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Determinants of Human Resource Development in Industrial Sector in Rajshahi City: A Micro-Survey Study

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University of Rajshahi

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DETERMINANTS OF HUMAN RESOURCE DEVELOPMENT IN INDUSTRIAL SECTOR IN RAJSHAHI CITY: A MICRO-SURVEY STUDY

A Thesis Submitted in Fulfillment of the Requirements for the Degree of Master of Philosophy in the Department of Population Science and Human Resource Development at the University of Rajshahi, Bangladesh

Submitted by

Roll No.: 09307

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Session: 2009 - 2010

Department of Population Science and
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Bangladesh

February, 2014

DECLARATION OF ORIGINALITY

This dissertation entitled "**Determinants of Human Resource Development in Industrial Sector in Rajshahi City: A Micro-Survey Study"** submitted by me in the Department of Population Science and Human Resource Development, University of Rajshahi for the degree of Master of Philosophy is based on my original research work.

To the best of my knowledge, this research work neither in part nor in full has been submitted to any other University or Institution for the award of any degree.

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SUPERVISOR(S) CERTIFICATE

SUBMISSION OF THESIS FOR A RESEARCH DEGREE

The following statement is to be signed by the student's supervisor(s) before the dispatch of the thesis to the approved examiners.

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The undersigned do hereby state that:

1. the above student's work, including the thesis has been completed to my/our satisfaction and the thesis is ready for examination; AND
2. an oral presentation of the thesis has been made in accordance with the ordinance of University of Rajshahi on 27 December, 2010 for **M. Phil. degree**.

Supervisor's/ Alternative/Co-Supervisor's Comments: To the best of our knowledge, this work neither in part nor in full has been submitted to any other university or institution for the award of any degree.

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DEDICATED TO

MY BELOVED PARENTS

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I, however, am alone responsible for any errors, inadequacies and omissions still remaining in the thesis.

February, 2014 The Author

Abstract

Bangladesh has witnessed a parallel process of economic growth driven by, and associated dispossession of labour. The Gross Domestic Product (GDP) has been lifted to a decadal average of six percent in recent time. The country has also moved forward in the realm of social indicators, despite a third person living below the so-called poverty line. Despite the development of human resource remaining in the heart of such development, still such development of human resource remain slow. Against this backdrop, this research finds the key question: can this type of development of human resource in industrial sectors enable the economy to a sustainable path required to accelerate the overall development of the country?

This study is based on survey data. The study indicates that, ever increasing pressures to sustain, in the context of growing need have pushed people to engage in income generating activities. The option for people to make choices and to claim rights to decent employment has remained elusive in the context of survival and hence has been subjected to injustices and dispossession. The research work also finds that there is a huge lack of skill development programmes among all the industries. The study also reveals the association of different variables of the respondents with their income satisfaction along with industrial production. The logistic regression analysis demonstrates the significant effects of different respondent's characteristics on their income satisfaction, their participation in the decision making process of the industry, their work place environment and their promotion status.

These analytical results may helpful to the policy makers, planners and researchers in developing suitable programmes addressing the case of human resource development in industrial sectors through out the country.

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Chapter One

Research Perspective

1.1 Introduction

Human resource development (HRD) is concerned with improvements in the quality of people as agents of production in developing economies (Meier, 1995). Natural resources and accumulation of capital remain important, but improvements in human factor are considered decisive (Johnson, 1964). The issue has emerged in recent decades as central piece in policy formulations for economic development. In addition, human resource (HR) is a key input of organizational development and HRD is considered to be a major operation to gain comparative advantage in production in the new millennium. Industry is one of the biggest contributors to human resource development. However, from the industrial points of view, industrial strategies do not properly reflect the human resource development towards their employees.

The role of HRD is particularly important when employees enter an organization (Holton, 1996), because it is through HRD practices that new employees can be initially socialized by being introduced to the organization's values, norms and culture. Also, organizational socialization has been identified as an important facet of organizational functioning (Fogarty and Dirsmith, 2001). Research on both HR and HRD areas have found that practices related to HR and HRD have had significant influences on employee's work-related attitudes. Research has found that HR practices such as recruitment and selection, compensation and rewards system, assessment and training influence numerous employee's work-related attitudes (e.g. Robertson and Mindel, 1980; Ogilvie, 1986; Meyer and Smith, 2000; Park, *et al.*,

2003). Perception of human resource practices was more important than the actual practices with regards to its influence on employee's commitment (Kinicki, Carson and Bohlander, 1992). Therefore, it is important to identify some of the variables those are truly related to the industrial strategies as well as its impacts on human resource development.

Human resource development has currently emerged as a concerning field of study, seeking answer to strategic questions that conventional wisdom has not satisfactorily provided. In the recent years, Bangladesh has made a good progress in some of the areas of human resource development but the progress is not satisfactory. If economics is concerned primarily with economic equilibrium, productivity of labour and cost of production and related problems, it does not have much to offer in determining a realistic strategy for the effective utilization of HR either at the micro or macro level. Bangladesh is a developing country and the situation of HRD is not high. There is a huge lack of information about human resource development in industrial/organizational sector in Bangladesh. It may be inferred that there is no clarity about the constituents/components of human resource development and divergent views in this regards have not made it possible to develop the system of human resource development in industrial/organizational sectors. In this study, an attempt is made to explore some of the determinants of human resource development in the industrial sectors.

1.2 Significance of the Study

One of the most important problems faced by almost all of the third world countries in these days is of development. The main feature of these countries is that they are not able to exploit their own productive resources including the human factor in an optimal way to sufficiently provide for the basic needs of their population. Human resource development (HRD) is such a phenomenon where individual's inner urges, his genious, his potentials are to be so developed as to make him capable for fulfilling not only organizational goals but also his personal as well as societal goals. Human resource development (HRD) blends the organization, individual and the

personal functions. The interest in the human resource development (HRD) arises from the realization that lack of the development of human resource (HR) posed obstacles to development as formidable as those of scarce resources, inadequate capital and insufficient technology.

It is currently accepted that human resource development (HRD) is the key towards a developed and industrialized society. At the industry level human resource development (HRD) is not only essential but critical to a company's survival. There is an intrinsic importance in modern industry where market and technology are so volatile that failure to proact to change and be innovative will result in a company being driven out of business. A company that is short on capital can borrow money but a company that is short of the required human resource (HR) has little chance of survival either in the short or long term perspective. The rising thought of human resource development (HRD) puts people at the center of development, because development is not only by people, it is also for people (Arya and Tandon, 1998).

The rapid pace of industrial development driven by technological progress implies continuous learning and education dissemination of knowledge and skills. Most practitioners in the field of organizational development (OD) and human resource development (HRD) today would agree that changes has become a constant phenomena that must be attended to and managed appropriately in order to ensure organizational survival (e.g. Beckhard and Pritchard, 1992; Burke and Church, 1992; Kanter, Stein and Jick, 1992; Kissler, 1991). Unfortunately, large majority of organizations have yet to recognize the strategic importance of human resource (HR) and human resource (HR) people have yet be recognized as partners in the strategic planning process (Sikula, 2001).

Like many other developing countries in the world, in Bangladesh, the average per capita income is as low as proportion (percent) of population below the poverty line ($1 PPPa day) 36.3% (GoB, 2005). For this consideration, human resource development has become a thinking issue and integral part of the development not

only in Bangladesh but also in the global context. As literature shows, only a limited research is done to study the relationship between the various human resource development components and the development of the organization, but this issue is important for Bangladesh since the country is an under developed country. It is hope that this study will help policy planners for formulate suitable programmes and future strategies addressing the issue of human resource development in industrial sectors.

1.3 Review of Human Resource Development (HRD) in Developed and Developing Countries

In 2012, the jobs outlook is increasingly daunting. Overall, the crisis has increased the backlog of unemployment by 27 million worldwide, with an unprecedented 200 million persons without work (ILO, 2012a). Under such circumstances, development of human resource is urgently needed. Development or growth of a nation/country largely depends on the development of its human resources. It is very interesting to note that when a country begins to rise in the table that represent economic development, this raise is accompanied by a process of investment in human resource development (HRD). As human resource development (HRD) is a key to external success and for development, human resource development (HRD) investments became essential at a sustained level. The following countries are selected regarding the mentioned matter.

USA: The USA is rather old in human resource development (HRD) terms. Regarding human resource development (HRD), the investment in education began very early in the United States due to the Dutch and British influence and to the Protestant Religion. Additionally, in the beginning of the 20th century the USA was the place where the sociological theories of labour were put in place. Since, 1920s, the USA had a system of education and training which was both quantitatively general and qualitatively strong. By the same time, the Federal Government began to fund huge training programmes (Lalonde, 1995). The private investment in education and training was also huge, done by companies, private universities, and

individuals. The idea of the USA as the 'land of opportunity' was also coupled with the idea that in the USA both rule of law and the competences of individuals and the organizations shaped the day life of everyone. Therefore, the USA are the country for which more studies have been made concerning the impact of the human resource development (HRD). Most of the studies point to the positive effects of education, training, competences and experience on the economy (Heckman, Lalonde and Smith, 1999).

Japan: The Japanese investment in human resource development (HRD) began in the 19th century, when primary schools were introduced. The Japanese economy was already preparing to become one of the world leading players after World War II (WW II). From that moment on, compulsory education was of nine years, and most children followed it by three more years of education. Furthermore, Japan is, since World War II (WW II) famous for its on-job training system, which evolves around the concept of life long training, life long jobs, and lean thinking. That system is made within a Conservative Welfare State (Ferrara, *et al.*, 2000). Japan has a very high level of demand and supply of human resource development (ILO, 2008, UN, 2008), which results in a very high level of equilibrium, and in a need that is resulted to the urgency of continuing to be among the best and not to the idea of catching up. Evidently, in Japan, the public sector, the companies and the individuals' investment in human resource development (HRD) is very high. The investment in human resource development (HRD) is also maintained by a very high level of human resource development (HRD) facilities, which can be considered to describe the stock of human resource development (HRD).

Brazil: Economically, Brazil has an agricultural economy and human resource investments in Brazil were small over the country's history. That situation means that Brazil has big need of human resource development (HRD) if the country is to become one of the most developed in the world. The idea, that human resource development (HRD) is beneficial to the economy and to the society has confirmed by several studies (Regnier, *et al.*, 2001; Bonfour and Edvinsson, 2004). Prioritizing

this, only recently basic education and training became social rights to be enforced. Some private funded training programmes existed, which created a “labour force elite”.

Russia: Russia is a very special case, because during the Communist regime significant investment in human resource development (HRD) were made. The high level of education of the Russian labour force inherited from the Communist Era is an important economic asset for Russia. The investments is human resource development (HRD) is high and the stock of human resource is also high. Russia is one of the countries in relation to which the macroeconomic effect of human resource development (HRD) have been calculated and the returns found have been positive (Psacharopoulos and Patrinos, 2002).

China: China has begun investment massively in human resource development (HRD), when the country began to be integrated in world economy. Human resource development (HRD) in China is quantitatively high but qualitatively low (UN, 2008; ILO, 2008). Recently, the investment in human resource development (HRD) has been increasing and in consequence the stock of human resource development (HRD) was also increased and human resource development (HRD) had an impact on China’s economic success in the last two decades (UN, 2008; Bonfouir and Edvinsson, 2005).

India: In the last two decades, the investment in human resource development (HRD) has increased and India became more and more integrated in the economic world and more and more a global power. However, the investment in human resource development (HRD) is small and is unbalanced, and the stock of human resource development (HRD) is also small and unbalanced as compared to others developed nations. This situation is important not only in economic terms but also in social terms because human resource development (HRD) could be a way of solving India’s big and increasing inequality problems (UN, 2008). Therefore, the lack of human resource development (HRD) is a cause of India’s economic problems.

Bangladesh: The concern for policy and action planning guideline for human resource development (HRD) in Bangladesh stems from the recognition that the economic progress of the past several decades, notable as it has been, has not led to the eradication of widespread poverty in the country. This is due, in part, to the limited attention paid to the human resources (HR) as a crucial means as well as the unlimited end of development. However, there are some progresses in the development of its human resources (HR) since independence, but the investment in human resource development (HRD) is still low in Bangladesh. Human resource development (HRD) issues are directly linked to the quality rather than the quantity. However, in Bangladesh, the human resource (HR) is quantitatively high but, qualitatively low due to the proper investment in this sector. Human resource development (HRD) is not only training the people but also managing the people. Without developing its human resources, desired economic growth might be elusive. Realizing this, the government's allocation in this sector has increased over the years (MoF, 2010). It is long way to go to achieve the expected targets by developing its human resources (HR).

1.3 Review of Literature

As the idea of cardinal measure of human resource development (HRD) is very recent, so, the researchers in human resource development (HRD) are very hardly be found in literature. Despite these, there are various articles on human resource development (HRD) but most of those concentrated on training and education. Some of the papers concentrated to study the formal education, like school, college and university education. Some of the study concentrated to study military education and technical education. None attempt to study all the components of Human resource development (HRD) as a whole. However, some of the selected studies have been overviewed below:

Peng (1996) explained that grain in something that is planted once and produce only a single harvest. Trees are planted once but may produce ten harvests. Men are things that are planted once but may produce a hundred harvests. First and the

foremost elements in human resource development (HRD) is education, which plays an important role for development of social and economic conditions of individuals, because it improves and flourishes the mental approach in true sense and brings confidence for doing something. It enhances the capabilities, improves efficiency and productivity of a man. Education is essential tool for human resource development (HRD) and necessary ingredient for sustainable socio-economic growth.

Haines (1997) supported that there are firms that "view their human resource (HR) as an expense rather than asset- an element that is expendable and perhaps discarded when the skills possessed becomes absolute; however when human resource (HR) are viewed as an asset, companies enhance individual value through training and human development (HD) and ensure continued contribution to the organization". The importance of human resource (HR) for the corporate performance has in any case proved both in the literature and empirical research conducted in all industrial sectors.

Harrison (1997) suggested that human resource development (HRD) is essential for organizational strategy, external labour market strategies, change in internal labour market needs and the value system within an organization. Much of the literature appears to be positing that investment in employees will chance learning and performance. However, the small firms facing difficulties cater appropriate system in the organization due to financial constraint. If the small and medium scales enterprises (SMEs) can overcome this hurdles therefore small firm also can be outperform. Human resource development (HRD) is generally preoccupied with activity and it is proven that there is a casual link between human resource development (HRD) investment and organization and business performance.

According to Jarboe and Yudken (1997), a high performance work system seeks to enhance organizational performance by combining innovative work and management practices with recognized work flows, advanced information system

and new technologies. Most important, it builds on and develops the skills and abilities of fronting workers to achieve gains in speed, flexibility, productivity and customer satisfaction.

Mathews (1998) noticed that, “before diversity strategies are implemented, the organization’s cultural environment, management and evaluation system should be examined to ascertain if existing personnel/human resources (HR) processes will support or hinder diversity in the organization; then, appropriate strategies can be designed to develop and manage diversity based on these findings”

In a study of Bontis (1999) it was found that in order to become organizational assets of the firm, the primarily concern of the firm is to develop, release and use knowledge tied to individuals effectively, and to put it into action to achieve some desired results in terms of products, processes, and services. The organizational capital within the firm can be more or less constructive in terms of utilizing the human resource (HR) to its fullest potential, depending on the organizing principles by which relationships among individuals, within and between groups and among firms are structured.

Cohen and Levinthal (2000) explained a key element in management of the learning process is to invest in absorptive capacity and prior knowledge in the firm through skill upgrading, advanced technical training and investment in research and development activities, which enhance the knowledge base and permit the individuals to make sense of and acquire new knowledge. An early lack of investment in a particular area of expertise may foreclose the future acquisition and development of knowledge.

Hill and Stewart (2000) on a case study, research into human resource development (HRD) within three small and medium scales enterprises (SMEs) firms, investigated employers attitudes towards learning, examined the link between career structures and training in organizations of all sizes. They also found that small organizations

lacked of career structure which did not guarantee promotion and training. Therefore, small firms have difficulties to progress and compete with larger firms whereby the employees have low motivation to perform. This is a major hurdle that small firms faced especially in the developing countries.

In accordance with the suggestion by Klein (2001) that human resource development (HRD) researchers should focus on organizations that include a broad range of industries and occupations the temporary employees participating in the study performed their work at organizations that included manufacturing, retail and financial services. These temporary employees were also from a variety of occupations such as clerical, industrial and technical. human resource development (HRD) researchers should seek to replicate these findings beyond the types of organizations and types of workers.

According to Rigg and Trehan (2002), human resource development (HRD) in small organizations took a discourse perspective on organizational learning and development. A qualitative approach is used to identify the three elements. Their findings showed that human resource development (HRD) practices were misconstrued in small and medium scales enterprises (SMEs). In today's organizational learning and development go well beyond the individual who attended the course and formal human resource development (HRD) investment is undetermined by organization processes that prevented learning. Therefore, formal human resource development (HRD) activity alone can give a highly distorted perspective. Moreover, the human resource development (HRD) within small and medium scales enterprises (SMEs) indicates a need for research that enables the human resource development (HRD) in action for small firm development.

As rightly emphasized by Williams (2002), human resource (HR) could play many important role. For instance existing training program can be redesigned to include value communication and reinforcement component. New program can be conducted to sensitize employees about the organizational values and how they

provided strategic advantage to the firm. In fact human resource (HR) can play a vital role in incorporating a value component into several human resource (HR) practices such as employee selection, appraisal, training and development, compensation and reward system, etc.

Gold, Rodgers and Smith (2003) described that human resource development (HRD) field is without a standard set of competencies and qualifications required to consider one self a human resource development (HRD) practitioner. Some practitioners entire field without any discipline-based training at all. Often, these practitioners "fall" into the training profession. They are viewed as being good in their practice area, so they are requested by their organizations to train others and share their expertise. These practitioners often turn to practitioner-oriented journals and handbooks, rather than to the scholarly research.

From a different point of view, Lawler and Mohrman (2003) supported that, Human Resource (HR) greatest opportunity to add value may well be to play a role in the development and implementation of corporate strategy; human resource (HR) can make a logical case for being an important part of strategy development, because of the importance of human capital in the ability of the firm to carry out its strategy. In other words human resource (HR) strategy can influence the firm's growth in accordance with the measures provided for the personal and professional development of the firm's employees even in the long term.

From a wider political and social perspective Marquardt, *et al.*, (2004) argued that, human resource development (HRD) practitioners can assist national governments in ensuring globalization provides long term benefits for society. Whilst this role is likely to be restricted to a small minority of practitioners it does merit serious consideration in an era, where ethically and socially responsible management is receiving increasing media attention.

According to Schlogl (2004), small sized firms failed to improve the basic infrastructure like expanding broadband and secure services. These factors have impacts on the small sized firms to turn to e-business approach. One of the main reasons is cost. In addition, the small and medium enterprises (SMEs) frequently can not afford or find qualified e-business staff to operate the business. These major impediments for smaller firm simply lengthen the usual problems relating to trust, traction security and crucially concerns about violations of intellectual property rights. Therefore, human resource development (HRD) is the situation for training the staff to be more equipped with knowledge and skills on handling e-business.

In a study of Adil, Ghafoor and Nadeem (2005) they described that, technical education is a very important aspect of the labour force and it guarantees the efficiency of the workers, education and training are the heart of the development efforts. Without human resource development (HRD), most of the technical innovations remain ineffective.

There are a number of human resource (HR) practices that could be tested in connection with employee performance, Tassema and Soeters (2006) have studied eight human resource (HR) practices and their relationship with perceived employee performance. These eight practices include recruitment and selection practices, placement practices, training practices, compensation practices, employee performance evaluation practices, promotion practices, grievance procedure and pension or social security.

Essi Saru (2007) described human resource development (HRD) and organizational learning issues from the perspective of small firms. In his study, it argued that learning is about developing the organization or its individual and therefore it is closely connected to the human resource development (HRD) processes. As understood from this description, human resource development (HRD) issues are very important for the sake of the individual of the small firms. Competencies and

learning in organizations are ways to overcome some of the problems and human resource development (HRD) are the solutions provider for the firms.

In a study Hassan (2007) explained three human resource development (HRD) variables, namely, manpower planning, performance appraisal and learning, and training significantly predicted organizational value of trust. It is interesting to note that while employee's satisfaction with manpower planning and training practices contributed positively to their level of trust, the performance appraisal system worked otherwise. Employee's satisfaction with autonomy which meant getting freedom to achieve the result was negatively related to performance appraisal and performance guidance system.

Huda, Karim and Ahmed (2007) in their study focused that, the Ready-Made Garments (RMGs) are expected to be caution about identifying and coping with the changing economic environment. Human resource (HR) is a key factor to be considered in organizational development and must be emphasized in responding the micro and macro-environmental changes of business. Strategic human resource development (SHRD) will be a key to success in implementing the human resource development (HRD) functions in the ready-made garments (RMGs).

Jia and Fan (2008) found that former studies of competency focus on individuals (especially the competency of managers), taking individuals as primary units of understanding enterprise performance. Along with changes of business environment, former relatively steady environment becoming more complex and changeable, roles of human resource development (HRD) centers on providing with necessary skill training for employees based on organizational needs.

In a study of Shahzad et al. (2008) examined the relationship between three human resource practices i.e. compensation, promotion and performance evaluation, and perceived employee performance among university teachers in Pakistan and found a positive relationship between compensation and promotion practices and employee

perceived performance while performance evaluation practices are not significantly correlated with employee performance.

A study conducted in manufacturing firms in Malaysia by Abdullah (2009) suggested that outcomes of human resource development (HRD) interventions generally focus on individual and team development and on improvements to work processes. However, the intended outcomes of human resource development (HRD) interventions with regard to strategic planning for organizational changes are not achievable. Hence, human resource (HR) practitioners need to understand the importance of providing human resource (HR) with training and development activities and to ensure that the activities provided are measured and evaluated to assess whether they meet the objectives set for each activity.

It was explained by Durkovic (2009) that, the idea that knowledge as the result of employee's development, is becoming a strategic resource and centre of competitive advantage and differentiation in modern economy. Attempting to change from within to adjust to external changes, modern organizations encourage development of employees and seek after methods and instruments enabling them to change the employee's knowledge and skill structure as the basis of organizational development (OD).

In accordance with the description by Abdullah and Hiok (2009) that, both small and medium-scale industries (SMIs) and large-scale industries (LSIs) are seen to value their production employees, providing them with more training and development than employees at other levels, and this training and development is associated with greater spending. However, both small and medium-scale industries (SMIs) and large-scale industries (LSIs) adopt mainly informal approaches to the analysis of human resource development (HRD) needs and the evaluation of training effectiveness, as opposed to formal methods. Nonetheless, the outcomes of human resource development (HRD) activities and the major challenges in human resource development (HRD) are generally similar across the two industry groups.

1.5 Objectives of the Study

Human resource development (HRD) has currently emerged as a serious field of study, seeking answers to strategic questions that conventional wisdom has not satisfactorily provided. On the basis of review of literature, the present study attempts to determine and investigate the situation of human resource development (HRD) in industrial sector.

To understand the inherent peculiarities about such a complex concept i.e. human resource development (HRD) in industrial sector the study is carried out with the following objectives:

- to observe the socio-demographic profile of the respondents;
- to explore the industrial information related to human resource development (HRD);
- to explore the job information of the respondents;
- to identify some industrial facilities like training and budget allocation for the welfare of the employee; and
- to identify more influential factors that are truly related to the various human resource development components as practiced by various industries.

1.6 Limitations of the Study

The whole data collection was very systematic and up-date, however, there were some limitations regarding the data owing (e.g. all the industries were not consider for this study) to the constraint of sufficient manpower, enough time and finance. On the other hand, lack of adequate assistance from the respective authority is also responsible for not considering all the industries in this study. Moreover, it is found difficult to collect information from other industries and all the respondents working within the industry. The major limitations of this study revolve around sampling issues as the small sample size reported here might have some effects on the current results. Also, it could be conceivable that issues related to organizational environment might have affected some of the relationships studied.

Another problem was determination of exact salary structure of respondents. Most of the cases the respondents are not willingly explore their exact salary, in fact most of the times they totally denied the salary matter. Moreover, the study is in industrial area and most of the respondents worked under someone's supervision and some information related to the organization, they tried to hide. Although they relied on good guess, the researcher has recorded the information given by respondents themselves.

1.7 Organization of the Study

The overall study has been organized in six chapters. The introductory chapter (chapter one) contains an overall introduction of the study, situation of human resource development (HRD) at global and national level, review of literature, importance of the study and objectives of the study. Chapter two presents a general profile of the study area, research methodology that includes; data sources and sampling design, preparation of the questionnaire, data processing and statistical methods. Last portion of this chapter includes the concept of the terminology and limitation and quality of the data. Chapter three is the most important part of this research, which contains background characteristics and human resource development related information under study.

In chapter four, bivariate analysis i.e. cross-tabulation is applied to examine the association of different variables of the respondents with the industrial strategies. Chapter five demonstrated the application of multivariate analysis named as logistic regression analysis to examine the factor affecting income satisfaction of the respondents, respondents' participation in industrial decision making process, respondents' perceptions about their work place environment and their promotion status. In chapter six, summary of the analysis is given along with brief conclusion. The last portion of this chapter includes the overall conclusion and policy recommendations.

Chapter Two

Data Sources and Methodology

2.1 Introduction

Although, a good number of surveys have been conducted in Bangladesh but at present the most complete and reliable source of information on the practices of Human Resource Development (HRD) in industrial sector at country level and its geographic subdivision is the census based enumeration. Some information about such practices in industrial level is not available in census data. In this circumstance a survey data is needed. Therefore, the primary data were collected from Rajshahi district to fulfill the research objectives of this study.

The term 'research' refers to the systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analyzing the facts and reaching certain conclusions either in the form of solutions towards the concerned problem on in certain generalizations for some theoretical formulation. Any researcher should observe the source, quality and limitation of data used in his/her research work for presenting smoothly the actual findings. The present chapter confined to indicate a description of the general profile of the study area, sample size, sampling technique, preparation of questionnaire, data collection, data processing and analysis, computerization and all other related issues relevant to this study. This chapter also provides data editing, data analysis, data quality and limitations of the study.

2.2 Data Sources and Sampling Design

This study is mainly based on the primary data. The study sample comprised of 417 respondents from three industries of which 80.1 percent are male and 19.9 percent

were female. The inclusion criteria were the respondents who were paid salary from the industry per month. The study followed a cross-sectional design where, data were collected by direct interviews. The participants were selected by simple random sampling and in proportion to the total monthly paid salaried respondents, which accounted for 60 percent during the period between January and March, 2011. This percentage of the data is considered more than sufficient to represent the minimum data sampling. Information from different books, publications, research studies, journals, articles and websites are also used to complete this study.

The primary data for this study were collected from three industries located in Rajshahi city under Rajshahi district of Bangladesh. The first step was to contact human resource department of each of the industries. A meeting with the human resource department was arranged and the purpose, general outline, methods and details of this study were explained. Then the interviews were carried out.

2.3 General Profile of the Study Area

Rajshahi city is the study area, which is a city of Rajshahi district in northwestern Bangladesh, is bounded by Naogaon district on the north, Natore district on the east, Chapai Nababganj district on the south. The river Padma, one of the major rivers of Indian subcontinent, runs along the city. Rajshahi city is the headquarter of Rajshahi division, one of the six administrative divisions in Bangladesh. Rajshahi is the home of many educational institutes, and is often referred to in Bangladesh as the education city. It is famous for pure silk, mango and lichi. Attractive silk products are cheaper in Rajshahi and it is often also referred to as silk city. According to the economic census 2003 roughly, 5162 industries of varying sizes in Rajshahi Zila (BBS, 2006). These industries are dominated by hand looms, rice and oil mills, and other food industries.

In spite of being an important city and located on a riverbank, industrial development in Rajshahi has not been fast. Local people have claimed this is due to lack of attention from the central government in Dhaka (capital city of Bangladesh). In 90’s

an Industry Park has been established in Rajshahi, now mainly home to industries producing products of the famous Rajshahi silk. Rajshahi is also home to a jute mill, a sugar mill and mango based industries. There will be a rapid industrial development in Rajshahi if gas is supplied through pipeline and the people of Rajshahi are demanding supply of gas as soon as possible. The government has taken steps to supply gas in Rajshahi quickly and a project has started to supply gas. Industry experts predict that gas connection with the rest of the country will allow Rajshai to fulfill its true potential and generally emerge as one of the most economically vibrant parts of Bangladesh. The study area is shown in figure 2.1.

Figure 2.1: The study area (Rajshahi city) under Rajshahi district

2.4 Methodology

The section of the study provided the following:

2.4.1 Preparation of Questionnaire

According to the aim of my study, a questionnaire was prepared under the cordial supervision of my respectable and honourable supervisor. After this, pre-testing of questionnaire was performed and necessary correction was allowed. Finally, author had gone to the study areas and asked the questions to the respondents and answers were collected on questionnaires. A structural interview schedule containing closed questions was desired to collect information on the basis of the study objectives.

Bengali version questionnaire was for the convenience of data collection due to the easy understanding of the respondents by personally interviewing the respondents. Sensitive and unnecessary questionnaires were excluded. After that, questionnaires were transformed into English version for analytical purpose.

2.4.2 Data Processing

For data processing and analysis the following stages were followed:

Editing: Author day by day following the completion of data collection carefully checked each schedule of the questionnaire. The data were edited rigorously to make correction of any existing inconsistencies in data and to minimize the non sampling error of the study. During the edition period following consideration were kept in mind: (a) the data should be completed, (b) the data should be consistent, (c) the data should be accurate, (d) the data should be homogeneous.

Coding: All the recorded data were coded in cod sheets according to a comprehensive cod plan. The author did coding the data in the following way: suppose the variables are education, occupation, etc are codes as edq (education), occu (occupation) and their internal categories as 0 = illiterate, 1= primary, 2 = secondary, ……. and so on.

2.4.3 Statistical Methods

Regardless of one's area of study, collecting information data on complex issues is usually analysis but easy. One of the first decisions that the researcher faces concern which variable to measure. In any situation where a multivariate problem is encountered, the method of analysis should proceed from simple to complex in an orderly manner (Srinivasan, 1979). In this study, simple and constructive analysis has been made from each and every frequency table. Both univariate and bivariate tables have prepared to meet the objectives of the study. We are desired to perform analysis step by step in the following chapters. We have performed univariate classification analysis in order to find percentage of occurrence, degree of association, factors affecting the situation of Human Resource Development (HRD). A multivariate technique named as logistic regression analysis is used for determining those factors that are truly affecting the practices of Human Resource Development (HRD). Different software has been used to complete this study. The entire analysis of the study is done by most extensively using software SPSS (Statistical Package for Social Sciences) for windows (version15.0), Excel and Ms Word are used simultaneously as they are also found to be necessary in different aspects. Some first hand analysis such as frequencies, bivriate analysis and logistic regression analysis are performed through SPSS 16.0 version.

2.4.4 Bivariate Analysis

After investigation of the data, some variables of the respondents are selected to check the association with different industrial strategies through bivariate analysis.

Bivariate Analysis: Bivariate analysis, examines the independent variables individually, and gives only a preliminary notion of how important each variable is by itself. The examination of percentage in a bivariate analysis is an advantageous first step for studying the relationship between two variables, these percentages do not allow for qualification or testing of that relationship. For this purposes, it is useful to consider various index that measure the extend of association as well as statistical test of the hypothesis that there is no association, chi-square test of independence is performed to test the existence of interrelationship among the

categories of two qualitative variables. In this study, some of the covariance is quantitative such as respondent's age sex, education, work experience etc. In view of performing differential analysis, it is required to take these variables into categories on the basis of their respective standard ranges.

Contingency Analysis: According to contingency analysis, we make design to test any association between different phenomena that could be useful in the socio-economic condition of the respondent. Here, we assume the hypothesis of independence or homogeneity as the null hypothesis (Gupta & Kapoor, 1994). The expected frequency under the hypothesis is calculated as:

$$E_{ij} = \frac{O_i \times O_j}{N}$$

Where, O_i = number of elderly at the ith row of respective contingency table;

O_j = number of elderly at the jth column of respective contingency table;

N = total number of elderly.

All the contingency tables are prepared on the basis of classification of variables. From each contingency table examination of association between component and the various segment of the component are made by computing chi-square using the formula given by:

$$\chi^2 = \sum_{ij} \frac{O_{ij}}{E_{ij}} - N$$

That follows the chi-square distribution with (r-1) (c-1) degrees of freedom.

Where, O_{ij} = the observed number of elders in (I,j)th cell;

O_{jj} = the expected number of elders in (I,j)th cell;

r = number of rows;

c= number of columns.

2.4.5 Development of Logistic Regression Analysis

When we examine each independent variable individually, it can only provide a preliminary idea of how important each variable is by itself. So the relative

importance of all the variables has to be examined simultaneously by some multivariate methods. There are a variety of multivariate statistical techniques that can be used to predict a binary dependent variable from a set of independent variables.

Multiple regression analysis and discriminate analysis are two related techniques but these techniques are applicable only when the dependent and independent variables are measured in interval scale under the assumption that they are normally distributed with equal variances. However, in most applications, dependent variable may be dichotomous one and one or more explanatory variables are qualitative or measured in nominal or ordinal scales and the assumption of normality is violated. To overcome this problem, a very interesting and appropriate technique is the linear logistic regression method. Cox is the pioneer of logistic regression model. Subsequently this model was illustrated by Wolker and of success. This model expresses a qualitative dependent variable as a function of several independent variables, both qualitative and quantitative (Fox, 1984). Duncan (1967) and Cox himself (Cox, 1970). More recently Lee (1980) and Fox (1984) have further illustrated the Cox's model. The logistic regression method does not require any distributional assumption. This regression is useful when the dependent variable is dichotomous. Since it does not require any distributional assumptions, unlike many other multivariate techniques (i.e. the variables are normally distributed with equal variances), it can appropriately handle situations in which the independent variables are qualitative or measured in nominal and ordinal scale. The logistic regression model can be used not only to identify risk factors but also to predict the probability

Let Y_i denote dichotomous dependent variable for the ith observation and $Y_i = y_i = 1$, if the ith individual is a success and $Y_i = y_i = 0$, if the ith individual is a failure.

So that, $p_i = E\{yi = 1 \mid Xi\} = \dfrac{1}{1+e^{-(\beta_0 + B_1 X_i)}}$ where X_i is explanatory variable and

$$1-p_i = E\{y_i = 0 \mid X_i\} = 1 - \frac{1}{1+e^{-(\beta_0 + B_1 X_i)}}$$

$$= \frac{e^{-(B_o + B_1 X_i)}}{1+e^{-(\beta_0 + B_1 X_i)}}$$

$$= \frac{1}{1+e^{(\beta_0 + \beta_1 X_1)}}$$

Therefore, we can write

$$\frac{p_i}{1-p_i} = \frac{1+e^{(\beta_o + \beta_1 X_i)}}{l+e^{-(\beta_o + \beta_1 X_i)}}$$

$$= e^{(\beta_o + \beta_1 X_i)} \text{.....(1)}$$

Now if we take natural log of the equation (1) we obtain

$$L_i = \log_e(\frac{p_i}{1-p_i}) = \beta_o + \beta_1 X_i \text{.....(2)}$$

Here, p_i /(1- p_i) given in (1) is simply the odds ratio and Li given in (2) is known as log odds.

Instead of single explanatory variable, we can count two or more explanatory variables. Let X_{i1}, X_{i2}, ... X_{ik} be the vector of k independent explanatory variables for the ith response. The logarithm of the ratio p_i and (l- p_i) gives the linear function of X_{ij} and the model (2) becomes,

$$L_i = \log_e(\frac{p_i}{1-p_i}) = \sum_{j=o}^{k} B_j X_{ij} \text{.....(3)}$$

Where we consider $X_{i0} = 1$ and β_j is the parameter relation to X_{ij}.

The function (3) is a linear function of both the variables X and parameter β. L is called the logit and hence the model (3) is called logistic regression model.

Interpretation of the Parameters

Interpretation of the parameters in logistic model is not so straight forward as in linear regression model. So is relevant to present a little discussion about it. Since

the logit transformation $L_i = \log_e \frac{p_i}{(1-p_i)}$ is linear in parameter, we can interpreter the parameters using arguments of linear regression. Thus the interpretation may be described as follows:

We have, $p_i = \frac{e^{\beta_0+\beta_1 X_1+.....+\beta_k X_k}}{1+e^{\beta_0+\beta_1 X_1+.....+\beta_k X_k}}$ is a linear in parameter.

i.e. $L_i = \log_e(\frac{p_i}{1-p_i}) = \beta_0 + \beta_1 X_1 + ... + \beta_k X_k$

So, arguing analogously as in the case of linear model we can say that β_j (j=1,2,....., k) represent the rate of change in $\log_e$ $(\frac{p_i}{1-p_i})$ for one unit change in X_j (other variables remaining constant).

The interpretation of the parameters in logistic regression has another interesting aspect. In fact, this is the proper interpretation for the parameters of qualitative variable coefficient. To describe this, we first consider that the independent variable (X_j) is dichotomous. This case in not only simplest but also it gives the conceptual foundation for all other situations. The description is given below.

We have $\text{Log}_e \frac{p_i}{1-p_i} = \beta_o + \beta_1 X_1 + ... + \beta_j X_j + \beta_k X_k$

Now if X_j is a dichotomous variable taking values 0 and 1, then the odds ratio 'O' (say) for X_j = 1 against X_j=0 is (keeping all other X's fixed)

$$O = \frac{p_i(\mathrm{Y_i} = 1 \mid \mathrm{X}, \mathrm{X_j} = 1) \big/ \{1 - p_i(Y_i = 1 \mid X, X_j = 1\}}{pi(Y_i = 1 \mid X, X_j = 0) \big/ \{1 - p_i(Y = 1 \mid X, X_j = 0)\}}$$

$$= \frac{e^{\beta_0+\beta_1 X_1+.....\beta_j X_j+.....+B_k X_k}}{e^{\beta_0+\beta_1 X_1+.....0.\beta_j X_j+.....+B_k X_k}}$$

$$= e^{\beta_j}$$

$$\Rightarrow Log_e O = \beta_j$$

So, we can directly estimate the coefficients of a logistic regression model as $\log_e \hat{O}$ and hence can interpreter. In a qualitative independent variable has m categories, we introduce only (m-1) dummy variables and the remaining one is taken as reference category.

Estimation of the Parameters

In order to estimate the unknown parameters we cannot use the standers OLS method, Because in that case we must face some special problem as non-normality of the disturbance terms, heteroscedastic variance of the disturbance terms, non-fulfillment of the axiom i.e. $0 \leq P_i = E(Y_i|X) \leq 1$ and questionable value of R^2 as a measure of goodness of fit.

To eliminate the above problem, Cox suggested the maximum likelihood estimation method in place of standard OLS method and proposed the following function.

$$L(\beta_0, \beta_1, \ldots\ldots \beta_k) = \frac{\prod_{i=1}^{n} \exp(Y_i \sum_{j=o}^{k} \beta_j X_{ij})}{\prod_{i=1}^{n} \{1 + \exp(Y_i \sum_{j=o}^{k} \beta_j X_{ij})\}}$$

$$= \frac{\exp\{\sum_{i=1}^{k} (Y_i \sum_{j=0}^{k} \beta_j X_{ij})}{\prod_{i=1}^{n} \{1 + \exp(Y_i \sum_{j=o}^{k} \beta_j X_{ij})\}}$$

$$= \frac{\exp\{\sum_{j=0}^{k} (\beta_j \sum_{i=1}^{n} X_{ij} Y_i)}{\prod_{i=1}^{n} \{1 + \exp(Y_i \sum_{j=o}^{k} \beta_j X_{ij})\}}$$

$$= \frac{\exp\{\sum_{i=1}^{n} \beta_j t_j\}}{\prod_{i=1}^{n} \{1 + \exp(Y_i \sum_{j=o}^{k} \beta_j X_{ij})\}}, \text{ where } t_j = \sum_{i=1}^{n} X_{ij} Y_j, \; j = 0,1,\ldots\ldots\ldots,k$$

The log-likelihood function is given by

$$\log_e L(\beta_0, \beta_1, ...\beta_k) = \sum_{j=0}^{k} \beta_j t_j - \sum_{i=1}^{n} \log_e \{1 + \exp(Y_i \sum_{j=0}^{k} \beta_j X_{ij})\}$$

In order to estimate the parameter of this function, the logistic regression procedure of statistical package SPSS for windows base 16.0 version is used.

2.5 Concept of the Terminology

The concepts to be used for analyzing the situation of human resource development (HRD) are not yet fully explored. However, the concepts that are found in literature are taken for the purpose of the present analysis. Some of the concepts are produced below:

(i) Development

The slogan of this world-wide revolution is development, and like other revolutionary slogans, it has various meaning to different groups. This noun generally means a progression from a simpler or lower to a more advanced, mature, or complex form or stage: the development of an idea into reality; the evolution of a plant from a seed; attempts made to foster social progress. It symbolizes the achievement of independence, politically and economically.

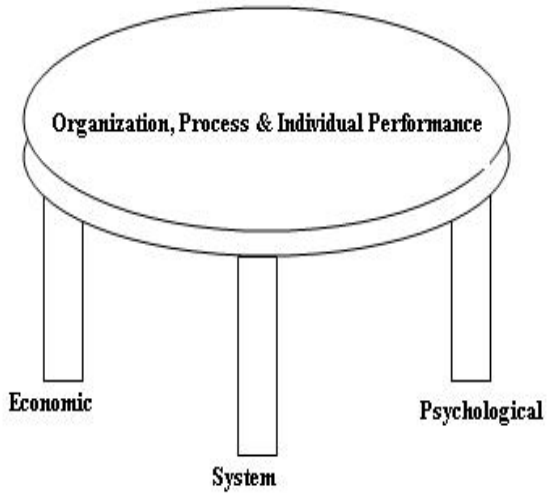
(ii) Human Development

The concept of human development (HD) asserts that the real foundation of human development is universalism in acknowledging the life claims of everyone. This concept embraces every development issue, including economic growth, social investment, people's empowerment, provision of basic needs and social safety nets, and political and cultural freedom. It is the process of enlarging people's choices so that they can live a long and healthy life, be educated, have access to resources for a decent standard of living, enjoy political, economic, social and cultural freedoms, and have human rights, self-esteem and opportunities for being creative and productive.

(iii) Human Resource Development

Human resource development (HRD) is a planned approach to learning aimed at change in knowledge, skills, understandings, attitudes, values and the behaviour of a learner or a group of learners. It is a process of developing and/or unleashing expertise through organization development and personal training and development for the purpose of improving performance (Swanson, 2001). The field of human resource development (HRD) is complex and evolving, which makes it difficult to identify a specific model and theory for human resource development (HRD) (Lee, 2003). This multi-based theory is presented as a three-legged stool model (Figure 2.2). The first element, which is fundamental to the survival of organization, is *economic*; second, the notion of connectivity and the relationships that can maximize the integration of subsystems and systems requires a *system* theory; and thirdly, *psychological* theory acknowledges that employees improve productivity, make changes and influence development within organizations through training, learning and development (Swanson and Holton, 2001).

Fig. 2.2: Theoretical foundation of human resource development



(iv) Organization Development

Organization development (OD) is the process of systematically implementing organizational change for the purpose of improving performance. It is a system-wide application of behavioral science knowledge to the planned development and

reinforcement of organizational strategies, structures, and processes for improving an organization's effectiveness (Cummings and Worley, 1997).

(v) Employee Development

Employee development (ED) is the enhancement of the skills, knowledge, and experience of employees with the purpose of improving performance. Employee development, unlike personal development, is usually coordinated by the employing organization. It can use a variety of training methods, and is usually conducted on a planned basis, perhaps as a result of a performance appraisal. It is the additional training dedicated to increase the skills, knowledge and experience of employees in order to improve their performance.

(vi) Education

Education is the gradual process of acquiring knowledge; it is the preparation of life. Education in the largest sense is any act or experience that has a formative effect on the mind, moral character or physical ability of an individual. In its technical sense, education is the process by which society deliberately transmits its accumulated knowledge, skills and value (personal and cultural) from one generation to other.

(vii) Training

Training is a learning process that involves the acquisition of knowledge, sharpening of skills, concepts, rules, or changing of attitudes and behaviours to enhance the performance of employees. Training may think of organizations as well as individuals being capable of "learning to learn"; based on the belief that "endless learning opportunities exist at the workplace". We typically say, training ca involve the changing of skills, knowledge, attitudes towards their work, or their interactions with their co-workers or their supervisor.

(viii) On-the-Job Training

On-the-job training is job training that occurs in the workplace. The new employee learns the job while doing the job and while earning his or her pay check. It also called hands on training. It is one of the best training methods because it is planned,

organized, and conducted at the employee's worksite. It involves one employee – usually a supervisor or an experienced employee-passing knowledge and skills on to a novice employee.

(ix) Off-the-Job Training

Off-the-job training involves employees taking training courses away from their place of work. This is often also referred to as "formal training". Off-the-job training courses might be run by the business' training department or by external provides. This training can take the form of lectures or self-study and can be used to develop more general skills and knowledge that can be used in a variety of situations, e.g. management skills programmes.

(x) Industry

Industry refers to the people or companies engaged in a particular kind of commercial enterprise. It is described as the manufacturing of a good or services within a category. It means any systematic activity carried on by co-operation between an employer and his workmen (whether such workmen are employed by such employer directly or by or through any agency, including a contractor) for the production, supply or distribution of goods and services with a view to satisfy human wants or wishes (not being wants or wishes which are spiritual or religious in nature).

(xi) Employer

Someone, who hires and pays wages, thereby providing a livelihood to individuals who are performing their works. An employer is a person or institution that hires employees or workers. Employers include individuals hiring a babysitter to governments and business which may hire many thousand of employees. The employer typically maintains ownership of intellectual property created by an employee within the scope of employment and as a function thereof.

(xii) Employee

The Person, who works for compensation whether direct or indirect, for another in return for stipulated services is treated as an employee. An employee may work on

an hourly, daily, or annual wage basis. An employee contributes labour and expertise to an endeavour. In the most modern economies, the term refers to a specific defined relationship between an individual and a corporation, which differs from those of customers, or clients.

(xiii) Job Security

Job security is the probability that an individual will keep his or her job. It is an employee's assurance or confidence that they will keep their current job. It is depend on economy, prevailing business conditions and the individual's personal skills.

(xiv) Job Performance

Organizational psychologists are still debating on the definition on the performance. However, there are several efforts outlining general models of job performance and the determinants of job performance. Among the notable ones are proposed by Campbell, *et al.*, (1993) where they build performance as a multi-dimensional phenomenon comprised of various latent factors. These include factors such as declarative knowledge, procedural knowledge, skills and motivation. Performance can be viewed from two perspectives, task performance and contextual performance. Task performance is the competency level of employees in performance various tasks and duties inherent in fixed jobs and work roles, while contextual performance is defined as extra task proficiency that contributes more to the organizational, social, and psychological environment that help accomplish organizational goals.

(xv) Human Development Index (HDI)

Human development index (HDI) is a composite index based on three indicators: longevity, as measured by life expectancy at birth; educational attainment, as measured by a combination of adult literacy (two-thirds weight) and the combined gross primary, secondary and tertiary enrolment ratio (one-third weight); and standard of living, as measured by per capita GDP (in PPP US$).

Chapter Three

Background Characteristics and Dimension of Industrial Information: Evidence from Survey Data

3.1 Introduction

This chapter covers the background characteristics that include socio-economic and demographic aspects of population are very important to conduct a research work. At industry level human resource development (HRD) is not only indispensable but also significant to a company's survival. There is an intrinsic importance in modern industry where market and technology are so volatile that failure to pro act to change and can be innovative will result in a company being driven out of business. The increasing demand of human resource development (HRD) is the recognized feature of most nations including Bangladesh as well. To cope the increasing demand of human resource development (HRD) in industrial sector, there is an urgent need of information related to the regarding matter. Hence, this chapter aims at eliciting information on the basic characteristics and human resource development (HRD) related information of the respondents and industry as well.

3.2 Background Characteristics of the Respondents

There are a number of characteristics of the respondents which influence the socio-economic performance, which are the subject matter of analysis. Some of them are shown in Table 3.1.

It is observed from Table 3.1 that among the total respondents 3.4 percent are top level employee (including general manager, manager, assistant manager and secretary) and remaining 96.6 percent are general employees (including all the

employees outside the mentioned category above). Considering age of the respondents, majority of the respondents are in age group 40-49 years. The age structure of the respondents varies across the industries under study. Incase of Sopura Silk Mills Ltd. majority of the respondents (40.2 percent) are in age group 30-39 years whereas, more than half of the respondents (51.9 percent) in Rejent Aluminum Factory are in age group less than 30 years. While, in Rajshahi Sugar Mills Ltd. 55.2 percent respondents are 40-49 years of old. The average age of the respondents is 38.51 years. Separately, this average age is 34.17 years, 30.04 years and 46.55 years for Sopura Silk Mills Ltd., Rejent Aluminum Factory and Rajshahi Sugar Mills Ltd. respectively. This result may indicate that, the private industries are interested with more energetic and dynamic young employees rather than the public one.

Gender inequality also found among the industries under study. Table 3.1 shows that, 8 of every 10 respondents are male. Though, the Sopura Silk Mills Ltd. tried to match the gender gap but, the others are far behind from that. Among the respondents, 40.9 percent in Sopura Silk Mills Ltd., 25 percent in Rejent Aluminum Factory and only 1.7 percent in Rajshahi Sugar Mills Ltd. are female. As regarding educational status of the respondents, majority of the respondents are secondary or less educated that consider 61.9 percent. Similar scenario is also true for all the industries under study. Only a little portion of the respondents have secondary and higher education. The clear picture about the educational status is found by showing the average years of schooling where the average years of schooling is only 5.91 years among the total respondents. The average year of schooling of the respondents is 5.03, 4.22 and 7.52 for Sopura Silk Mills Ltd., Rejent Aluminum Factory and Rajshahi Sugar Mills Ltd. respectively. This result is an indication of less educated employee based industry and physical labour based as well. However, purposeful education enables the individuals to understand and to study the real life situation and to develop an opportunity for creating confidence in the minds of younger generation, and provide a strong base for rational and value oriented and nation-building progress (Myers and Harbison, 1965; Mingat and Tan, 1986).

Most of the respondents (91.8 percent) are married and remaining are in other category that includes unmarried, divorced/separated and widow/widowed. Incase of family member, most of the respondent's (82.5 percent) family member in between 4 to 6. The average number of family member of the total respondents is 4.82. This figure is quite similar to the respondents of all three industries under study. There is a strong relationship between job satisfaction and organizational commitment (Ayeni and Phopoola, 2007). In fact, job satisfaction is highly depends on economic satisfaction of the employee.

Table 3.1: Socio-demographic characteristics of the respondents

Variables	**Sopura Silk Mills Ltd. N = 132**		**Rejent Aluminum Factory N = 104**		**Rajshahi Sugar Mills Ltd. N = 181**		**Total N = 417**	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Current Status								
Top level	1	0.8	2	1.9	11	6.1	14	3.4
General	131	99.2	102	98.1	170	93.9	403	96.6
Age								
< 30 years	40	30.3	54	51.9	1	0.6	95	22.8
30-39 years	53	40.2	42	40.4	17	9.4	112	26.9
40-49 years	28	21.2	4	3.8	100	55.2	132	31.7
50+ years	11	8.3	4	3.8	63	34.8	78	18.7
Avg. age	**34.17**		**30.04**		**46.55**		**38.51**	
Sex								
Male	78	59.1	78	75.0	178	98.3	334	80.1
Female	54	40.9	26	25.0	3	1.7	83	19.9
Educational status								
Primary inc.	46	34.8	48	46.2	14	7.7	108	25.9
Secondary inc.	80	60.6	52	50.0	126	69.6	258	61.9
Secondary to higher	6	4.5	4	3.8	41	22.7	51	12.2
Avg. years of schooling	**5.03**		**4.22**		**7.52**		**5.91**	
Marital status								
Married	112	84.8	95	91.3	176	97.2	383	91.8
Others	20	15.2	17	8.7	5	2.8	34	8.1
Family member								
1- 3	14	10.6	10	9.6	18	9.9	42	10.1
4 – 6	104	78.8	83	79.8	157	86.7	334	82.5
7+	14	10.6	11	10.6	6	3.3	31	7.4
Avg. no. of family	**4.98**		**4.89**		**4.66**		**4.82**	

member								
Satisfaction of income								
Yes	41	31.1	16	15.4	26	14.4	83	19.9
No	91	68.9	88	84.6	155	85.6	334	80.1

Notes: inc. = Incomplete; Avg. = Average

Considering income, most of the respondents have a great objection with the poor salary structure provided by the industry but, do not want to focus due to the restriction of the authority. This is mostly true for the employees at Sopura Silk Mills Ltd. and Rejent Aluminum Factory. It is found from Table 3.1 that 8 of very 10 respondents are not satisfied with their income from the industry. Separately, this is also true for the respondents of all the industries under study. Though, a near of 20 percent respondents are satisfied with their income but, in most cases, their satisfaction based on the truth "something is better than nothing".

3.3 Job Related Information of the Respondents

The labour- intensive industries ought to be a central theme of development economics and a central focus of development policies. So, there is an urgent need of exploring the work related information of the employees. Therefore, Table 3.2 presents various work related information of the study respondents.

Employee's work experience likely to have an influence on employee related outcomes (Godard, 2001; Guest, 1999). It is observed from Table 3.2 that, majority (43.9 percent) of the respondents are working in the same industry for 15 years and above with an annual average of 13.2 years. The average work experience of the respondents with the same industry is 10.2 years, 6.36 years and 19.32 years for Sopura Silk Mills Ltd., Rejent Aluminum Factory and Rajshahi Sugar Mills Ltd. respectively. On the other hand, average years of total work experience of the respondents are as high as 15.5. Respondents at Rajshahi Sugar Mills Ltd. have the total work experience of 21.67 years, followed by Sopura Silk Mills Ltd. (12.55 years) and Rejent Aluminum Factory (8.52 years).

Since, the promotion practice and perceived employee performance are positively and significantly correlated (Teseema and Soeters, 2006) but, from Table 3.2 it is found that, most of the respondents (72.9 percent) have not got any promotion during their long work life. Among the respondents who have got promotion, of, which 77 percent promotion are based on seniority basis and only 23 percent are promoted due to qualification. The interesting matter here is that, promotion practice is totally absence in Rejent Aluminum Factory, it is almost negligible for Sopura Silk Mills Ltd. but this practice is quite satisfactory for Rajshahi Sugar Mills Ltd.

Training of the employee is the key to enhance the productivity as well as the better development of the employee for searching new knowledge that provides adequate criteria to an individual to perform better in a given task and subsequently contributes to the firm performance (Rothwell, *et al.*, 1995). From Table 3.2 it is observed that, an overwhelming majority of the respondents have training, which considers 93.5 percent. Individually, the respondents of all the three industries under study have training. However, they take training from their work place. The trained employees are very much realize that, their performance highly increased by their training, which consider 60.8 percent and 39.2 percent respondents realized that their performance fairly increased.

Knowledge development describes the inter-organizational process of identifying existing and accessible knowledge, in order to transfer and apply this knowledge to solve specific tasks better, faster and cheaper than they would other-wise have been solved (Christensen, 2005). From Table 3.2 it is observed that, 78.7 percent of the respondents are not present or participate in decision about the industry, 17 percent are often participate and only 4.3 percent are fully participate in the process of decision making. Health facilities are very important to ensure good physical exposure of the labour force, which helps in achieving the stability and continuity in the labour productivity.

Considering workplace environment, only 36.7 percent respondents said that it is healthy, 50.8 percent said that it is fairly healthy and 12.5 percent said that it is unhealthy. Most of the respondents (84.9 percent) said that, the industry hearty try for the welfare of the employee and 15.1 percent respondents negatively respond about that. The interesting findings here is that, those who positively respond, their response mainly based on the emotion that, the industry gives them work for which they can earn money and with which they can maintain their livelihood, though in difficult. All the respondents in all the three industries under study realize that every industry should have separate human resource development section.

Table 3.2: Job related information of the respondents

Variables	Sopura Silk Mills Ltd. N = 132		Rejent Aluminum Factory N = 104		Rajshahi Sugar Mills Ltd. N = 181		Total N = 417	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Work experience within the industry								
< 5 years	21	15.9	38	36.5	5	2.8	64	15.3
5-9 years	38	28.8	50	48.1	7	3.9	95	22.8
10-14 years	44	33.3	8	7.7	23	12.7	75	18.0
15+ years	29	22.0	8	7.7	146	80.7	183	43.9
Avg. work exp. within the institution	**10.20**		**6.36**		**19.32**		**13.20**	
Total work exp.								
< 10 years	52	39.4	69	66.3	0	0.0	121	29.0
10-14 years	30	22.7	23	22.1	9	5.0	62	14.9
15-19 years	23	17.4	6	5.8	54	29.8	83	19.9
20+ years	27	20.5	6	5.8	118	65.2	151	36.2
Avg. of total work exp.	**12.55**		**8.52**		**21.67**		**15.50**	
Having promotion								
Yes	3	2.3	0	0.0	110	60.8	113	27.1
No	129	97.7	104	100.0	71	39.2	304	72.9
Reason for promotion								
Seniority	3	100.0	0	0.0	84	76.4	87	77.0
Qualification	0	0.0	0	0.0	26	23.6	26	23.0
Others	0	0.0	0	0.0	0	0.0	0	0.0
Having training								
Yes	127	96.2	91	87.5	172	95.0	390	93.5
No	5	3.8	13	12.5	9	5.0	27	6.5
Change of performance after training								
Highly Increased	73	57.5	38	41.8	126	73.3	237	60.8
Fairly	54	42.5	53	58.2	46	26.7	153	39.2

increased								
Same as before	0	0.0	0	0.0	0	0.0	0	0.0
Participation in decision making								
All times	3	2.3	4	3.8	11	6.1	18	4.3
Often	43	32.6	26	25.0	2	1.1	71	17.0
Not at all	86	65.2	74	71.2	168	92.8	328	78.7
Work place environment								
Healthy	67	50.8	5	4.8	81	44.8	153	36.7
Unhealthy	30	22.7	22	21.2	0	0.0	52	12.5
Fairly healthy	35	26.5	77	74.0	100	55.2	212	50.8
Try for the welfare of the employee by industry								
Yes	122	92.4	54	51.9	178	98.3	354	84.9
No	10	7.6	50	48.1	3	1.7	63	15.1
Perception of having HRD section by every Industry								
Yes	132	100.0	104	100.0	181	100.0	417	100.0
No	0	0.0	0	0.0	0	0.0	0	0.0

Note: exp. = Experience

Moreover, it is apparent that all the industries conduct training programme for its employees, but the budget allocation for such programme is not available for Sopura Silk Mills Ltd. and Rejent Aluminum Factory. Only Rajshahi Sugar Mills Ltd. provided budget allocation for training programme of its employees. Though, the amount for such allocation is little but is increasing as the advancement of time (Table 3.3).

Table 3.3: Budget allocation for training program provided by institution

Year	Sopura Silk Mills Ltd.	Rejent Aluminum Factory	Rajshahi Sugar Mills Ltd.
	Amount of money (in BDT.)		
2007-2008	NA	NA	10,125
2008-2009	NA	NA	16,870
2009-2010	NA	NA	24,520

Notes: NA = Not Applicable; BDT = Bangladesh currency-Taka.

3.4 Dimension of Industrial Information

Research has found that human resource practices such as, recruitment and selection, compensation and rewards system, assessment and training influence numerous employee work-related attitudes (Meyer and Smith, 2000). So, it is very much important to know the industrial information related to human resource development. All these information are presented in Table 3.3 for better understanding of the issue.

One of the most important problems that are faced by many developing countries in the world including Bangladesh is surplus or shortage of manpower in industrial sectors. It is found from Table 3.3 that only Sopura Silk Mills Ltd. has its manpower as needed. But, incase of Rejent Aluminum Factory and Rajshahi Sugar Mills Ltd. they have the surplus shortage manpower respectively as they needed. There is no direct recruitment system of the employee for Sopura Silk Mills Ltd. and Rejent Aluminum Factory. On the other hand Rajshahi Sugar Mills Ltd. follows the direct recruitment of their employees.

Based on the industrial information, the recruitment system of employees for Sopura Silk Mills Ltd. and Rejent Aluminum Factory mainly depends on training and persuasion/relation. Educational qualification is not so important here as they are a physical intensive labour industry. Though, education and training get more priority for employment at Rajshahi Sugar Mills Ltd. but, persuasion/relation is also effectively related for the employment of the employee.

Orientation Programme is very much important that creates a beginning to the new employees with their work environment. The role of human resource development (HRD) is particularly important when employees enter an organization (Holton, 1996). However, the orientation programme is totally absent for the employees at Sopura Silk Mills Ltd. and Rejent Aluminum Factory. Rajshahi Sugar Mills Ltd. practicing the orientation programme for its employees. Training is a planned and systematic effort to modify and develop knowledge skill, competency and attitude towards learning experience to achieve effective performance through work productivity (Buckley and Caple, 2004).

It is found from Table 3.3 that, all the three industries are conducting training programme for their new employees and all the training programmes are conducting in the form of on-the-job training. Two out of three industries under study (Sopura Silk Mills Ltd,. and Rajshahi Sugar Mills Ltd.) have separate budget allocation for the training programmes of their employees but, Rejent Aluminum Factory has not

such type of allocation. Incentives should be incorporated to organization strategies as seen as a technique which organization can apply in order to achieve higher productivity in accordance with goals (Ian, *et al.*, 2004). But, from the information of the Table 3.3, it is found that, no industry under study has such incentives programme i.e. reward system for their employees. However, incentive should be incorporated to organization strategies as seen as a technique which organization can apply in order to achieve higher productivity in accordance with goals.

Monitoring system of employee's work plays a crucial role in the work force productivity. Proper monitoring system may aware the employees about their responsibilities towards the organization. Table 3.3 shoes that, every industry under study maintain their monitoring system of their employee's work. Two industries (Sopura Silk Mills Ltd. and Rejent Aluminum Factory) are monitoring their employee's work regularly. On the other hand, Rajshahi Sugar Mills Ltd. is monitoring their employee's work with an interval of one week. Labour union is very much important to establish the legal rights of the employees. But, at present labour union of an industry in Bangladesh very much affected by politics that also failed to cope the employee's legal rights, which is unwanted and unexpected. Politics-free work environment is significantly correlated to job satisfaction of employees (Pahik and Pesonjee, 1997). It is found that there is no labour union at Sopura Silk Mills Ltd. and Rejent Aluminum Factory. But, employees at Rajshahi Sugar Mill Ltd. have their labour union.

Table 3.4 Dimension of industrial information at a glance

Variables	**Sopura Silk Mills Ltd.**	**Rejent Aluminum Factory**	**Rajshahi Sugar Mills Ltd.**
Current manpower in industry	Equal as Needed	Surplus	Shortage
Is there direct recruit system?	No	No	Yes
Recruit system based on applicant's what component?	Training and persuasion/relation	Training and persuasion/relation	Education, training and persuasion/relation
Orientation system for new	No	No	Yes

employee			
Training program for new employee	Yes	Yes	Yes
Types of training program provided by industry	On-the-job training	On-the-job training	On-the-job training
Budget allocation for training	Yes	No	Yes
Reward system for employee	No	No	No
Monitoring system of employee's work	Yes	Yes	Yes
Interval of monitoring employee's work	Daily	Daily	Weekly
Labour union in institution	No	No	Yes
Job security of the employee	No	No	Yes
Health facility of the employee has ensured by industry	Yes	Yes	Yes
Separate HRD section in industry	No	No	No
Types of education need for skilled manpower	Technical	Technical	Technical

Job security is broadly linked with job satisfaction of the employees that enhance their productivity. But, it is found from Table 3.3 that, employees at Sopura Silk Mills Ltd. and Rejent Aluminum Factory have no job security. On the other hand, employees at Rajshahi Sugar Mills Ltd. have their job security. However, it may not mean that employees at Rajshahi Sugar Mills Ltd. are more productive than the others. Improvement in health situation of the working population through medical and public programmes is one of the ways to develop human resource. Information shows that all the three industries ensure the health facilities of their employees. In fact, the satisfaction level of the employees with their health facilities is quite low.

Training and development is traditionally a function of human resource department (HRD). It follows a classical training cycle, identifying training and development

needs (Wilson, 2005). But it is found that, there is no separate human resource development (HRD) department in all the industries under studies. Technical education is very important aspect of the labour force and it guarantees the efficiency of the workers, education and training are the heart of the development efforts (Adil, *et al.,* 2005). Considering Such an important aspect of human resource development, all the industries give priority to technical education for developing a skilled manpower.

3.5 Conclusions

Human resource is a very large concept, which encapsulates all the characteristics of individuals that may make them earn money, including education, training, experience, skills, competences, abilities, motivations, resilience, health, beauty, among others (Bannock, *et al.,* 2005). In this chapter, respondents' background characteristics and human resource development related information are broadly explained. Research has found that, human resource practices such as recruitment and selection, compensation and reward system, assessment and training influence numerous employees' work-related attitudes (e.g. Robertson and Mindel, 1980; Ogilvie, 1986; Park, *et al.,* 2003; Meyer and Smith, 2000). Based upon the results, provided in this chapter should be given priority in order to formulate policies for the industry as well as employees' welfare.

Chapter Four

Association of Different Variables of the Respondents with Industrial Strategies

4.1 Introduction

Human resource development (HRD) has become one of the most significant areas in the industrial as well as in the non-industrial world, which indicates the process of increasing efficiency and productivity by increasing knowledge, skills and the capacities of the people through education, training, health facilities etc. The industrial strategies are largely associated with the different variables of the respondents such as, age, sex, education, training, work experience etc. The present chapter is an attempt to test the association between different variables of the respondents and industrial strategies, so that we can have a clear image on the regarding matter.

4.2 Association of Respondent's Characteristics with Income Satisfaction

Income satisfaction is one of the key indicators that influencing the life and livelihood status of an employee. It is also fundamental for the productivity of any organization. Table 4.1 represents the association of different variables of the respondents with their income satisfaction. Different levels of the respondent's age are strongly associated with their income satisfaction ($p = < 0.001$). It is observed that, 8 of every ten respondents are not satisfied with their income. In the recent time, high inflation rate creates price hike of essential commodities, makes it difficult to maintain a minimum standard of life especially for those with no or fixed income. The possible reason for which they are not satisfied with their income might be that, their income is not adjusted with the higher inflation rate in the recent year.

Considering respondent's age, majority of the respondents (86.4 percent) in the age group 40-49 years are not satisfied with their income. However, 26.9 percent of the respondents aged 50 years and above are satisfied with their income. They are satisfied in the sense that, they can earn some money at this stage and can participate in maintenance of their family. In Bangladeshi society, female work are still limited and home oriented. Earning some money is a joyous matter to them. It is reflected in the results that, female (37.3 percent) are more satisfied with their income than their male counterparts (15.6 percent) and their differences are statistically significant ($p < 0.001$). Additionally, 84.4 percent of the male respondents are not satisfied with their income whereas, it is 62.7 percent for female respondents (Table 4.1).

As a poor country, most of the people in Bangladesh are facing trouble to maintain their livelihood with their lower income having higher households size. It is observed that, respondents having household size 4 and more are not satisfied with their income. Majority of the respondents (81.7 percent) having household size 4-6 are not satisfied with their income whereas, 33.3 percent of the respondents having comparatively lower household size (1-3) are satisfied with their income. One of the key findings here is that, the percentage of the respondents, who are satisfied with their income, is decreasing when their household size is increasing. Furthermore, the association between the household size and income satisfaction of the respondents significant ($p = 0.071$). Highest percentages of the respondents who are married are not satisfied with their income (82.8 percent) as compared to the other marital status categories. This may be due to the maintenance of their family. The difference between the different levels of marital status and income satisfaction is statistically significant ($p = < 0.001$).

Level of education is also significantly associated with the satisfaction of income of the employees ($p < 0.001$). Respondents with secondary incomplete education contain higher percentages (87.6 percent), who are not satisfied with their income. The percentage of the respondents, who are satisfied with their income is higher (47.1 percent) are secondary and higher educated. It is also observed that, the

percentage of the respondents, who are satisfied with their income, is increasing with the increase of their education level (Table 4.1). One possible reason might be responsible for that, respondents with higher level of education hold higher position with higher income than the lower educated respondents.

Table 4.1: Association of respondent's characteristics with income satisfaction

Variables	Satisfied with income		Total
	No	Yes	
Age (in years)			
< 30	72 (75.8)	23 (24.2)	95 (100)
30-39	91 (81.2)	21 (18.8)	112 (100)
40-49	114 (86.4)	18 (13.6)	132 (100)
50+	57 (73.1)	21 (26.9)	78 (100)
Total	334 (80.1)	83 (19.9)	**417 (100)**
χ^2 = 6.86; d.f. = 3; p = 0.076			
Sex			
Male	282 (84.4)	52 (15.6)	334 (100)
Female	52 (62.7)	31 (37.3)	83 (100)
Total	334 (80.1)	83 (19.9)	**417 (100)**
χ^2 = 19.78; d.f. = 1; p = < 0.001			
Household size			
1-3	28 (66.7)	14 (33.3)	42 (100)
4-6	281 (81.7)	63 (18.3)	334 (100)
7+	25 (80.6)	6 (19.4)	31 (100)
Total	334 (80.1)	83 (19.9)	**417 (100)**
χ^2 = 5.30; d.f. = 2; p = 0.071			
Marital status			
Married	317 (82.8)	66 (17.2)	383 (100)
Unmarried	14 (53.8)	12 (46.2)	26 (100)
Others	3 (37.5)	5 (62.5)	8 (100)
Total	334 (80.1)	83 (19.9)	**417 (100)**
χ^2 = 22.05; d.f. = 2; p = < 0.001			
Level of education			
Primary incomplete	81 (75.0)	27 (25.0)	108 (100)
Secondary incomplete	226 (87.6)	32 (12.4)	258 (100)
Secondary and higher	27 (52.9)	24 (47.1)	51 (100)
Total	334 (80.1)	83 (19.9)	**417 (100)**
χ^2 = 34.45; d.f. = 2; p = < 0.001			
Have special training			
No	192 (81.7)	43 (18.3)	235 (100)
Yes	142 (78.0)	40 (22.0)	182 (100)
Total	334 (80.1)	83 (19.9)	**417 (100)**
χ^2 = 0.87; d.f. = 1; p = 0.35			
Job security			
No	179 (75.8)	57 (24.2)	236 (100)

Yes	155 (85.6)	26 (14.4)	181 (100)
Total	334 (80.1)	83 (19.9)	**417 (100)**
	χ^2 = 6.16; d.f. = 1; p = 0.013		

Table 4.1 also demonstrated that majority of the respondents are not satisfied with their income, have no training (81.7 percent) whereas, majority of the respondents, who are satisfied with their income belongs to those having training. The association of income satisfaction with the respondents having training or not is not statistically significant (p = 0.350). Job security of the respondents is also significantly associated with their income satisfaction (p = 0.013). Highest percentage of the respondents with job security is not satisfied with their income (85.6 percent) whereas, among the respondents, who are satisfied with their income, majority of them have no job security.

4.3 Association of Respondent's Characteristics with Industrial Decision Making

Employees, active participation in decision making process is very important for the betterment of any industry/organization. However, in most cases, such an important factor remains elusive or invisible. Table 4.2 demonstrates the association of different respondents' characteristics with the industrial decision making process.

Respondent's participation in various industrial decision making process is largely varies according to their age level and this variation is statistically significant ($p < 0.001$). Majority of the respondents, who can participate all times in the process of industrial decision making are belonging to age group 50 years and above, that contains 20.5 percent. On the other hand, 27.7 percent of the respondents aged 30-39 years can often participate in industrial decision making process, which is the highest among all other age groups. Additionally, 89.5 percent of the respondents aged less than 30 years have no participation in that process, which is comparatively higher than all other age groups (Table 4.2).

The industrial decision making process also varies according to the sex of the respondents, which is also statistically significant (p = 0.012). In case of male respondents, 5.4 percent can participate all times in the decision making process of the industry whereas, for female it is zero percent. However, most of the male have no participation in industrial decision making process and similar situation is true for female respondents as well. Industrial decision making process is widely depends on the work experiences of the respondents within the industry and it is statistically highly significant (p = < 0.001). Respondents with higher work experience within the industry contains higher percentage (4.9 percent) than others who can participate all times in the decision making process of the organization. However, the percentage of the respondents is also high, who can not participate in that process (Table 4.2). Similar results are also found in case of the respondent's total work experiences.

Table 4.2: Association of respondent's characteristics with industrial decision making

Variables	Participation in decision making			Total
	All times	Often	Not at all	
Age (in years)				
< 30	1 (1.1)	9 (9.5)	85 (89.5)	95 (100)
30-39	1 (0.9)	31 (27.7)	80 (71.4)	112 (100)
40-49	0 (0.0)	25 (18.9)	107 (81.1)	132 (100)
50+	16 (20.5)	6 (7.7)	56 (71.8)	78 (100)
Total	18 (4.3)	71 (17.0)	328 (78.7)	**417 (100)**
χ^2 = 76.13; d.f. = 6; p = < 0.001				
Sex				
Male	18 (5.4)	50 (15.0)	266 (79.6)	334 (100)
Female	0 (0.0)	21 (25.3)	62 (74.7)	83 (100)
Total	18 (4.3)	71 (17.0)	328 (78.7)	**417 (100)**
χ^2 = 8.85; d.f. = 2; p = 0.012				
Level of education				
Primary incomplete	0 (0.0)	22 (20.4)	86 (79.6)	108 (100)
Secondary incomplete	1 (0.4)	43 (16.7)	214 (82.9)	258 (100)
Secondary and higher	17 (33.3)	6 (11.8)	28 (54.9)	51 (100)
Total	18 (4.3)	71 (17.0)	328 (78.7)	**417 (100)**
χ^2 = 1.19E2; d.f. = 4; p = < 0.001				
Work experience within the organization				
< 5 years	1 (1.6)	0 (0.0)	63 (98.4)	64 (100)
5-9 years	6 (6.3)	21 (22.1)	68 (71.6)	95 (100)
10-14 years	2 (2.7)	24 (32.0)	49 (65.3)	75 (100)
15+ years	9 (4.9)	26 (14.2)	148 (80.9)	183 (100)

Total	18 (4.3)	71 (17.0)	328 (78.7)	**417 (100)**
χ^2 = 31.29; d.f. = 6; p = < 0.001				
Total work experience				
< 10 year	1 (0.8)	15 (12.4)	105 (86.8)	121 (100)
10-14 year	0 (0.0)	22 (35.5)	40 (64.5)	62 (100)
15-19 year	0 (0.0)	14 (16.9)	69 (83.1)	83 (100)
20+ year	17 (11.3)	20 (13.2)	114 (75.5)	151 (100)
Total	18 (4.3)	71 (17.0)	328 (78.7)	**417 (100)**
χ^2 = 44.72; d.f. = 6; p = < 0.001				
Have training				
No	2 (7.4)	6 (22.2)	19 (70.4)	27 (100)
Yes	16 (4.1)	65 (16.7)	309 (79.2)	390 (100)
Total	18 (4.3)	71 (17.0)	328 (78.7)	**417 (100)**
χ^2 = 1.35; d.f. = 2; p = 0.509				

Here, the differences between the participation in industrial decision making process and different level of respondent's total work experience are also statistically significant (p = < 0.001). Also, respondent's participation in the process of industrial decision making is also varies according to their training experience i.e. they are trained or not and the difference is not statistically significant (p = 0.509).

4.4 Association of Respondent's Characteristics with Work Place Environment

Employees' health is largely depends on the work place environment. However, in most cases such an important issue remains neglected. As a cross-cutting issue, health is one of the vital factors that influence the growth of employees and industry as well. Unless, ensuring a sound health services to its employees, industrial productivity might be far reaching. Therefore, it is quite important to know about the situation of workplace environment. Table 4.3 explores the association of different variables with the work place environment.

Age level of the respondents is strongly associated with the work place environment (p = < 0.001). Majority of the respondents (61.5 percent) aged 50 years and above said that their work place environment is healthy whereas, 34.7 percent of the respondents aged less than 30 years responded negatively (i.e. unhealthy) about their

work place environment. On the other hand, 59.8 percent respondents said that their work place environment is fairly healthy, are belonging to age group 40-49 years. An interesting findings here is that, the percentage of the respondents, who said positively (healthy) about their work place environment is increasing with the increase of their age. One possible reason might be for that the respondents with higher age are less aware about the environmental impact on health than their younger counterparts.

Majority of the female respondents (42.2 percent) responded negatively (i.e. unhealthy) about their work place environment whereas, majority of male respondents said that their work place environment is fairly healthy. Furthermore, 40.7 percent male and 20.5 percent female respondents responded positively about their work place environment and respondent's perception about their work place environment is significantly varies with their sex ($p = < 0.001$). It is also observed that, respondent's perception about their work place environment is significantly varies with their level of education ($p = < 0.001$).

Majority of the respondents with secondary and higher education (66.7 percent) responded positively about their work place environment. On the hand majority of the respondents (27.8 percent) replied negatively about their work place environment are not completed primary level education and 53.3 percent respondents replied that their work place environment is fairly healthy are not completed secondary education. One possible reason might be for that is, higher educated respondents hold higher position and likely to be a representative of the industry. Hence, they do not wish to show negative perception towards their industry.

Majority of the respondents (47.5 percent) who responded positively about their work place environment are working more than 15 years within the same industry whereas, 35.9 percent of the respondents, having work experience less than five years, responded negatively about their work place environment. The possible

reason might be for that is, respondents having higher work experience with the same industry are able to adapt with their work place environment. On the other hand, 57.9 percent respondents replied that, their work place environment is fairly healthy, having work experience 5-9 years within the industry (Table 4.3).

It is also observed that, respondent's perception about their work place environment is significantly varies according to their work experience within the industry (p = < 0.001). Like the work experience within the industry, respondent's perception about the work place environment also significantly varies (p = < 0.001) in order to their total work experience.

Table 4.3: Association of respondent's characteristics with work place environment

Variables	Work place environment			Total
	Healthy	Fairly healthy	Unhealthy	
Age (in years)				
< 30	22 (23.2)	40 (42.1)	33 (34.7)	95 (100)
30-39	34 (30.4)	63 (56.2)	15 (13.4)	112 (100)
40-49	49 (37.1)	79 (59.8)	4 (3.0)	132 (100)
50+	48 (61.5)	30 (38.5)	0 (0.0)	78 (100)
Total	153 (36.7)	212 (50.8)	52 (12.5)	**417 (100)**
χ^2 = 82.64; d.f. = 6; p = < 0.001				
Sex				
Male	136 (40.7)	181 (54.2)	17 (5.1)	334 (100)
Female	17 (20.5)	31 (37.3)	35 (42.2)	83 (100)
Total	153 (36.7)	212 (50.8)	52 (12.5)	**417 (100)**
χ^2 = 84.42; d.f. = 2; p = < 0.001				
Level of education				
Primary incomplete	21 (19.4)	57 (52.8)	30 (27.8)	108 (100)
Secondary incomplete	98 (38.0)	138 (53.5)	22 (8.5)	258 (100)
Secondary and higher	34 (66.7)	17 (33.3)	0 (0.0)	51 (100)
Total	153 (36.7)	212 (50.8)	52 (12.5)	**417 (100)**
χ^2 = 54.74; d.f. = 4; p = < 0.001				
Work experience within the organization				
< 5 years	14 (21.9)	27 (42.2)	23 (35.9)	64 (100)
5-9 years	19 (20.0)	55 (57.9)	21 (22.1)	95 (100)
10-14 years	33 (44.0)	35 (46.7)	7 (9.3)	75 (100)
15+ years	87 (47.5)	95 (51.9)	1 (0.5)	183 (100)
Total	153 (36.7)	212 (50.8)	52 (12.5)	**417 (100)**
χ^2 = 76.97; d.f. = 6; p = < 0.001				
Total work experience				
< 10 year	21 (17.4)	57 (47.1)	43 (35.5)	121 (100)

10-14 year	15 (24.2)	40 (64.5)	7 (11.3)	62 (100)
15-19 year	37 (44.6)	45 (54.2)	1 (1.2)	83 (100)
20+ year	80 (53.0)	70 (46.4)	1 (0.7)	151 (100)
Total	153 (36.7)	212 (50.8)	52 (12.5)	**417 (100)**
χ^2 = 1.08E2; d.f. = 6; p = < 0.001				

4.5 Association of Respondent's Characteristics with Employee's Promotion

An incentive is an important factor, which accelerates employee's productivity that resulted in the overall productivity of any industry/organization. Employee's promotion is one of the forms of incentives that augment employee's outputs as well as industrial production. However, such an important factor is not regularly practiced in all these three industries under study. Table 4.4 shows the association of different variables with employee's promotion at the industry.

Employee's promotion is significantly varies according to their age (p = <0.001). It is observed that, 61.5 percent of the respondents have been promoted aged 50 years and above whereas, 98.9 percent respondents aged less than 30 years have not got promotion. An interesting findings here is that, the percentage of the respondents, who are promoted, is increasing with the increase of their age (Table 4.4). Addressing gender inequality is a major concern in the development agenda. In terms of employment, as well as promotion and occupation, women often face greater handicap than men. The difference between men and women employees, who have got promotion, is significant (p = < 0.000).

Male respondents consists higher percentage (33.5 percent) that has got promotion. On the other hand, only 1.2 percent female respondents have got promotion at the industry. Employee's promotion at the industry is strongly associated with their educational status (p = < 0.001). Most of the employees (94.4 percent) have not got promotion, have lower or no education. On the other hand, employees, who are promoted, have secondary and higher education that consists 58.5 percent. It is also observed that the percentage of the employees, who have got promotion, is increasing as their education level has increased (Table 4.4).

Majority of the employees (57.4 percent) having work experience for 15 years and above within the same industry are promoted and those having lower work experience are not promoted which consists 98.4 percent. The variation of having promotion according to the work experience of the respondents within the industry is statistically significant (p = < 0.001). Similar results are also found incase of employees total work experience and the variations are statistically also significant (p = < 0.001). Training is the key element in influencing the performance of a firm (Mullins, 2002). Training of the respondents is also closely associated with their promotion (p = 0.053) at the industry. Majority of the respondents (28.2 percent), who are promoted having training. On the other hand, 88.9 percent respondents, who have not training, have not got promotion as well.

Table 4.4: Association of respondent's characteristics with the promotion

Variables	Satisfied with income		Total
	No	Yes	
Age (in years)			
< 30	94 (98.9)	1 (1.1)	95 (100)
30-39	110 (98.2)	2 (1.8)	112 (100)
40-49	70 (53.0)	62 (47.0)	132 (100)
50+	30 (38.5)	48 (61.5)	78 (100)
Total	304 (72.9)	113 (27.1)	**417 (100)**
	χ^2 = 1.42E2; d.f. = 3; p = < 0.001		
Sex			
Male	222 (66.5)	112 (33.5)	334 (100)
Female	82 (98.8)	1 (1.2)	83 (100)
Total	304 (72.9)	113 (27.1)	**417 (100)**
	χ^2 = 35.17; d.f. = 1; p = < 0.001		
Level of education			
Primary incomplete	102 (94.4)	6 (5.6)	108 (100)
Secondary incomplete	181 (70.2)	77 (29.8)	258 (100)
Secondary and higher	21 (41.2)	30 (58.8)	51 (100)
Total	304 (72.9)	113 (27.1)	**417 (100)**
	χ^2 = 52.34; d.f. = 2; p = < 0.001		
Work experience within the organization			
< 5 years	63 (98.4)	1 (1.6)	64 (100)
5-9 years	91 (95.8)	4 (4.2)	95 (100)
10-14 years	72 (96.0)	3 (4.0)	75 (100)
15+ years	78 (42.6)	105 (57.4)	183 (100)
Total	304 (72.9)	113 (27.1)	**417 (100)**

	χ^2 = 1.52E2; d.f. = 3; p = < 0.001		
Total work experience			
< 10 year	121 (100)	0 (0.0)	121 (100)
10-14 year	61 (98.4)	1 (1.6)	62 (100)
15-19 year	57 (68.7)	26 (31.3)	83 (100)
20+ year	65 (43.0)	86 (57.0)	151 (100)
Total	304 (72.9)	113 (27.1)	**417 (100)**
	χ^2 = 1.34E2; d.f. = 3; p = < 0.001		
Have training			
No	24 (88.9)	3 (11.1)	27 (100)
Yes	280 (71.8)	110 (28.2)	390 (100)
Total	304 (72.9)	113 (27.1)	**417 (100)**
	χ^2 = 3.74; d.f. = 1; p = 0.053		

4.6 Conclusions

In order to bring better fitted workers in to the organizations and meeting the workers' needs and expectations, human resource management faces challenges. Thus, there is a compelling demand to develop better ideas, strategies to improve the interface between employees and employers, and to elaborate comprehensive insight that can be help human resource managers to get better results and improved performances (Vigoda and Cohen, 2003). In this chapter, associations of different variables of the respondents with some of the industrial strategies are clearly explained, which might be helpful in formulating new policies and strategies for the betterment of industry and employee as well. The authority needs to be creative in renewing and revising strategies, approaches based upon the findings in order to maintain a productive environment between industry and its employees.

Chapter Five

Determinants of Industrial Strategies: Application of Logistic Regression Analysis

5.1 Introduction

In the previous chapter, the individual influence of some selected background characteristics of the respondents on the various industrial strategies has been examined. Differentials in the dependent variables generally give an idea of gross effects of the independent variables. In social science research, usually the explanatory variables are likely to be interrelated and thereby, we do not know the effect of an individual factor (i.e. the net effect) on dependent variable, controlling for other variables. In order to know such net effects, the use of multivariate techniques will be highly appropriate and therefore to determine of different industrial strategies (like, income satisfaction, industrial decision making, work place environment, employee promotion etc.) we used a multivariate technique named as logistic regression analysis is adopted for the present chapter. In this analysis, one category of each of the explanatory variable is kept as reference category. It estimates the coefficient for each of the remaining categories of the variable, which expresses the magnitude of the effect of each category on the outcome, relative to the reference category. Here we have focused on the determinants of four industrial strategies by considering their own substances.

Income satisfaction of the employee is essential for the job satisfaction that leads to higher productivity of an organization. In addition to provide the principle of work division to simple tasks, the movement has shown that humans are rational and motivated by physical components, and money alone is what creates happiness and reinforces workers to increase their performance (see Taylor, 1947). Therefore, both

management theorists and practitioners are concerned with methods for improving job satisfaction, because greater job satisfaction equates to a better quality of life, better health, and potentially greater performance and productivity. Some studies have shown that job satisfaction is influenced by the level of income (Oshagbemi, 2000; Bender and Heywood, 2006; Jones and Sloane, 2007).

Employees' participation in decision making process is also essential for an organization. It is however, not possible to engage all the employees in such process but, decision should be based on employees points of view. When employers understand how their employees make decisions about future work, they can do a better job of planning for their human resource needs (Zheng and Kleiner, 2001). Employees who feel that they are contributing to the organization will be more engaged with their job, and thus, will be less likely to leave the organization.

Work place environment has also greater impact on the productivity of the organization. Employees, who feel that they have a decent work place environment, might not leave the organization easily. However, it varies among the different employees' characteristics but, better work place environment sometimes works more than better wages. However, compensation systems have traditionally been designed to attract and retain employees and to motivate them to increase their effort and outputs toward the achievement of organizational goals (Bergmann and Scarpello, 2001).

At the organization level, promotion of the employee has been considered for a group of talented employees that help to increase the organizational productivity and enhance organization's innovativeness. Likewise, employees who feel that they have higher chances of promotion are more likely to stay with the organization, rather than leave the organization. Importantly, promotion opportunities not only give the employees a sense of appreciation and gratitude, but also will influence their decision on retention or resignation (Johari, et al., 2012).

5.2 Determinants of Industrial Strategies

In this section, we apply logistic regression technique to estimate the effects of some selected variables (independent) among the respondents on some dependent variables.

5.2.1 Measurements of Some Selected Variables and Model Development

In model 1, we apply logistic regression technique to estimate the effects of selected independent variables among the respondents on their income satisfaction. If the respondents are satisfied with their income as the dependent variable which we dichotomized by assessing '1' are satisfied with their income and '0' are not satisfied with their income. The explanatory variables considered in the model are as follows**:** respondent's age, sex, household size, marital status, level of education, training and job security. The logistic regression technique can be used not only to identify the risk factors but also predict the probability of success. This technique expresses a qualitative dependent variable as a function of several independent variables, both qualitative and quantitative. In the same way we developed model 2, 3 and 4. The variables are classifying in Table 5.1.

Table 5.1: Some selected variables and their categories

Name of Variables		Categories
Dependent	**Independent**	
Model 1:	Age	1 = less than 30 years 2 = 30 – 39 years 3 = 40-49 years 4 = 50 + years
Income satisfaction of the employees; '1' if the respondents are satisfied with their income and '0' otherwise	Sex	1 = Male 2 = Female
	Household size	1 = 1-3 2 = 4-6 3 = 7+
	Marital status	1 = Married 2 = Others
	Level of education	1 = Primary incomplete 2 = Secondary incomplete 3 = Secondary and higher
	Having training	1 = Yes 0 = No
	Have job security	1 = Yes 0 = No
	Age	1 = less than 30 years

Model 2:		2 = 30 – 39 years 3 = 40-49 years 4 = 50 + years
	Sex	1 = Male 2 = Female
Industrial decision making process; '1' if the respondents can participate in industrial decision making process and '0' otherwise	Level of education	1 = Primary incomplete 2 = Secondary incomplete 3 = Secondary and higher
	Work experience within the industry	1 = less than 5 years 2 = 5-9 years 3 = 10-14 years 4 = 15+ years
	Total work experience	1 = less than 10 years 2 = 10-14 years 3 = 15-19 years 4 = 20+ years
	Having training	1 = Yes 0 = No
Model 3:	Age	1 = less than 30 years 2 = 30 – 39 years 3 = 40-49 years 4 = 50 + years
Respondents' perception about the work place environment ; '1' if the work place environment is healthy and '0' otherwise	Level of education	1 = Primary incomplete 2 = Secondary incomplete 3 = Secondary and higher
	Work experience within the industry	1 = less than 5 years 2 = 5-9 years 3 = 10-14 years 4 = 15+ years
	Total work experience	1 = less than 10 years 2 = 10-14 years 3 = 15-19 years 4 = 20+ years
Model 4:	Age	1 = less than 30 years 2 = 30 – 39 years 3 = 40-49 years 4 = 50 + years
	Sex	1 = Male 2 = Female
Promotion of the respondents; '1' if the respondents have got promotion and '0' otherwise	Level of education	1 = Primary incomplete 2 = Secondary incomplete 3 = Secondary and higher
	Work experience within the industry	1 = less than 5 years 2 = 5-9 years 3 = 10-14 years 4 = 15+ years
	Having training	1 = Yes 2 = No

The regression results and discussions are presented in table 5.2.

5.2.2 Findings and Discussion

Income satisfaction of the respondents (Model 1) is largely affected by the age of the respondents. It is observed from Table 5.2 that, respondents aged 50 years and above are 3.15 times significantly (positive) and more likely to be satisfied with their income than those are less than 30 years old (reference category). Similar results are also found incase of Model 3 and Model 4 which are 2.87 times and 2.12 times more likely to the dependent variable respectively than their reference category. But, incase of Model 2, an insignificant result is found by considering respondent's age.

Additionally, respondents aged 30-39 years and 40-49 years are 99 percent and 92 percent more likely to satisfy with their income than the reference category respectively while, respondents at the same age category are 97 percent and 81 percent more likely to participate in the process of industrial decision making (Model 2) than the reference category. On the other hand, respondents aged 30-39 years and 40-49 years are significantly and more preferable to response positively about their work place environment than the reference category, which contains 3.23 times and 6.57 times respectively whether, respondents aged 40-49 years are 7.99 times significantly (positive) and more likely to get promotion than their younger counterparts (i.e. the reference category). More specifically, it is observed that, respondents with higher age level are more preferable to the dependent variable than their younger counterparts.

Sex of the respondents also exerts the significant effect on the dependent variable for Model 1, Model 2 and Model 4 respectively. Female respondents are 3.73 times more likely to satisfy with their income (Model 1), 2.11 times more likely to participate in the decision making process of the industry (Model 2) and 0.07 times less likely to get promotion (Model 4) than the reference category.

Household size of the respondents also has an impact on their income satisfaction. It is observed from Table 5.2 that respondents with households size 4-6 and 7 and above are 25 percent and 32 percent less likely to satisfy with their income than the reference category respectively. Like household size, respondent's marital status also exerts the significant effect on their income satisfaction as well. Respondents with other marital status category (i.e. unmarried, divorced/separated and widow/widower) are 6.00 times significantly (positive) and more likely to satisfy with their income than those are married (reference category).

Level of education of the respondents has also significant effect (positive) on Model 1, Model 2, Model 4 and negative effect on Model 3. Respondents with secondary and higher education are 5.69 times more likely and significantly (positive) to satisfy with their income on the hand, respondents with same education are 4.72 times significantly (positive) and more likely to participate in the industrial decision making of the organization than the reference category. Similar result is also found in case of Model 4 while, respondents with secondary and higher education are 73 percent significantly (negative) and less likely to response positively about their work place environment than the reference category.

Respondents, having training are not significant but 58 percent more likely to satisfy with their income than those have not, i.e. the reference category. In case of Model 2, respondents having training are 37 percents significantly but less likely to participate in the decision making process of the industry than the reference category. Considering Model 4, respondents having training also contain higher likelihood of the dependent variable. More specifically, respondents having training are 7.42 times significantly (positive) and more likely to get promotion than the reference category (Table 5.2). Job security has demonstrated a significant effect on income satisfaction. Incase of Model 1, respondents having job security are 68 percent significantly (negative) but less likely to satisfy with their income than the reference category.

It has also observed from table 5.2 that respondents with higher job experience within the industry have a higher likelihood of the dependent variable (Model 2 and Model 4) and lower likelihood of the dependent variable for Model 3. Respondents, who have job experience of 5-9 years and 10-14 years within the industry are 6.69 times and 5.31 times more likely to participate in the process of industrial decision making than the reference category. Furthermore, respondents having 15 years and above job experience within the industry are 4.03 times more likely to participate in the process of decision making of the industry.

In Model 3, respondents having work experience 5-9 years within the industry are 8 percent less likely to response positively about their work place environment. While, respondents having work experience of 10-14 years and 15 years and above within the industry are 59 percent and 24 percent less preferable to response that their work place environment is healthy than the reference category. Additionally, for Model 4, respondents with work experience 5-9 years and 10-14 years within the industry are 2.37 times and 1.16 times more likely to get promotion than their reference category.

Incase of respondent's total experience, higher work experience contains higher likelihood of the dependent variable for Model 2 and lower likelihood for Model 3 (Table 5.2). Respondents, having total work experience of 10-14 years, 15-19 years and 20 years and above are 1.94 times, 1.27 times and 2.00 times more likely to participate in the decision making of the industry than the reference category. While, total work experience of the respondents also exerts the significant (negative) effects on their perception regarding the work place environment. Respondents, having total work experience of 10-14 years, 15-19 years and 20 years and above are 42 percent, 87 percent and 89 percent are less likely to show their positive perception about their work place environment (i.e. work place environment is healthy) than the reference category (Table 5.2).

Table 5.2: Determinants of industrial strategies: logistic regression estimates of odd ratios

Variables	Model 1		Model 2		Model 3		Model 4	
	ERC	OR	ERC	OR	ERC	OR	ERC	OR
Age								
< 30 years ®	-	1.00	-	1.00	-	1.00	-	1.00
30-39 years	**0.69***	1.99	0.68	1.97	**1.17****	3.23	-0.45	0.64
40-49 years	0.65	1.92	0.60	1.81	**1.88*****	6.57	**2.08***	7.99
50+ years	**1.15****	3.15	0.81	2.26	**1.05***	2.87	**20.49****	2.12
Sex								
Male ®	-	1.00	-	1.00	NA		-	1.00
Female	**1.32*****	3.73	**0.75*****	2.11			**-2.72****	0.07
Household size								
1-3 ®	-	1.00	NA		NA		NA	
4-6	-0.29	0.75						
7+	**-0.38***	0.68						
Marital status								
Married ®	-	1.00	NA		NA		NA	
Others	**1.79****	6.00						
Level of education								
Primary inc. ®	-	1.00	-	1.00	-	1.00	-	1.00
Secondary inc.	-0.41	0.66	0.11	1.11	**-0.55****	0.58	**1.13****	3.11
Sec. and higher	**1.74*****	5.69	**1.55*****	4.72	**-1.3*****	0.27	**1.95*****	7.05
Have training								
No ®	-	1.00	-	1.00	NA		-	1.00
Yes	0.46	1.58	**0.60***	0.63			**2.00*****	7.42
Have job security								
No ®	-	1.00	NA		NA		NA	
Yes	**-1.2*****	0.32						
Work experience within the organization								
< 5 years ®	NA		-	1.00	-	1.00	-	1.00
5-9 years			**2.82*****	6.69	-0.09	0.92	0.86	2.37
10-14 years			**2.73*****	5.31	**-0.89***	0.41	0.15	1.16

15+ years			**1.80***	4.03	-0.28	0.76	**2.78****	16.16
Total work experience								
<10 years ®	NA		-	1.00	-	1.00	NA	
10-14 years			0.66	1.94	-0.55	0.58		
15-19 years			0.24	1.27	**-2.1*****	0.13		
20+ years			0.69	2.00	**-2.2*****	0.11		
Constant	**-2.1*****	0.12	**-4.8*****	0.01	**-1.5*****	4.58	**-7.5*****	0.01

Notes: ERC = Estimated Regression Coefficient;
SE = Standard Error of ERC;
OR = Odds Ratios;
® = Reference Category;
Coefficient significant at least 10 percent level is shown in bold type; and
Level of significance: ***p<0.01; **p<0.05; *p<0.10
Inc. = Incomplete; Sec. = Secondary;
NA = Not Applicable

5.4 Conclusions

In order to take more strategic approach to influencing the human resource situation, a broad analysis is required. Concern for employees' development through better system of identifying their potentials, promoting those potentials, providing learning and training opportunities and performance guidance made significant impact on employees' values that their organization intended to promote. Under these circumstances, this chapter focused on the more influential factors affecting the industrial strategies. It is found that various respondents' characteristics have a significant effect on various industrial strategies. Results provided in this chapter should scientifically utilize in promoting new industrial strategies and policies in order to maintain balance welfare not only for employees but for industries as well.

Chapter Six

Summary and Policy Implications

6.1 Summary of the Study

Human resource development (HRD) is essential in enabling people to enlarge their choices[1] and expand their freedoms[2]. In order to take a more strategic approach in influencing the human resource situation, a broad view is required, which puts human resources in the context of wider development. It is not only for the individual growth but also to conquer organizational and national progress. The human resource domain is both embedded in and intertwined with a broader policy context. However, human resources in Bangladesh continue to languish due to the absence of long-term policy directives, inadequate funding and equal lack of vision at the national level.

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[1] United Nation Development Programme. *Human Development Report*, 1990.

[2] Amartya Sen, Development as Freedom. Random House, New York, 1999.

The impact of human resource practices on various aspects of organizational performance has broadly examined by a sizable body of research (Guest, *et. al.*, 2003; Huselid, 1995; Ichniowski, *et al.*, 1997; Wall and Wood, 2005; Wright and Boswell, 2002) as well as on a range of employee attitudes and behaviours at work (Appelbaum, *et al.*, 2000; Guest, 2002; Godard, 2001; Ramsey, *et al.*, 2000). However, the mechanisms linking human resource practices to both organizational performance and employee related outcomes have not received systematic research attention (Guest, 1997; Wright and Gardner, 2003).

The present study focuses on the relationship between human resource practices and employee attitudes and behaviour, and on the mediating role played by employee work experiences in this relationship. The study reveals that, majority of the respondents are in the age group 40-49 years and the average age of the respondents is 38.5 years. Eight of every ten respondents are male. The educational status of the respondents is not so high because the study industries are labour induced which is reflected in the average years of schooling that is only 5.91. Nine of every ten respondents are married and their average family member is 4.82.

In case of income satisfaction, 80.1 percent respondents are not satisfied with their income. However, the average total work experience of the respondents is 15.5 years, among them only 27.1 percent have get promotion due to the seniority (77 percent). Furthermore, 93.5 percent of the respondents have training of which 60.8 percent think that their performance is highly increased after the training. About eight of every ten respondents have no participation in industrial decision making process.

Half of the respondents think that their work place environment is fairly healthy and all the respondents agree that every industry/organization should have separate human resource development section. From the organizational points of view, it is observed that in every industry under study, the practices of human resource

management are not appropriately and effectively managed. In fact, there is no separate human resource development section in those industries under study.

From the bivariate analysis, the study reveals that, respondents' satisfaction of income is significantly associated with some variables. More specifically it is observed that, respondents' age, sex, household size, marital status, level of education, training, job security, are significantly associated with their income satisfaction. On the other hand, respondents' participation in industrial decision making is also significantly associated with some variables like, respondents' age, sex, level of education, work experience and training.

Additionally, the study also reveals that respondents' age, sex, level of education, total work experience within the industry are significantly associated with their perceptions about their work place environment. Respondents' promotion also significantly associated with the variables like, their age, sex, level of education, work experience and training.

In logistic regression analysis, the study demonstrates that the respondents' age, sex, marital status, level of education and job security exerts the significant effect on their income satisfaction. Furthermore, it is also found that, respondents' sex, level of education, work experience within the industry are the more influential factors in industrial making process. Respondents' perception about their work place environment is largely affected by some variables like, age, sex, level of education, work experience within the industry and training exerts the significant effect on their promotion status. Considering human development index, the industries contains low HDI value.

6.2 Policy Implications

If the first Millennium Development Goal (MDG) of reducing poverty by half by 2015 is to be achieved, full employment and decent work need to be the focus of economic and social policies, and such policies need to be pursued in an integrated

way through the development of human resource. For the poor, employment is not only a way of fulfilling professional ambitions; it is a way of earning a living for survival. In this backdrop, development of human resource is the key to achieve the desired targets.

Bangladesh, despite having witnessed some progress in the development of its human resource over the last two decades, is still facing multiple challenges of enactments, enforcements, and violations of workers' rights. There can be no denying that the continued sizeable growth of population has major implications in the future development of the country. In Bangladesh, achieving the goals of economic growth, social development and poverty reduction depend much on the developments of human resource and success in expanding decent employment opportunities through both waged and self-employment for the growing labour force. Therefore, sustainable management and observance of rights of rapidly growing labour force are need of the hour.

Human resource (HR) is a key input of industrial/organizational development and human resource development (HRD) is considered to be a major operation to gain competitive advantage in production in the new millennium. The role of human resource development (HRD) is particularly important when employees enter an organization (Holton, 1996) because it is through, human resource development practices that new employees can be initially socialized by being introduced to the organization's values, norm and culture. Thus, there is a compelling demand to develop better ideas, strategies to improve the interface between employees and employers, and to elaborate comprehensive insight that can help human resource managers to get better results and improved performance (Vigoda and Cohen, 2003).

The findings of this study confirmed that, human resource practices are an important predictor in the industrial sector. The results of this study demonstrate that, human resource practices are significantly affected by some of the respondents' characteristics in the industries under study. Besides that, majority of the employees feel that each industry should implement proper human resource practices in the

place to improve their performance in future. As a result, it may lead high job performance at the work place.

It is evident that a better access to employment can generate sustainable impact on reduction in poverty when it is accompanied by rising productivity and real wages, wider opportunities for women, youth and other disadvantaged groups and above all the labour rights, such as the rights to work, employment, and social protection. Such an approach to employment is important for Bangladesh not only as an objective in its own right but also a means of ensuring human rights and a fundamental of promoting poverty reducing sustainable development in the country.

Rights and wages, often the fruits of hard fought bargaining, are also perceived to be part of the problem in the current orthodox thinking. In mainstream analysis all too often workers are asked to bear the brunt of the costs of adjustment, in terms of soaring unemployment and plummeting wages, even when the labour market is not the core of the problem facing the industries as well as the country.

Issues of workers' rights and entitlements, including the rights to participate in decision-making that affects their lives, are rarely raised. Thus any programmatic intervention should entail right to just and favourable conditions of work underwritten by at least three dimensions: commutative justice[3], distributive justice[4] and social rights.

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[3] Commutative justice: fairness in all agreements and exchanges; distributive: allocation of income, wealth and power; and social justice: obligations to be active/productive participants in society.

Right to Work: A Framework

Rights	Assessment	Objectives	Output indicators
1. The Right to Work	Discrimination in access to employment and during employment, based on gender considerations/ class considerations/ minorities/ migrant / refugee considerations	To ensure that access to employment opportunities are fair and equal without discrimination and that workers know their rights under the law	• Reform of domestic laws that are obstacles to realize the right to Work, • carry out legal, awareness, and education campaigns, • training programs and rights advocacy
1.1. Right to just and favourable conditions of work	Unhealthy, and unsafe working conditions preclude from working even if discrimination was not applied	To work with local / national businesses to promote just and favourable conditions of work, to ensure sanitary, healthy and safe working conditions for all workers	• Reform of labour laws. • Active advocacy through trade unions, • Establishment and enforcement of regulatory systems, • Access to health facilities on site, enforcement of punitive laws for violators
1.2 Right of everyone to an adequate standard of living	The right to work is impacted by a lack of standardized wages or discriminatory practices in hiring; a lack of equal pay for work of equal value; no effective system for delivery of social security	To ensure that non-discrimination is taking place in terms of hiring and of wages, to enable job creation as needed with equal access to employment; to develop a social security delivery system	• Reform of labour laws concerning hiring practices, equal pay, minimum wages etc. • Re-training schemes, available to re-skill workers • National policies that support labor intensive industrial development, • Social safety nets available for the most vulnerable

Source: Adopted from Titumir, 2013

[4] This is contrary to the conservative economic thinking (neo-liberal economics) about the libertarian conception of distributive justice. In this framework the state plays a night watchman role of simply protecting a narrowly defined set of (mostly property) and corporate rights. Other conservatives within this tradition may appeal to a utilitarian notion of distributive justice that relies totally on the free market to maximize utility, allocate resources and distributes rewards.

Based upon the findings of the study further suggests that:

- employees' participation in teamwork should encouraged by management. For example, employees' participation in teamwork planning and administration will help them to increase positive socialization, improve career and increase psychological well-being;

- promote career development programmes or initiatives for the employees;

- management should have more promotion exercises as well as more training programmes so that, employees can upgrade their knowledge and skills in order to perform better at their job;

- continuous investment to develop the practices of human resource development;

- communication gap between workers and management should be narrowed down with the adaptation of sound strategic policy; and

- workers' wage scheme should be a provision for inflationary adjustment so that, the real income and monetary income would match.

6.3 Conclusions

Development of human resource in Bangladesh is much lower in the world. Millions of people are deprived from the benefit of education, skills, training, nutrition, good health, etc. However, the government has taken many projects to develop its human resource in macro level but, in the micro level (i.e. industrial/organization) human resource development should be more emphasized to face the rapid challenges in international business. It is not only for the individual growth but also to conquer industrial/organizational and national progress. In the present trend of globalization, liberalization, market change and technological changes are generating lot of business challenges and opportunities for the industries/organizations and compelling them to change their operations in many different natures.

Human resource development (HRD) in Bangladesh continues to fade away due to the lack proper policy directives, lower funding and a general lack of vision at the national level. The role of the government has not been as positive as desired. Force has rarely been used for the benefit of the people. It is pertinent to mention that theoretically many of the strategic documents and policy papers are sound and seems implementable, but in reality, fails to do so because of poor implementation of existing policies and practices, lack of funds, poor monitoring and evaluation and so on. The authority needs to be creative in renewing and revising strategic approaches in the regarding matter. Therefore, provisions must be formulated for programme evaluation and also for understanding the impacts of the programmes.

Effective human resource practices may lead to sustained competitive advantage for industries/organizations that value their most valuable asset, i.e. employees. While there are some progresses, challenges still remain critical to achieve the substantive targets regarding human resource development (HRD). Without accelerating the existing policies and practices, the development of human resources remain elusive and distant dream. Findings are needed to be scientifically utilized in developing suitable programmes and policies addressing the regarding matter in Bangladesh.

Unless major changes are made the development of human resource of the country will not increase significantly. It requires major policy and institutional reforms on both demand and supply sides of the labour market. On the supply side of the labour market, the main efforts needed are to substantially strengthen policies for human development, especially education and training programmes to enhance skills and the country needs a rights based approach to employment on the other. Without accelerating the efforts, the aim of desired development of human resources remains elusive.

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