

## **Investment in Human Capital Resource: Reshaping Business Management**

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**Abstract:** *Entrepreneurship, innovation and human resource can be attributed to key economic terminologies of a dynamic economy. With the emergence of human capital as the most important asset, the growth and expansion of any business organisation depends on its qualitative labour resource to realise its vision. Human Resource Management (HRM) is a major field in labour economics and covers a wide range of activities. Section 1 highlights the interactive role of human capital and HRM for reshaping business activities. A success story with respect to Grameen Shakti that utilizes local human resources as well as skilled professionals is analysed in Section 2 of the paper. Section 3 presents a case study with the help of primary data collected from 114 software firms in Mumbai city on labour resource. Section 4 through a human resource comparative analysis portrayed in the above two cases develops a qualitative strategy for enhancing business productivity.*

**Keywords:** *Human capital, human resource management, business productivity.*

### **Introduction:**

#### **1. Interactive Role of Human Capital and Human Resource Management**

Human resource is the set of individuals who make up the workforce of an organization, business sector or economy. Human capital is sometimes used synonymously with human resources and is the stock of competencies, knowledge, social and personality attributes, including creativity, cognitive abilities, embodied in labour so as to produce economic value. The professional discipline and business function that oversees an organization's human resources is called HRM.

A. W. Lewis is said to have initiated the idea of human capital when he wrote in 1954 the "Economic Development with Unlimited Supplies of Labour". The use of the term in the modern neoclassical economic literature dates back to Jacob Mincer's article "Investment in Human Capital and Personal Income Distribution" in *The Journal of Political Economy* in 1958. The idea of 'human capital' is similar to Karl Marx's concept of labour power wherein, his interpretation was that in capitalism workers sold their labour power in order to receive income. Modern growth theory views human capital as an important growth factor. Human capital can, therefore, be considered as a means of production, into which additional investment yields additional output. Human capital is substitutable, but not transferable like land, labor or fixed capital.

The concept of human capital has relatively more importance in labour-surplus countries since these economies are naturally endowed with more of labour due to high birth rate under the given climatic conditions. The surplus labour in these countries is the human resource available in more abundance than the tangible capital resource. This human resource can be transformed into human capital with effective inputs of education, health and moral values. The transformation of raw human resource into highly productive human resource with these inputs is the process of human capital formation. The intangible human capital is an instrument of promoting comprehensive development of the nation because human capital is directly related to human development and when there is human development, the qualitative and quantitative progress of the nation is inevitable.

United Nations publishes the Human Development Report on human development in different nations with the objective of evaluating the rate of human capital formation in these nations. The statistical indicator of estimating Human Development in each nation is Human Development Index (HDI) and is the combination of 'Life Expectancy Index', 'Education Index' and 'Income Index'. The Life expectancy index reveals the standard of health of the population in the country; education index reveals the educational standard and the literacy ratio of the population; and the income index reveals the standard of living of the population. If all these indices have the rising trend over a long period of time, it is reflected into rising trend in HDI. If HDI increases, there is higher rate of human capital formation in response to higher standard of education and health. Similarly, if HDI increases, per capita income of the nation also increases. This process of human development is the strong foundation of a continuous process of economic development of the nation for a long period of time. Human capital is the backbone of human resource management and economic development in every nation. From the corporate objective, employees are viewed as an asset to the enterprise, whose value is enhanced by

development. Hence, companies will engage in a host of human resource management practices to capitalize on the human capital asset.

**2. Grameen Shakti – A Success Story Utilizing Local Human Resources and Skilled Professionals**

Grameen Shakti founded and supported by the Grameen Bank won the Nobel Peace Prize jointly with its founder Prof. Muhammad Yunus in 2006. Grameen Shakti utilizes local human resources as well as skilled professionals such as operators, engineers, electricians, fuel handlers and fee collectors. These human resources are positioned at the four levels in an organisational structure of local, divisional, regional and branch offices. Grameen Shakti also requires technical resources in the form of equipment like solar panels, accessories, batteries, other quality materials for solar home systems, filters, series to clean the gas, gas engines, technology of waste gasify, generators, and electricity distribution system. Grameen Shakti imports solar panels from Japan and assembles in Bangladesh at Grameen Technology Centers. The Grameen Technology Centers are managed by engineers and supported by technicians who are mainly female.

Grameen Shakti was established with the mission “to empower the rural people with access to green energy and income” and vision “a future where rural households in Bangladesh have access to environment friendly and pollution free energy at affordable cost”. Grameen Shakti is realising its mission and vision by covering about 40,000 Bangladeshi villages with 650,298 solar home systems, 18,490 biogas plants, 324,864 improved cooking stoves, 1,097 branches and 10,600 employees. Grameen Shakti imparts clean energy to rural households with health and environment friendly solutions in Bangladesh. Grameen Shakti’s value proposition lies in their divergent products and program that facilitate innovative distribution.

**3. Case Study on Labour Resource of Software Firms in Mumbai City**

Human capital is believed to be the main force in the growth of the Indian software industry that has evolved over the years. The reason is that software is an advanced technology product that utilizes the diverse skill requirements of labour in the software production process leading to a set of designations related with the industry. In the case of the Indian context, software professionals are employed as programmers rather than as system engineers or designers by foreign clients.

The case study is based on a survey conducted on the 114 software firms in the city of Mumbai that was divided geographically into four main areas of Central and South Mumbai, Western Suburbs and Navi Mumbai. Examining data on firms in the software and services industry can provide a quantifiable means for understanding how different aspects impact a firm’s behavior.

**3a. Technique of Analysis**

Named after Maurice Kendall, who developed the Kendall rank correlation coefficient in 1938, commonly referred to as Kendall’s Tau ( $\tau$ ) coefficient; this is used as a test statistic in a statistical hypothesis test to establish whether two variables may be regarded as statistically dependent. The tau test is a non-parametric hypothesis test as it does not rely on any assumptions on the distributions of X or Y and uses the coefficient to test for statistical dependence. Kendall’s Tau Measure of association is symbolically represented as:

$$\tau_c = \frac{N_s - N_d}{\frac{1}{2}N^2 [(m-1)/m]}$$

where,

*N<sub>s</sub>* is the number of concordant pairs

*N<sub>d</sub>* is the number of discordant pairs

*N* the total number of cases

*m* is the minimum value, whichever is less, of the number of rows or columns

The significance of Kendall’s Tau association analysis tests is that for a 2-tailed test, if the *p*-value is below the acceptance level, that is, 5 percent level of significance then, the null hypothesis can be rejected.

**TABLE 1.1: Profile of Respondent in Surveyed IT Software Firms (2005-2009)**

Background Characteristics	Number of Firms	In Percentage
<b>Age:</b>		
<b>20-30 Years</b>	<b>42</b>	<b>36.8</b>
<b>31 and above</b>	<b>72</b>	<b>63.2</b>

<b>Education Qualification:</b>		
<b>Graduation</b>	<b>54</b>	<b>47.4</b>
<b>Post-graduation</b>	<b>34</b>	<b>29.8</b>
<b>Diplomas</b>	<b>26</b>	<b>22.8</b>
<b>Current Software Skills:</b>		
<b>Excellent</b>	<b>43</b>	<b>37.7</b>
<b>Very Good</b>	<b>44</b>	<b>38.6</b>
<b>Good/Average/Unsatisfactory</b>	<b>27</b>	<b>23.7</b>
<b>Total Number</b>	<b>114</b>	<b>100</b>

**Source:** Compilation of Survey Results conducted in the year 2010.

The demographic and educational profile of the respondent participating in the survey is based on age bands, gender and educational qualifications. As indicated in Table 1.1 for the representation of 11 females and 103 males in the surveyed IT software and service firms, the age group of the number and the percentage of employed IT software personnel are narrowed down to two age bands. It can be observed that in the age band of 20-30 years, there is the existence of 42 employees representing 36.8 percent. Similarly, in the age band of 31 years and above, there are 72 employees having a representation of 63.2 percent. As reflected from Table 1.1, the demographic profile indicates the presence of a dominant vibrant male workforce and the lack of female representation in the IT software and services industry indicating an uneven labour market. The reason advanced by some of the surveyed respondents is that as they move up the job ladder, the long working hours and the shift system in the IT software and services firms is the major factor affecting the participation of the female workforce.

**TABLE 1.2: Association Analysis on Industry Specific Application Software Development and Skilled Employees (2005-2009)**

Description	Number of Countries	Total Number of Skilled Employees in IT Software Firm				p-value
		Less than 30 Employees N (In Percent)	Between 30 to 100 Employees N (In Percent)	Between 100 to 500 Employees N (In Percent)	More than 500 Employees N (In Percent)	
Total Number of Industry Specific Application Software Development by the Firm	None	7 (26.92)	9 (25.71)	3 (11.11)	1 (3.85)	0.0096
	Between 1 to 2	10 (38.46)	8 (22.86)	11 (40.74)	9 (34.62)	
	Between 2 to 4	6 (23.08)	13 (37.14)	5 (18.52)	8 (30.77)	
	More than 4	3 (11.54)	5 (14.29)	8 (29.63)	8 (30.77)	

**Note:** Figures in parentheses indicate percentage share.

**Source:** Calculation through SPSS.

**TABLE 1.3: Association Analysis on Industry Specific Packaged Software Products Development and Skilled Employees (2005-2009)**

Description	Total Number of Skilled Employees in IT Software Firm				p-value
	Less than	Between	Between	More than	

		<b>30 Employees N</b>	<b>30 to 100 Employees N</b>	<b>100 to 500 Employees N</b>	<b>500 Employees N</b>	
<b>Total Number of Specific Packaged Software Products Development by the Firm</b>	<b>None</b>	<b>16 (61.54)</b>	<b>26 (74.29)</b>	<b>15 (55.56)</b>	<b>12 (46.15)</b>	<b>0.0700</b>
	<b>Between 1 to 3</b>	<b>7 (26.92)</b>	<b>6 (17.14)</b>	<b>6 (22.22)</b>	<b>7 (26.92)</b>	
	<b>More than 3</b>	<b>3 (11.54)</b>	<b>3 (8.57)</b>	<b>6 (22.22)</b>	<b>7 (26.92)</b>	

**Note:** Figures in parentheses indicate percentage share.

**Source:** Calculation through SPSS.

It can be observed from Table 1.2 that the total number of industry specific application software development by the firm and the total number of skilled employees in the software firm is found to be statistically significant, wherein, the p-value is 0.0096. As reflected from Table 1.3, the total number of specific packaged software products development by the software firm and the total number of skilled employees in the software firm is observed to be statistically insignificant, wherein, the p-value is 0.0700.

#### **4. Human Resource Analysis and Development of Qualitative Strategy for Enhancing Business Productivity**

The comparison of the two studies reveals social and economic empowerment strategy. Grameen Shakti integrates technology into operations for the purpose of income generation, cost savings and higher standard of living of the poor. The social business specific qualifications of Grameen Shakti are that it provides affordable energy solutions, improves the livelihood of rural people, emphasizes on gender integration, re-invests profits in program expansion and reduces poverty. In the case of the software industry, apart from creating jobs for highly qualified professionals as well as ordinary college pass-outs, the rise of the software industry has provided opportunities for expanding the local base of entrepreneurship.

For the qualitative and quantitative development of business productivity, human resource has been linked with firm level capability development. The main area should focus on incentives and work organization. Incentives should include remuneration systems and also the system of appraisal, promotion and career advancement. Work organization would include the distribution of decision rights, that is, autonomy or decentralization between managers and workers, job design that involves flexibility of working, job rotation, team-working and information provision. The following strategy on labour market employment will enhance business productivity.

##### **4a. Labour Market Employment Strategy**

Human capital is a key input into the generation of new ideas and knowledge and is therefore linked with an investment in education that has resulted in an increase in productivity levels and earnings. It can be stated that the stock of human capital determines the rate of economic growth and human capital devoted to research is crucially important to enhance business productivity. Labour productivity can be enhanced by investing in human capital acquisition as well as labour participation by women. Education is an important process by which the quality of labour can be improved with differences in educational attainment explaining significant and enduring wage differentials between workers (Smith 2003, p. 3). Changes to the education system from being too structured to one that creates creativity and curiosity, with training to work on completely open-ended problems where practical solutions are found within the constraints of the resources at one's disposal can facilitate the strengthening of business capabilities in the country, encourage entrepreneurs to work on creating products for the Indian market and will result in them creating much more innovative solutions when they face the real world.

Employee effectiveness relates to achievements of organisational objectives in the dynamic environment by facilitating the best of knowledge, skills, experience and honest professionalism.

It is imperative for organisations to encourage their employees to comprehend how, they should endeavour by identifying any gaps in their skills, knowledge and experience, moreover dispensing training and other

development opportunities to cover the new areas. Employee needs opportunities to learn new skills and adopt them into routine behaviour in the workplace.

One area of interest that the business sector should pursue is an enhanced collaboration as well as co-operation with academic institutions as well as public-private partnerships. Acemoglu and Pischke (1999) have suggested that since general and specific skills are complementary, an increase in general skills can increase the value of specific skills to a firm (Smith 2003, p.141). Training programs are essential to reduce the degree of competition within the business firms.

The issue of professional labour is important in the context of the business sector that depends on the characteristics of the human resource that has included education, age, experience and networks. Individual firms should be permitted to benefit from information spillover and knowledge externalities due to proximity to other firms within an agglomeration as a result of spatial concentration of industries.

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