ABSTRACT

A radical change is witnessed in the face of HRM in the last decade. Volatile business environment, economic turmoil, talent war, demanding work culture, potential vs. performance is posing new challenges for HR. In the present competitive business environment achieving corporate excellence became a continuous process that requires high performance throughout the organization. At this juncture, the roles of HR managers are quite important and challenging. They are accountable for their HR activities and assessed in terms of delivering strategic value that is quantifiable. At this point of time, use of metrics in HR functions can help in linking HR actions to business strategies. The application of psychometric tools in HRM functions can result in incredible increase in returns on human capital.

In the international business scenario, many corporate houses are using psychometrics as an assessment tool to take business decisions. It is a popular technique to assess individual behavior in countries like US, UK, South Africa. Of late, Indian companies, research, and training institutions have started using psychometric tests for individual assessments, team building, and organizational development purposes. The use of psychometrics in HRM is getting significant than ever to enhance the strategic role of HR that brings long-term performance of the company and the shareholder’s value. This conceptual paper is designed to give a logical explanation of the role of psychometric as an assessment tool for HR to take the strategic decision.

KEYWORDS: Assessment tests, HR activities, Psychometrics.
1.1. INTRODUCTION

People add value to the Organization. The value adding role of the people component in the organization can be realized with effective HRM strategies. An organization that strives for success will have to use effective strategy to select, retain and develop people for delivering true value and high performance. It is imperative for organizations to get the right kind of manpower that not only have right technical skills but also the attitude and behavioural pattern to adapt the company’s profile and culture. If the HR wants to play a strategic role in organisations, it needs to develop its ability to measure how human capital decisions affect the business and how business decisions affect human capital. Quantification of HR though is a difficult process, is now becoming an essential prerequisite for the corporate houses.

Psychometric - the science of psychological measurement that aims at measuring psychological attributes that can aid in quantifying the HR attributes has caught the imagination of the Indian corporate world in recent years. Today, a number of companies are using psychometric testing as an assessment tool to take HR decisions. These tools enable a company to test personality type, learning styles, behavioral aptitude and personal preferences of individuals. It is widely used in recruitment, selection, classification of human resources and occupational decisions. The use of psychometric tests for recruitment has greatly increased since the last ten years. Be it in Europe, India or Australia, almost all big companies use them. In the US, however the use of psychometric tests is more widespread, especially due to the governmental accreditation policy on use of these tests. Over the years the usage has increased to a level where 80% of the Fortune 500 companies in the USA and by over 75% of the Times Top 100 companies in the UK are using some kind of psychometric testing. About twenty per cent of Indian companies use some form of psychometric tests while recruiting candidates. Psychometric testing is most commonly used by companies looking for highly skilled workers in both the public and private sectors who see the value in screening their candidates to ensure suitability, or to help them develop.

1.2. OBJECTIVE OF THE STUDY

Use of psychometric tools in HRD is becoming more popular as employers seek a more objective means of selecting and developing their people. The use of psychometric tests should be encouraged in academic studies as well. A huge variety of instruments is available, therefore it is challenging for HR professionals to know which instrument to use and for what purpose. The paper aims at giving an understanding of psychometric, the assessment tools that are available and their applications in strategic HR functions to measure human behavior and to take better decisions focusing organisational benefits and excellent business results.

1.3. PSYCHOMETRIC - AN ASSESSMENT TOOL

Psychometrics came from the theories of Psychology in the late 1980S’ and used extensively by western countries to measure different dimensions of human behavior. Some of the first psychometric tests were developed by Sir Francis Galton in the late 1800’s, and were later improved upon by psychometricians James McKeen Cattell and Charles Spearman. One of the most significant early contributions to psychometrics came in 1905 with the creation of the Binet - Simon test, which was able to accurately measure a child’s mental age. This test was later
improved upon by a Stanford psychologist name Lewis Terman and was renamed the Stanford -
Binet test or Stanford-Binet Intelligence Scales, which was the very first intelligent test. 
Psychometric tests have developed over the years to measure aptitude, ability, and 
personality traits.

Psychometrics is “the psychological theory or technique of mental measurement.” It is the 
science of measuring a subject’s abilities, knowledge, attitudes, personality traits, and level of 
education through testing to gain an “inside view” of not only what a person knows, but also 
what they are capable of learning and how they feel about certain situations. There are three 
broad categories—cognitive tests, interest inventories and temperament assessments, which can 
offer an evidence-based insight into behaviours.

There are many different types of psychometric tests, including measures of skill, ability, 
intelligence, personality, motivation and interests. A good psychometric test features objectivity, 
standardization, reliability, validity, discriminating and norms.

1.4. ADVANTAGES OF PSYCHOMETRICS

As an assessment tool Psychometrics has many advantages to the organization as well as to the 
candidate as it is much more reliable, consistent and free from error than other assessment 
methods.

Psychometric Assessments allow for the identification of potential which neither the candidate 
nor the employer realized. It can open new avenues of development and/or new career paths. 
Psychometric assessments are designed to assist the employer gauge whether or not a candidate's 
skills and behavioral style makes them suitable for a specific role. Psychometric assessments 
reduce recruitment costs and reduce the time it takes a new recruit to become fully effective. In 
other words, it can impact the bottom line with a positive return on the investment. It adds to the 
fairness of the selection/promotions process, career planning and developmental efforts to gain 
sight into candidates work style and strengths giving a deeper knowledge of the individual. 
Candidates even can utilize the feedback for developmental purposes.

As Human Resources meet the demands of an increasingly litigious work environment, the 
objectivity promised by psychometric testing adds an additional layer of reassurance to the 
assessment process. Quite apart from the hard business benefits mentioned above, there are some 
more subtle, less well-known benefits of using tests. Marketing and branding is one: using good 
tests makes you look good. It shows you are serious about people issues.

1.5. PSYCHOMETRICS AND STRATEGIC HRM PERSPECTIVES- RESEARCH 
EVIDENCES

Firms that carefully link HR activities to business strategy, measured by metrics have a 33% 
higher return on total capital than organisations that do not. (Eatson Wyatt research, 
2003).Organisations today realized the importance of the quantifying the people performances.
Psychometrics fits with the major trends in Human Resources. Psychometric tools in HRD is becoming more popular as it promises to provide accurate and objective data on an individual’s personality style, motivation, intellectual potentials for an insightful assessment to take any business decision.

Psychometric testing is not an essential aspect but a desirable method to use in processes like recruitment and development of people, to ensure that the right people are given the right jobs. Psychometric profiling helps in measuring candidates’ suitability for a role based on the required personality characteristics and aptitude (or cognitive abilities). They identify the extent to which candidates’ personality and cognitive abilities match those required to perform the role. Psychometric tests are used in all aspects of HR work. Be it as part of the training, development or career assessment, psychometric tests are being increasingly used in management of human resources. According to Central Test HR Survey (Jun, 2009), almost 40% of the companies use psychometric testing after recruitment for various developmental HR purposes and this practice is going to increase in the years to come. Psychometric assessments can add value to the selection, development and promotional process, Succession planning, counseling and coaching leadership development programmes, realization of self and development.

Research studies are also there that say loads about the use, benefit of such tests in HRM functions like recruitment, selection, succession planning and leadership development. According to Owen and Taljaard (1996), it appears that psychometric tests can contribute to the efficiency of selection and placement in industry, if used carefully and responsibly. Moerdyk, and Mittner (1998), also mentioned that if psychometric tests are handled with insight and sensitivity, they remain the most effective way of predicting behaviour. Kemp (1999) said that tests are an aid in the selection process and if used properly, supply invaluable information which is not easily gleaned in interviews. Friedenberg (1995) compared different selection procedures starting with application forms, letters of reference, and interviews to testing and confirmed that although each technique has its own merits, but standardized tests are the most psychometrically sound. According to Van der Walt (1998), experience has proved that tests are generally much more reliable and more valid than other techniques. He mentioned that studies in trade and industry have indicated that psychometric tests are about four times more effective than screening interviews.

Gregoire (1999) mentioned that academic education, continuing education, as well as more publications on test and assessment methods will raise the competency level on testing and will improve the quality of actions in the professional field – undoubtedly a very important goal in this regard. Psychometric Assessments provide you with information which can validate your decisions, create new opportunities, highlight development areas and reinforce your strengths.

1.6. APPLICATION OF PSYCHOMETRICS IN HRM

Psychometrics though has its roots in the science of psychology; is a subject of discussion in the competitive business area. The application of Psychometrics to Business field is rapidly growing. Its application to Human Resources is primarily through Organizational Psychologists and has its roots in candidate selection. The use of psychometrics in Human Resources continues to grow.
with the expansion of Organizational Psychologists and Assessment Centers into staff development, training and executive coaching services.

Psychometric tests are used in all aspects of HR work. The application of tests can fall from recruitment and candidate selection to employee development and team building. Popular psychometric tools in use are LLQ, 16PF, MMPI, OPQ32 and FIRO, to name a few. These tools enable a company to test the candidate’s personality and behavioral aptitude. The tests comprise personality tests, motivation tests, cognitive tests and simulation exercises.

In today’s modern workplace with complexities of work the behavior of the employees are becoming difficult to predict. At this point of time an effort to understand the behavior accurately and relate it with desired work performance is must. Psychometric tools which is a reliable and objective assessment technique is crucial to human resource development within the organization. Some of the most common uses of Psychometric in HRM are:

1.6.1. RECRUITMENT AND SELECTION

The use of Psychometric in HRM started with recruitment and selection process. More and more organizations are using the psychometric tests in the selection process to get a right candidate thereby taking best hiring decision and helping in falling the rate of attrition. Achieving a perfect between the employee and the job is directly related to the assessment of the individual’s aptitude and personality which can help the organization to take the right selection that ultimately transform the organization in every respect.

It has been estimated that it costs organizations the equivalent of the whole of the first year's costs (salary and any other benefits) to put right a wrong recruitment decision. Research reported in a number of test manuals shows that using good assessments professionally as part of the recruitment process dramatically increases the number of right decisions you make.

Given the increasingly similar CVs, psychometric tests provide valuable help to recruiters by giving them objective information on those aspects that are often difficult to evaluate through other means. They allow recruiters to save time and money, and reduce recruitment errors reducing the risk that often turn out to be a costly affair for the employer.

1.6.2. CAREER PLANNING AND SUCCESSION PLANNING

With the longer career span and growing average age of employability, a carefully designed succession planning is going to become very important in improving motivation level of experienced professionals and in reducing burden of recruitment. Retaining the employees is becoming a major challenge for the human resources department. As tools of assessment and alignment, the personality tests, motivation and skill tests are, thus, increasingly being demanded more and more to be used internally, after recruitment.
1.6.3. INDIVIDUAL DEVELOPMENT

Psychometric assessment helps the employers to develop the existing human capital and retain them for a longer period of time. Developing existing employees is a wise decision for any organization as it is less risky and less expensive than recruiting new ones. In this regard right assessments aids to focus on employee training or development needs, finding out levels of knowledge, preferred ways of learning or motivations for learning and thereby taking corrective measures for future development of employee potentials. Levels of self-insight can also be created making the employees realized about the respective strengths and weaknesses and to set right goals as part of effective development plans. The assessments through these kind of tests help in getting out of subjectivity and bring a new perspective in the employees. For instance, psychometric testing may discover a seasoned software developer to be a good potential project leader, without him having thought about it till the assessment.

1.6.4. TEAM AND ORGANIZATIONAL DEVELOPMENT

Research replicates that diverse teams always outperform than a team made up of similar people. But to be a diverse team with positive synergy, coordination requires a lot of efforts on everyone’s part. There are certain psychometric tests that identify individual differences - the diversity that fuels a high-performing group of people and gauge attitudes, look at the spread of characteristics and skills in a workforce and create the best organizational structure to deliver objectives which significantly improve communication and productivity both internally and externally.

1.6.5. APPRAISAL AND PROMOTIONAL PROCESSES

Employee appraisal in modern business place is a sensitive issue as many important decisions on promotion, incentives, and variable pay depend upon the merit evaluation of the employees. And in the organizational environment where all are equally competent to categories them to different types of performers really troublesome. In this situation the use of psychometric can ease the task to a large extend with its objective, systematic and impartial features. Use of psychometric in performance appraisal and taking promotional decisions will encourage healthy competition among the employees and can bring star performance also.

1.6.6. MENTORING AND COUNSELING

Psychometric tests are a reliable and valid basis for measuring the aptitude, personality and behavior of the individuals which gives a holistic assessment of people. On the basis of this kind of systematic assements career coaching, counseling for behavioural modification are not only advisable but work wonders.

1.6.7. LEADERSHIP DEVELOPMENT

The leadership traits which are crucial for the success of any organization can be developed by assessing people with psychometric tools. Ideal temperament for the individual job and for
leadership initiative to achieve the objective can be known accurately and authentically through psychometric tools.

1.6.8. ASSESSMENT OF INTEGRITY

Though integrity tests in Psychometrics are new and quite controversial in its application for work assessment, still it can be popularized in selection and development purposes.

1.6.9. EDUCATION

Psychology – the scientific applied study of behavior is a key knowledge area for the managers in any organization. Understanding self and other have many an advantages and organization is also going to be benefited if people behavior is understandable and, predictable. Learning about psychometric tests increases your knowledge and awareness about the different dimensions of individual behavior, temperament and personality and how these can be measured and its applications to take strategic decisions.

1.7. POPULAR PSYCHOMETRIC TESTS USED IN HRM

Here are a wide variety of psychometric tests. Selecting the right test for the right job is an important activity. Psychometric tests can be designed to measure a single factor (i.e. aptitude) or a variety of factors (i.e. skill level, motivation, etc.). Some of the most common psychometric tests which are administered for different purposes in HRM to test aptitude, temperaments and personality are given below.

1.7.1. IQ TEST / STANFORD-BINET 5

Stanford Binet’s IQ test measures a subject’s intelligence and aptitude, which may be used to predict potential educational or ascertain the need for additional education assistance. Developed by the Psychologists Binet, this test contains questions pertaining to logic and verbal ability in order to ascertain the subject’s mental age from an average IQ score is 100. This test can be used to know the IQ of the candidates in recruitment and training need identification of the employees.

1.7.2. BIG FIVE PROFILE

Big Five Profile measure a subject’s core five personality traits, based on the Big Five personality model to measure the five personality traits Openness, Conscientiousness, Extroversion, Agreeableness, and Neuroticism which influence the work behavior. The test consists of a series of statements, to which the subject answers how much they agree or disagree with each.

1.7.3. MYERS-BRIGGS TYPE INDICATOR / JUNG TYPOLOGY TEST

One of the first accurate and reliable personality questionnaires, which is commonly used to get a broad overview of a person’s personality traits based on four dichotomies:
Extraversion/Introversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving. The test format includes a series of statements where the subject chooses to agree or disagree about the types. This powerful and versatile indicator of personality type is widely used for individual, group and organizational development purposes for identifying leadership styles, developing managerial potentials, counseling for managing stress, executive coaching, providing career guidance, resolving team conflicts, improving communication, valuing diversity, identifying learning styles and motivations, understanding the corporate culture and responding to the change.

1.7.4. FIRO-B

Firo –B is a unique questionnaire that measures the interpersonal behavioral style. This test is used for team building, identifying leadership styles, improving communication, resolving conflicts, career development, coaching and personal growth. With combination of other assessment techniques this can be applicable to structure interviews and to assess interpersonal behavior.

1.7.5. CPI (CALIFORNIA PERSONALITY INVENTORY)

A sophisticated personality measure which is highly reliable and has many applications and used throughout the world to predict behavior to take decisions in Recruitment and selections, developing and managers and leaders and assessing leadership and creative potentials.

1.7.6. CTPI- 100

The Central Test Personality Inventory for Professionals is a commonly-used questionnaire for managerial and executive-level candidates that allow to assess personality traits, values and skills specific to the exercise of managerial functions or supervision. The purpose of the test is to ascertain the subject’s work-related personality traits and behaviour competencies, by categorizing the subject’s responses in four primary groups: people management, self-management, task management, change management.

1.7.7. MANAGEMENT STYLE INVENTORY

Management Style Inventory is used to determine a person’s management style, strengths, and areas of improvement. The test is aimed at placing the subject into one of seven management categories such as - manager, entrepreneur, motivator, strategist, chief executive, expert, project manager. It consists of a series of questions with two possible choices for answers in order to classify the response.

1.7.8. 16-PF (16 PERSONALITY FACTOR MODEL)

The 16PF is an extensively researched and rigorously constructed questionnaire, designed to provide an in-depth measure and analysis of an individual’s personality. A multiple-choice format test that is used to ascertain a subject’s dominant personality traits. The test is based on 16 dominant personality factors: warmth, reasoning, emotional stability, dominance, liveliness, rule-
consciousness, social boldness, sensitivity, vigilance, abstractedness, privateness, apprehensiveness, openness to change, self-reliance, perfectionism, and tension. This measures each of the 16 primary personality factors, as well as several new scales such as Emotional Intelligence, Team Roles, Management and Subordinate styles and Counter-Productive Work behaviour.

1.7.9. SITUATIONAL JUDGEMENT TEST (SJT)

Situational Judgement Test Format aims to ascertain the subjects ability to solve work related problems, make decisions, and whether their personal working style is appropriate for the position they are being considered. The test format consists of a series of situations and the subject is instructed to select the most effective and least effective options from which the persons ability can be judged.

1.7.10. SDI – STRENGTH DEPLOYMENT INVENTORY

This test enables individuals to understand the reason why others can do certain things and identifies individuals own personal strengths and motivations and how these relates to those of their colleagues. The applications of this test include team development and management skills development.

1.7.11. ABLE SERIES

Ability Series is a set of ten ability tests that are used to provide an in-depth view of a subject’s capabilities. Adaptable for many job types, the test series is an accurate way of assessing a candidate’s abilities and potential to learn.

1.7.12. CREATRIX – INNOVATION INVENTORY

The Creatrix is a tool to help identify strengths and weaknesses around innovation. It looks at two key factors – Creativity and Risk-taking. These two main scales are made up of seven drivers. The output from the Creatrix is a personal profile showing strengths and a comprehensive report. The Creatrix can be used as a coaching tool with individuals or as an organizational development tools with teams. Applications include individual development, team development, culture change and leadership development.

1.7.13. WAVE

Wave – A personality questionnaire developed by Saville Consulting represent a great step forward in the psychometrics market, and give employers and individuals access to assessments which have been designed specifically to maximize prediction of performance and potential at work. The unique feature of Wave is to find a good fit between the employee’s proposition – that is their motivation, talent and potential – and the employer’s proposition – that is the job itself and the organizational culture which is critical to ensure high productivity and motivation. It has wide applications that includes spotting leadership potential, to improve the selection hit
rates, to prepare customized development plans for the employees, identification of the talents who will thrive in your culture and assessing the integrity of managers.

1.7.14. EMOTIONAL INTELLIGENCE TEST

EI tests are similar to an IQ tests which measures a person’s Emotional competence that is the ability to understand emotions (their own and others’) as well as their ability to establish and maintain healthy relationships. The test looks for strengths and weaknesses in areas such as intrapersonal intelligence, flexibility, relationship management, and self-assertion.

1.7.15. SALES PROFILE

Sales Profile determines the candidates apt for a sales-orientated job, and ascertains whether the candidate would be better at one aspect of sales over others (B2B Sales, Telemarketing, Technical Sales, etc.). The subject chooses one of two responses for a series of statements which helps to determine their sales personality.

1.7.16. OCCUPATIONAL INTEREST INVENTORY

Occupational Interest Inventory assesses the subject’s motivations and aptitudes and used by career centers, human resource professionals, and educational institutions to ensure employees / students are match well to their chosen field.

Apart from the specific mentioned tests there are aptitude tests, verbal reasoning tests, numerical reasoning tests, abstract reasoning tests, creativity tests, knowledge tests, motivation questionnaires, reasoning tests, in-basket exercises which are also included in for different purposes under psychometric tests.

1.8. CONCLUSIONS

The science of Psychometrics today impressed the new generation managers. In our march toward a brave new working world, psychometrics fits well with all the major trends of people management to take strategic business decisions. It contributes to the goal of objective, accurate and insightful assessment by adding a useful tool to the complement of assessment strategies.

Psychometric tests are used in all aspects of HR work, although they are not magic bullets to understand the complex, unpredicted human behavior. Still the tests are a part of standardized, systematic, reliable and valid source of information to interpret employee behavior and to take business decision. Psychometric testing’s scientific approach to prediction is one of its main contributions to business planning. Tests also create shared understanding and language to discuss HR issues in a team or organization. They can improve the accuracy of processes that predict a person's future behavior, success in a job or learning a new skill. An increased use of psychological assessment and testing in the workplace has caused the field of Psychometrics to expand rapidly over the last several years. Psychometric – As an assessment tool for Strategic HRM needless to say have a long way to go.
1.9. STUDY IMPLICATION

Realizing the benefits of psychometrics in strategic HRM decisions today’s organizations should use the variety of tests in combination for different purposes to take business decisions. In the complex business environment where performance matters, the use of psychometric as an assessment tool with all its accuracy, reliability, and validity is not only desirable rather it is a business imperative for organizations.

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