all the internal components of talent ecosystem. The framework assumes Leadership in the organization, Organization culture and strategy, Learning and networking as critical factors along with talent management practices as the driving forces behind ensuring sustenance of talent. Critical talent identification enables the organization to look at talent in a futuristic perspective and the role of a leader in pursuing this is enabled by a talent culture where talent is defined in every single function of the organization. The talent mindset created by this inclusive environment focusses on proper identification and utilization of talent on their current roles and utilize this talent for future talent breeding. Organization culture and strategy with effective leadership play a critical role in influencing talent management practices and creating an environment of learning and networking.

Many studies have been conducted on the appropriate talent retention strategy; relationship between TM strategy and organization success; leadership role and building talent mindset; organization culture and talent management practices. All the studies conclude that talent management is critical to an organization's success. This is further explored by PepsiCo in their internal survey where they tie talent sustainability philosophy to CSR and human relationship management. However, sustainability being about 'the long term existence' or 'being available for a long term', no study has been made to understand how organizations build their capabilities, brand themselves and plunge in TM practices under the able flagship of the leaders to sustain talent. Despite the fact that all global leaders and executives of large companies agree to the challenges in attracting, nurturing and retaining talent, there is no holistic approach which integrates all the factors influencing the capability of an organization to sustain right talent.

TALENT MANAGEMENT IN SCIENTIFIC INSTITUTIONS IN INDIA.

Scientific institutions under the study are governed by the policies and regulations formed by the Government of India. In relation to human capital management, these organizations still follow all human resource management philosophies and functions. HR practices in these organizations have a defined structure and is updated to meet all the talent challenges. Managing scientific talent is an integral part of human resource management. Rules and regulations are standardized across all government aided and government controlled scientific research institutions to maintain consistency in the management of human resource. Specific to the nature of work carried out, with some exceptions, all policies governing recruitment, induction, training and development, retention, promotion and retirement are centrally defined and administered within the broad framework of government policies. Some of the salient points of the HR practices in these institutions are summarized in the succeeding paragraphs:

- **Recruitment.** Recruitment to these institutions happens in many ways. At the entry level, recruitment is by standard selection processes which includes performance assessment at the basic graduation examination, screening tests – some specific to organizations and some generic applicable across a host of institutions, and other skill based assessment tests. Hiring is done at other levels apart from the entry level as well. Lateral entry, deputation from other organizations, re-hiring of ex-employees are some of the approaches adopted to hire the best talent. Traditionally, most of these government-funded organizations do not encourage mid-level and senior level lateral hiring from outside the organization. The reverse brain drain policies are drafted to invite talented scientific personnel at all levels into these scientific institutions. Recruitment at midlevel and senior levels is specific to the needs of the organization and is done in many ways, either through structured hiring processes, referrals, direct offers of

employment for a specific term or project based hiring.

- **Career Progression.** Career progression in these scientific institutions is very well defined and employees are made aware of the options that they have. The strategy that is adopted for career progression of employees in these scientific institutions is a combination of time based assured progression and performance based accelerated progression. This strategy is adopted to motivate the outstanding performers to realize their aspirations faster and ensure that they do not leave the organizations for greener pastures.

As part of the career progression strategy, organizations sponsor higher education and research opportunities in premier educational institutions, both in India and in international locations. This exposure fuels the innovative and curious minds to excel in their performance on the job, thereby accelerating their professional growth. Deputation to other scientific and R & D Institutions on project-based assignments, administrative assignments with government agencies, etc., are some of the other avenues that are created to test the capabilities of their employees and evaluate them for higher responsibilities.

- **Learning and Development.** All these scientific institutions lay great emphasis on learning and development of their scientists. They foster an environment, which promotes and encourages employees to actively engage in L & D activities. Deputation to pursue higher studies and undertake research work is treated as service period for the purpose of seniority and pay and allowances. Scientists are encouraged to register and participate in seminars and conferences sponsored by these organizations and publish papers to disseminate knowledge to a larger community. Networking and interaction with peers from other institutions to gain insights into developments in other fields of scientific research is also encouraged.

Understanding whether the scientific organizations are able to successfully recruit, develop, retain and sustain the right talent is the primary objective of this study.

RESEARCH GAPS IDENTIFIED

The area of talent management practices and strategies have been researched with respect to organization effectiveness. But no inputs are available specifically about managing and sustaining talent in scientific institutions in India. There is no information about linking growth of a scientific institution to various determinants of sustaining talent. Scientific talent possesses greater intellect and skills in terms of technical know-how and most of the studies focus on giving the conceptual background of Talent management and its application in various organizations.

Issues related to engagement, empowerment, culture, commitment and sustenance of scientists are not addressed yet. No study is done on relating various elements like sustainability; resource and processes; culture and capacity; policies and practices to the anchor points i.e., impact, efficiency and effectiveness of talent. No study has been done in regard to development of a holistic model for sustenance of talent in scientific research institutions.

PROBLEM STATEMENT

The best of Organizations are known for nurturing and growing talent for meeting Organizational objectives. The review of literature suggests to probe into those factorial dimensions which may facilitate an organization to sustain talent. There are nine factorial dimensions to be considered by an organization to sustain talent and ensure perpetual succession, image value and positioning an organization in the minds of people in the society. The problem area of present study is to explore the relevance and relative importance of identified factorial dimensions in relation to sustaining right talent.

OBJECTIVES OF THE RESEARCH

The objectives of the study are:

- To analyze the key dimensions for talent sustainability practices/processes at select scientific institutions in India;
- To determine the significance of leadership, organization culture and TM on Talent sustainability;

Several studies have been conducted in respect of talent management practices in various sectors and organizations. Extensive research into the field of

leadership and its influence on HR practices has been conducted. Interestingly, there are no studies done in scientific research organizations, which is considered to have the best of brains contributing to science and technology through their ideas and innovations. There are no studies which integrates all the talent management practices along with other factors which may be contributing for an organization's success in having the best talent perpetually. A new theme on sustainability in terms of talent which is the intellectual capital of an organization is examined in this study. Talent sustainability in scientific institution has not been researched and no material on the subject could be found. The scope for further studies can be related to considering exogenous factors and endogenous factors and examining their combined effect on sustenance of talent.

This exploratory study intends to gain understanding into the following:

- Identify all the endogenous factors of an organization which influences an organization to efficiently sustain the talent within;
- Examine the relationship between all the demographic variables and the dimensions identified as influencers;
- Measure the efficiency of an organization to sustain talent as an integrated effort;
- Examine the factors which have greater influence on talent sustenance and

POPULATION AND COVERAGE

The population coverage for the study is specifically related to India and covers nine scientific institutions located in various geographic places like Bengaluru, Vishakhapatnam, Dehradun, Tirunelveli, Hyderabad and Indian station in Antarctica. Scientific institutions are the hub of talented individuals. People working in these organizations possess high capabilities and skills needed for innovation and research. For the sake of feasibility, the scope of the study is narrowed down to scientists only. The study entails scientists at various levels which includes Scientist C(SC), Scientist D(SD), Scientist E(SE), Scientist F(SF), Scientist(G), Scientist (H), HR managers, Head of HRD (with grades as SD and SF accordingly).

DATA COLLECTION INSTRUMENTS

Data collection

Primary data in relation to the research was collected from the target group. Suitable instrument was developed and administered keeping in mind various talent segments and respondents in the

study. Data collected from schedule interview with scientists in all nine organizations is also utilized for the purpose of analyzing. **Secondary data** was gathered from secondary sources:

- Ministry of HRD –Annual publication and reports, Government of India;
- Web sites of all scientific research institutions under the study and
- Policy, Regulation and reports of the scientific institutes considered for the study.

Instrument development

At the very beginning of the research exhaustive literature review was done and taking inputs from that and from the gaps identified, a check list was framed. Discussion regarding the same was done with subject matter experts and industry experts. A battery of questions were framed for the purpose of developing interview schedule. In depth discussion with experts was done. Instruments from earlier studies in the related field of Talent management was investigated leading to the development of the instrument. There has been no study to test the capability of an organization in terms of talent sustenance and hence more deliberations and discussions were held with subject experts. The underlying concept of sustainability, talent functions and internal factors of an organization were considered and second and final instrument was developed with nine dimensions. Twenty demographic variables to get the details of the respondents were identified. The nine dimensions totalled to eighty nine variables on the whole and inclusive of ninety five battery statements in the instrument with some variables having more than one statement.

STATISTICAL MEASURES FOR ANALYSIS

Statistical tools such as central tendency & dispersion measures, relationship measures such as correlation and Linear regression, Autocorrelation, Multi-collinearity, Multiple Regression analysis and Step-wise regression are used. Demographics data is analyzed based on central tendency, dispersion, skewness and kurtosis, mean, median and standard deviation.

Testing of whether there exists any statistically significant differences between the means is tested with ANOVA model and the statistics value is used to determine the ration of two variances (two mean squares). Step wise regression is conducted to identify the impact of individual variables step by

step & the procedure of computations was truncated at the points where R^2 was saturated **Cooper et.al (2012)**.

LIMITATIONS OF THE STUDY

- The study is restricted to select few government scientific institutions and does not cover private research institutions.
- The study is limited to nine institutions only in India.
- External factors influencing talent sustainability is not considered for the purpose of this study. All nine dimensions are internal components.
- The study does not cover other technical and allied workers in the research institutions. It covers only scientists.

FINDINGS

Frequency Distribution: Demographic statistics:

- Out of 185 respondents, 139 respondents are male and 46 are female and that accords to a ratio of almost 75 to 25 percent.
- There are 46 respondents between the age group of 30-35 years and 36-40 years. Almost an equal number falls under the fifth category i.e., respondents who are 50 years and above. This shows that almost equal number of respondent scientists fall under each of the age group identified.
- 40% percent of the respondents have graduation as their only qualification. Another 48% have a Master's degree to their credit and the balance 12% possess a PhD which is the highest level of qualification in these institutions.
- Cross organizational experience prior to joining these institutions was studied in two domains – academics and industry. About 25% respondents had worked in academic institutions before moving into scientific institutions, while 13% had industry experience before their current assignments. As much as 68% of the respondents this was their first organization where they started their career. Most of the scientists join the profession only by choice and not by chance.
- The study revealed that about 28% have continued in the same organization with work experience ranging between 5 and 10 years, with 20% having served in the same organization for more than 25 years. Some

of the reasons attributed to this long term association could be a combination of intrinsic & extrinsic factors.

- The scientific designation in these institutions starts with Scientist "C" at entry level to Scientist "H" for senior scientists. Promotions are based both on the quantitative factors (years of experience) and qualitative factors (assessment of the performance). The study revealed that about 53% of the respondents are at the operational level of the hierarchy (Scientist 'C' & 'D'), 33% constitute the middle level (Scientist 'E' & 'F') and 14% of the respondents constitute the higher echelons in the hierarchy (Scientist 'G' & 'H'). This is an operationally ideal distribution of the manpower across the organization.
- Publishing the research work in various national and international journals is an essential component of talent development and sustenance. The study shows that from the 54% of the respondent scientists who have published at least one article/paper, nearly 33% of the respondents have published between 5 to 10 articles/papers in both national and international journals, while another 4% have published more than 25 articles/papers. This is a very good indicator to show that efforts to develop talent is done in these organizations.
- Engagement on assignments outside of the organizations is another factor which contributes to talent building. These engagements provide employees with opportunities to learn, explore and experiment with their skills in a new environment, which could be challenging and unique in some form. Apart from testing their scientific knowledge, these assignments enable scientists to hone management skills, which is critical for leadership pipeline within the organization. The study reveals that almost 19% of the respondents had the opportunity to work on multiple projects outside their own parent organizations.
- The data reveals that nearly 17% of the respondents had the privilege of working on external assignments, (14 % on national consultancy and 2.2% on international consultancy services). This is a good indicator that these scientific institutions are investing time and efforts to develop a

multi-dimensional talent pool within their respective organizations. International exposure to the scientists will enable organizations to draw experience and knowledge from them and helps the overall skill development of the scientists. This needs to be addressed by the institutions.

- Awareness of developments across multiple domains which could have an impact on one's own work stimulates the mind to think divergently and perform better at their work. The study has found that approximately 25% of the respondents are members of one or more professional and academic forums. This indicates that individuals are motivated to push themselves beyond work to go out and network and interact with like-minded professionals. Those scientists having no membership with any institution or professional body could be due to lack of interest or time. This needs some intervention from the organizations' front.
- Around 70% of the respondent scientists have attended seminars (ranging between 5 and 15 in number). Very few of them have not attended a single seminar (7.6%). The study found that almost 40% have actively engaged in organizing seminars and workshops in their organizations.
- Long leave for the purpose of higher education is provided on a selective basis in these organizations. It is understood that 98.9 percent of them have not availed such facility. Scientific institutions do have scope for further studies for their scientists. Since going out for studies means availing of leave for a long period, this could be the reason for the lack of encouragement to pursue studies.
- 15% of the respondents claim being a part of product or process patents and another 3% are a part of the copyrights for their work along with their respective organizations. A sense of achievement and satisfaction along with motivation to do more is what can be the outcome of being a part of such product and process development. More encouragement in terms of awards and recognition is missing in relation to intellectual properties.

- The data reveals that nearly 26% of the respondents have received awards at various forums, i.e., 22% Indian awards and 4% International awards. Apart from this, internal recognition mechanisms are deployed in these organizations to recognize the contributions of employees and keep them motivated. Nearly 34% of the employees have received internal awards in recognition of their dedicated and outstanding contributions to the organizational objectives. These are good practices to ensure talent retention and sustenance in organizations.

Correlation analysis-findings

Correlation analysis was done for all the demographics and psychographic variables, and some of the significant results are mentioned below:

All eighty nine variables were tested for relationship and significance and it was found that all the identified variables are statistically significant at 0.000% level of significance, barring a few exceptions. The correlation coefficients range between as low as 0.169 to 0.870. All correlation coefficients are positive, implying low, medium and good positive relationship association with each other. There is a statistically significant relationship between all the ten variables (D1V1 to D1V10) of the first dimension, i.e., Organization culture and strategy (D1). Similarly, it was found that the relationship between all the identified variables under every determinant was found to be statistically significant, some with positive correlation and some negatively correlated.

Step-wise regression findings

Step-wise regression was done to analyze the contribution of dimensional variables in predicting their impact on the dependent variable. The extent to which the variables make an impact enables the researcher to understand which factor has greater influence. Step-wise regression procedure which was followed is a combination of both forward and backward selection techniques. All nine dimensional variables were added step-wise, from D1 to D9, against all the thirteen talent sustainability variables individually. Significant results have been captured. Overall depiction of which dimensional variable has maximum impact is understood and is as under:

Table 1: Step wise Regression- Significance level of each dimension

TS/D	D1	D2	D3	D4	D5	D6	D7	D8	D9
TS1	0.000	0.823	0.011	0.009	0.055	0.508	0.192	0.081	0.005
TS2	0.000	0.004	0.004	0.035	0.157	0.449	0.292	0.218	0.007
TS3	0.000	0.000	0.282	0.848	0.81	0.222	0.805	0.073	0.002
TS4	0.000	0.265	0.000	0.114	0.241	0.023	0.997	0.714	0.037
TS5	0.000	0.692	0.037	0.000	0.003	0.234	0.376	0.745	0.019
TS6	0.000	0.002	0.002	0.013	0.342	0.000	0.289	0.04	0.017
TS7	0.000	0.004	0.001	0.025	0.139	0.000	0.628	0.146	0.01
TS8	0.008	0.042	0.036	0.134	0.011	0.002	0.734	0.884	0.000
TS9	0.000	0.063	0.251	0.384	0.151	0.101	0.000	0.005	0.012
TS10	0.000	0.065	0.151	0.392	0.151	0.101	0.000	0.003	0.033
TS11	0.000	0.061	0.136	0.172	0.101	0.121	0.000	0.015	0.012
TS12	0.000	0.01	0.208	0.017	0.022	0.117	0.329	0.017	0.002
TS13	0.000	0.011	0.08	0.11	0.961	0.422	0.755	0.191	0.000

Consolidated table**Source: Author**

- For dependent variable, Commitment, (TS1), Model 1 is statistically significant at 0.05 level conventional threshold. Model 3, 4, 5 and 9 have greater predictor power compared to other predictor variables. Organization culture, talent development, critical talent identification, performance management, learning and networking dimension variables have greater predicting power amongst all the predictor variables.
- The ANOVA results depicts that all the R² values steadily increase with the addition of the identified dimensional variables and is

statistically significant at 0.000 level of significance.

- Better organization culture and strategy, efficient talent development activities, robust performance management and learning networking offer a unique variance to the dependent variable 'commitment'.
- Organization culture, talent acquisition, talent development, critical talent identification, learning and networking have a significant contribution to the dependent variable TS2, 'Systems'.
- Organization culture and strategy, and Talent acquisition dimensional variables impact sustainability variable TS3, at 0.000% level of significance. There is no

significant impact of talent development, critical talent, performance, succession, retention and leadership on dependent variable. At 0.002% level, Learning and networking has a significant impact on talent sustainability.

- Organization culture and strategy (D1), talent development (D3), Succession and career planning (D6) and Learning and networking (D9) are the four dimensional variables which impact 'Efficiency' TS (4).
- Autonomy as a TS (5) variable is impacted significantly by Organization culture, talent development, critical talent identification, performance, learning and networking.
- All nine dimensions except for performance management (D5) and retention (D7) have statistically significant relationship with talent sustainability variable, TS6.
- Organization culture, acquisition, development, critical talent, succession and learning have a significant impact and strongly influence talent sustainability of an organization in terms of approach (TS7).
- Continuous effort (TS8) of the organization to attract and retain the best talent is dependent on culture, acquisition, development, performance management, retention, learning and networking. Sufficient effort is put in the area of acquiring talent, providing them a conducive organizational culture and opportunities for development. However, efforts in terms of Leadership and critical talent identification are lagging.
- Transparency (TS9) in the way of functioning is significantly influenced by dimensional variables of culture (D1), acquisition (D2), retention (D7), leadership (D8) and learning (D9).
- Culture, development, retention, leadership and learning dimensional variables have a significant impact on the effort (TS10) of the leaders in performing their duties to ensure organization's success.
- Organization culture, retention, leadership and learning are the only four dimensional variables which have significant impact on ensuring engagement (TS11) of the management in ensuring that the critical talent is available for future roles.
- Amongst all the predictor variables, organization culture, acquisition, critical

talent, performance, leadership and learning dimensional variables have greater predicting power on Congruence (TS12), and have a significant positive influence.

- Organization culture and strategy (D1), talent acquisition (D2) and Learning and networking (D9) are the only three dimensional variables which impact 'Best practices' (TS13) at the scientific institutions.
- The Model fit is proved for all thirteen TS variables and the identified predictor variables are found to have significant impact on talent sustainability variables.
- The dimensional variables of Leadership (D8) has effective influence on building competency, transparency, involvement of management, congruence and engagement of people. There are some grey areas which needs to be addressed.
- Amongst the nine identified dimensional variables it is found that Organization culture and strategy (D1) has a unique variance, i.e. p value 0.000% against all the sustainability variables and it displays the highest level of significance value. Following that is learning and networking (D9). Dimensions having lesser impact in leading the organizations towards effective talent sustenance are D2, D3, D4, D6 and D8. The dimensional variables performance management, engagement & retention, career & succession planning though not making a major impact, do influence factors like commitment, effort, autonomy, competency, and approach. The least impact is by dimensional variables of D5 and D7.

FUTURE CHALLENGES FOR SCIENTIFIC INSTITUTIONS

Scientific institutions have a very good brand image and culture which attracts talented people. But, with the younger generation (millennials) joining the workforce, their expectations and demands are very different and to meet that, resilience should be practiced as a part of functioning. Competitive salary, pay for performance, stock options are some of the interventions which have attracted talented people in various other industries. Scientific institutions owned by the government may lose talented people due to lack of such opportunities within these organizations. There is continuous political and bureaucratic interference in the

functioning of these institutions. This hinders exploring newer approaches to innovation. This further impedes the ingenuity amongst scientists to achieve more and big. With such restricted environment, talented individuals will look out for better opportunities elsewhere. Competition at the global level for scientific institutions is always reflected in the number of patents they possess. India lags in this front.

SUGGESTIONS

Based on the insights gained by interviews and interactions with the respondents, and correlating them with data collected and analyzed, the following suggestions are listed for the scientific institutions to emulate:

- a) Develop a distinct talent development and management strategy, which should be an integral part of the HR practice of the organization. This strategy should encompass the aspect of talent sustainability and align that with the organizational vision and mission. The policies and frameworks should also focus on enhancement of employee experience, creating a talent management culture and mindset, and the role of leadership in driving these strategies.
- b) Create a knowledge portal spanning across all scientific organizations for wider dispersion of knowledge. This will provide insight into research work being done in allied domains by other institutions. Employees must also be encouraged to contribute to these portals to ensure a vibrant portal, which adds value to the community.
- c) Generate new models of talent engagement across the organizational hierarchy which reflects the culture of inclusive and exclusive talent management. This could include open communication, fostering long term relationship through coaching and mentoring, etc.
- d) Implement a Talent Management Information System (TMIS) to monitor, control and initiate timely interventions in order to ensure effective implementation of Talent Management practices.
- e) Define the scope of Leadership in terms of talent nurturing and sustenance. This will ensure identification of critical talent and

also creates a talent mindset across all functionalities espoused by the leaders.

SCOPE FOR FURTHER RESEARCH

Only internal factors were considered for the purpose of the study. External factors like government policies, labor market influence, economic and demographic changes, etc., can be considered for a holistic study along with internal factors to comprehend talent sustainability. Talent sustainability being a new concept and in the fledgling researchable state, needs a lot of theoretical underpinnings. This can be done by exhaustive work in varied industries in different context. This research was conducted in scientific institutions functioning under the government agencies. This can be studied in the context of private scientific institutions to understand the similarities and variances. Latent TS variables which are hidden in the internal environment of an organization can be identified and analyzed to improve talent management practices.

CONCLUSION

It is but imperative for every organization to step up to the challenges and build their capabilities to meet the mandate of the new decade with Artificial intelligence (AI), Robotics and Natural learning processing (NLP) taking over the world by storm. Science and innovations are scaling newer heights and can be made conceivable only by the powerful brains behind it. That relates to the talented power house of organizations. India aims to be one among the top five nations in the field of science and innovation and the scientific institutions in India are the primary contributors to this. Technological advances, innovations in health systems and infrastructure underpins the contribution of nation building. Building up the intellectual capital and ensuring that this capital continues to remain in the organization is the success path towards sustainability. Esteemed scientific institutions in India were chosen for the purpose of the study. These scientific research organizations are the beacons of advancement in the field of science and technology. This research study aimed at, inter alia, examining talent management practices in scientific research institutions and to determine the internal factors influencing Talent sustainability. Nested within the exploratory research framework, primary data was collected both with the help of schedules and an instrument. Collected data was analyzed using statistical tools and the goal was achieved based on inductive and deductive logic. A theoretical framework was developed for Talent

sustainability and the influence of the determinants in ensuring talent sustenance was derived. Potential challenges faced by scientific institutions and suggestive policy guidelines for improving the efficiency are listed. A key contribution of the study is the development of TSF which can be further modified considering both internal and external factors.

Scientific institutions in India absorb the best of the talent from the labour market. The cream of the lot is chosen for the position of a scientist after a rigorous selection process. The organizations have a culture of learning and provides large scope for development and growth of the individuals. The connection between the intention and the application is missing and that is reflected by the lackadaisical behavior of some leaders, which is understood by the inference made with the data collected. Engagement of scientists involves both physical and psychological engagement. Scientific organization carry an elite persona which every employee of the organization likes to boast about. Beyond that, the value addition which the organization brings to the individual's personal life has to be stronger in terms of association and communication. In its ambition to achieve greater heights in the field of science, technology and innovation, the scientific organizations have a greater challenge to meet as more and more millennial are becoming a part of the organization.

This study has been successful in identifying the internal factors influencing talent sustainability. The factors identified are able to relate to an extent of 73.535%. The other factors if identified could give an overall view in understanding the organization's capability to manage and sustain talent better. Talent sustainability being a very new concept, this research study will enable further research to explore the possibilities of the concept application or further add on to the theoretical foundation.

References

Books

- Berger A Lance & Berger A Dorothy (2011): Talent Management Handbook, Mc Graw Hill Education (India) Private Limited, ISBN: 978-0-07-107739-2, pp: 205-320.
- Black Ken (2013), Applied Business Statistics-Making better business decisions,

Wiley India private limited, ISBN-978-81-265-3707-5,pp:410-588.

- Blass Eddie (2009): Talent Management: Cases and Commentary, London Palgrave, MacMillan, ISBN: 978-0-230-23352-2.
- Boudreau J.W & Peter Ramstad,(2007), Beyond HR: The New Science of Human Capital, Harvard Business School Publishing Corporation, 2007.
- Boudreau, J.W, & P.M. Ramstad. (2005): Talentship, talent segmentation and sustainability: A new HR decision science paradigm for a new strategy definition. Human Resource Management 44(2),pp: 129-136.
- Cappelli, Peter (2008): Talent on Demand- Managing Talent in the age of uncertainty, Harvard Business Press, ISBN: 978-1-4221-0447-7,pp: 165-180.
- Collins J & Porras IJ (2002): Built to last-Successful habits of visionary companies, Harper Collins Publisher, ISBN:13-0-06-051640-2, pp:169.

Bibliography

- Berger A Lance & Berger A Dorothy(2011): Talent Management Handbook, Mc Graw Hill Education(India) Private Limited, ISBN:978-0-07-107739-2, pp:205-320.
- Collins J and Porras I J (2002): Built to last-Successful habits of visionary companies, Harper Collins Publisher, ISBN:13-0-06-051640-2, pp:169.
- Constanza R & Patten B C (1995): Defining and Predicting Sustainability, Ecological Economics(15) (1995), 193-196, Elsevier Science BV,SSDI: 0921-8009(95)00048-8
- Eva Gallardo-Gallardo, Nicky Dries, Tomas F Gonzalez-Cruz (2013) What is the meaning of 'Talent' in the world of work, Human Resource Management Review 23(2013),Elsevier, pp:290-300
- Hislop Donald (2013): Knowledge Management in Organizations-a critical introduction, Oxford University Press, ISBN:978-0-19-870309-9, pp-84-244.
- Josh Bersin & Associates, (2010): Talent Management: Benchmarks, Trends, & Best Practices, Bersin & Associates, <https://www.slideshare.net/IvyLeeSensor>

x/talent-management-benchmarks-trends-best-practices.

- John W. Boudreau and Peter Ramstad, (2007): “Beyond HR: The New Science of Human Capital”, Harvard Business School Publishing Corporation, 2007.
- Kohli A S & Tapomoy Deb (2008): Performance Management, Oxford University Press, ISBN-13:978-0-19-569337-9, pp:83-91.
- Meyers Maria Christina, Woerkom Marianne Van (2014) The influence of underlying philosophies on talent management: Theory, implications for practice, and research agenda, Journal of World Business, Vol 49, Issue 2 April 2014, Pg 192-203, Elsevier, Doi: 10.1016/j.jwb.2014.06.001
- Odor HO (2018): A Literature Review on Organizational Learning and Learning Organizations, International Journal of Economics & Management Sciences, Sci 7: 494. doi: 10.4172/2162-6359.1000494 P, <https://www.hilarispublisher.com/open-access/a-literature-review-on-organizational-learning-and-learning-organizations-2162-6359-1000494.pdf>
- Starik, M., & Kanashiro, P. (2013). Toward a Theory of Sustainability Management: Uncovering and Integrating the Nearly Obvious. *Organization & Environment*, 26(1), 7–30, SAGE Journals, <https://doi.org/10.1177/1086026612474958>
- Tony Wall & John Knights (2013): Leadership Assessment for Talent Development, Kogan Page Limited, ISBN: 978-0-7494-6860-6, pp: 219-229.