

CAREER PLANNING: BANGLADESH PERSPECTIVE

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ABSTRACT

Successful careers are managed through careful career planning. Without an understanding of career goals and career paths, planning is unlikely. Usually, there are two way of career planning. One is individual career planning; another is organizational. Individual career planning is influenced by various factors. Planning by the organization include creating, publicizing, and maintaining the program through training and information. But the responsibility for career planning and development stays with the employee. The implementation of career plans requires career development. These actions may be sponsored by the personnel department, or they may be activities that employees undertake independent of the department. Personnel departments gave little support to career planning. When promotable talent is scarce, human resource departments usually reacted with crash training programs or additional recruitment. Human resource planning and career planning seldom occurred. This study identifies the factors that hinders the career planning and to solve those in the context of Bangladesh. So, that one's career planning becomes effective. There should be human resource planning in the organization. Short term and long term policy for career planning should be formulated as soon as possible. Implementation of career development policy should include detail rules and procedure regarding the entire human resource development in the organization.

Key words: Career, Career Goals, Career Paths, Career planning, Career Development, Personnel Department.

INTRODUCTION

A career is all the jobs that are held during one's working life. For some people, these jobs are part of a careful plan. For others, their career is simply a matter of luck. Merely planning a career does not guarantee career success. Superior performance, experience, education and some occasional luck pay an important role. When people rely largely on luck, however, they seldom are prepared for career opportunities that arise. Successful people identify their career goals, plan, and then take action. Restated, successful careers are managed through careful career

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planning (Werner and Desimone 2009). People who fail to plan their careers may do so because they think that their organization or their boss will assume' that responsibility. Without an understanding of career goals and career paths, planning is unlikely. The absence of career planning means that career development is likely to be haphazard at best.

Usually, there are two way of career planning. One is individual career planning; another is organizational. When the person identifies his/her goal and accomplish various activities accordingly is called individual career planning.

The factors that influence individual career planning are related to inherent intelligence accrued from parents, familial environment, natural instinct physical and mental health, adaptability to stress, coping with emergency, personality, inter personal skill, cognitive ability and use of available resources etc. In the case of career planning by the organization personnel department leads to find out the avenues, ways and opportunities to develop employees so that employees can be developed towards achievement of the goal of the organization (Ivancevich 2004).

Personnel department's role included creating, publicizing, and maintaining the program through training and information. But the responsibility for career planning and development stays with the employee. Because he or she is the person most keenly interested. And since each person's career is unique only the employee can decide if the company's career path is appropriate for him or her (Dessler 2005) Personnel departments increasingly do, take an active interest in employee career planning. They often handle career planning because their human resource plans indicate the organization's future employment needs and related career opportunities. In addition, personnel experts are more likely to be aware of training and other developmental opportunities where individual managers also should encourage career planning.

LITERATURE REVIEW

Before discussing career planning it is necessary to know career, career path, career goals, career development:

- a. Career. A career is all the jobs that are held during one's working life.
- b. Career path. A career path is the sequential pattern of jobs that forms one's career.
- c. Career goals. Career goals are the future positions one strives to reach as part of a career. These goals serve as benchmarks along one's career path.
- d. Career planning. Career planning is the process by which one selects career goals and the path to these goals.
- e. Career Development. Career development is those personal improvements one undertakes to achieve a personal career plan (Werther and Keith 1989).

Each person's career goes through stages. The main stages of this career cycle follows.

Growth Stage: The growth stage lasts roughly from birth to age 14 and is a period during which the person develops a self-concept by identifying and interacting with other people such as family, friends, and teachers. Toward the end of this stage, the adolescent (who by this time has developed preliminary ideas about what his or her interests and abilities are) begins to think realistically about alternative occupations.

Exploration Stage: The exploration stage is the period (roughly from ages 15 to 24) during which a person seriously explores various occupational alternatives. The person attempts to match these alternatives with what he or she has learned about them and about his or her own interests and abilities from school, leisure activities, and work.

Establishment Stage: The establishment stage spans roughly ages 24 to 44 and is the heart of most people's work lives. During this period, it is hoped a suitable occupation is found and the person engages in those activities that help him or her earn a permanent place in it. But in most cases, this is a period during which the person is continually testing his or her capabilities and ambitions against those of the initial occupational choice.

The establishment stage is itself comprised of three sub stage. The trial sub stage lasts from about ages 25 to 30. During this period, the person determines whether or not the chosen field is suitable; if it is not, several changes might be attempted. Roughly between the ages of 30 and 40, the person goes through a stabilization sub stage. Here, firm occupational goals are set and the person does more explicit career planning to determine the sequence of promotions, job changes, and/or any educational activities that seem necessary for accomplishing these goals. Finally, somewhere between the mid-thirties and mid-forties, the person may enter the midcareer crisis sub stage. During this period, people often make a major reassessment of their progress relative to original ambitions and goals. It is often during this midcareer sub stage that some people face, for the first time, the difficult choice between what they really want, what really can be accomplished, and how much must be sacrificed to achieve it.

Maintenance Stage: Between the ages of 45 and 65, many people simply slide from the stabilization sub stage into the maintenance stage. During this latter period, the person has typically created a place in the world of work and most efforts are now directed at maintaining that place.

Decline Stage: As retirement age approaches, there is often a deceleration period in the decline stage. Here many people face the prospect of having to accept reduced levels of power and responsibility and learn to accept and develop new roles as mentor and confidante for those who are younger. There is then the more or less inevitable

retirement, after which the person hopefully finds alternative uses for the time and effort formerly expended on his or her occupation (Byars and Rue 1984).

Importances of benefits of career planning are mentioned below:

- a. Develops promotable employees. Career planning helps to develop internal supplies of promotable talent.
- b. Lowers turnover. The increased attention and concern for individual careers generates more organizational loyalty and, therefore, lower employee turnover.
- c. Taps employee potential. Career planning encourages employees to tap more of their potential abilities because they have specific career goals.
- d. Furthers growth. Career plans and goals motivate employees to grow and develop.
- e. Reduces hoarding. Without career planning, it is easier for managers to hoard key subordinates. Career planning causes employees, managers, and the personnel department to become aware of employee qualifications.
- f. Satisfies employee needs. With less hoarding and improved growth opportunities for employees, an individual's esteem needs, such as recognition and accomplishment, are more readily satisfied.
- g. Assists affirmative action plans. Career planning can help members of protected groups prepare for more important jobs. This preparation can contribute to meeting affirmative action timetables (Kelly and Patton 1987).

Individual Career Development

Career development begins with the individual (Werner and Desimone 2009). Each person must accept his or her responsibility for career development, or career progress is likely to suffer. Once this personal

commitment is made, several career development actions may prove useful (Arnold and Feldman 1986).

These actions involve:

Job performance	Mentors and sponsors.
Exposure	Key subordinates
Resignations	Growth opportunities
Organizational loyalty	

Job performance: The most important action an individual can undertake to further his or her career is good job performance. The assumption of good performance underlies all career development activities. When performance is substandard, regardless of other career development efforts, even modest career goals are usually unattainable. Individuals who perform poorly are disregarded quickly by the personnel department and by management decision makers. Career progress rests largely upon performance.

Exposure: Career progress also is furthered by exposure. Exposure means becoming know, (and it is hoped in high regard) by those who decide promotions, transfers, and other career opportunities. Without exposure, good performers may not get a chance at the opportunities needed to achieve their career goals. Managers gain exposure primarily through their performance, written reports, oral presentations, committee work, community service, and even the hours they work. In small organizations, exposure to decision-makers is more frequent and less dependent upon reports, presentations, and the like. In some situations, especially in other nations, social status, school ties, and seniority can be more important than exposure.

Resignations: When an individual sees greater career opportunities elsewhere, a resignation may be the only way to meet his or her career goals. Some employees, manager and professionals in particular-change employers as part of a conscious career strategy. If done effectively, these resignations usually result in a promotion, a pay increase, and a

new learning experience. Resigning in order to further one's career with another employer has been called leveraging. Astute managers and professionals use this technique sparingly because too many moves can lead to the label of "job hopper." Those who leave seldom benefit their previous organization because they almost never return with their new experiences.

Organizational loyalty: In many organizations, people put loyalty to their career above loyalty to their organization. Career-long dedication to the same organization complements the personnel department' objective of reducing employee turnover. Sometimes employers try to "buy" this loyalty with high pay or benefit. Other organizations try to build employee loyalty through good management treatment and effective human resource practices, including career planning and development. By offering careers, not just jobs, many organizations nurture a pool of talent that consistently allows them to staff senior management positions from among life-long employees. And many employees use their dedication and loyalty to the company as a career tactic (Cascio 1989).

Mentors and sponsors: A mentor is someone who offers informal career advice. If the mentor can nominate the employee for career development activities such as training programs, transfers, or promotions, then the mentor becomes a sponsor (Noe, Hollenbeck, Gerhart and Wright 2004).

Key subordinates: Successful managers rely on subordinates who aid the managers' development and performance. The subordinates may possess highly specialized knowledge or skills that the manager may learn from them. Or, the employee may perform a crucial role in helping a manager achieve good performance. In either case, employees of this type are key subordinates. They exhibit loyalty and dedication to their bosses. They gather and interpret information, offer skills that supplement those of their managers, and work unselfishly to further their managers' careers. They benefit by also moving up the career ladder when the manager is promoted and by receiving important delegations

that serve to develop their careers. These people complement personnel department objectives through their teamwork, motivation, and dedication. But when a manager resigns and takes a string of key subordinates along, the results can be devastating.

Growth opportunities: when employees expand their abilities, they complement the organization's objectives. For example, enrolling in a training program, taking noncredit courses, pursuing an additional degree, or seeking a new work assignment can contribute to employee growth. These growth opportunities aid both the personnel department's objective of developing internal replacements and the individual's personal career plan.

Besides self-nomination to find growth opportunities, other groups outside the organization may help. For years, men have used private clubs and professional associations to form "old-boy networks," which afforded growth opportunities and often a fair amount of exposure among organizational decision makers.

Community service activities provide opportunities for both growth and recognition. Learning to work with other volunteers uncovers different management skills and exposes one to different styles of leadership. Accounting, law, consulting, and other professional service firms often expect their members to be active as a means of developing new business leads and favorable publicity for the firm. In large organizations, community involvement may be an effective way of gaining visibility within the company. And the network of contacts outside the company may be useful in looking for another job or beginning an entrepreneurial venture (Byars and Rue 1984).

Personnel-Supported Career Development

Career development should not rely solely on individual efforts because such efforts are not always in the organization's best interest. Or employees may simply be unaware of opportunities within the company

to further their careers or of the organization's staffing needs. Personnel departments do more to help employee careers than just conduct career information seminars during off hours. And development programs are a big stepping-stone in most people's careers.

Personnel departments seek many goals through their career planning activities in addition to helping employees. A key goal is to develop an internal pool of talent. Career planning can help trainers identify training needs among employees. It also can be used to help guide members of protected classes into jobs where the employer has an underutilization of women and minorities. Improvements in performance, loyalty to the company, and motivation also may be outcomes of career planning. Simply put, career planning can make good business sense; it can enhance profits, productivity, and employees' quality of work life,

Management support: Efforts by the personnel department to encourage career development have little impact unless supported by managers. Commitment by top management is crucial. Without it, middle-level managers may show much less support of their subordinate's career planning concerns. This commitment must go beyond mere permission; top management must lead through example by taking an active interest in the career plans of middle level managers. When executives show active concern for career planning, other managers will emulate that behavior very quickly.

Feedback: Without feedback about their career development efforts, it is difficult for employees to sustain the years of preparation sometimes needed to reach career goals. Personnel departments provide this information in several ways. One way is to give employees feedback about job placement decisions. An employee who pursues career development activities and is passed over for promotion may conclude that career development is not worth the effort. Unsuccessful candidates for internal job openings should be told why they did not get the career opportunity they sought. This feedback has three objectives:

1. To assure bypassed employees that they are still valued and will be considered for future promotions if they are qualified. Otherwise, valuable employees may resign because they think the organization does not appreciate their efforts.
2. To explain why they were not selected.
3. To indicate what specific career development actions they should undertake. Care should be exercised not to imply that certain career development actions automatically will mean a promotion. Instead, the individual's candidacy for selection will be influenced by appropriate career development actions.

Feedback about job performance is, perhaps, the most important feedback an employee gets. Career success rests largely upon performance. In the long run, there can be no substitute for doing the job well. To give employees feedback about their job performance, many personnel department develop formal performance appraisal procedures. The resulting feedback allows the employee to adjust his or her performance and career plans.

To realize these benefits, more personnel departments are following the lead of other pioneers by supporting career planning through career education, information, and counseling (Werther and Keith 1989).

OBJECTIVE

To find out the factors that hinders the career planning and to solve those in the context of Bangladesh perspective. So, that one's career planning became effective.

METHODOLOGY

At the beginning of the study an intensive literature review has been done. Focusing on the main objective a survey has been carried out. Total sample number was 100. Stratification of sample size is shown in

the table no.1.1, 1.2 and 1.3 respectively. Students and Officers are included in the sample of this study. This survey includes the issues concerning how Students and Officers plan their career; what are the career planning policies, rules and regulations; what type of career development programs are there in the organization. It also includes service rules, annual reports, decision of the Board of Governors, office order, relevant previous files; and related information of the organizations.

To collect sample, students and officers at various levels have been provided close ended as well as open ended questionnaire. There are 19 questions in the questionnaire. 1-9 are related to personal information of the respondents (not shown here). From No.10-20 are career related questions. Among the sample 20 candidates are interviewed. This study also included discussion with persons who are already in the service or interested to join in the service to understand the factual situation of the career planning. As a result possible in-depth analysis of the issue has been revealed in this study. It is notable that in some cases respondents did not provide any answer and documents. Therefore, hopefully this endeavor will become a value added source to formulate decisions relating to career planning policies.

Table No.1.1: Categories of Sample

Who are already in service		Who are interested to join in the service			Employees interested in career development			Total
Public	Private	Public	Private	Public	Private	Total		
30	30	15	15	05	05	10	100	
= 60								

Table No.1.2: Categories of 30 trained Officers of public/private organizations

Departmental heads of public organizations	Departmental heads of private organizations	Mid and entry level officers of public organizations	Mid and Entry level officers of private organizations	Total
10	10	05	05	30

Table No.1.3: Table mentioning duration of training along with who have completed training programs.

Duration of Training	Number of Employees Participated in Training		Total trained
	Total		
	Local	Foreign	
1 to 3 weeks	15	02	17
1 to 3 months	06	03	09
Above 3 – 6 months	00	03	03
Above 6 – 12 months	00	01	01
Total			30

Trained Employees

FINDINGS / RESULTS

Following table showing the answers of questionnaire (Annexure-1)

Table No.1.4-Answers

Question No.	Yes	No	Remarks	No Response
10	62	28		10
11	71	25		04
12	75	21		04
13	81	18		01
14	68	28		04
15	56	43		01
16	24	76		00
17	59	38		03
18	43	49		08
19	21	79		00

Total respondent 100

DISCUSSION AND RECOMMENDATION

In case of individual career planning students in the beginning of the education, students can hardly choose their subject of their interest; rather they choose their subjects on the basis of job market trending. Moreover, there is hardly any structured counselling system exists in educational institution to choose the right subject case by case. Human Resource (HR) department of the organization is responsible for counselling. But unfortunately there is no existence of HR department in most of the public organizations. Although Administration or personnel department of public organizations carry out the personnel functions but they never address counselling. Moreover, there are no counselling services in the community. As a result, counselling is virtually absent. In some cases the issue addressed by the supervisors is in the form of advice which is not always acceptable to the employees and not effective as well. As a result, there is no productive career planning in the country. There are some other factors also such as family background, parent's pressure, social influence etc. which influence individual career planning. Then ultimately persons own choice is not reflected in career planning. Therefore, all public/private organizations should have HR department where there should be a formal counselling program in the large organizations. It is worthy to appoint full time counsellors. Considering the expenditure, the smaller and other organization may hire or engage this counsellor on part time basis.

After finishing degrees a person starts searching jobs in various organizations. In most of the cases chances of getting job is influenced by personal reference, nepotism and favoritism in the private sector. However, in the government sector employment opportunities provided by PSC are more or less free from personal influence or favoritism.

In most of the cases a person ultimately cannot build their career in their line jobs. For example, a good no. of candidates having technical degrees are doing their jobs in banks, marketing and some other nontechnical

business sectors. Same is the case with the non technical candidates also. As a result career planning cannot be achieved.

Surprisingly, many employees know very little about career planning. Often they are unaware of the need for and advantages of career planning. And once made aware, they often lack the necessary information to plan their careers successfully. For example, speeches, memoranda, and position papers from top executives stimulate employee interest at low cost to the employer. If executives communicate their belief in career planning, other managers are likely to do the same.

Regardless of the educational strategy the personnel department selects. However, it should provide employees with other information they need to plan their careers. Much of this information is already a part of the personnel department's human resource information system. But human resource information system has not yet been developed in most of the organizations in Bangladesh.

Personnel departments gave little support to career planning. When promotable talent was scarce, personnel departments usually reacted with crash training programs or additional recruitment. Human resource planning and career planning seldom occurred. Instead of seeking proactive solutions, organizations and employees reacted to new developments. Historically, this limited role for personnel departments was understandable because career plans were seen as largely an individual matter. Even when human resource managers wanted their departments to provide assistance in career planning, they often lacked the resources to become involved. As a result, only a few (mostly large) organizations encouraged career planning by employees.

Career progress is seldom straight up in an organization. Lateral transfers, leaves, and even resignations are used. But through periodic career planning, he/she reassessed his career progress and then undertook development activities to achieve intermediate career goals. Today, an increasing number of human resource experts see career

planning as a viable way to meet their internal staffing needs. Although this service may be limited to managerial, professional, and technical employees because of non-availability of funds, ideally all workers should be able to receive career planning advice. When employers encourage career planning, employees are more likely to set career goals and work toward them. In turn, these goals may motivate employees to pursue further education, training, or other career development activities. These learning activities then improve the value of employees to the organization and give the personnel department a larger pool of qualified applicants from which to fill internal job openings.

Workshop and seminars on career planning increase employee interest by pointing out the key concepts associated with career planning. But these types of seminars/workshops are hardly observed. Most of the authorities do not realize the importance of employee career development. To overcome this problem, higher officials should have to participate in various seminars and symposiums. Career planning policy should include seminar as a mandatory requirement.

When an individual sees greater career opportunities elsewhere, a resignation may be the only way to meet his or her career goals. Some employees, manager and professionals in particular-change employers as part of a conscious career strategy. If done effectively, these resignations usually result in a promotion, a pay increase, and a new learning experience. If there is no scope for career development in existing organization one has to switch on to the other organization. In the context of Bangladesh this is not always possible due to limited job opportunities. Many employees quickly learn that a mentor can aid their career development. However, neither the mentor nor' the employee always recognize that such a relationship exists. When employees expand their abilities, they complement the organization's objectives. For example, enrolling in a training program, taking non-credit courses, pursuing an additional degree, or seeking a new work assignment can contribute to employee grow. These growth opportunities aid both the personnel department's objective of developing internal replacements

and the individual's personal career plan. But in the context of Bangladesh, training is imparted without need assessment of the employees. As a result, potential candidates for promotion do not have relevant training. Moreover, training is not valued in promotion policy. Hence, employees are not interested about receiving training.

Absence of training makes an employee less effective on the job. For career development, many candidates are apathetic to take part in the training programme. Even they do not have any drive to apply acquired knowledge in their job. They also take the training programme only as a part of their job responsibility. As a result, once the training program is finished they do not even think of its impact. These are the psychological barriers of employees and failure of the supervisors to make the training programmes pragmatic. So, the employees perception regarding training become repulsive than to attractive. Training programme should be applied, understandable contemporary, circumstance oriented, and employee would have to be counseled about the benefit and impact of training in his or her personal life and in organization. It needs to be mentioned here that employee placement is not done following the education background of the employees. It leads to demotivation of employees to take part in career development.

Feedback about job performance is, perhaps, the most important feedback an employee gets. Career success rests largely upon performance. To give employees feedback about their job performance, many personnel departments develop formal performance procedures. The resulting feedback allows the employee to adjust his or her performance and career plans. But performance appraisal of an employee is influenced by many ways. Performance appraisal in our country often lead to demotivation for the deserving candidates because of lack of practice of justified process. Very frequently nepotism, favoritism and influence become the determining factors of employees appraisal. In addition to that, lack of knowledge and training of supervisor really makes the selection of competent employees difficult. To prevent irregularities for the appraisal, supervisors should be trained and have

honesty, justice and high moral. Some other issues though seem passive but are very relevant in this concern. Nonetheless promotions, motivation of the employees for career development are very important factors on the overall development of the organization. It has been observed that a good many employees become apathetic and lose their interest because they have been working in the same position for a long time having no opportunity for further development which discourages them to participate in career development programs as desired.

Most employee do not have any ideas about the indicators of getting promotion. As a result, many employee despite their higher level of intellectual ability do not get the attention of the departmental promotion committee. So their career planning is not fulfilled. Promotion criteria for respective job to be well circulated to the employees so, that the employee can have the opportunity to develop accordingly.

In some other cases, employees being trained and educated are not utilized in respective field. Subordinate usually become more competent in their knowledge and skill by getting training and education. But in many instances controlling authority do not want to cooperate with and make their scope of work narrow. Culture of not accepting the new approach and change and avoiding risks are also very important issues for the failure of career development.

Personnel departments should take an active interest in employee career planning. They often handle career planning in lieu of their human resource plans which indicates the organization's future employment needs and related career opportunities. But actually there is no career planning in the organizations of Bangladesh and there is no human resource planning even. Positions are filled-up when they become vacant. As a result, career planning is not on the planned basis. Since career planning is not done professionally, the whole process is based on individual judgment which has no scientific basis. Therefore, it can be said that career planning is not systematic and effective in Bangladesh. Efforts by the personnel department to encourage career development have little impact unless supported by managers. To utilize achieved

skills, employers should adequately provide necessary infrastructural facilities and logistics. Commitment by top management is crucial. Without it, middle-level managers may show much less support of their subordinate's career planning concerns. This commitment must go beyond mere permission; top management must lead through example by taking an active interest in the career plans of middle level managers. When executives show active concern for career planning, other managers will emulate that behavior very quickly.

Without broad-based support among all levels of operating management, others in the organization are likely to ignore career development and devote their attention elsewhere. Personal image should be established in such a way so that top management becomes impressed to accommodate him/her as a core member of the organization. For this one has to accomplish his/her job sincerely and enthusiasm. Network development among peers, friends, and clients is very effective for enhancing career planning.

Career planning is not implemented due to various problems. The main problems are: there is no sound policy in the organization. There is improper management system and lack of required quality and quantity of resources etc. Research revealed that often standard rules and procedures have not been followed to select employees in various organizations. As a result, relatively less qualified persons are being selected in the organizations who are engaged in career planning (The facts on the ground collected through surveys, observation, interviews, office files etc). However, if personal specialists leave career planning to managers, it may not get done. Not all managers take a strong interest in their employees' careers. For this reason career development is hampered.

If above mentioned problems are solved and if necessary measures are taken, then career planning would achieve its goal. So, the concerned authority should impose immense importance for developing effective career planning for human resource development of the organizations.

CONCLUSION

Career planning and development problems need to be solved. To do so, in case of individual career planning before graduation individual would have to find his/her keen interest or passion to take his/her graduation subject and also job market trending shall be kept in mind. Moreover, once graduation is finished he/she would have to plan for achieving some relevant skills by taking post graduation & various training courses. After graduation individual may also start networking to different professional groups of his/her interest. In the case of career planning by the organization there should be proper management system and human resource planning in the organization. Short term and long term career planning policy should be formulated as soon as possible. Implementation of career development policy should include detail rules and procedure regarding the entire human resource development in the organization. There should be an integration and coordination within and among recruitment policy, training policy and career development. A scheme should be planned which would include various career development programs. It will create opportunity of higher education and advance training from home and abroad by institutional self financing. Employees should be provided study leave and special allowances while pursuing such programs. Budget should be increased in career development heads. These programs would have to be implemented phase wise and, ultimately it will have a great positive impact on the employee to design, plan and implement career planning effectively.

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- The facts on the ground collected through surveys, observation, interviews, office files etc.

APPENDIX -1

Questionnaire:

1. Is there human resource planning in the organization?
2. Is there any career planning in the organization?
3. Is there personnel division /Human resource department in the organization?
4. Is there any provision of counseling seminar/symposium for career planning?

5. Is there any research and development department/ wing in the organization?
6. Whether achieved training & education can be applied in the work place?
7. Is promotion held on time for their employees?
8. Whether self initiated training/seminar is funded by the authority?
9. Whether study leave policy specific and detailed?
10. Do you get any support from top management for career development?

A MODEL FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS (SDGs) BY ESTABLISHING FUND RAISING LOCAL GOVERNMENT ENTERPRISES (LGEs)

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ABSTRACT

This article attempts to identify the scope of setting Local Government Enterprises (LGEs) to strengthen the ministry of finance in providing necessary financial support to all ministries and their departments especially the Ministry of Local Government in setting 17 points SDGs by 2030. The secondary data analysis and primary qualitative data reveal that there is no consistency between national SDGs plans at the ministry of planning, election manifesto of the winning political organization, and SDGs oriented plans at the decentralized local government. It is found that there are 17 departments under the related ministries which has been transferred to the local government at rural and urban levels. They can play an important role in achieving 17 points SDGs. But lack of centrally designed SDGs oriented local plans and programs, strong financial and infrastructural support, measuring performance and enough central controlling, they are not performing well toward SDGs by 2030. In this context, a conceptual model has been developed based on literature review data and FGDs data to define the problem and its solution. Government of the developing and underdeveloped countries can use the model in setting revenue earning Local Government Enterprises (LGEs) under strong skilled private style marketing management system by setting a separate department of the Ministry of Finance to provide strong financial support to the local government including other ministerial departments in designing and executing 17 points SDGs oriented central and local plans and programs. A government can enjoy dual benefits by establishing this world new concept based Local Government Enterprises (LGEs); (1) economic and infrastructural development, and (2) Social development in touch of 17 points SDGs. Thus, offering SDGs oriented package of election manifesto (both national and local plans) of the winning political organization, handed it over to the ministry of planning and ministry of finance to assign related ministries specially the ministry of local government as the unified process of planning, implementing, and controlling can achieve the SDGs under the strong financial support by setting Local Government Enterprises (LGEs) under the ministry of finance.

Keywords: Local Government Enterprises (LGEs), SDGs, Employment, Central planning, Financing

INTRODUCTION

The Sustainable Development Goals (SDGs) is known as transforming our world: the 2030 Agenda for Sustainable Development.

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“Sustainability calls for a decent standard of living for everyone without compromising the needs of future generations.” (VNG, LGCP, 2016). These goals have to be achieved by international development cooperation by the UN member countries. But how is it possible? It needs to build the capacity of all kinds of socio-economic actors. In this context, the central and local government agencies are the key actors as the social organizations to facilitate the individuals, all kinds of private social and commercial organizations in building their capacity for achieving the SDGs. There are 17 “Global goals” with 169 targets. The goals are contained in paragraph 54 United Nations Resolution A/RES/70/1 of September 2015 (UN official Documents, 2016). On 19 July 2014, the UN General Assembly’s Open Working Group (OWG) on Sustainable Goals forwarded a proposal for the SDGs to the Assembly. It included ending poverty and hunger, improving health and education, making cities more sustainable, combating climate change, and protecting oceans and forests (Press release, 2014).

The major 17 points goals are **1. No poverty, 2. Zero hunger, 3. good health, and well-being, 4. Quality education, 5. General equity, 6. Clean water and sanitation, 7. Affordable and clean energy, 8. Decent work and economic growth, 9. Industry, innovation and infrastructure, 10. Reduced inequalities, 11. Sustainable cities and communities, 12. Responsible consumption and production, 13. Climate action, 14. Life below water, 15. Life on land, 16. Peace, justice, and strong institutions 17. Partnerships for the goals.** These 17 points goals basically indicate the related responsible ministries of a government and their local government agencies or departments in achieving SDGs by 2030. In the Commonwealth Local Government Conference, it is observed that for local government to play a full role in supporting the achievements of national and global development targets such as the SDGs, it is essential that adequate resources and powers to access own-source revenue are devolved to the local level: domestic resource mobilization will be critical to achieving the SDGs (Gaborone Declaration 2015). In this context, the national revenue collection domestically is the only source of revenue by imposing a higher rate of

taxes and non-taxes revenue. But very often, after budgeting, the private investors, especially in the underdeveloped or developing countries, protest to reduce the rate of taxes in terms of discouraging new investors, unemployment, discontinuing the existing competitive business etc. In Bangladesh, here is a repercussion in collecting more revenue by the high rate of taxes and VAT. “The corporate tax remained unchanged in the proposed budget, which according to him, is discouraging potential and existing investors from taking up new ventures or expanding their plant sizes (Bakht, 2016). “Local industries will lose competitiveness if the supplementary duty is withdrawn on a number of products” (Khaled, 2016). Ahmed thanked the government for reinstatement of package VAT. But he said they will sit with the government for a cut in the rate of package VAT as the budget proposed a cent-percent increase (Ahmed, 2016). The given reactions of the leading businessmen of Bangladesh on the government fund upraising budget for revenue collection is calling for **a new source of revenue**. In this context, fund-raising (treasury) entrepreneurship at local government of the member countries of the UN would be a new way of collection revenue in order to allocate the profit for socio-economic development projects and for achieving the SDGs by 2030.

Local Government has two types of funds for undertaking public service generating projects and providing regular services; one is revenue fund, the other is development fund. Very often these funds are not being able to continue the regular services and undertaking enough plans and projects for satisfying the fundamental needs of the local people. The main source of the revenue fund is the revenue collected from the people of the locality by imposing a tax, rates, tolls and different fees. On the other hand, development fund consists of ADP (Annual Development Programs) and grants/local donations from other sources (Ahmed, 2016). But, the people of local government often do not want to give taxes, even sometimes they protest against the local government agencies by street processing under the opposition political banner. In this context, revenue structure of local government is very weak in collecting enough revenue for undertaking local plans and programs in achieving

Sustainable Development Goals (SDGs) for the related responsible local government agencies. On the other hand, the decentralized local government is not performing well in making local resource-based SDGs oriented plans and programs without the strong financial support of the central government. It is also found that there is an inconsistency between election manifesto of the winning political organization, and national and local plans of the government due to the decentralized local government (Datta, 2017). According to the Centre for Policy Dialogue (CPD), strong financial support and infrastructural changes are required in achieving SDGs by 2030 (Bhattacharya, 2017).

Therefore, in the above circumstances, setting some high potential services and manufacturing Local Government Enterprises (LGEs) in rising existing funds (treasury) have two significant benefits; (1) Rising local or national revenue income (2) Bring about socio-economic development in achieving Sustainable Development Goals (Datta, 2017). Fundraising Local Government Enterprises (LGEs) are basically social enterprises based on locally produced farm products and raw materials to ensure the fair price for the farmers, generate employment, and provide quality health and education, poverty-free society. “Social entrepreneurship has proven to provide impactful innovations for poverty alleviation,” (Abby Maxman, 2017).

Most of the departments of Local Government Institutions (LGIs) are well enough to provide technical support in setting 17 points goals oriented Local Government Enterprises (LGEs) under controlling of related ministries or set by the separate department LGEs at each local government unit under the Ministry of Finance. In analyzing the literature and primary data, it is found that there is scope of setting some locally viable and 17 points SDGs oriented enterprises to increase the capability of Local Government as well as Central Government for achieving SDGs. Therefore, all the member countries especially in developing and under developing countries should make a chain between election manifesto, national and local plans under an unified implementing and controlling system by setting Local Government

Enterprises (LGEs) to build the capacity of the ministry of finance in providing strong financial support from the central treasury to adopt the new concept of achieving SDGs by 2030 to change the world into a poverty-free peaceful world. This effort will be able to increase revenue income in making a strong fund (treasury) by expanding economic activities at rural and urban area as well as increase the capacity of infrastructural and social development in touch of 17 points SDGs.

LITERATURE REVIEW

1. Scope of Setting Local Government Enterprises (LGEs) in Achieving SDGs

In searching literature review, there are no directly related articles, books, or research on the world new concept of Local Government Entrepreneurship (LGEs) for socio-economic development in achieving Sustainable Development Goals (SDGs). But in touch with the research problem, some related literature are analyzed here. Many governments around the world, believing that entrepreneurship is the key to economic development, offer Entrepreneurship Development Programs (EDPs). An entrepreneur is one who combines the land of one, the labor of another and capital of yet another, and, then, produces a product (Say, 1827). In this connection, the local government can produce locally collected resources based products and services by using locally vested land and the technical assistance of the related department of the local government institutions (LGIs) to strengthen the local economy in achieving the related SDGs. In Bangladesh, there are 17 departments (Upazila Manual, 2013) at the rural local government who can provide technical support in setting locally suitable revenue earning manufacturing or service-oriented enterprises in achieving 17 points sustainable goals (SDGs). The urban local government can expand its activities similarly by setting 17 departments under seventeen ministries. Innovation to the entrepreneur plays an important role (Schumpeter, 1939). Therefore, setting LGEs is an innovative idea in the context of

entrepreneurship development of a country that can play a significant role in achieving SDGs.

The entrepreneur is intimately associated with the three elements risk bearing, organizing and innovating; Marshall advocated the significance of organization among the services of a special class of business undertakes (Marshall, 1936). The crucial role played by the entrepreneurs in the development of the Western countries has made the people of under-developed countries too much conscious of the significance of entrepreneurship for economic development (S.S. Khanka, 2016).

Entrepreneurship is described as one of the two necessary conditions for economic development, the other being the increased output of capital (Parson and Smelser, 1956). In analyzing this context, LGEs can earn huge capital as revenue for social and economic investment to bring about a local economic change in a touch of achieving 17 points SDGs. The acceleration of economic reform in the early and late 1990s has highlighted repeatedly the importance of social welfare for maintaining economic growth, social stability, and political authority (Croll, 1999).

Government acts as a public entrepreneur and venture capitalist in addition to its traditional regulatory role in setting the rules of the game. Moving beyond product development, innovation then becomes an endogenous process of “taking the role of the other”, encouraging hybridization among the institutional spheres. (Zerbinati & Souitaris, 2005) In this paper, the author explores the potential role of entrepreneurship in public sector organizations.

At first, he presents a review of the entrepreneurship theme in the political science and public management research streams, comparing these ideas with the mainstream business literature on entrepreneurship. Thereafter, illustrate empirically how Stevenson's classical framework of entrepreneurship can be applied in a European local government context to explain the recent initiatives to compete for and utilize the European

Union structural funds. The empirical basis of the study is comprised of ten in-depth case studies of local government organizations, five in the UK and five in Italy. Finally, it proposed five distinct types of entrepreneurial agents in the public sector: professional politician; spin-off creator; business entrepreneur in politics; career-driven public officer; and politically ambitious public officer. (Perlmutter & Cnaan, 1995) What are local public administrations expected to do in an era of tax base decline, diminishing state and federal support, and intensified public demand for more and better services? Here is an opportunity to set LGEs for raising fund to provide more public services to the local people.

Felice Perlmutter and Ram Craan argue that a Policy of fundraising and development is one solution to this dilemma. The authors acknowledge that private support for public services is not a new idea or practice: however, the institutionalized policy of capital campaign and donation seeking from private sources on an ongoing basis to fund traditional public services is the essence of this new policy (Hubbard, 1995).

The author has said that private sector support is imperative for public services is a good idea but in an underdeveloped or developing countries, private sectors, especially in rural area, is not being sufficiently encouraged in terms of investment risk of return and sufficient knowledge about entrepreneurship development (Rahman, 2017). In this context, local government has to become forward for entrepreneurship development to play an important role in achieving SDGs by setting local government-owned enterprises on leasing based or public-private partnership. Local government entrepreneurship in China in the reform era is argued to have been, on balance, instrumental to the growth and market-oriented reform. (Leadbeater, 1997) Social entrepreneurs will be none of the most important sources of innovation. Social entrepreneurs identify under-utilized resources, people, buildings, equipment and find ways of putting them to use to satisfy unmet social needs. Social entrepreneurs who deploy entrepreneurial skills for social ends are at work in parts of the traditional public sector, some large private sector

corporations and at the most innovate edge of the voluntary sector. (Macnaghten & Jacobs, 1997). This paper reports on a study using focus groups drawn from different sections of the Lancashire public which sought to cast light on the public understanding of and identification with sustainable development. Considerable public support was found for the idea that current ways of life are generating problems for the future and that economic activity would have to be held within environmental limits. However, there was very little support for the idea that sustainability would be achieved through government and business initiatives. But in the context of financing the local government, here is a good idea for sustainable development by strengthening local government through fundraising enterprises. (Froelich, 1999) *This article examines the effects of three major revenue strategies in nonprofit organizations. Evolving resource dependence is demonstrated by the shifting reliance on each source of funds: private contributions, government funding, and commercial activities. It is observed that a non-profit organization can raise its fund by performing commercial activities. In this connection, a government of a country including both local and central government is basically non-profit organization. Therefore, it can earn revenue and raise fund by setting some locally suitable commercial enterprises. In fact the main objective of these fundraising enterprises is to bring about a balanced socio-economic development.* (Carroll & Stater 2009) This article investigates whether revenue diversification leads to greater stability in the revenue structures of nonprofit organizations. The findings suggest that nonprofits can indeed reduce their revenue volatility through diversification, particularly by equalizing their reliance on earned income, investments, and contributions.

In this connection, local government as a non-profit organization can reduce the revenue shortage through diversification of its activities into revenue earning social enterprises besides the public services to increase the capacity for achieving SDGs. Because, the diversified revenue generating activities indirectly are the part of public services in achieving SDGs.

LGEs are the extended concept of SOEs. SOEs are known by many names-government corporations, government business enterprises, government-linked companies, and parastatals, public sector units or enterprises and so on. SOEs have been rising in influence in the global economy over the past decade. For instance, the proportion of SOEs among the Fortune Global 500 has grown from 9% in 2005 to 23% in 2014, including a greater presence in the top rankings (PWC Analysis, 2014). In fact, three Chinese SOEs (Sinopee Group, China National Petroleum, and State Grid) have consistently made the top ten since 2010 and contributed 16% of total revenues from the 114 SOEs on the list in 2014. This also underscores the growing revenue share of Chinese-Owned SOEs among the biggest companies in the world, as well as SOEs from across the rest of Asia (PwC Analysis, 2014).

Most of the countries of the world, the State-Owned Enterprises (SOEs) came into being on priority basis with a view “to replaces weak private sectors, to produce higher investment ratios and extract a capital surplus for investment in the economy, to transfer technology to strategic sector, to generate employment and to make goods available at lower costs” (Sunita, 1994). In the context of Bangladesh, Private sector is not remarkably encouraged due to investment risk and necessary knowledge for setting enterprises especially at rural local government area (Datta, 2017). Expected performance of an enterprise depends on human resource, skilled management. Himmelberg (2002) and Coles, Lemmons, and Meschke (2003) highlighted the effect of human resources in the development of an enterprise. As per the study of Asian Development Bank (ADB), the State-Owned Enterprises (SOEs) in Bangladesh is mainly confronted with some problems like redundant employees, overstaffing, and mismanagement. Another significant study found that a substantial number of persons holding managerial posts and performing managerial functions are without any management training (Haque, 1975).

It is observed that local government enterprise (LGE) is very close to the SOEs. Therefore, the management problem is the main obstacle to

operate effectively. In fact, the management style of private sector controlled by a new LGE department under Ministry of Economics or leasing system of local government-owned enterprises may be an effective concept to set LGEs to operate it purposively.

2. Strong Financial Support in Achieving SDGs by setting LGEs

In many developing countries like Bangladesh, local government service delivery capacities are hindered or not reached to a satisfactory level due to (a) Limited financial resources and revenue bases; (b) Restricted financial market access; and (c) Lack of proper institutional development (Siddiqi and Ahmed, 2016). It is observed that local government institutions are facing financial shortage in making enough plans and programs in achieving SDGs.

The ability to mobilize adequate funds is an essential pre-condition for the efficient discharge of the multifarious functions of local government; however, at least three features of local government finance distinguish it from central government finance. These are; the power of local government bodies with small territorial jurisdictions to collect indirect taxes (such as sales tax) is limited because the evasion of indirect taxes is easier in the ease of local government than in the case of central government. The local funds thus constituted are usually to be kept in a government treasury or in the bank transacting the business of a government treasury or in such manner as may be specified by the government (Siddiqi, 2016).

The local government can invest any portion of their fund with permission of the relevant authority. In analyzing this literature, the local government can use the fund to set revenue earning social enterprises subject to the permission of the central government for earning revenue in building its capacity as well as socio-economic development. The local government can form a special fund for any special purpose with the prior permission of the relevant authority (Siddiqi, 2016). In this context, the local government can deposit the profits from the

fundraising commercial projects by forming a new fund to strengthen the capacity of local government in achieving SDGs controlled by local government or central government.

The member countries of the UN needs huge fund for infrastructural changes and facilitating the local government agencies for setting 17 point goals to change the world by 2030. It depends on the opportunities of increasing revenue of the concerned countries which are not so easy in terms of protesting activities from the business communities, political oppositions, citizen action groups etc. So, the opportunities of imposing higher taxes and its area are going to be limited especially in developing and under developing countries of the world.

In every year, the expenditure of a government is gradually increasing for meeting the unlimited demands of the people of a country. In this context, the government is gradually imposing higher taxes, tariffs, VAT, duties including all other sources of revenue. Recently in Bangladesh, the budget for the fiscal year (budget, 2016-17) has been declared in the National Parliament with high targeted revenue collection for increasing the level of public services from national and local government levels of Bangladesh. Here we find some important information on government's attitudes of fund uprising through increasing taxes, tariffs, corporate taxes on the business and industries. In the immediate reactions of some business leaders gave their opinions are given below; The new budget lacks specific policy directions for boosting private investment matching with an ambitious revenue target set for funding upraised budgetary outlay (leading economists and business people said). In their immediate reaction after the presentation, of the TK 3,406 trillion budgets in parliament, they said revenues will mainly come from the business but it is hardly possible to mobilize resources sans ensuring satisfactory investment in the private sector. Economists were critical of proposed high domestic borrowing as it will result in increased interest payments at the expense of taxpayers' money. "I did not get any specific direction on how to stimulate the private investment which hovers around 21 percent although it needs to be

raised to at least 27 percent to attain expected level of economic growth.” He pointed out that the corporate tax remained unchanged in the proposed budget, which according to him, is discouraging potential and existing investors from taking up new ventures or expanding their plant sizes (Bakht, 2016). “Local industries will lose competitiveness if the supplementary duty is withdrawn on a number of products” (Khaled, 2016). Ahmed thanked the government for reinstatement of package VAT. But he said they will sit with the government for a cut in the rate of package VAT as the budget proposed a cent-percent increase (Ahmed, 2016).

President of Dhaka Chamber of Commerce and Industry (DCCI), Hossain Khaled said the ratiocinations of supplementary duties on 1440 products would cause problems to the local industries. He said, “In my view, the local industries will lose competitiveness if the supplementary duty is withdrawn on a number of products.” He mentioned that the corporate tax for the ready-made garment sector has been reduced to 20 percent while keeping it for other industries unchanged. The leading businessman noted that this should apply to other industries, too, especially the potential sectors and the SMEs. The cost of living would increase due to the proposed cent-percent hike in package VAT in the proposed budget.

Besides, the entrepreneurs of Small and Medium Enterprises (SMEs) will be discouraged from making the investment. (Khaled, 2016). Hailing various fiscal measures in the proposed national budget for the financial year 2016-17, the Metropolitan Chamber of Commerce and Industries has termed attainment of increased revenue collection target a major challenge for the government. In its mixed reaction to the TK 3.4 trillion proposed budget placed by the Finance Minister in the parliament, the chamber suggested that tax-complaint enterprises should not be burdened excessively with a view to achieving the high revenue target of TK 2.42 trillion (Manzur,2016). The given reactions of the leading businessmen of Bangladesh on the government fund (treasury) upraising budget for revenue collection is calling for a new source of

revenue. In this context, fund-raising entrepreneurship at local government would be a new way of collection revenue in order to allocate the profit for socio-economic development in achieving SDGs. There should have no remarkable reaction from the private sector investors and local people because it is only for revenue generation to strengthen capacity for delivering more services to the local people and rural economic development.

3. Centrally Controlled Local Plans in Achieving SDGs

The concept of planning is considered in society seems the central planning by central government. Annual Development Plan (ADP), Five years Development Plan and Perspective Plans are only made at the national level. The total planning support and monitoring system are organized in such a manner and fashion that the 'local level plans' do not have any place anywhere in the national planning and budgeting system. As the constitutional directives in Bangladesh added planning as one of the vital activities of LGs, all the LG laws of the country included short and medium-term plan provision in the legal framework of the LGIs.

In spite of constitutional provision (Article 59) and subsequent laws passed in the Parliament, local plans were not appropriately recognized in the national planning documents (Ahmed, 2016). In India, State Planning Commission supports the LG planning system through District Planning Councils (DPCs). The DPCs coordinate all LGI plans within the district. The state-level development financing of LGI is cleared at DPC levels considering the specific requirement of Panchayat Raj Institution (Kabir, 2014).

The National Planning Commission should extend its arms up to districts for proper guidance and monitoring of plans at local levels. In this case, DPC model of India may be reviewed for devising the system of Bangladesh (Ahmed, 2016). The author also suggested that taxation list needs rationalization from national to local and overlap, duplication, and multiple taxations need to be avoided.

4. Capacity Building of Local Government

Capacity development is a complex process, a means to reach to some end as well as a goal and outcome by itself. It takes place at different levels and with target population as well and it has to intervene at policy and implementation at both the levels for sustainable capacity achievement (Oxfam, 2015). The capacity framework incorporates policy environment, legal authority and empowerment, administrative sanction, adequate finance and required manpower with right kind of efficiency. The LGI capacity development needs a policy framework and an independent resource pool. It needs a legal environment and inter-organizational cooperation framework with LGIs and financial solvency of the LGIs and legal and social provision for resources mobilization. The development initiatives may come from national, regional, local and even individual entrepreneur levels. The existing legal framework on which the LGIs system in Bangladesh stands needs a thorough review because it is complex, cumbersome, confusing, contradictory and disjointed (Ahmed, 2016).

5. Decentralized Local Government and Election Manifesto in Achieving SDGs

In the twenty-first century decentralization and participation of local government are becoming popular panaceas that have attracted the special attention of donors, academics, many national and international agencies and many third world countries. Decentralization administration, participatory management, participatory action research, participatory evaluation, and recently with ‘good governance’ theory attributing new meaning and dimensions to the original areas of interest a decentralization and local government (Ahmed, 2012). In effect, decentralized budget based on local revenue fund is not being able to undertake optimal plans and projects for socio-economic development (Datta, 2017). At the turn of the decade, the experiments produced frustrating results and marked silence was observed for some years,

particularly in the third world countries (Cheama and Rondinalli, 1983). It is found that the most of the local government tires are always waiting for central grants or any other grants from foreign donor agencies due to shortage of revenue and development funds. Therefore enough funds are the prerequisite for local development.

A decentralization concept is a tool for political mobilization. In this context, local political leaders are getting more powerful and highly involved in political activities. But the question arises, how they are expert in using limited resources for making effective plans and implementing projects.

It is also found that sometimes decentralized fund and budget is being misused in making plans (Datta, 2017). So the proposed concept of fund-raising entrepreneurship of local government to implement centrally plans and projects with the necessary budget may be a new dimension for achieving SDGs. On the other hand, in the concept of political services marketing for peaceful democracy, each and every political organization has a political product (basic principles + past performance + election manifesto). The winning political organization wants to deliver the election manifesto (a package of local and central plans and programs) by using local and central government within five years duration as per ballot contract with the voters of a democratic country (Datta,2016).

Decentralization is a great obstacle to implement the pre-planned election manifesto designed as per SDGs. Local government is the most important government agency to deliver the political product (centrally approved local plans for each constituency + national plans) of the winning political organization. Because, in the concept of political services marketing, the winning political organization hand over the political product to the ministry of planning for creating and delivering the election manifesto or political product. Therefore, a structural change is imperative in achieving SDGs by 2030.

Research Gap and Conceptual Frame

In the literature review of the above section, it is found that many researchers have been conducted in relation to the research problem but no research has been conducted on the world's new concept of setting revenue earning of Local Government Enterprises (LGEs) in achieving SDGs. This is a burning issue throughout the world. Therefore, the concept should be studied to change the world by 2030.

In every country, there are public sector enterprises (SOEs) at central government but no fundraising social enterprises are available at local government. The local government of developing and underdeveloped countries are not capable to make a local demand based plans and programs in achieving SDGs due to sufficient fund.

On the other hand, the scope of increasing revenue of the central government is limited to finance the local government in building the capacity for achieving the SDGs related goals by the related departments. The ministry of finance may establish a separate department to operate LGEs by using the private style marketing management system. Here is an opportunity to mobilize local resource (land, labor, raw-materials, revenue & development fund) and central grants in setting locally suitable revenue earning Local Government Enterprises (LGEs).

It is also found in the literature review, that the decentralized local government is not well enough to make plans and programs in achieving the election manifesto in touch with SDGs. Therefore, centrally revenue collection and making local and national plans (Datta,2017) under the election manifesto is imperative for effective plans and programs implementation and controlling to periodic measure the level of SDGs during as per the political product of the winning political organization. Here are the major variables that have been identified in the literature review and personal interview KPI (Key Personal Interview).

Y = Performance of Local Government and the department of LGEs under Ministry of Finance in Achieving SDGs = (PLGG)

X₁= Role of Local Government including related Departments of other Ministries transferred to the local government in Achieving SDGs = (RLGD)

X₂=Centrally Controlled National & Local Plans as per the Election Manifesto of the winning Political Organization in Achieving SDGs = (CCNP)

X₃= Strong Financial Support to the Local Government Institutions by the Ministry of Finance = (SFSL)

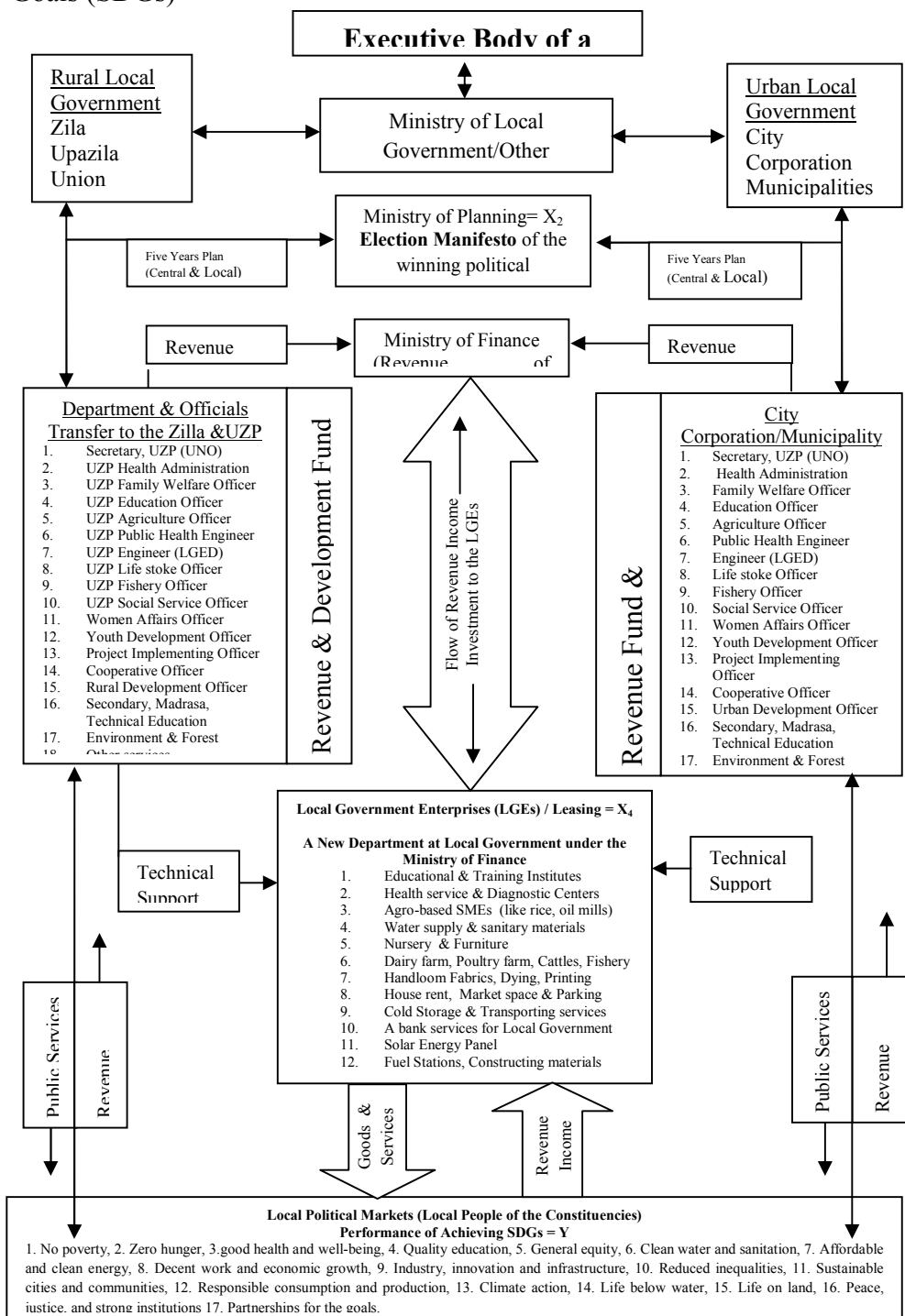
X₄=Impact of 17 points SDGs oriented Local Government Enterprises (LGEs) with skilled management under the Ministry of Finance = (ILGE)

$$Y = f (X_1, X_2, X_3, X_4)$$

OBJECTIVE

The main objective of this article is to identify the scope of setting 17 points SDGs oriented enterprises at local government under a separate department of Finance Ministry and centrally controlled election manifesto based national and local plans by using private style skilled marketing management system to facilitate the local government institutions and other departments transferred to the local government in achieving SDGs.

Figure 1 : U.K Datta Model of Achieving Sustainable Development Goals (SDGs)



The research problem is that the local government including other departments transferred to the local government is facing shortage of development fund and inconsistency exists between central and local government plans, and election manifesto in undertaking 17 points SDGs oriented plans and programs. The present revenue structure of both central and local government is not enough to provide strong financial support to local government institutions for undertaking SDGs based plans and programs by 2030. This is an exploratory research. Qualitative data has been collected by literature review, discussion with some experts in economics, public administration, and government and politics from two public universities; University of Dhaka, and Jahangirnagar University of Bangladesh. The author has collected data personally from face to face personal interview. Two focus group discussion FGDs have been conducted to develop a conceptual model. The author personally played the role of the moderator in the two separate FGDs; one is in Dumura Upazila on a sample of 10 participants (Upazila Chairman, and government officers) another at National Institute of Local Government (NILG) with 10 Mayors of Urban Local Government. Data has been analyzed and explained by using the given conceptual model.

RESULTS /FINDINGS

Discussion with 10 Experts Professors of Local Government

To elaborately define the research problem, 10 expert opinions were taken from the department of public administration, University of Dhaka, Government and politics, Jahangirnagar University, Savar, Out of 10 expert professors, 5 professors agreed positively to set fundraising enterprises at local government tiers as the Local Government Owned Enterprises (LGEs). They said that the present financial structure is not so well for local demand-based planning and executing. On the other hand, a higher rate of tax and VAT is limited in terms of dissatisfaction of the general people. On the other hand, increasing the corporate tax sometimes discourse the new investment from the private sector. Therefore, the new concept of balanced economic development can be

set for earning additional revenue for strengthening the capacity of all local government tiers for providing local demand based public services to best satisfy the local people. Presently, the block grants are not suitable for local demand-based planning. On the other hand, 4 professors said that enterprises setting at the local government are significantly important for building the national socio-economic development of Bangladesh. But who will do it? Local government-owned enterprises are losing concern due to marketing management problem. Some of them said it may be set by a public-private partnership (PPP). A renowned professor of economics suggests setting the enterprises by the local government ownership, but it must be operated by the highest bidder of the local entrepreneurs on a contract basis (Akash, 2017). Another renowned professor said that local government can facilitate the local people to set enterprises privately. Later, the local government can earn revenue from these businessmen.

The chairmen of public administration disagreed the concept due to inefficient management, and corruption. He also said that local government has no such skill for operating the fundraising enterprises. Another eminent professor in economics said that in PPP model, the private partner will take the major benefits from the enterprises. On the other hand, setting local government-owned enterprise plants for leasing the highest bidder will encourage the local elected political leaders to allot it among their relatives and personal interest.

The Executive Director of CPD (Centre for Policy Dialogue) said that leasing system model may be used for personal interest by the local political leaders. But he suggested to encourage the PPP model for setting enterprises at local government. Besides this, he also said that local government can facilitate the local business people for setting new enterprises based on local land, labor, and locally produced raw materials. He agreed to set enterprises but he was confused about the operating model. He also said that this attempt is significantly important in achieving SDGs by 2030 and advised another to relate the SDGs with the research concept.

Focus Group Discussion with High Officials at Rural Local Government

The focus group discussion has been conducted at Dumuria Upazila, Khulna. The Upazila Chairman, Vice-chairman (male) Vice-Chairman (female), Upazila Nirbahi Officer, Agriculture Officer, Livestock Officer, Social Welfare Officer, Cooperative Officer, Youth, and Sports Officer took part in the discussion. The Upazila Chairman said that entrepreneurship in local government for fundraising is a very good concept. At present, the Upazila Parishad is failing to undertake necessary development projects to meet the local demand due to the inadequate development fund. There is a huge scope for generating employment by developing entrepreneurship at local government. This Upazila is famous for vegetable production and huge vegetables are being transported to Dhaka. In this context, transporting business might be a potential unit for earning revenue for raising development fund. Besides this, fishery, dairy farm, cold storage might be set up in this Upazila. This initiative might be the substitute of micro-credit by increasing the ability for allocating interest-free loan for the self-employment from the Upazila development fund.

The entrepreneurship of local government might be an attractive way of economic development in terms of effective policy and management by the central government. The Upazila Nirbahi Officer said that the entrepreneurship in local government is a very good concept no doubt. But before undertaking attractive commercial projects for fundraising, effective management should be developed at local government. For example, in transportation business, the institution needs some skilled people and a unit for operating and maintaining the business. Government logistic support can ensure the higher price to the farmers. A separate management unit might be set up under the ministry of commerce or ministry of finance for effectively operating the commercial projects in raising development fund. This initiative also can control the price level in favor of the consumer for consuming farm products at a lower price. Even, the local government might be able to

finance the central government also. He also said that the entrepreneurship at local government will be able to increase the growth rate of GDP. A strong committee might be formed to run the commercial projects effectively and efficiently. 10% profit might be allocated among the members of this committee as incentive.

The Upazila Vice-chairman agreed with the opinions of the UNO. He added that there is a great opportunity for generating employment in suitable commercial projects at local government level. Adequate development fund will help the local government institution for allocating interest-free loan for self-employment. This initiative will be able to discourage VGF program. Therefore, rural economy will be stronger and the overall capacity of local government also will be increased. The Vice-chairman (female) agreed with this statement given by the Vice-chairman (male). She argued that micro-credit is no longer effective for poverty alleviation. The government should find the new way of employment generation and poverty alleviation.

The Social Welfare Officer said that it needs to develop a national policy for executing this concept. A new separate management department must be set up under the ministry of commerce or finance. He said that the success rate of micro-credit is only 5%-10%. In this context, entrepreneurship at local government might be an effective tool for generating employment for the local people. The Cooperative Officer said that the concept is very good and potential but management challenge is significantly important. A cooperative wholesale market might be established at Dumuria for farm products. All farmers will sell their farm products in this market. The vendors will purchase the farm products from here to send it to the urban area. A supermarket might be established for the local target group. A sales center might be set up for handicraft products for encouraging the local cottage industries. In this context, Parishad can invest in logistic support like truck, warehouse, cold storage etc. Here is a scope of employment generation to strengthen the socio-economic development toward SDGs. Most of the people in this Upazila are farmers. They expect such a loan which will

be paid after investment return. But in micro-credit system, loan recipients bound to start instalment payment. Therefore this system is not so effective in generating self-employment. In this connection, entrepreneurship at local government can play a significant role in employment generation and flourish the development activities.

The Upazila agriculture officer said that it is very urgent to raise fund for strengthening the local government for generating public services to satisfy the local people. In this view, entrepreneurship at local government is a good concept in terms of fundraising to undertake socio-economic development projects and employment generation for the local people in achieving SDGs. In fact, the central government should hand over a new management unit under the ministry of finance or ministry of commerce. He added that service oriented commercial projects might be potential sectors like establishing a training center, lake, park, transportation, high-rise building, community center, warehouse, cold storage etc. he also added that rice mill is another potential commercial project.

Now the government of Bangladesh is purchasing rice instead of paddy. For raising development fund, entrepreneurship is better than taxes and VATs because the people do not want to pay higher tax and VAT. Ministry of Planning should conduct an experiment in some Upazila Parishads for examining the probability of success on a pilot basis. The Livestock Officer said that a dairy farm might be established targeting the greater Khulna market. In this project, employment will be generated for procuring milk from the farmers, producing package and distribution of the packaged milk.

Focus Group Discussion with the Mayors at Urban Local Government

A focus group discussion was held with 10 Mayors from Munsigonj, Singair, Madaripur, Tungipara, Nazipur, Boalmari, Manikgonj, Sreepur, Gajipur, Shibchar, apart from the urban local government of Bangladesh

at National Institute of Local Government. The research director was the moderator of the discussion and qualitative data has been collected by using a mobile device. At the start of point of the focus group discussion, the moderator shares the research concept with the participants to identify the potentiality of setting fundraising commercial projects as the entrepreneurship development at local government. The mayor of the Singair Pauroshova said the most important farm products are vegetables in the locality. Around 80% of the total vegetables consumed in Dhaka City is supplied from Singair area of Bangladesh. But there is no cold storage here. Farmers became bound to sell their perishable vegetables at a lower price. Setting cold storage here will generate employment and ensure the fair price for the farmers. On the other hand, there is no gas for establishing agro-based industries. A community center, multi-storage building, the diagnostic center may be established to earn revenue by providing public services.

Recently, the salary incensement of the staff has been expanded. Therefore, revenue income of Purosovas has should be increased. On the other hand, the farmers of this area are not getting the justified price of milk. The middlemen are selling per litre milk at 70-85 taka in Dhaka market. Therefore a dairy firm, milk processing small industry can be set here for employment generation and ensure the just price of milk to the farmers. Besides this, Paurosha can establish markets to rent for earning revenue as a risk-free investment. He also said that all Pauroshava can establish small and less risky investment for earning revenue to reduce the dependability on ADP and foreign donation and loan. ADP is restricted for the specific purpose of projects. It cannot be expanded to meet the emergency demand of the local people. He said the government should facilitate all local government units in creating income generating projects to reduce the funding pressure on the central government. Only the taxes fees are not enough for sufficient public services. He added that the research concept is highly appreciated but central government should provide the initial investment. The mayor of Madaripur agree with this statement and said that the concept is very good, but question remains who will finance the initial investment? The government of Bangladesh

is collecting revenue for ADP allocation from the foreign loan and donation which is shameful for the nation. In this connection, Puroshava can set school, college, universities, medical college and related services-oriented revenue earning projects to reduce the financing pressure on the central government revenue. These initiatives will create job opportunities for the local people. The government should provide initial investment to set enterprises at local government. One mayor said that this research concept is very close to the nationalization and socialism concept of Bangabandhu Sheik Mujibur Rahaman.

A large number of social and commercial organizations have been nationalized by him. But all were losing concern for mismanagement. Strong management is required to successfully operate the fundraising enterprises at local government units. The mayor of Tungipara, said that it is possible to set enterprises at Pauoshava in terms of enough fund allocation by ECNEC, Ministry of Planning for the initial investment. The mayor of Mujib Nagar, said that the research concept is good. In building digital Pouroshava, the government should provide initial investment. The mayor of Boalmari Pouroshava said that this research should be undertaken under the ministry of planning. If the central government can provide initial investment for setting service-oriented revenue earning projects like a community center, special hospital etc. the revenue earning from these project will be helpful to bear the operating cost of Poroshavas. This effort will also help to reduce the dependability on the central government as well as the foreign donations.

The mayor of Manikgonj agreed fully to the establishment of revenue generating commercial projects to strengthen the capacity of service delivery. He also pointed that, it will helpful tool for generating employment for the local people and reduce the dependability on foreign donation and as well as central revenue. The mayor of Sreepur said that some small and medium industries may be set to reduce the unemployment problem in Bangladesh. He also fully agreed to the discussion mentioned above. The mayor of the Munshigonj also agreed with other participants' statements.

DISCUSSION AND RECOMMENDATIONS

In analyzing the qualitative secondary and primary data, it is found that there is a scope of setting Local Government Enterprises (LGEs) at urban and rural local government including other department transferred to the local government institutions in providing financial support for achieving SDGs. The analysis reveals some tentative suggestions. They are as follows.

1. According to the literature review, the election manifesto should be made in considering local plans for each and every constituency as per five years target of the SDGs by the political competitors in a democratic country which would be handed over to the ministry of planning to execute it by urban and local government and related other departments transferred to the local government. Because decentralized local government is not capable to make plans in considering 17 points Sustainable Development Goals (SDGs) due to enough financial support and necessary managerial knowledge. As per the primary data and the conceptual model, the ministry of finance can set suitable Local Government Enterprises (LGEs) as pilot project at each and every rural and urban local government to strengthen its capacity in providing necessary finance to the local government including other departments for investment to bring about economic development and social development in achieving SDGs under a private style skilled marketing management department at each local government unit. The newly established department of LGEs will take technical support from the related departments at local government unit (*Health Administration, Family Welfare Officer, Education Officer, Agriculture Officer, Public Health Engineer, Engineer (LGED), Life stake Officer, Fishery Officer, Social Service Officer, Women Affairs Officer, Youth Development Officer, Project Implementing Officer, Cooperative Officer, Urban Development Officer, Secondary, Madrasa, Technical Education, Environment & Forest , Other services*)

2. The ministry of planning will set 17 points of SDGs goals from top to bottom of local government institutions and other related departments of different ministries as per the election manifesto of the winning political organization.
3. The revenue income (profits) from the LGEs at local government would be deposited in the central government revenue (treasury) to increase the capacity of the Ministry of Finance in providing strong financial support to all local government institutions including other related departments and ministries.
4. Measuring 17 points Sustainable Development Goals (SDGs) yearly, identifying the gap and taking corrective actions instructed by the ministry of local government, the ministry of planning, and ministry of finance shall help achieve the goals by 2030.
5. A new Act should be made for SDGs oriented LGEs setting at local government institutions. On the other hand, as per the literature review data, political and administrative reform is also imperative to eliminate overlapping plans and programs between central and local government. In this connection centralized local government should be re-established to eliminate the vertical conflicts between Upazila Chairman, Member of Parliament (MP) in delivering political services as per the SDGs oriented local package of election manifesto (Datta,2017) in each and every constituency by using local government institution.

CONCLUSION

In this research, it is observed that local government institutions are not able to make plans and programs effectively due to lack of locally collected revenue fund and central government's grants as per the 17 points SDGs. Therefore, structural and legal changes are very imperative by which the central government and local government will make plans

and programs in achieving SDGs. It is also found that huge financial support is required for investment in infrastructural and economic development as well as social development in achieving SDGs by 2030. In fact, the ministry of finance is not fully capable to provide enough financial support to the local government including other related departments within the present revenue structure. In this situation, the central government can set fund-raising enterprises (LGEs) at each and every rural and urban local government institution by setting a separate department with an effective management system to provide needed financial support to all ministries and their departments especially the ministry of local government for setting 17 points goals for achieving SDGs. Because, it has double benefits; (1) Infrastructural and economic development, (2) social development within the Sustainable Development Goals (SDGs). In the conclusion, this world new concept in setting LGEs at rural and urban levels of local government in the context of Bangladesh would be the best model in achieving SDGs for other countries of the world to change the world especially in developing and under developing countries.

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THE EFFECTS OF EMPLOYEE ENGAGEMENT ON ORGANIZATIONAL COMMITMENT: A SURVEY ON JUNIOR EXECUTIVES WORKING IN THE PRIVATE SECTOR OF BANGLADESH

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ABSTRACT

The purpose of this study is to explore the relationship between the two dimensions of employee engagement (job engagement and organizational engagement) and the three dimensions of organizational commitment (affective commitment; normative commitment and continuance commitment). A total of 138 junior executives working in the private sector of Bangladesh have taken part in the survey during August-September 2017. Measures of central tendency, dispersion and association have been used as part of descriptive statistics while multiple linear regression analysis has been used to identify significant predictors of organizational commitment. According to the study, the respondents perceived level of engagement is found low but very close to moderate (mean=4.678 on a 7 point likert scale). The study also reveals that employee engagement has a positive effect on affective commitment as well as normative commitment. However, it is found that employee engagement has no significant effect on continuance commitment.

Keywords: Employee Engagement, Job Engagement, Organizational Engagement, Organizational Commitment, Affective Commitment, Normative Commitment, and Continuance Commitment.

INTRODUCTION

Private sector has been playing a significant role in the economic development of Bangladesh. The sector's contribution to growth became more prominent in the 1990s, with steady growth in the production and export of ready-made garments (RMG), textiles, knitwear, and frozen foods such as shrimp. The sector is driving innovation and growth in many other sectors which have traditionally been dominated by government institutions: Education, Power Generation, Airlines, Healthcare, Television, Infrastructure, etc. According to Bangladesh

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Bureau of Statistics (BBS), private investment's share in GDP increased significantly to 23.0 per cent in FY2016 compared to 22.1 per cent in FY2015 and is the highest in the last 21 years. However, even though the sector is growing rapidly, it is still facing a number of significant challenges in order to ensure high organizational commitment and hence higher productivity. The low level of employee engagement compared to other countries, which may lead to low organizational commitment, is one of the challenges many managers face in this regards.

After doing rigorous literature review, it is found that there are many studies in different countries which investigated the relationship between employee engagement (job engagement and organizational engagement) and organizational commitment (affective commitment, normative commitment and continuance commitment). As the private sector has been the main engine of economic growth and employment generation in Bangladesh, the researcher is inclined to conduct the research in order to measure the level of employee engagement as well as organizational commitment of junior executives in this sector.

LITERATURE REVIEW

Employee Engagement:

The term employee engagement has been defined by various researchers in numerous, often inconsistent, ways in the literature. The first researcher who conceptualized engagement at work was Kahn (1990), who described it as the "...harnessing of organization member's selves to their work roles: in engagement, people employ and express themselves physically, cognitively, emotionally and mentally during role performances". In other words, engaged employees put a lot of effort in their work because they identify with it. In its turn, engagement is assumed to produce positive outcomes, both at the individual level (personal growth and development) as well as at the organizational level (performance quality).

More easily, employee engagement can be understood as "willingness or enthusiasm that the employee holds to spend optional effort towards the job" (While Perrin, 2003). In a study about antecedent and consequences

of employee engagement, Saks (2006) defines it as the extent to which an individual is attentive and absorbed in the performance of his/her roles. He differentiated between two types of employee engagement: job engagement and organizational engagement. Job engagement refers to the extent to which an individual is actually fascinated in the performance of his/her own individual job role (pp: 600-619). Meanwhile, organizational engagement reflects “the extent to which an individual is psychologically present as a member of an organization”. The most commonly used definition of employee engagement used by academics and in organisations is mentioned in an article by Anitha (2014) where she says employee engagement is “the level of commitment and involvement an employee has towards their organisation and its values”. Thus, the higher a percentage of engaged employees an organisation has, the more success the organisation will experience (Sundaray, 2011).

Types of Employees based on Level of Engagement

According to the Gallup, the Consulting organization, there are mainly three levels of engagement of employees that occur in the organization. A brief description about the three is given below:

1. **Actively Disengaged Employees:** This is the first category of employees, who are unhappy and resentful and spreads unhappiness in the organization. Such employees are bad for the organization since they are always provoking and convincing the other employees to leave their jobs and move out of the organization. However, these employees last longer in the firm and remove the prospective employees whom they perceive will attain higher position or move to the next job level in the near future. They do so, to get ahead in their jobs by removing the potential candidates (Business Jargons, n.d.).
2. **Engaged Employees:** The engaged employees are those who work with full passion and are emotionally attached to the organization. They are innovative and provide new ideas to move the organization forward. Such employees are optimistic and spread positivity among

the co-workers. They personalize the goals and objectives and always work for the betterment of the organization (Business Jargons, n.d.).

3. **Not Engaged Employees:** This is the category in which majority of the employees in the organization fall. These are the ones who seek directions from their superior and do only that work which has been asked for. Such employees do put in their time, but not passion and energy into their work. They like to receive only one instruction at a time and lacks innovativeness. These employees can hold either a negative or positive attitude towards the organization (Business Jargons, n.d.).

Thus, an employee can fall into either of these categories depending on his emotional attachment to the firm. The emotional attachment refers to the strong emotional bond employee shares with the organization. In a research conducted by Gallup, it was found out that 16% of the employees working in organizations are actively disengaged, 28% are engaged and almost 56% are not engaged. Although these statistics cannot be generalized, but they hold true for majority of the cases and there may be deviation of 5% here and there for each category and not more.

How to improve Employee Engagement?

As proposed by Management Study Guide (MSG), managers should consider the following 3 C's of employee engagement:

1. **Career:** When individuals join an organization, they expect to build a career with it. If the top management and immediate managers spend dedicated time in carving out the careers of its employees, they will feel that they belong to the organization. They feel engaged when they receive support from the management in growing their careers.

2. **Competence:** Competence is all about the ability to grow. Regular workshops and training sessions must be held in order to help employees acquire a higher level of skills and competencies. The focus should be on developing for marketable skills.
3. **Care:** Sitting at the topmost, care is regarded the finest art of the managers by which they can make employees feel an indispensable part of their organization. The managers need to be empathetic and sensitive towards people and understand their personal problems. Showing small day-to-day caring gestures towards employees make them feel that they belong to the organization and organization belongs to them.

Organizational Commitment:

In organizational behavior and industrial and organizational psychology, organizational commitment is the individual's psychological attachment to the organization. As said by Nik Penhale Smith (2016), “organisational commitment is the bond employees experience with their organisation. Broadly speaking, employees who are committed to their organisation generally feel a connection with their organisation, feel that they fit in and, feel they understand the goals of the organisation. The added value of such employees is that they tend to be more determined in their work, show relatively high productivity and are more proactive in offering their support”.

Moreover, organizational commitment predicts work variables such as turnover, organizational citizenship behavior, and job performance. Some of the factors such as role stress, empowerment, job insecurity and employability, and distribution of leadership have been shown to be connected to a worker's sense of organizational commitment. Organizational commitment can be contrasted with other work-related attitudes, such as self-efficacy, defined as an employee's feelings about their job, and organizational identification, defined as the degree to which an employee experiences a 'sense of oneness' with their organization (Wikipedia, the free encyclopedia). As with other topics in organizational behavior, a wide variety of definitions and measures of

organizational commitment exist. Mowday et. al. (1979) underlined a concept named as attitudinal commitment. As an attitude, organizational commitment is most often defined as (1) a strong desire to remain a member of a particular organization; (2) a willingness to exert high levels of effort on behalf of the organization; and (3) a definite belief in, and acceptance of, the values and goals of the organization.

Another approach was that of Meyer and Allen (1991). This is one of the most widely recognized approaches in organizational commitment literature. They developed a three-component model of organizational commitment. Because of multidimensional nature of organizational commitment, there is growing support for a three-component model. The three dimensions are as follows:

Affective commitment

Affective commitment involves the employee's emotional attachment to, identification with, and involvement in the organization. Employees who are affectively committed to the organisation will probably carry on working for it because they want to (Meyer & Allen, 1991). Individuals who are dedicated at an emotional level usually remain with the organisation because they see their individual employment relationship as being in harmony with the goals and values of the organisation for which they are currently working. Affective commitment development involves identification with the organisation and internalisation of organisational principles and standards (Beck & Wilson, 2000).

Continuance commitment

Continuance commitment involves commitment based on the costs that the employee associates with leaving the organization. Because of the individual's awareness or consideration of expenses and threats linked to leaving the organisation, continuance commitment is considered to be calculative (Meyer & Allen, 1997). Individuals with continuance commitment remain with a specific organisation because of the money they as employees earn as a result of the time spent in the organisation, and not because they want to. This differs from affective commitment,

where individuals remain with an organisation because they want to and because they are familiar with the organisation and its principles.

Normative commitment

Normative commitment involves the employee's feelings of obligation to stay with the organization. The internalized idea of responsibility and commitment allows employees continued membership that is appreciated by a specific organization (Allen & Meyer, 1990). The normative element is seen as the commitment individuals consider morally appropriate regarding their remaining with a specific organization, irrespective of how much status improvement or fulfillment the organization provides the individual over the years (March & Mannari, 1977).

How to Improve Organizational Commitment?

Managers, can instill organizational commitment in employees by creating a desirable corporate culture, stimulating employees and rewarding both quality performance and company loyalty (Frenz, Roslyn, 2017). This can be done in the following ways:

- a. Observe the activities of other companies with higher levels of organizational commitment: Study businesses within the same industry to understand how they keep employees committed to their current employer. Determine which commitment methods may be appropriate for your business.
- b. Encourage employee innovation: Many employees enjoy working in a cutting-edge environment that encourages creative ideas and personal innovations. Employees who feel that they are contributors to the company's strategic direction may feel greater ownership of their work, which often leads to enhanced commitment.
- c. Communicate frequently: Most employees appreciate transparent management because it keeps them informed of executive decisions that may affect their jobs. Consistent corporate communication helps minimize negative rumors that would otherwise damage employee loyalty.

- d. Take steps to retain employees: Let them know their work is appreciated. Institute company loyalty programs. Visibly honor and promote employees who work hard and demonstrate commitment to the organization. Institute tenure timetables rewarding the commitment of long-standing employees.
- e. Use the organization’s history to install a desirable corporate culture: Some companies have a long history full of uplifting stories contributing to the company culture and encouraging continued loyalty. Tell these stories during employee orientation to instill commitment in new employees.
- f. Create a rich employment environment: Host employee events such as picnics and holiday parties. Make the company a fun place to work.

Review of Relevant Studies:

Author(s) & Article	Purpose of the Study	Key Findings
Owais Nazir, Jamid UI Islam (2017) “Enhancing organizational commitment and employee performance through employee engagement: An empirical check”	To examine the relationships between perceived organizational support, employee engagement, employee performance and affective commitment in the context of Indian higher education.	The study revealed a positive influence of perceived organizational support on employee performance and affective commitment. These relationships have also been found to be mediated by employee engagement.
Andrii Trofimov et al. (2016) “Organizational commitment factors: Role of employee work engagement”	To give a detailed analysis of such phenomena as work engagement and describes it as a significant factor of influence on the level of organizational commitment.	The study concluded that the more an employee of the organization feels himself engaged in work, the more level of organizational commitment s/he has.
Ambar Khalid et al. (2015) “Relationship between	To find out the relationship between organizational	The results indicated that there exists a positive significant relationship

<p>organizational commitment, employee engagement and career satisfaction: A case of University of Gujrat”</p>	<p>commitment, career satisfaction and employee engagement.</p>	<p>between organizational commitment, career satisfaction and employee engagement but organizational commitment was more closely related to employee engagement whereas career satisfaction was found to be significant but not in close relationship with organizational commitment.</p>
<p>Maha Ahmed Zaki Dajani (2015) “The Impact of Employee Engagement on Job Performance and Organisational Commitment in the Egyptian Banking Sector”</p>	<p>To identify the key drivers of employee engagement within the Egyptian context and to study the impact of employee engagement on job performance and organisational commitment based on social exchange theory.</p>	<p>The results indicated that employee engagement has significant impact on job performance, but less impact on organisational commitment.</p>
<p>Ali Abbaas Albdour and Altarawneh & Ikhlas I. (2014) “Employee Engagement and Organizational Commitment: Evidence from Jordan”</p>	<p>To investigate the relationship between the two measurements of employee engagement (job engagement and organizational engagement) and three key measurements of organizational commitment (affective commitment; continuance commitment; and normative commitment)</p>	<p>The study revealed that frontline employees who have high job engagement and organizational engagement will have high level of affective commitment and normative commitment. On the other hand, high employees’ job engagement can meaningfully affect employees’ continuance</p>

	in the context of Jordanian banking sector.	commitment.
Collins Badu Agyemang and Samuel Batchison Ofei (2013) “Employee work engagement and organizational commitment: A comparative study of private and public sector organizations in Ghana”	To investigate employee work engagement and organizational commitment using a comparative approach of private and public sector employees in Ghana.	The study revealed that: <ul style="list-style-type: none"> • There is a significant positive relationship between employee engagement and employee commitment. • Employees of private organizations have a higher level of employee engagement and organizational commitment than employees in public organizations, and long-tenured and short-tenured employees did not differ in commitment levels.
Stephen T. Bond (2013) “The influence of job satisfaction, organizational commitment, and employee engagement on intent to leave among Public school Teachers in South Louisiana”	To determine the influence of job satisfaction, organizational commitment, and employee engagement on the intent to leave of public school teachers in South Louisiana.	Findings indicate that the teachers were generally satisfied with their overall jobs. Negative correlations were found between scores for each of the three psychological measures of job in general, organizational commitment, and employee engagement; and Intent to Leave.
Wai Kwan L. and Daniel Cernas O. (2011)	To measure the effect of employee engagement on continuance and	The study reveals that while engagement has a non-significant positive

“Effect of Employee Engagement on Continuance and Normative Commitment to the Organization”	normative commitment to the organization	association with continuance commitment, it has a positive association with normative commitment.
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OBJECTIVE

The major objective of this study is to gain better understanding of the effects of employee engagement on organizational commitment, especially among the junior executives working in the private sector of Bangladesh. In order to achieve the major objective, the following specific objectives are formulated:

1. To measure the level of job engagement among junior executives working in the private sector;
2. To measure the level of organizational engagement among junior executives working in the private sector;
3. To measure the level of affective commitment among junior executives working in the private sector;
4. To measure the level of normative commitment among junior executives working in the private sector; and
5. To measure the level of continuance commitment among junior executives working in the private sector.

HYPOTHESIS:

Several studies indicate that there is a positive relationship between employee engagement and affective commitment (e.g., Richardsen et al., 2006; Llorens et al., 2006; Hakanen et al., 2006; Saks, 2006; Demerouti et al., 2001; Maslach et al., 2001; Brown and Leigh, 1996), but none has looked at engagement’s impact on the other two components of organizational commitment (continuance commitment and normative commitment). However, a study conducted in Jordan by Ali Abbaas Albdour and Ikhlas I. Altarawneh (2014) indicate that job engagement is

positively related to affective commitment and normative commitment and negatively related to continuance commitment. Therefore, attempts have been made to test the following hypothesizes.

H₁: Job engagement is significantly positively related to affective commitment;

H₂: Job engagement is significantly positively related to normative commitment;

H₃: Job engagement is significantly negatively related to continuance commitment;

H₄: Organizational engagement is significantly positively related to affective commitment;

H₅: Organizational engagement is significantly positively related to normative commitment; and

H₆: Organizational engagement is significantly negatively related to continuance commitment.

METHODOLOGY

The research approach followed in this study is empirical and quantitative, where a cross-sectional field survey have generated the primary research data for this study. The survey is conducted during August - September 2017 using two sets of structured questionnaires. Two sets of structured questionnaires are personally administered to a conveniently selected 188 junior executives' working for different private companies in Dhaka, Narayanganj and Gazipur cities. All of them are the participants of the Post-Graduate Diploma in Human Resource Management course offered by the Bangladesh Institute of Management, Dhaka. Among them, a total of 138 complete responses (73 percent) were received, of which, 92 are male and the others are female. Respondents' average age is 29.26 years and average length of service is 3.24 years. Measures of central tendency, dispersion and association (i.e., mean, standard deviation and correlation) have been used as part of descriptive statistics while multiple linear regression analysis has been used to identify significant predictors of organizational

commitment. Statistical software- the Statistical Package for Social Sciences (SPSS) is used to analyse the data.

Measurement Instrument

A. Employee Engagement Scale

The two dimensions of employee engagement are measured through Saks' (2006) job engagement and organizational engagement scales. The job engagement scale consists of five items, such as 'I really "throw" myself into my job' and 'sometimes I am so into my job that I lose track of time'. On the other hand, the organizational engagement scale consists of six items, such as 'Being a member of this organization is very captivating' and 'Being a member of this organization makes me come "alive."'.

B. Organizational commitment Scale

The three dimensions of organizational commitment- affective, continuance and normative- are measured through Allen and Meyer's (1990) organizational commitment scale. The scale consists of 15 items, five per dimension. The affective commitment dimension consists of such items as 'I would be very happy to spend the rest of my career with this organization' and 'I enjoy discussing my organization with people outside of it'; the continuance commitment dimension consists of such items as 'It would not be too costly for me to leave my organization now' and 'I feel that I have too few options to consider leaving this organization'; and the normative commitment scale consists of such items as 'One of the major reasons I continue to work for this organizations that I believe that loyalty is important and therefore, feel a sense of moral obligation to remain' As like as employee engagement survey, each participant is asked to indicate the extent to which he/she agree with statements In both the cases, respondents were requested to indicate the extent to which he/she agree with the statements on a sevenpoint Likert type scale with anchors (1) strongly disagree to (7) strongly agree.

RESULTS /FINDINGS

A. Level of Employee Engagement

The level of employee engagement and organizational commitment of the respondents have been explored by examining the mean and standard deviation. For a better understanding, the mean values of all variables are categorized into three levels -low, moderate and high. Mean values of less than 3.50 are categorized as “low”; values between 3.50 and less than 5.00 are categorized as “moderate”; and values of 5.0 or higher are categorized as “high” level of responses. The results are presented below:

Table 1: Respondents’ Level of Employee Engagement

Dimensions of Employee Engagement	Perceived Engagement	
	Mean	Std. Deviation
Job Engagement	4.847	.297
Organizational Engagement	4.510	.233
Average Employee Engagement	4.678	0.265

The above table reveals that the level of job engagement (mean= 4.847) is higher than organizational engagement (mean = 4.510) among the surveyed respondents. On average, overall employee engagement is found low but very close to moderate (mean= 4.6789) among the junior executives employed in the private sector of Bangladesh.

Table 2: Respondents’ Level of Organizational Commitment

Components of Organizational Commitment	Perceived Organizational Commitment	
	Mean	Std. Deviation
Affective Commitment	4.819	.391
Normative Commitment	4.192	.328
Continuance Commitment	3.033	.247
Average Organizational Commitment	4.015	0.322

The above table shows that the junior executives’ overall organizational commitment is slightly above the low level (mean=4.015). However, varying degrees of organizational commitment are expressed with

different dimensions. The highest mean score is expressed with “affective commitment” (mean=4.819), while the lowest level of commitment is marked with “continuance component (mean=3.033).

B. Relationship between Employee Engagement and Organizational Commitment

In order to test the hypothesis relating to the relationship between dimensions of Employee Engagement and the dimensions of Organizational Commitment, the Pearson’s correlation has been used. The correlation coefficients are given below in Table 3.

Table 3: Correlation between Employee Engagement and Organizational Commitment

	JE	OE	AC	NC	CC
JE	1				
OE	.504**	1			
AC	.544**	.498**	1		
NC	.226**	.335**	.197*	1	
CC	-.002	-.034	-.090	.062	1

** . Correlation is significant at the 0.01 level (2-tailed).

Note: JE (job engagement), OE (organizational engagement), AC (affective commitment), CC (continuance commitment) and NC (normative commitment). The above table shows that job engagement is significantly positively correlated with affective commitment ($r=0.544$) as well as normative commitment (0. 226). Similarly, organizational commitment is also significantly correlated with affective commitment ($r=0.498$) as well as normative commitment (0.335). However, no significant negative relationship has been found between job engagement and continuance commitment (-0.002) as well as job engagement and continuance commitment (-0. 034).

The results accept the hypotheses- 1, 2, 3 and 4. However, the hypotheses 5 and 6 are rejected in this study. These findings are consistent with the results of prior studies, particularly in Ali Abbaas Albdour and Ikhlas I. Altarawneh (2014) and Wai Kwan Lau (2011).

C. Multiple Regression Analysis

With the purpose of determining the impact of job engagement and organizational engagement on different dimensions of organizational commitment, the following three regression models have been developed:

Model-1: $\text{Affective Commitment} = a + b_1 \text{Job Engagement} + b_2 \text{Organizational Engagement} + \epsilon$

Model-2: $\text{Normative Commitment} = a + b_1 \text{Job Engagement} + b_2 \text{Organizational Engagement} + \epsilon$

Model-3: $\text{Continuance Commitment} = a + b_1 \text{Job Engagement} + b_2 \text{Organizational Engagement} + \epsilon$

Each of the above regression models have been analyzed using statistical software SPSS. The results of the multiple linear regression analysis for each model are given below:

D. Summaries of Regression Analysis

Using SPSS, multiple linear regression analysis have been done separately for the above mentioned three regression models. Findings of the regression analysis can be summarized as follows:

Table 4: Model Summary

Model	Dependent Variable	R	R Square	Adjusted R Square	F	Sig.
Model-1	Affective Commitment	0.63	.392	.388	32.27	.00
Model-2	Normative Commitment	0.34	.116	.103	8.90	.00
Model-3	Continuance Commitment	0.04	.001	.013	.098	.91

a. Predictors: (Constant), Job Engagement, Organizational Engagement
Table-4 represents that:

1. In the case of Model-1, the value of Adjusted R Square (R^2) is 0.388. Therefore, it can be concluded that 38.8% of the variation in the normative commitment is explained by the dimensions of employee

engagement, i.e. job engagement and organizational engagement, while the rest 61.2 % is influenced by other factors that have not been examined. Further, the P-value ($<.01$) for the F-test points out that the overall model is fit. This means at least one of the independent variables is significant in the model-1.

2. In the case of Model-2, the value of Adjusted R Square (R^2) is 0.103. Therefore, it can be concluded that 10.3% of the variation in the normative commitment is explained by the dimensions of employee engagement, i.e. job engagement and organizational engagement, while the rest 89.7% is influenced by other factors that have not been examined. Further, the P-value ($<.01$) for the F-test indicates that the overall model is fit. This means at least one of the independent variables is significant in the model-2.
3. In case of Model-3, the value of Adjusted R Square (R^2) is 0.013. Therefore, it can be concluded that very insignificant (1%) portion of the variation in the continuance commitment is explained by the dimensions of employee engagement, i.e. job engagement and organizational engagement, while the rest 99.9% is influenced by other factors that have not been examined. Accordingly, the P-value ($>.01$ or even $.10$) for the F-test indicates that the model-3 has no predictive capability.

Table 5: Coefficients

Model	Variables	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Model-1 ^a	(Constant)	1.810	.388		4.66	.000
	Job Engagement	.492	.073	.526	9.52	.000
	Organizational Engagement	.426	.093	.432	7.83	.000
Model-2 ^b	(Constant)	1.898	.553		3.43	.001
	Job Engagement	.184	.104	.196	2.81	.017
	Organizational Engagement	.418	.132	.296	3.16	.002
Model	Variables	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
Model-3 ^c	(Constant)	3.162	.442		7.15	.000
	Job Engagement	-.017	.083	.020	.20	.840
	Organizational Engagement	-.047	.106	-.044	-.44	.660

a. Dependent Variable: Affective Commitment

b. Dependent Variable: Normative Commitment

c. Dependent Variable: Continuance Commitment

Table-5 shows the coefficients of the regression line (B values under unstandardized coefficients column) for the regression models, which can be interpreted as follows:

In case of Model-1:

It can be said that both the dimensions of employee engagement have a significant positive effect on affective commitment ($p < .000$). Based on the B values under un-standardized coefficients column, we can therefore draw the following inferences:

- a. A one- unit increase in job engagement will lead to a 0.692 unit increase in affective commitment.

- b. A one- unit increase in organizational engagement will lead to a 0.726 unit increase in affective commitment.

Furthermore, based on the beta values, Organizational Engagement ($\beta = 0.305$) seemed to have the strongest effect on affective commitment followed by job engagement ($\beta = 0.290$, $p < .01$).

In case of Model-2:

It can be stated that both the dimensions of employee engagement have a significant positive effect on affective commitment ($p < .000$). Based on the B values under un-standardized coefficients column, we can therefore draw the following inferences:

- a. A one- unit increase in job engagement will lead to a 0.084 unit increase in affective commitment.
- b. A one- unit increase in organizational engagement will lead to a 0.418 unit increase in affective commitment.

Furthermore, based on the beta values, Organizational Engagement ($\beta = 0.296$) seemed to have the strongest effect on affective commitment followed by job engagement ($\beta = 0.076$, $p < .01$).

In case of Model-3:

Based on the P-value, it can be said that both the dimensions of employee engagement have negative but statistically insignificant effect on continuance commitment.

Thus we can conclude that employee engagement positively affects two dimensions of organizational commitment, i.e. affective commitment and normative commitment. But there is no significant impact of employee engagement on continuance commitment.

MANAGERIAL IMPLICATIONS AND CONCLUSION

The findings of the study indicate that both the dimensions of employee engagement (job engagement and organizational engagement) are

positively and significantly related to the affective and normative dimensions of organizational commitment. However, unfortunately, the junior executives working in the private sector of Bangladesh perceived a low but close to moderate level of employee engagement showing almost the same level of commitment towards their organizations. These findings may be a cause of concern for the management in the private sector of Bangladesh. Therefore, innovative and adaptable managerial interventions need to be taken to improve employee engagement and to make stronger their organizational commitment.

In managerial implication, this study has provided useful information to the management of the private sector. With this information, the managements will be able to know how to increase the organizational commitment of employees. To achieve this, urgent and concrete strategies must focus on the development of effective job engagement as well as organizational engagement. It is also required to contribute to the development of organizational commitment by conducting survey on employee engagement.

As a final point, the present study makes useful additions to the current knowledge base by examining the impact of employee engagement on organizational commitment. However, there are some limitations to this study. It is due to time constraints and limited data available. One other limitation of this study is that it covered only three cities in Bangladesh. Thus, future studies should use a less restricted sample to extend the applicability of the findings of this study. Moreover, to get a more perfect result, studies may be undertaken to measure the level of employee engagement and organizational commitment in different industries.

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MEASUREMENT OF JOB SATISFACTION OF GOVERNMENT BANKERS: AN EMPIRICAL STUDY ON SONALI BANK LTD

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ABSTRACT

The term Job Satisfaction is widely used in Human Resource Management. Job satisfaction is important to attract and retain talent workforce. Organization can ensure a competitive advantage over the key rivals through confirming the satisfaction of employees towards job. Organization need to meet the expectations of employees' which shall ensure their job satisfaction. The purpose of the study is to measure the job satisfaction in government bank employees' of Bangladesh basing on the Sonali Bank Limited. This study is a quantitative analysis. Both primary and secondary data have been used to conduct the study. The targeted population of the study is the employees of Sonali Bank Ltd. The sample size of the study is 100. The research has been conducted basing on four (4) hypotheses. The questionnaire has been prepared to justify the hypotheses. Different statistical tools have been used to evaluate the response of employees. MS-Excel-2007 has been used to analyze the data and find out the result. 'Z' test has been used to test the hypotheses. The study found that the employees of government bank are satisfied towards their job basing on the Sonali Bank Limited. The study shows that, the bank has still some limitations to satisfy the employees' needs. Finally, some recommendations are given to overcome the limitations of the bank.

Keywords: Human Resources Management (HRM), Job Satisfaction, Work Environment, Job Security.

INTRODUCTION

In today's competitive business era, HRM practices and Organizational commitment have been identified as the basis for gaining sustained competitive advantages, particularly for organization operating in challenging and changing international competitive environments (Buck, et al., 2002). Dramatic advances of Information and Communication Technology (ICT), changing mix and personal values of the workforce, emergence of the knowledge economy and increasing global competition have created enormous challenges on organizations (Majumder, 2012). Efficient Human Resources can ensure the utmost satisfaction of employees' towards their job which shall help organization to cope up with different challenges.

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Job satisfaction is the positive feelings of employees towards the organization. It is the measurement of employees' satisfaction on their job. Job satisfaction motivates employees to be with the organization for long run and also acts as a part of the organization as family. Every business is a people of business. People are the hearts of every successful business that make things happen. Job satisfaction is a pleasurable or positive emotional state resulting from the appraisal of one's job and job experiences.

When people speak of employee attitudes, they often mean job satisfaction (Robbins, 2003). Human capital is its most valuable resource, which provides the solid foundation needed to build long-term profitability and ongoing success of an organization. If people of the organization are satisfied towards their job or work than it helps organization to achieve their targeted goal. Job performance is directly related with the job satisfaction. Job satisfaction plays an important role to reduce employees' turnover and absenteeism (Nabi, et al., 2016).

Job satisfaction depends on different issues which may be related with financial side or may not be like; job security, working conditions, working environment, promotion facility, career advancement, recognition of good work, relationship with co-workers, responsibility sharing, salary, medical and housing facility, fair recruitment, selection & promotion practices, training & development (T&D) practices, company goodwill & reputation, management style, compensation package, logistical support etc.

On the other hand, dramatic advances of information and communication technology (ICT) are changing mix and personal values of the workforce. The emergence of the ICT and increasing global competition has created enormous challenges on organizations. To cope up with the challenges efficiently, human resource has been considered as one of the most important factor in today's hypercompetitive market place. Due to lack of efficient Human Resources Management (HRM) practices, it reduces employees' satisfaction towards their organization and

ultimately that affects their commitment to the organization. Job satisfaction of employees has received considerable attention to researchers and practitioners not only in the field of business studies but also in psychology. One of the reasons of this popularity is that, the job satisfaction is assumed to have major implications as it is a multidisciplinary and everlasting relevant construct covering all professions, work, jobs and contexts (Spagnoli, Caetano, & Santos, 2012).

Banking is a highly competitive sector all over the world. This sector has been witnessed a rapid growth in the last decade. Because of this growth, the demand for experienced and skilled Human Resources (HR) has increased in manifold (Mizan, et al., 2013). To maintain efficiency and competitive service, banks must retain experienced and capable personnel. Attracting new competent people and retention of existing efficient personnel can give a distinguished position in competitive environment (Ahmad, et al., 2003).

In Bangladesh there are 5 types of banks which are operating. These are State-owned commercial banks, Private commercial banks, Islamic commercial banks, Foreign commercial banks and Specialized banks. There are four (4) state-owned commercial banks, thirty one (31) private commercial banks, eight (8) Islamic commercial banks, nine (9) foreign commercial banks and nine (9) specialized banks in Bangladesh which are working under Bangladesh Bank (BB, 2017).

Sonali Bank Ltd. is the largest Nationalized Commercial Bank of Bangladesh which was established by the Nationalization Order 1972 (Presidential Order- 26). The bank was formed by the amalgamation and nationalization of National Bank of Pakistan, Bank of Bahawalpur and Premier Bank which were located in East Pakistan until the year of 1971. This bank is fully state owned institution. At present, the bank has a total of 1211 branches. The branches of the bank are located all over the country. Location-wise total branch of the bank is presented bellow;

Sl. No.	Location of the Branches		Quantity of the Branches
1.	a)	Local Branches	1209
	b)	Foreign Branches (The branches are in U.K)	02
	Total Number of Branches		1211
	i)	Rural Branches	743
	ii)	Urban Branches	466
2.	Regional Offices		16
3.	Principal Offices		46
4.	No. of G.M Offices		11
5.	Representative Offices (These representative offices are in Jeddah, KSA, Riyadh, KSA and Kuwait)		03
6.	Correspondence offices		639

A total of 22,446 employees are working into this bank to operate the bank's functions. After the independence of Bangladesh, the bank plays the vital role to ensure the economic sustainability of the country (SBL, 2017).

In recent years, the young generation of Bangladesh is widely interested to build their career in banking sector. In that case, major part of the young generation chose the government bank as their career due to different benefits. Now, it is the demand of time to investigate the job satisfaction of government bankers of Bangladesh. This study has conducted basically to know the status of job satisfaction of government bankers of Bangladesh.

The significant factors which attract young generations towards banking sector are job security, participation in decision making, attitude of top management, available leave facilities, salary increment, specific time for family, flexible working hour, promotion opportunity etc. This opportunities make the job is more desirable to female employees in particular (Saif, et al., 2016). In the era of globalization, the banking service has also changed. The effects of globalization brought about significant changes in service sector of Bangladesh which has created a

good competition among the public, foreign and private banks in Bangladesh (Ali, 2010).

LITERATURE REVIEW

Job satisfaction has been widely studied over the years. Different research has done to measure employee job satisfaction from different point of view. Employee job satisfaction has a direct relation with organization success.

Human Resource Management (HRM)

Human Resource is a critical organizational resource that helps an organization to stay in competitive environment. It is one of the important areas that influence a number of employees' attitudes and behavior such as intent to leave, levels of job satisfaction, and organizational commitment (Lee, et al., 2000). There are nine important HRM practices such as decentralization, compensation, participation, training, development, employment security, social interactions, management style, communications, and performance appraisal (Buck, et al., 2002). People, not buildings, make a company successful (DeCenzo, 2009). The most significant resource of the organizations is Human Resource (HR). Human resource has become the pre-requisite for success of any organization (Moyeen, et al., 2001). Organizational commitment is significantly affected by HRM practices such as training and development, compensation, welfare activities etc. which are associated with superior organizational performance. Proper HRM practices can help the retention of knowledgeable and skilled employees (Lamba, et al., 2013).

Job Satisfaction

Job satisfaction is an experience which has various aspects. The most significant aspects are those, which are relevant to working conditions and the nature of work (Davis, et al., 1999). Job satisfaction can be explained as the fulfillment of five (5) specific needs such as psychological needs, safety and security needs, acceptance needs, self

esteem needs, and self actualization needs (Maslow, 1954). Job satisfaction also can be defined as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. Edwin A. Locke's has developed the Range of Affect Theory. The main premise of this theory is that satisfaction is determined by a discrepancy between what one wants in a job and what one has in a job (Locke, 1976). An early form of job satisfaction theory held that all elements of one's work environment contributed in additive fashion to the total job satisfaction which one realized. Job satisfaction also can be defined as in terms of how people feel about their jobs and different aspects of their job (Spector, 1997). HRM practices had a significant impact on employee attitudes and employees' job satisfaction, organizational commitment and organizational fairness (Edger, et al., 2005).

Importance of Job Satisfaction

Job satisfaction has been found to have an important, albeit indirect, influence on organizational productivity by reducing costs associated with abject employee behaviors such as absenteeism and turnover (Farrell, et al., 1988). It is assumed that the benefits that employees receive from their organization influence the effort, skill, and creativity that employees are willing to provide their employer (Wright, et al., 2003). In today's work field, happy workers are productive workers and productive workers are likely to be happy. Employee job satisfaction is essential to face the dynamic and ever-increasing challenges of maintaining productivity of the organization by keeping their workforce constantly engaged and motivated (Singh, 2013).

Consequently, study on employees' job satisfaction is getting increased attention than before. But among all the previous studies little could be known about the satisfaction of knowledge employees, especially in the public sectors. Knowledge employees refer to "intellectual workers who enrich human knowledge both as creators and as researchers, they apply it as practitioners, they spread it as teachers and they share it with others as experts or advisers. They produce judgments, reasoning, theories, findings, conclusions, advice and arguments for and against and so on

(Cuvillier, 1974). Participation of employees in decision making process also positively motivates employees' job satisfaction (Lee, et al., 1989).

Factors of Job Satisfaction

Job satisfaction is not only depends on the nature of the job but also depends on some other factors. Job satisfaction comes from two (2) factors. These are motivational factors and maintenance factors. Here, motivational factors are the recognition, responsibility, achievement, growth, challenging work etc. On the other hand, maintenance factors are the status, interpersonal relationship, quality of supervisions, company policy and administration, working conditions, job security, salary etc. (Herzberg, 1952). He also coined the term 'job enrichment', a technique which grew out of the hygiene-motivation theory. It involved including motivators in the design of jobs. He also invented the acronym KITA (Kick In The Ass) to explain personnel practices such as wage increases, fringe benefits and job participation which were developed as attempts to instill motivation but are only short-term solutions (Herzberg, 1968).

Work Environment

Work environment is an important factor which influences the employee job satisfaction. Study found that, politics-free work environment is significantly co-related to job satisfaction (Pathik, et al., 1997). In case of job satisfaction, work environment, relation with colleagues, recognition, promotional aspects and autonomy in work is more important than participation, job security and responsibility (Hossain et al., 1995). The work environment can implicate the social relation at workplace and also maintain the relationship between colleague, supervisor and the organization. It describes the neighboring circumstances in which employees are working together. A satisfied or happy and hardworking employee is the biggest asset of any organization (Jain et al., 2014). There are also eight factors which make people satisfied at workplace. These are better working environment, officer's view, worked efficiently, present work, improving interpersonal

relationship, bank treatments, colleagues and challenging work (Nimalathasan, 2012).

Employee Relationship

Society has entered a new era in the relationship between organizations and their employees. In this new era, people are the primary source for a company's competitive advantage and organizational prosperity. The survival of the organization depends on how employees are treated (Lawler, 2005).

Employee Training

Every organization needs well-adjusted, trained, and experienced people to perform its activities effectively and efficiently. Today's business environment has become complex. The training for employees' education is becoming a diver for adjusting dynamic change in organizational interfaces (Rahman, 2014). Incentive programmes can positively affect motivation, performance and interest within an organization. While a little more problematic, team-based incentives are given to employees can also encourage and support a range of positive outcomes (Milne, 2007). Salary, efficiency in work, fringe supervision, and co-worker relation are the most important factors contributing to the job satisfaction (Parvin, 2011).

METHODOLOGY

Problem Identification

In Bangladesh, the government bank sector is facing different types of challenges day by day. To meet these challenges bank need to ensure an efficient workforce. Otherwise, government bank shall be deprived from attracting and retaining efficient workforce. Especially over the last couple of years, there is a vast expansion of private bank in Bangladesh. The private banks are offering different types of benefits to their employees which attract the young generation to build their career in the sector. This expansion makes a challenge to government bank. Still the government bank is more far from the different attributes and features

from private bank. Here, this research has been conducted to know whether the government banks' employees are satisfied with the different initiatives taken to satisfying their needs basing on Sonali Bank Limited.

Nature of the Research

This paper is basically a quantitative analysis to measure the job satisfaction of the government bankers basing on the Sonali bank's employees opinion.

Research Question

The study has been conducted to explore the answer of the following questions:

- i. Are the employees of the government bankers satisfied towards their job?
- ii. What are the factor(s) that/those satisfy employees most?
- iii. What are the limitation(s) of the government bank to satisfy the employees?
- iv. What type of initiatives can be taken to overcome the limitation(s)?

Hypothesis Development

The study has been conducted on the basis of following hypotheses;

H_1 : Employees have job security.

H_2 : Bank provides necessary logistical support.

H_3 : The employees are satisfied with the working conditions.

H_4 : Employees are satisfied about the financial facilities of the bank.

Source of Data

Basically, this paper has been prepared basing on both primary and secondary data. Data has been collected through a structured questionnaire from the primary source. Different books, journals, websites, articles etc have also been used as the secondary source of information. Primary data has been collected from the employees of Sonali Bank Limited.

Population, Sample

In this study, the government bankers are considered as the population. Among the four government banks, the Sonali Bank Limited has been considered as the sample bank. The sample respondent size of the study has been considered as 100. Purposive technique of sampling has been used to determine the sample size. Sample respondent has been taken randomly.

Questionnaire Development and Data Collection

This study has been conducted basing on primary data. Data has been collected through a questionnaire. The study has been conducted basing on four (4) hypotheses. The questionnaire has been prepared to justify the hypotheses. The questionnaire has been prepared with five options like strongly satisfied, satisfied, neutral, dissatisfied and strongly dissatisfied. A total of six month has been used to conduct the study.

Data Analysis Technique

Different statistical tools and techniques like hypotheses, populations, sampling etc. have been used to analyses the collected data. MS-Excel 2007 has been used to analyze the data. One tail 'Z' test is used to test the hypotheses. Here, the outcome is calculated by multiplying the frequency (survey figure) with point assigned from 1 to 5 that represents strongly satisfied=5, satisfied=4, neutral=3, dissatisfied=2 and strongly dissatisfied=1. The weighted average is calculated by dividing the total outcome with the sample size. Decision is taken by comparing the weighted average value with standard value. Standard value is calculated by dividing the total point with total options and the output is added with standard error. Standard deviation (σ) has been found by applying the formula \sqrt{npq} (since Binomial Variance= npq) where, n= total sample, p=degree of probability, q=degree of non-probability which has been calculated by 1-p. Standard error ($\sigma_{\bar{x}}$) of the mean for infinite population has been calculated by applying the formula σ/\sqrt{n} . After analysis of the data, the hypotheses have been tested by using one tail 'Z-test'. Hypotheses has been considered as accepted when $\mu \leq$ of standard

value and rejected when $\mu <$ of standard value. One tail 'Z' test is done at 95% level of significance.

Limitations of the Study

Basically, employee job satisfaction depends on different factors. This paper has been prepared basing on specific four (4) hypotheses which are directly related with employee job satisfaction. There are also some other factors which are also needed to satisfy the employee towards job. Moreover, the factor of job satisfaction depends on time, place, and situation. In that case, to get current scenario regarding job satisfaction, it requires conducting research work basing on society trend, time, place and situation. On the other hand, there are four government banks in Bangladesh. This paper has been prepared basing only on Sonali Bank Limited. To get more accurate result about the job satisfaction of government bankers, it requires taking sample from each bank.

OBJECTIVE OF THE STUDY

The prime objective of this research is to investigate whether the government bankers are satisfied on their job or not basing on Sonali Bank Limited. Besides the prime objective, the research has also some supportive objectives. These objectives are as follows;

- i. To identify the factor(s) that can give employee most satisfaction.
- ii. To identify the limitation(s) of the government banks while satisfying employee towards job.
- iii. To provide some guidelines to overcome the weaknesses while satisfying employee towards job.

ANALYSIS AND FINDINGS

Job satisfaction never depends on a particular issue rather it depends on different issues. This study has been conducted to measure whether the government bankers are satisfied towards their job basing on Sonali

Bank Ltd. The study has been conducted from four hypotheses. The analysis of the collected data is presented below:

Job Security

Opinion	Frequency	Response on Variable 1	Response on Variable 2	Variable 1 * Point	Variable 2 * Point
SA	5	42	40	210	200
A	4	26	28	104	112
N	3	12	16	36	48
D	2	12	16	24	32
SD	1	8	0	8	0
Total	15	100	100	382	392
Standard Value	3.5	Average Value		3.87	

Figure: Calculated table about the response on job security

Outcome = Frequency (Survey Figure) * Point Assigned

Weight Average = Total Outcome (Variable 1 * Point + Variable 2 * Point) / Sample Size = $774/200 = 3.87$ which is higher than standard value. So, the respondents are satisfied with the job security.

Hypothesis Test

Hypothesis₁

Null Hypothesis $H_0: \mu \geq 3.5$

Alternative Hypothesis $H_1: \mu < 3.50$

At 95% level of significance, one tail Z test is done in the following table:

Confidence Level	Z Value	Z Observed Value	Decision
95%	1.64	0.37	Accepted

Since the calculated value (0.37) is higher than the table value (at 95% level of significance is 1.64 for one tail), the Null hypothesis is accepted. It can be concluded that employees are satisfied about the job security.

Logistical Support

Opinion	Frequency	Response on Variable 1	Response on Variable 2	Response on Variable 3	Response on Variable 4	Variable 1 * Point	Variable 2 * Point	Variable 3 * Point	Variable 4 * Point
SA	5	8	6	10	4	40	30	50	20
A	4	68	40	60	50	272	160	240	200
N	3	24	50	28	42	72	150	84	126
D	2	0	4	2	4	0	8	4	8
SD	1	0	0	0	0	0	0	0	0
Total	15	100	100	100	100	384	348	378	354
Standard Value	3.5	Average Value				3.66			

Figure: Calculated table about the response on logistical support

Outcome = Frequency (Survey Figure) * Point Assigned

Weight Average = Total Outcome (Variable 1 * Point + Variable 2 * Point + Variable 3 * Point + Variable 4 * Point) / Sample Size = 1464 / 400 = 3.66 which is higher than standard value. So, the respondents are satisfied with the logistical support.

Hypothesis Test

Hypothesis₂

Null Hypothesis $H_0: \mu \geq 3.5$

Alternative Hypothesis $H_1: \mu < 3.50$

At 95% level of significance, one tail Z test is done in the following table:

Confidence Level	Z Value	Z Observed Value	Decision
95%	1.64	0.16	Accepted

Since the calculated value (0.16) is higher than the table value (at 95% level of significance is 1.64 for one tail), the Null hypothesis is accepted. It can be concluded that employees are satisfied about the logistical support of the bank.

Working conditions

Opinion	Frequency	Response on Variable 1	Response on Variable 2	Response on Variable 3	Variable 1 * Point	Variable 2 * Point	Variable 3 * Point
SS	5	20	18	36	100	90	180
S	4	36	36	28	144	144	112
N	3	44	40	20	132	120	60
D	2	0	6	10	0	12	20
SD	1	0	0	6	0	0	6
Total	15	100	100	100	376	366	378
Standard Value	3.5	Calculated Average Value			3.73		

Figure: Calculated table about the response on working conditions

Outcome = Frequency (Survey Figure) * Point Assigned Weight Average = Total Outcome (Variable 1 * Point + Variable 2 * Point + Variable 3 * Point) / Sample Size = $1120/300 = 3.73$ which is higher than standard value. So, the respondents are satisfied with the working conditions.

Hypothesis Test

Hypothesis₃

Null Hypothesis $H_0: \mu \geq 3.5$

Alternative Hypothesis $H_1: \mu < 3.50$

At 95% level of significance, one tail Z test is done in the following table:

Confidence Level	Z Value	Z Observed Value	Decision
95%	1.64	0.23	Accepted

Since the calculated value (0.23) is higher than the table value (at 95% level of significance is 1.64 for one tail), the Null hypothesis is accepted. It can be concluded that employees are satisfied about the working conditions of the bank.

Financial Facilities

Opinion	Frequency	Response on Variable 1	Response on Variable 2	Response on Variable 3	Variable 1 * Point	Variable 2 * Point	Variable 3 * Point
SA	5	0	0	4	0	0	20
A	4	28	12	30	112	48	120
N	3	44	42	38	132	126	114
D	2	28	42	24	56	84	48
SD	1	0	4	4	0	4	4
Total	15	100	100	100	300	262	306
Standard Value	3.5	Average Value			2.89		

Figure: Calculated table about the response on working conditions

Outcome = Frequency (Survey Figure) * Point Assigned
 Average = Total Outcome (Variable 1 * Point + Variable 2 * Point + Variable 3 * Point) / Sample Size = $868/300 = 2.89$ which is lower than standard value. So, the respondents are not satisfied with the financial facilities.

Hypothesis Test

Hypothesis₄

Null Hypothesis $H_0: \mu \geq 3.5$

Alternative Hypothesis $H_1: \mu < 3.50$

At 95% level of significance, one tail Z test is done in the following table:

Confidence Level	Z Value	Z Observed Value	Decision
95%	-1.64	-0.61	Rejected

Since the calculated value (-0.61) is lower than the table value (at 95% level of significance is 1.64 for one tail), the Null hypothesis is rejected. It can be concluded that employees are not satisfied about the financial facilities of the bank.

Standard Error Calculation

Prerequisites

Data analysis, interpretation and findings:

$$\begin{aligned}\text{Standard Deviation, } \sigma &= \sqrt{npq} \quad (\text{since Binomial Variance} = npq) \\ &= \sqrt{100 * 0.5 * 0.5} \\ &= 5\end{aligned}$$

Where

$$\begin{aligned}n &= 100 \\ p &= 0.50 \\ q &= 1-p \\ &= 1-0.5 \\ &= 0.5\end{aligned}$$

Standard error of the mean for infinite population

$$\begin{aligned}\sigma_{\bar{x}} &= \sigma / \sqrt{n} \\ &= 5 / \sqrt{100} \\ &= 0.50\end{aligned}$$

RECOMMENDATIONS

The study reveals that, the bank has still some limitations to satisfy the employees' towards the job. In the light of the findings from the study, the researcher is inclined to put forth some guidelines. These guidelines are;

- a) The participants of the study are not satisfied on the financial facilities of the Sonali Bank Limited. To ensure the employees satisfaction, bank can add different financial benefits in addition to salary. Excellent performer may be rewarded which shall motivate the employees'. This reward shall create a positive competition among the employees. As a result, the productivity shall rise. Most important thing is that, the bank need to ensure fair promotion policy and its proper execution. This arrangement shall give the bank a competitive advantage among the others bank.

- b) Employees of the bank are satisfied towards the factors of job security, logistical support and working conditions. Though the factors give satisfaction to employees, the bank may have to continue to upgrade these facilities. Moreover, the bank may have to

take more initiatives to satisfy the employees by providing facilities which are provided by private bank. This adding's shall help to attract and retain talent employees.

- c) Government bank fights with private bank as well as other financial institutes of the society. So, government bank may closely observe the facilities offered by private banks and others financial institute. If the government bank can ensure equal benefits with private bank, than this benefits shall help to attract talent human resource. Government bank may also follow the market trend regarding the fulfilment of employees' needs.

CONCLUSION

This study concludes that the employees of the government bankers are satisfied with their jobs. Job satisfaction is an important indicator that indicates how well the organization is operating over the competitive environment. As a result, to be a strong competitor in market every organization needs to focus on satisfying the employees' needs. The study reveals that, different factors exercised by the bank to satisfy the employees' needs but does not give equal satisfaction to employees. Most of the employees are satisfied towards the initiatives on job security, working conditions, logistical support of the bank. On the other hand, most of the employees are not satisfied towards the initiatives of bank on financial facilities. It is obvious that, bank need to give more emphasize on financial facilities to satisfy the employees. Bank also needs to ensure different financial and non financial initiatives so that the employees can adjust with the society's living standard. Bank also needs to follow fair promotion policy and recognize excellent performances. However, this paper has been prepared basing only on Sonali Bank Limited. There are three (3) other state banks in Bangladesh. To get more accurate result about the job satisfaction of government bankers, it requires taking sample from each bank. This paper may help the future researcher in conducting further study considering the factors depending on time, place, and situation.

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Appendix-1

Questionnaire

on

MEASUREMENT OF JOB SATISFACTION OF GOVERNMENT BANKERS: AN EMPIRICAL STUDY ON SONALI BANK LTD.

Name : Mob :
 Designation : E-mail :
 Branch :

Dear Respondent,

From the following questionnaire a research shall be conducted on “**Measurement of Job Satisfaction of Government Bankers: An Empirical Study on Sonali Bank Ltd.**”. The data shall be collected from this questionnaire, shall be used only for research purpose and shall not be disclosed to anyone. In the following cases every statement has 5 options like strongly satisfied (SS), satisfied (S), neutral (N), dissatisfied (D) and strongly dissatisfied (SD). Please tick (✓) the right option from the following as per your own opinion.

Sl. No.	Particulars	Strongly Satisfied (SS)	Satisfied (S)	Neutral (N)	Dissatisfied (D)	Strongly Dissatisfied (SD)
A.	Job Security					
i.	Job security					
ii.	Growth of the job					
B.	Logistical Support					
i.	Challenging work					
ii.	Logistical support					
iii.	Training Opportunity of the Bank					
iv.	Team work Opportunity					
C.	Working Conditions					
i.	Balance between their life and work					
ii.	Favorable rules and regulations					

iii.	Relation with their superiors and subordinates					
D.	Financial facilities					
i.	Salary, medical and housing facility					
ii.	Fairness in promotion and performance evaluation					
iii.	Recognition to excellent performance					

Please Give Your Opinion (If Necessary):

Signature

Thank you for your participation

LEVERAGE, RISK, AND PROFITABILITY: EMPIRICAL EVIDENCE FROM SELECTED MANUFACTURING SECTORS OF BANGLADESH

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ABSTRACT

Corporate capitalization and use of leverage have been of great interests in academic researches on corporate finance. Theory suggests that leverage benefits a company in twofold: debt is less expensive than the counterpart equity capital and it provides tax shield from the tax deductibility on financial charge payments. Due to these two saving windows, leverage has a potential to increase the return on equity of common shareholders. However, since usage of leverage burdens a company with mandatory financial charge payments, it increases financial risk of the company that may provoke a potential failure. The researchers have tried to find out the relationship among leverage, risk, and profitability. The study further looks into the theoretical relationship among the variables and determines the factors having most impacts on these three aspects. The study involves data from 24 manufacturing companies listed in Dhaka Stock Exchange (DSE) of five manufacturing industries for the period of 2007-2014. The Least Squares Regression has been applied on three equations derived for the theoretical modelling. The study suggests that firms with lower profitability are highly riskier, as deemed by the investors due to the higher variations in profit generation, use higher leverage than the amount they could hold otherwise and experience a decrease in profits due to increasingly high marginal cost of capital charged by the investors due to an increase in their perceived risk and the premium to justify the risk intake. The high growth companies use more debts, generate more profits, and usually are more risky. The larger firms have higher amount of debt with lower profits. The highly capital intensive firms hold lower leverage with higher profitability and higher risk. The firms with higher fixed cost in its cost structure hold more leverage and result lower profit but usually are risky. The older firms have lower leverage whereas liquid firms have higher debts.

Keywords: Capital Structure, Leverage, Debt Ratio, Risk, Profitability, Returns, ROE, Manufacturing Sectors, Least Squares Regression.

INTRODUCTION

Financial managers' duties primarily entail choosing the best corporate capital structure for a company by adequately weighing positive and negative impacts of its components. In deciding the optimal mixture of

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equity and debt in a firm's capital structure, financial managers' key motivation is maximizing the shareholders wealth. The substitution of equity capital by lower cost long-term debt theoretically can raise a firm's value. Theory suggests that increasing a company's debt up to a certain extent, the optimal level, increases the value of the company primarily because of two reasons: equity is usually more costly than debt and tax deductibility on debt's financial charges (i.e., interest payments) commonly known as tax shield. The allocation of risk among different groups of stakeholders of a corporation is also an end goal of corporate finance. Therefore there has been an esoteric debate over the significance of a firm's choice of capital structure from the publication of the very first research on this topic by Modigliani & Miller (1958).

There have been numerous studies performed on the determinants of leverage with a kick off in 1960's in the US. Bangladesh also experienced some researches in this topic arena. So far there is an inadequacy of researches done for understanding the relationship among risk, profitability, and leverage. Theoretically increment of leverage enhances profitability of a firm along with increasing risk of failure of the company, a high financial risk, because it burdens with a fixed obligation to the firm (Hurdle, 1974). In addition, theory says a firm should earn a higher return on its equity when it has a greater proportion of debt in its capital structure and this higher return on equity should translate more rapid growth of earnings (Murphy, 1968). In this paper the researchers tried to estimate relationship of risk and the opportunity to earn higher return on equity due to the capitalization components of the companies under selected manufacturing sectors of Bangladesh.

OBJECTIVE

This paper aims at analysing and measuring the relationships among leverage, risk, and profitability. The study assumes that a profitable firm uses less leverage and a risky firm uses more leverage, however, a profitable firm tends to be risky due to variability inherent in its profitability. The study further focuses on testing theoretical models

using time series data to judge significance of factors relating to leverage, profitability, and risk of a firm.

LITERATURE REVIEW

Modigliani & Miller (1958) stated that the market value of a company is not affected by the capital structure of the company. It implies that managers cannot create value simply by changing the company's capital structure because adding leverage increases the risk exposure of equity holders which justifies seeking compensation for bearing additional risk. Essentially the fixed interest payment obligation increases the risk of default (Hurdle, 1974).

Profit variability for risk is projected to have positive correlation with rate of return on equity (Hurdle, 1974). Hall & Weiss (1967) stated that some firms with command on variance of profit are willing to give up some fraction of potential earnings.

Murphy (1968) argued that leverage (calculated as long-term debt to total capitalization) is unrelated to the ROE as heavy leverage didn't tend to project higher rate of returns on equity. He further asserted that when leverage is unrelated to the relative growth and profitability of a company, it may also have no relation with variance of profitability and price of the company in the market place (Murphy, 1968). Baker (1973) referenced two cross-section studies those have yielded that firms with low leverage earned higher rate of returns on equity. Considering works of Hall & Weiss (1967), it was hypothesized that profitability and leverage may affect each other meaning profitability and leverage both have predictability over each other (Baker, 1973).

In a study, it was found that equity asset ratio had a significant positive effect on returns on equity keeping market structure variable constant and asserted that "*relatively profitable firms take some of the exceptional returns in the form of reduced risks*" (Hall & Weiss, 1967).

It is expected that there is negative correlation between risk and debt (Hurdle, 1974). Hall&Weiss (1967) stated that without raising more debt and the resultant risk, firm can sustain a higher than average profits with lower variance but different data have been found to trigger different results. On other hand, high capitalization, the resultant of high debt, associates lower risk (Hurdle, 1974). Hurdle (1974) argued with certainty that *“high profits are necessary in order to have a choice in capital structure, which could imply a positive coefficient would associate high profits with high risk”*.

He further stated that fast growing firms usually have higher leverage than slowly growing firms. Lower profit variance is expected to be associated with size as size implies diffusion of risks and high asset turnover is aligned with capital intensive firms. On the other hand, large fixed costs make firm thriving for the stability of profit on the cautions of failure to meet these obligations (Hurdle, 1974).

Empirical study implies that firms with higher profit tend to have large fluctuations in profit and higher profit deviation requires assurance of higher profitability before holding higher debt (Hurdle, 1974). Study of Mazur (2007) concerning a group of Warsaw Stock Exchange listed companies (2000-2004) indicate that enterprises with higher profitability and liquidity prefer internal sources of financing. Firms in a similar industry are likely to have similar amount of leverage because industry condition have significant impact on firm's selection of holding leverage due to the implied financial risk choice that is influenced by demand and cost risks (Baker, 1973). In view of the cost fixity equation of Sherman&Tollison (1972), Baker(1973) described that *“...ceteris paribus, larger amounts of cost fixity imply higher profit rates. Also, firms with relatively high cost fixity and corresponding potentially high profit risk may, ceteris paribus, tend to choose financial structures that are relatively less risky...”* It is also expected that lower profit risk dictates taking more leverage and cost fixity affects both leverage and profitability of a company (Baker, 1973). He found out that on a relative basis, more leverage results higher profitability and in turn greater risk.

METHODOLOGY

The study has tried to find out the relationship among leverage, risk, and profitability and further looks into the theoretical relationship among the variables and determines the factors having most impacts on these three aspects. In this regard, a descriptive research design has been followed.

Data sources and sample size

To conduct this study, secondary data from financial statements of 24 manufacturing companies of five manufacturing industries; out of 88 companies under these 5 manufacturing industries listed in Dhaka Stock Exchange (DSE) were collected. These industries are namely pharmaceuticals (pharma), chemicals (chem), Cement (cem), Food and Allied (F&A), and Engineering (Eng). The selection of sample size was based on the best data availability in the manufacturing sectors listed in DSE. The time period under the research interest is 2007 to 2014 due to the data availability of all selected firms. Number of companies in the sample is 24 including nine (9) from pharmaceuticals, five (5) from chemicals, five (5) from cement, two (2) from food and allied, and three (3) from engineering industries respectively. Appendix-1 shows the name of the selected companies from each selected industries used in this study.

Measurement of the variables and analysing tools

From various empirical studies on capital structure and leverage (Hurdle, 1974; Hall & Weiss, 1967; Murphy, 1968; Baker, 1973; Mira, 2005; Scherer, 1970; Akhtar, 2005; Mazur, 2007; Sayeed, 2011; Siddiqui, 2012), the researchers have come up with variables those have been stated as having strong explanatory power on risk, profitability, and leverage of any firms.

Least Squares Regression was run to determine the impact of independent variables, the explanatory variables, on dependent variables. As the title of this research suggests, the study utilized three regression

models to compute impacts on profitability, risk, and leverage respectively. The three regression models and their elements are:

$$L = \alpha + \beta_1 \text{ Growth} + \beta_2 \text{ Size} + \beta_3 P + \beta_4 \sigma \text{profit} + \beta_5 \text{ AT} + \beta_6 \text{ CF} + \beta_7 \text{ Age} \\ + \beta_8 \text{ LE} + \beta_9 \text{ LR} + \beta_{10} \text{ OL} \dots\dots\dots (I)$$

$$P = \alpha + \beta_1 \text{ Growth} + \beta_2 \text{ Size} + \beta_3 L + \beta_4 \sigma \text{profit} + \beta_5 \text{ AT} + \beta_6 \text{ CF} + \beta_7 \text{ Age} + \beta_8 \text{ LR} \\ + \beta_9 \text{ OL} \dots\dots\dots (II)$$

$$\sigma \text{profit} = \alpha + \beta_1 \text{ Growth} + \beta_2 \text{ Size} + \beta_3 P + \beta_4 \text{ AT} + \beta_5 L + \beta_6 \text{ CF} + \beta_7 \text{ Age} \\ + \beta_8 \text{ LE} + \beta_9 \text{ OL} + \beta_{10} \text{ LR} \dots\dots\dots (III)$$

Where,

L= As proxy for leverage, total debt ratio has been used and calculated as sum of debt in current liabilities and long-term liabilities as the ratio to sum of the debt and equity combined.

P= Calculated as the net income available to common equity holders to total equity, otherwise usually referred as return on equity (ROE).

□profit= The average absolute deviation in annual profits calculated on the ROE calculated previously as P.

Growth= Calculated as the growth in sales over the previous year's sales i.e., $\left(\frac{\text{Revenue}_t - \text{Revenue}_{t-1}}{\text{Revenue}_{t-1}}\right)$.

Size= Size of a firm has been calculated as the natural logarithm of total assets of the company.

AT= Asset turnover of a firm is calculated as the ratio of total assets to revenues.

CF= Cost fixity calculated as $\left(1 - \frac{\text{Variable Expense}}{\text{Total Variable and Fixed Expense}}\right)$.

Age= Natural logarithm of years firm has been in operation.

EL= Long-term debt to Earnings before Interest, Taxes, Depreciation, and Amortization (EBITDA) has been calculated to measure firm's ability to repay its debt outstanding in an appropriate manner.

LR= Liquidity ratio is calculated as total current assets over total current liabilities.

OL= Operating leverage as calculated Earnings before Interest, and Taxes (EBIT) over revenue.

α = Intercepts of the models.

β_i = Coefficients of independent variables.

Equation (I), (II), and (III) represent leverage, risk, and profitability regression models to be estimated in the analysis.

Expected Findings

The expected findings from the empirical analysis are as follows:

More profitable firms have comfort to use internally generated funds for its funding requirements compared to low profitable firms. This is also true for the firms those are in business operations for many years as these firms can rely on internally generated funds as it grows older. Firms with higher liquidity should prefer using internally generated funds over issuance of new debt for its financing needs. These three situations imply higher profitability with lower variance. On the other hand, effect of asset turnover is sought to have positive relationship with leverage and risk due to the efficiency resultant from the proficient use of a firm's assets and stable profits over time with potential engagement in price cutting (Scherer, 1970). However, firms with more principal payment of debt outstanding should prefer to use internally generated funds in order to avoid failure risk, a resultant from inability to pay down debt sufficiently. Thus, this condition reduces profit variance accordingly. Firms those are growing rapidly are sought to have higher debt because funds generated internally are not sufficient to fuel their immense growth opportunities and consequently raise firm's profitability

with significant variance. However, firms with higher operating leverage implies higher cost structure risk that makes Earnings before Interest and Taxes (EBIT) vulnerable and thus reducing profit available to the common equity holders of the company. Firms utilizing higher operating leverage should employ less debt in its capitalization to avoid incurring more mandatory fixed payments thus reducing variation in profit available for common equity holders. On the other hand, cost fixity implies cost structure risk of a company and potentially discouraging inclusion of more financial risk in terms of leverage but increases profitability of the company with reducing variance over time (Baker, 1973).

Theoretical impact of variables

Based on the literature study, the study has derived the theoretical expected relationships of the independent variables with the leverage equation, profitability equation and risk equation which are shown in Table 1, Table 2 and Table 3 respectively.

Table 01: Variable and Their Impacts in Leverage Equation

Equation I		
	Variables	Impact
Dependent Variable	L	
Independent Variable	P	Positive/Negative
	□profit	Negative
	Growth	Positive
	Size	Positive
	AT	Positive
	CF	Negative
	Age	Negative
	LE	Negative
	LR	Negative
	OL	Negative

Table 02: Variable and Their Impacts in Profitability Equation

Equation II		
	Variables	Impact
Dependent Variable	P	
Independent Variable	L	Positive/Negative
	□profit	Positive/Negative
	Growth	Positive
	Size	Positive/Negative
	AT	Positive
	CF	Positive
	Age	Positive
	OL	Positive/Negative
	LR	Positive

Table 03: Variable and Their Impacts in Risk Equation

Equation III		
	Variables	Impact
Dependent Variable	□profit	
Independent Variable	L	Negative
	P	Positive/Negative
	Growth	Positive
	Size	Negative
	AT	Positive
	CF	Negative
	Age	Negative
	LE	Positive
	OL	Positive
LR	Negative	

ANALYSIS AND FINDINGS

The least square regression method has been applied on these three equations. The result of the analysis is as follows with t-statistics in the parentheses:

Equation I: Leverage

As expected, highly growing firms use more debt in the manufacturing sectors to boost their profitability in positive net present value projects than corresponding slowly growing firms or dying firms. On the other hand, large companies, as determined by size variable, use more debt in

their capital structure. It's conflicting with the findings of Hurdle (1974) that large companies in terms of both size and market share are negatively related with leverage. The possible explanation of this result lies behind the fact that the larger a firm, the higher collateral is available to support intake of debt. Therefore, larger firms use higher leverage.

The negative relation of profitability to leverage indicates that increased costs of debt decrease the profits available to shareholders, therefore higher profits are necessary in order to enjoy different choices of capital structure components. The measure of risk found to be positively related with leverage and supported by the practical scenario in Bangladeshi market. The larger firms have more collateral available to draw debts from banks and financial institutions and therefore they use more and more leverage to increase profits. However, the profits come with higher variability due to increased marginal cost of leverage.

$$L = 0.34 + 0.066\text{Growth}^* + 0.005\text{Size} - 0.014\text{P} + 0.068\text{profit}^* - 0.0782\text{AT}^{***}$$

$$(1.34) \quad (2.07) \quad (0.38) \quad (0.98) \quad (2.19) \quad (-6.86)$$

$$+ 0.027\text{CF} - 0.074\text{Age}^* + 0.077\text{LE}^{***} + 0.019\text{LR}^* - 0.228\text{OL}^*$$

$$(0.25) \quad (-2.00) \quad (10.45) \quad (2.57) \quad (-1.97)$$

t statistics in parentheses

* p<0.05, ** p<0.01, *** p<0.001

$$R^2 = 0.37$$

$$\text{p-value} = 0.00$$

Firms with higher asset turnover are found to use less debt in their capitalization to exploit the scale economies in production. On the other hand, firms having more fixed expenses in its cost structure use more debt and thus increase overall risk of the firm by increasing idiosyncratic risk along with the financial risk.

As firms get older, the corporate managers usually seek to use internally generated funds over debt financing. The negative relationship found in the leverage equation indicates that aged firms under the study have generated enough fund internally to fund its capital budget or use of internally generated funds are less expensive than the debt financing

available in the market. Firms with higher long-term debt to EBITDA are found to use more debt in addition to its existing debt burden.

On the other hand, higher liquidity ratio is positively related with leverage as firms constrained with leverage limits require them to decrease the liquidity buffers by dipping the cash and other highly liquid assets they hold and thereby making them riskier as a result. The relationship of operating leverage and leverage has been found significantly negative as firms with higher fixed expense avoid incurring more fixed payment obligations to have a minimized overall risk.

The leverage equation has been found statistically significant as 37% of variability in the dependent variable, the leverage, is explained by the model with a p-value 0.00 (significantly <0.05).

Equation II: Profitability

The negative relation between leverage and profitability(as measured by return on equity) indicates that firms with higher leverage usually have lower return on its equity capital due to increase marginal cost of capital, ceteris paribus. This notion entertains that as long as firms can enjoy higher tax shield from tax deductibility of its mandatory debt expense with lower marginal cost of capital can raise its return on equity. This also justifies the higher marginal tax rate and higher marginal cost of capital for companies in Bangladesh.

The risk has also been found to be positively related with profitability as firms with higher profits usually have larger variation in its profit and hold more leverage; firms need to ensure higher profit as explained in the leverage equation (Hurdle, 1974).

$$\begin{array}{rcccccc}
 P = & 8.239^{***} & -0.255\text{Growth} & -0.579\text{Size}^{***} & -0.646L & +0.917\text{profit}^{***} & +0.051AT \\
 & (5.07) & (-1.65) & (-5.57) & (-1.90) & (4.82) & (1.01) \\
 & & -0.067CF & +1.227\text{Age}^{**} & -0.012LR & +1.567OL^{**} & \\
 & & (-0.11) & (3.07) & (-0.37) & (2.70) &
 \end{array}$$

t statistics in parentheses

* p<0.05, ** p<0.01, *** p<0.001

$$R^2 = 0.38$$

$$p\text{-value} = 0.00$$

The size variable is negatively related with profitability implying that larger firms have lower profits and this finding doesn't comply with the findings of Hurdle (1974) and Hall & Weiss (1967). The possible explanation entails that larger firms in Bangladesh usually hold high level of leverage and thus increased marginal cost of capital and lower profits available to the shareholders. The positive relationship of growth with profitability connotes that highly growing firms generate more profits compared to slowly growing or dying companies.

The asset turnover tends to reflect expectation of positive relationship with profitability suggests that the relationship between economies of scale and profitability is positive. The negative relationship with cost fixity infers that firms under the study have lower fixed expenses relative to variable expenses they incur. Therefore their contributions to profitability get reduced by the increasing marginal costs.

The older firms have been found to generate more profits than their younger counterparts and the firms with higher liquidity also have positive relationship with profitability of the companies. The positive relationship between operating leverage and profit implies cost structure risk of the firms. The profitability equation has also been found statistically significant as 38% of variability in the dependent variable, the return on equity, is explained by the model with a p-value 0.00 (significantly <0.05).

Equation III: Risk

The significant positive relationship between risk and profitability implies that firms with higher profitability are deemed as risky by the investors due to the higher profit firms usually have larger variations in their profit generation as described in profitability equation. Similar to the relationship found in the leverage equation, risk equation also suggests the positive relationship between leverage and risk due to the fact that in quest of higher returns firms draw leverage and as a result experience higher variations in profitability due to increased cost of debt

by swelling investors expectation for higher risk premium, an increase in the marginal cost of debt capital, and thus increases total risk of the firm.

$$\square \text{profit} = 1.715^{**} + 0.181\text{Growth}^{***} - 0.118\text{Size}^{**} + 0.094\text{P}^{***} + 0.123\text{AT}^{***} + 0.256\text{L}^* \\ (2.94) \quad (3.60) \quad (-3.11) \quad (3.98) \quad (5.68) \quad (2.01) \\ + 0.022\text{CF} \quad + 0.275\text{Age}^* - 0.086\text{LE}^{***} + 0.170\text{OL} \quad - 0.019\text{LR} \\ (0.11) \quad (2.01) \quad (-6.24) \quad (0.54) \quad (-1.62)$$

t statistics in parentheses

* p<0.05, ** p<0.01, *** p<0.001

$$R^2 = 0.38$$

$$\text{p-value} = 0.00$$

Highly growing firms are found to have lower variability in their profitability over their slowly growing or dying counterparts implying that growing firms face limited market structure barriers (further researches are warranted to ascertain the impact of this variable on risk) and have stable growth rate over time. The positive relationship of asset turnover with risk of a firm signifies that capital intensive firms, the firms with high asset turnover, are more likely to engage in price cutting and comply with the findings of Scherer (1970).

The larger firms are found to have lower variability in their profit generation as they have a higher control power over the production and the sales of their produces in Bangladesh (further researches are required for this variable and its associated market and production factors). The older firms seem to have more variability in their profitability though they acquired significant business experience however, the increased marginal cost capital increases variability of return.

There is positive relationship between cost fixity and variability in profit generation as explained in profitability equation that firms holding higher fixed expenses can stabilize the profitability because of lower marginal costs however; firms under the study tend to have lower fixed expenses. Firms with higher operating leverage have positive relationship because higher operating leverage suggests more cost structure risk and boost up the variability in earnings before interest and taxes (EBIT) of a company.

The companies with higher liquidity ratio have lower variability in their profitability due to the home made funds available for its immediate needs. On the other hand, the long-term debt to EBITDA variable is significantly negatively related with risk.

The risk equation has also been found statistically significant as 38% of variability in the dependent variable, the return on equity, is explained by the model with a p-value 0.00 (significantly <0.05).

CONCLUSION

The study establishes the theoretical relationships among leverage, profitability and risk in the perspective of manufacturing industries in Bangladesh. It is empirically established that the profitable firms use less leverage whereas the risky firms use more leverage, *ceteris paribus*. However, a profitable firm tends to be risky due to variability inherent in its profitability. The study suggests that firms with higher profitability are highly riskier in consequence, as deemed by the investors due to the higher variations in profit generation, use lower leverage than the amount they could hold otherwise to avoid increasingly high marginal cost of capital charged by the investors because of an increase in their perceived risk and the premium to justify the risk intake.

The high growth companies are found to use more debt and consequently generating more profits with more variations than their slowly growing or dying counterparts. This relationship implies that growing firms face more market structure barriers and have unstable growth rate over time. The larger firms use higher debt in its capitalization as they have substantial collateral to intake more debts and as a result can comply with their preference of lower risk and higher debt to lower profits. It implies that a firm can continue generating higher profits with lower deviations, lower risk as a resultant, while holding higher amount of debt. The firms with high asset turnover seem to hold lower debt in their capitalization with higher profitability and higher variations. It implies that highly capital intensive firms are more likely to

avoid debts to avoid increased marginal cost of capital but do not engage in price cutting. The firms having higher fixed expense in their cost structure tend to hold higher debt but lower profit with higher variations though fixed expenses are supposed to stabilize profit variations but increase total risk of a firm by increasing cost structure risk of that company.

The older firms are found to hold lower leverage and generate higher profit and lower variations connoting their scale economies from learning curve. On the other hand, firms with higher long-term debt to EBITDA are found to use more leverage and negating the profit variations (more evidence is required to conclude on this variable).

The firms with more liquidity use unexpectedly higher debt but experience decrease in profitability with lower variance suggesting that firms 'intake of leverage tends to cost higher and therefore decrease returns. On the other hand, the higher cost structure risk as measured by higher operating leverage increases profit variations and return on equity for common equity holder. It further reduces the comfort of using leverage as to avoid increasing total risk of the company.

Further researches concerning leverage, risk, and profitability of any company should include different market and industry variables such as market share, concentration ratio, demand variability of firms' produces etc. and other production variable such as production variability etc. to ascertain the relationship among risk, profitability, and the use of leverage in a firm's capital structure.

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APPENDIX-1

List of sample companies:

Industry	Company
Pharmaceuticals (pharma)	1. ACI Limited
	2. BeximcoPharma
	3. GlaxosmithKline
	4. The IbnSina
	5. Libra Infusions Limited
	6. Orion Infusion Ltd.
	7. Renata Ltd.
	8. Square Pharmaceuticals Ltd.
	9. Pharma Aids
Chemicals (chem)	1. Keya Cosmetics
	2. Kohinoor Chemicals
	3. Reckitt Benckiser(Bd.)Ltd.
	4. ACI Formulations Limited
	5. Beximco Synthetics
Cement (cem)	1. Confidence Cement
	2. Heidelberg Cement Bd.
	3. Aramit Cement
	4. Lafarge Surma Cement Ltd
	5. Meghna Cement Mills Ltd
Food and Allied (F&A)	1. AMCL (Pran)
	2. British AmericanTobaco BD Co.
Engineering (eng)	1. Aftab Automobiles Limited
	2. National Polymer Bangladesh Limited
	3. Singer Bangladesh Limited

ADVERSE EFFECTS OF CLIMATE CHANGE ON OCCUPATIONAL HEALTH AND SAFETY

Dr. Kazi Reshad Agaz¹

ABSTRACT

The impact of climate change on workers' health is affected by factors, such as population growth, energy policies, and increasing urbanization and deforestation. These factors along with climate change may lead to an increase in the magnitude and severity of known hazards and result in increasing numbers of workers who would be exposed to them. The hazards can be considered in seven categories: increased ambient temperature air pollution; ultraviolet (UV) radiation; extreme weather; expanded vector habitats; industrial transitions and emerging industries; and changes in the built environment. Exposures to these hazards can then lead to various health effects. The potential links between global climate change and occupational safety and health is derived by the World Health Organization (WHO) A review of the literature published between 2005 and 2016 for assessing the relationship between environmental health and policy actions or interventions. This knowledge review highlighted five categories of hazards that could potentially have direct or indirect impacts. In response to the impact of climate change, adjustments in occupational safety and health research and practice could include alteration of standards, modification of hazard controls, development of acclimatization procedures, new research directions, development of new hazard control guidance and hazard communications, development of early warning systems and surveillance, and increased emphasis on prevention through design.

INTRODUCTION

The effects of climate change (CC) are often discussed in terms of its impacts on the environment and the general population. To date, the scientific community has focused very little on its repercussions on occupational health and safety (OHS), yet workers can be affected both directly and indirectly by CC, notably by changes in the ecosystems that form the basis of their economic activities. The potential links between

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global climate change and occupational safety and health can be visualized in a conceptual model shown in Figure 1. It is derived from two models used by the World Health Organization (WHO) for assessing the relationship between environmental health and policy actions or interventions. The impact of climate change on workers' health is affected by other contextual factors, such as population growth, energy policies, and increasing urbanization and deforestation. These factors along with climate change may lead to an increase in the magnitude and severity of known hazards and result in increasing numbers of workers who would be exposed to them. The hazards can be considered in seven categories: (1) increased ambient temperature; (2) air pollution; (3) ultraviolet (UV) radiation; (4) extreme weather; (5) expanded vector habitats; (6) industrial transitions and emerging industries; and (7) changes in the built environment. Exposures to these hazards can then lead to various health effects.

OBJECTIVE

The objective of this review was to explore research topics relating to the negative impact of climate change (CC) on occupational health and safety (OHS) as well as some strategies for protecting workers.

METHODOLOGY

First, a review of the literature published between 2005 and 2016 was performed to identify the main links between CC and OHS. This knowledge review highlighted five categories of hazards that could potentially have direct or indirect impacts on OHS are: heat waves, air pollutants, ultraviolet radiation, extreme weather events, and communicable vector-borne and zoonotic diseases. Another five conditions that could lead to changes in the work environment and have negative impacts on OHS were also identified: changes in agricultural and animal husbandry methods, changes in the fishing industry, disturbances of the forest ecosystem, degradation of the built environment, and the emergence of new “green” industries. Topics were in turn categorized according to three major research orientations: the acquisition of knowledge on hazards and target populations,

epidemiological surveillance, and the development of adaptation measures.

Problems

(Paul A. Schulte and HeeKyoung Chun, (2009))To date, most of the climate change research has focused on the health of the general population rather than on occupational health and safety outcomes. Because of the lack of appropriate health, climate, and other relevant data, it has been difficult to assess how climate change has affected workers. To begin to address complexities, it may be useful to develop a framework for identifying how climate change could affect the workplace, workers, and occupational morbidity and mortality. (NIOSH Safety and Health Topic, Hazards to Outdoor Workers.(2006)The basis for the framework was a review of published peer reviewed scientific literature from 1988–2008. The review focuses on the climate-related health effects, host factors that might enhance susceptibility to climate effects, and the impact of this information on occupational safety and health research and practice. Papers reviewed included those on epidemiologic studies of climate change and health outcomes during 1988– 2008. Literature was included if the study had directly pertinent information on workers. Workers are exposed to many types of hazards that depend on their type of work, geographic region, season, and duration of work time.

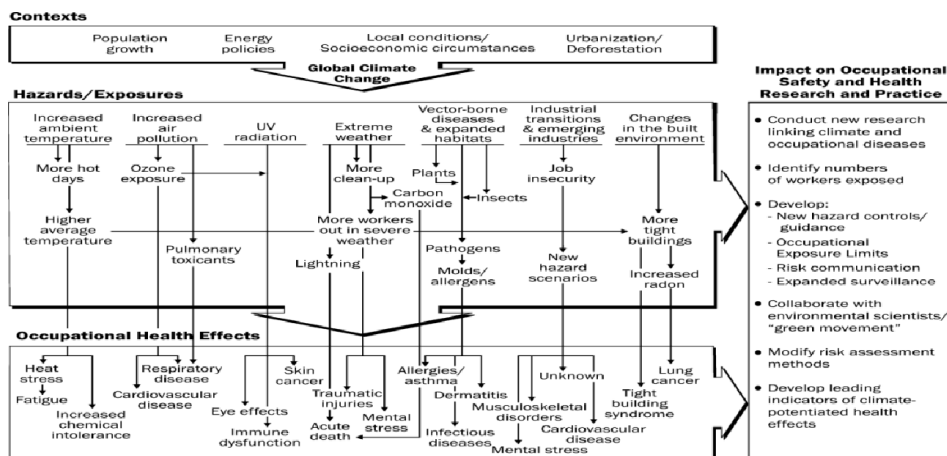


Figure 1. Conceptual framework of the relationship between climate change and occupational safety and health

(Herrera R, Orantes CM, Almaguer M, Alfonso P, Bayarre HD, Leiva IM et al. (2014) & Wimalawansa SJ.(2009) Bennet C & McMichael T.(2016) Any occupational health hazard that is associated with climate factors can naturally also be linked to climate change. Table 1 summarizes the most likely hazards and their effects in vulnerable groups, based on a recent review of a large number of epidemiological and laboratory studies. The most predictable impact of climate change is an increase in environmental heat levels, because the modelling of future climate starts from the influence of greenhouse gases on air temperature. Health effects, such as heat exhaustion, heat stroke, chronic kidney disease and chemical poisoning (Table 1), are therefore part of the occupational health impacts occurring in countries of the WHO South-East Asia Region. Thus, countries or areas with very long periods of hot weather are at particular risk for the heat effects. All of the tropical countries of the region are in this category. The risks of kidney disease and chemical poisoning will depend on other factors at the workplace, but the local heat levels are a key feature. Extreme weather, particularly strong storms or heavy rainfall, can create serious injury and drowning hazards (see Table 1) and emergency workers are a vulnerable group, as the frequency and strength of extreme weather events is likely to increase with climate change.

Table 1. Climate-related occupational health hazards, vulnerable groups and health effects

Climate hazard	Vulnerable groups	Health effects
High heat exposure (temperature and humidity)	Workers carrying out physically demanding tasks; outdoor workers	Heat exhaustion, heat stroke
	exposed to direct sun	
	Workers in heat-stress situations who do not hydrate enough	Chronic kidney disease
	Workers exposed to highly evaporative chemicals, e.g. organic solvents; high heat leads to higher workplace chemical exposures	Chemical poisoning

Extreme weather, wind	Outdoor workers in affected areas; emergency workers; all workers	Injuries, drowning
	when their workplaces are closed due to weather	
Ecological conditions indirectly related to climate	Outdoor workers, particularly farmers needing to work at dawn and dusk	Vector-borne diseases, diseases related to ecological change
Other indirect climate-related hazards	Low-income groups with limited health protection; workers with existing non-climate health problems affected by heat	Infectious diseases, noncommunicable diseases, mental health issues, etc.

Kjellstrom et al., 2013 and 2016

The other health effects mentioned in Table 1 (vector-borne diseases, infectious diseases, noncommunicable diseases and mental health issues) are indirectly linked to climate change via factors such as ecological conditions, local food-production possibilities, worsened clinical status and displacement from home locations. Climate change involves effects on access to water and water quality, as well as changes in the ecology that may bring disease vectors to new locations. Local changes in climate conditions may be so extreme that continued habitation becomes difficult.

Increased Ambient Temperature

(Parsons K. (2014) ; Ebi KL, Smith JB, Burton I et al. (2005) High heat exposure creates a risk of heat exhaustion and heat stroke and is subjectively perceived as unpleasant or dangerous. People working or involved in heavy physical activity are particularly affected, because physical activity produces additional intra-body heat that must be dissipated. A working person's natural reaction to heat is to reduce physical activity, which reduces the body's internal heat production.

This may be called “self-pacing” or “autonomous adaptation”. An outcome of this preventive reaction is reduced hourly work capacity and reduced economic productivity during exposure to heat.

(Technical Manual (OTM). OSHA Directive TED 01-00-015.(2008;Levy, B.S., and D.H. Wegman (2000)Excessive exposure to a hot work environment can bring about heat-induced disorders, such as dehydration, heat rash, heat cramps, heat exhaustion, heat fatigue, heat syncope/fainting, and heatstroke. Work-related factors such as work practices, work/rest cycles, access to water, and access to shade/cooling and other controls can also affect the development of heat-induced disorders. Factors that could affect susceptibility to temperature-related occupational hazards include age; weight; degree of physical fitness; degree of acclimatization; metabolism; use of alcohol or drugs; a variety of medical conditions such as hypertension or thyroid disease; prior heat injury; and the type of clothing worn. In general, heat-induced occupational illnesses, injuries, and reduced productivity occur in situations in which the total heat load exceeds the capacities of the body to maintain normal body functions without excessive strain.

(Paul A. Schulte and HeeKyoung Chun 2009) Both outdoor and indoor workers are at risk of heatstroke and heat fatigue. The outdoor occupations are most at risk of heatstroke which include construction; refining; surface mining; hazardous waste site activities (e.g., those workers required to wear semipermeable or impermeable protective clothing; personal protective equipment [PPE] such as Tyvek suits, gloves, and half-face, powered air-purifying respirators); agriculture; forestry; and fishing. There also are possible heat implications for indoor workers in such workplaces as greenhouses, glass or rubber manufacturing plants, and for others who work in buildings without air conditioning or proper ventilation systems.

(Levy, B.S. and D.H. Wegman (2000) and (Mirabelli, M.C. and D.B. Richardson2005)Some of the heatstroke deaths reported have been associated with occupational exposure at construction sites, agricultural settings, and hot industrial jobs requiring heavy work leading to increasing the worker’s heat load by generating more metabolic heat.

Individuals in thermally stressful occupations or with pre-existing illnesses (e.g., cardiovascular disease or chronic respiratory diseases) are vulnerable to heat stress; those unaccustomed to the heat are particularly susceptible. Individuals in thermally stressful occupations or with pre-existing illnesses (e.g., cardiovascular disease or chronic respiratory diseases) are vulnerable to heat stress; those unaccustomed to the heat are particularly susceptible.

(WHO South-East Asia Journal, of Public Health 2017) Using the type of calculations presented for India, the potential annual loss of work hours was calculated for five countries in the region (Table 2) and for a number of other countries outside this region.⁴⁵ These data represent the modelling results for the policies of the Paris Agreement (similar to RCP 6.0)²⁵ and the situation for moderate-intensity work (300 W). Losses as high as 5–9% may have major impacts on the annual economic outputs from local enterprises and could reduce a country’s gross domestic product in a significant manner. Such analysis for the countries in South-East Asia is lacking.

Table 2. Potential percentage of annual daylight work hours lost due to environmental heat levels for moderate work (300 W) in the shade

Country	Population, millions	Daylight work hours lost (%)			
		1981–2010	2011–2040	2041–2070	2071–2099
Bangladesh	161	1.1	2.5	4.6	8.6
India	1311	2.0	3.6	5.2	8.0
Indonesia	258	0.33	1.2	2.6	5.5
Maldives	0.4	0.42	1.9	4.5	9.2
Nepal	29	0.61	1.3	2.0	3.4

Source: World Health Organization Global Health Observatory data repository.

RECOMMENDATIONS

Occupational safety and health practitioners will need to participate in decisions to recommend environmentally safer materials. The next step in developing the framework is to assess the relative magnitude and frequency of climate-related hazards and the number of workers exposed. This probably needs to be done on a regional basis, with

attention to what industries or occupations might be most affected. Ultimately, there may be the need for a research and prevention agenda as well as a prioritization scheme. It's imperative that employers, safety professionals and workers stay informed about emerging issues and hazards associated with climate change as a way to address worker safety and health.

Some strategies for protecting workers include:

- a. Putting formal monitoring systems in place to limit worker exposures by altering workday schedules and/or increasing frequency and length of breaks.
- b. Enhancing personal protective gear, as needed, and finding alternative for heat-inducing protective body gear.
- c. Tracking changes in occupational exposures and patterns of injury and illness as they pertain to climate change.
- d. Reinforcing protective practices with small, sensor-based technology that can pre-warn workers about exposures.
- e. Training workers to identify climate-related exposures that can cause hazards.

In response to the impact of climate change, adjustments in occupational safety and health research and practice could include alteration of standards, modification of hazard controls, development of acclimatization procedures, new research directions, development of new hazard control guidance and hazard communications, development of early warning systems and surveillance, and increased emphasis on prevention through design. Standards for hazards that might be increasing as a result of climate change may need to be reviewed to determine if they are still adequate or need to be modified to reflect more frequent exposures.

(Ichihara, G., J.K. Miller, A. Ziolkowska, S. Itohara, and Y. Takeuchi et al 2007) & (Majersik, J.J., E.M. Caravati, J.D. Steffens et al 2007) Risk assessment methods may need to be adapted to address a mix of risks not usually considered in occupational standards (e.g., exposure to ticks, poison ivy, mosquitoes, and water-borne diseases). One area of growing concern is that transition to more environmentally safe products or chemicals, i.e., “green” materials as a means to mitigate climate change may be misinterpreted in terms of their safety for workers. For example,

recent neurologic cases involving 1-bromopropane illustrated that what is considered environmentally safe is not necessarily worker safe. Occupational safety and health practitioners will need to participate in decisions to recommend environmentally safer materials. The next step in developing the framework is to assess the relative magnitude and frequency of climate-related hazards and the number of workers exposed. This probably needs to be done on a regional basis, with attention to what industries or occupations might be most affected. Ultimately, there may be the need for a research and prevention agenda as well as a prioritization scheme.

CONCLUSION

Over the next few decades, the global CC context will likely necessitate significant changes in a number of industries and occupations. Substantial challenges will have to be faced as numerous emerging problems will in all probability impact on the work environment. Each problem will have to be examined taking often conflicting environmental, social, and economic constraints into account. Keeping this in mind and in light of the study results, further studies are warranted with respect to the three main priority orientations: the acquisition of knowledge on hazards and target populations, epidemiological surveillance in collaboration with public health partners, and the development of adaptation measures. Standards for hazards that might be increasing as a result of climate change may need to be reviewed to determine if they are still adequate or need to be modified to reflect more frequent exposures.

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