

## Secondary data analysis of link between human resource management and employee productivity

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**Abstract:** The paper studies the effects of training on employee productivity. This paper will provide insight in to what are the effects of training on employee productivity. This paper provides a review of the current evidence of such a relationship and offers suggestions for further investigation. An extensive review of the literature in terms of research findings from studies that have been trying to measure and understand the impact that individual HR practices like training have on employee productivity across various sectors. The focal point of our review is on training practices and employee productivity and their relationship. In conclusion, we can say that taken as a whole, the research findings are varied. Some studies have found a positive association, some negative and some no association whatsoever. The paper concludes with directions for future research by applying different level of analysis on exploring the impact of training practices on employee productivity. Our comparison and analysis suggest that there definitely exist a relation between these two but the impact and effect of training practices on employee productivity varies for different industry.

HRM includes monetary (individual and group) as well as many non-monetary aspects of the employment relationship such as Planning, Organizing, Staffing, Directing, Controlling and work organization e.g. teams, groups and autonomy. We place HRM more generally within the literature on management practices and productivity. We start with some facts on levels and trends of both HRM and productivity and the main economic theories of HRM. We look at some of the determinants of HRM – risk, competition, ownership and regulation. The largest section analyses the impact of HRM on productivity emphasizing issues of methodology, data and results (from micro-econometric studies). We conclude briefly with suggestions of avenues for future frontier work

**Keywords:** Training; Employee Productivity

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### I. Introduction

Traditionally, labor economics focused on the labor market rather than looking inside the problem areas of firms. Industrial sociologists and psychologists made the running in Human Resource Management (HRM). This has changed dramatically in last two decades. Human Resource Management (HRM) is now a major field in labor economics. The hallmark of this work is to use standard economic tools applied to the special circumstances of managing employees within companies. HRM economics has a major effect on the world through teaching in business schools, and ultimately what gets practiced in many organizations.

HRM covers a wide range of activities. The main area of study we will focus on will be incentives and work organization. Incentives include remuneration systems (e.g. individuals or group incentive/contingent pay) and also the system of appraisal, promotion and career advancement. By work organization we mean the distribution of decision rights (autonomy/decentralization) between managers and workers, job design (e.g. flexibility of working, job rotation), team-working (e.g. who works with whom) and information provision.

Where we depart from several of the existing surveys in the field is to put HRM more broadly in the context of the economics of management.

Present Scenario of business world is characterized by a growing competitiveness, market globalization and technological advances in organization. The survival of an organization implies the prosecution of sustainable competitive advantages. The knowledge and skills of an organization's employees have become increasingly important to its performance, competitiveness and advancement. Theories placing the origin of these advantages outside the company are now losing validity in favour of those centered on internal elements, especially the theory of resources and capacities.

Among the internal resources which can be considered sources of competitive advantage is the human element, mainly due to its intangible characteristics: knowledge, skills and attitudes (Wright et al., 1994; Kamoche, 1996; Mueller, 1996; Barney and Wright, 1998) and organizational knowledge (Bassi et al., 1998; Lee and Yang, 2000; Alavi and Leidner, 2001; Bollinger and Smith, 2001) are being given more and more significance. Although all practices of human resource are implied in the development of these resources, training is one of the main activity in order to have qualified, flexible, and proactive employees (Bartel, 1994; Raghuram, 1994; MacDuffie and Kochan, 1995) and to achieve the correct running of each stage of the process of

knowledge management (Alavi and Leidner, 2001; Bollinger and Smith, 2001). Organizations spend an enormous amount of time and money on training in order to assist employee's learning of job-related competencies (Cascio, 2000; Noe, 2006). As a result of the financial investments organizations make in training, it is important to provide results that training efforts are being fully realized (Cascio, 2000; Dowling & Welch, 2005). The revenue cycle is driven by knowledge, innovation, and creativity – all of which come from employees as shown in Fig 1. Employers must actively manage these assets by investing in training as shown in a more detailed way in Fig 2.

Figure 1: Relationship Cycle New employees are informally trained through trial and error, self-assessment and introspection, and by asking questions. Experienced employees learn from on the job experiences. Yet this type of informal, unscheduled training can lead to waste of time and problems in workflow. Studies show that employees who develop through unstructured training are less productive during a developmental period than those who have formal training.

Organizations maintain a blurred position regarding investment in training. They generally accept training as an important means to improve employee productivity which ultimately leads to organizational productivity and effectiveness, a present demand for all organizations. But, in Productivity Revenue Training practice, they usually face this challenge with cost control including training practices expenditure. This situation can be explained by the fact that organizations do not understand how investments in training can provide value. Either training evaluation is carried out in a very casual way, or it does not exist at all in many organizations and the lack of this information makes it impossible either to prove value of training or to find reasons for its existence (Davidove and Schroeder, 1992; Pineda, 1995). When training is not evaluated, the investment and its effects cannot be tested and resources can be wasted in inadequate activities (Foot and Hook, 1996; Gómez-Meji'a et al., 1996). Sometimes, training evaluation is avoided because it is considered an expensive and time-consuming process (Buckley and Caple, 1991; Gómez-Meji'a et al., 1996). At other times, the reason is the lack of measurement systems for determining the changes arisen from training (Werther and Davis, 1991; Sole' and Mirabet, 1997). For training to be effective, various methods must be used because adults learn in different ways. Some individuals need written documents while others need to hear the information spoken aloud. Some do well in classroom settings and others excel through e-learning. However, all training should have one thing in common: it should incorporate application. To read or hear about something isn't enough; successful training requires theory, demonstration, as well as application. The objective of this paper is, taking the above mentioned situations into consideration, to compare and analyze the impact of training on employee productivity across various industries.

## **II. Literature Review**

### **A. Training**

Firms can develop and enhance the quality of the current employees by providing all-inclusive training and development. Research indicates that investments in training employees in problem-solving, decision-making, teamwork, and interpersonal relations result in beneficial firm level outcomes (Russell, Terberg, and Powers, 1985; Bartel, 1994; Cianni and Wnuck, 1997; Ettington 1997; Barak, Maymon, and Harel, 1999).

Training also has a significant effect on employee performance. Firms can develop and enhance the quality of the current employees by providing comprehensive training and development. Indeed, research indicates that investments in training employees in problem-solving, teamwork and interpersonal relations result in beneficial firm level outcomes (Russell, Terberg, and Powers 1985; Bartel 1994; Cianni and Wnuck 1997; Ettington 1997; Barak, Maymon, and Harel 1999). In a rare organization level study, Russel et al., (1985) found that training was correlated with sales volume per employee and store image in a sample of retail outlet stores.

Effective training programs are systematic and continuous. In other words, training must be viewed as a long term process, not just an infrequent and/or haphazard event (Tannenbaum & Yukl, 1992; Wexley & Latham, 1991). Assessments of employee and organizational needs as well as business strategies should be conducted and then used in selecting training methods and participants (Goldstein, 1991). Training programs that are consistent with employee and organizational goals and needs and fit with the business strategy will meet with greater success than those that are not (Wexley & Latham, 1991). Preferably, employees will be trained based on the results of assessments of their work.

### **B. Employee Productivity**

Employee Productivity is the log of net sales over total employees - an economic measure of output per unit of input. Employee productivity measures may be examined collectively (across the whole economy) or viewed industry by industry. The dictionary defines 'productivity' as the state of producing rewards or results. 'Productive' means fruitful, lucrative and profitable. In this context, productivity is synonymous with output. In scientific literature, 'productivity' is defined as the relationship between output and input; between results or proceeds and sacrifices. If it involves the ratio between output and a specific part of the input, this is referred to as

‘partial productivity’: for example, labour productivity expressed as the amount of production for each labour unit, or the number of labour hours for each product unit.

Companies today are forced to function in a world full of change and under various complications, and it is more important than ever to have the correct employees at the correct job with the right qualification and experience in order to survive the surrounding competition. The successful and prosperous future of an organization is dependent on its skilled, knowledgeable and well experienced workforce. That is why training is a fundamental and effective instrument in successful accomplishment of the firm's goals and objectives. Training not only improves them resourcefully, but also gives them a chance to learn their job virtually and perform it more competently hence increasing firm's productivity.

Training has been an important variable in increasing organizational productivity. Most of researches including Colombo and Stanca (2008), Sepulveda (2005) and Konings & Vanormelingen, (2009), showed that training is a fundamental and effective instrument in successful accomplishment of the firm's goals and objectives, resulting in higher productivity. Training design refers to the degree to which the training has been designed and delivered in such a way that provides trainees the ability to transfer learning back to the job (Holton, 2000). The author argues that part of transfer design is the degree to which training instructions match job requirements.

It is observed that investigation directed at building a contingency model of transfer-oriented training intervention design would provide information important for developing training environments more conducive to positive transfer in terms of productivity effectiveness. Identification of training needs, design and implementation of training programmes, transfer of training, and evaluation of programme benefits are key activities (Krishnaveni & Sriprabaa, 2008) in addition to studying general training variables such as types of training, selection of trainees, selection criteria, evaluation instruments etc. The success of training depends on the correct implementation of all steps of the process: previous analysis of training needs, development and implementation of an adequate training plan and evaluation (Pineda, 1995; Gómez-Meji'a et al., 1996; Sole' and Mirabet, 1997). In conclusion, training, together with other activities positively affects results and is associated with a productivity increase and a staff turnover decrease (Arthur, 1994; Huselid, 1995; Ichniowski et al., 1997). However, despite the significance of both the training needs analysis, which influences the development, application and evaluation of training (McGehee and Thayer, 1961; Agnaia, 1996; Gray and Hall, 1997; Al-Khayyat, 1998; Legare, 1999; Dickenson and Blundell, 2000; Holton, 2000; Selmer, 2000) and the plan development and implementation stage where the training characteristics are established and put into practice (Buckley and Caple, 1991; Goldstein, 1993; Foot and Hook, 1996; Bee and Bee, 1997; Frazis et al., 1998, 2000)

### **III. Method**

#### **A. Sampling**

The sample includes firms from various sectors with a minimum of 1000 employees for the last financial year. In this study, the industries from various sectors like Automobile, Agricultural, Service (Insurance), Financial Services (Credit Banks) and Luxury Items FMCGs (Branded Wall Paints) were chosen.

#### **B. Data collection**

The data was collected from two different sources primary and secondary. Primary data was collected by distributing the questionnaire for training as per Annexure-1. The questionnaire is a standardized one which has been used earlier in Indian context. It was responded by the person heading the HR department. Secondary data about the Net Sales & Number of employees of various organizations/companies was collected from Capitaline Plus Database. Capitaline Plus provides fundamental and market data on more than 20,000 Indian listed and unlisted companies, classified under more than 300 industries. It employs powerful analytic tools with extensive financial and performance parameters on different company profile (directors more than 10-years, financials -P&L, Balance sheet, Cash flow, Consolidated financial data, Segment data, Forex data, R&D data, Ratios, etc, Quarterly results, Ownership pattern, Finished products, Raw materials, Share price data, Director's Report, Management discussion, Notes to account, Business news, Corporate events, etc.)

### **IV. Discussion**

Productivity per employee has a direct relationship with training imparted in the employees across sectors. It is the extent or degree of relationship which is in question.

The overall findings of the study can be divided into following parts:

1. The basic industries like Automobile and Agricultural (which is having a developed and mature market, and whose consumption pattern shows the vibrancy in the economy) have high degree of relationship between training and productivity. Higher the training in these companies higher will be the productivity.

2. The risky businesses like Credit banks which falls in the category of high profit high risk business, the training plays a small part in the productivity of the employees i.e., the extent of relationship between these two is very low as compared to other basic manufacturing industries. Market forces like recovery of loans, liquidity available in the market, how prudently the customer of the services used the credit money play more crucial role in the productivity.
3. For luxury items like branded wall paints, the productivity largely depends upon the economic indicators like rise in the middle and upper class income, their expenditure pattern, disposable income and consumption pattern of the society. The training has a very limited role to play in these kinds of industries.
4. In case of service industry like insurance companies, employees consist of both direct and indirect employees like agents. Though training practices in this sector were found to be very organized and constructive but due to its diverse employees the effect was low.

## V. Conclusions

Training has a significant role to play on productivity. The training needs change with the changing PEST environment, determination of training need is a major HR Concern in recent times. But there are other dominant market forces which reduce its significance. Our analysis is a comparative study of training practices and other macro-economic and market forces, both of which affect productivity.

There are other determinants of employee productivity which are not focused in this research. Due to time constraints, and small sample size the generalizability of results can be challenged.

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Fig 2: Detailed Relationship Cycle

Training Employee  
Skills Attitudes Knowledge  
Innovation Creativity  
Productivity  
Increases  
Decreases

### Annexure-1

#### Training Questionnaire

Note: A number of statements dealing with various aspects of Training practices are given below. Please indicate the extent

to which each statement describes your organization using the following 5-point scale.

5 = means it is very much true

4 = means it is mostly true

3 = means it is some times true and some times not true

2 = means it is not true most of the time

1 = means it is not at all true

Please provide your answer by highlighting or bold or underlining your choice.

1. Our organization conducts extensive training programs for its employees in all aspects of quality.

1 2 3 4 5

2. Employees in each job will normally go through training programs every year.

1 2 3 4 5

3. Training needs are identified through a formal performance appraisal mechanism.

1 2 3 4 5

4. There are formal training programs to teach new employees the skills they need to perform their jobs.

1 2 3 4 5

5. New knowledge and skills are imparted to employees periodically to work in teams.

1 2 3 4 5

6. Training needs identified are realistic, useful and based on the business strategy of the organization.

1 2 3 4 5