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Evaluation on BPR Implementation in Ethiopian Higher Education Institutions

By Hailekiros Sibhato & Ajit Pal Singh

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Abstract - This paper analyzes business process re-engineering (BPR) implementation at Ethiopian higher education institutions (EHEI's) i.e., Mekelle University, Mekelle, and Aksum University, Aksum. It investigates the current status and effectiveness of BPR implementations at the EHEI's. It reviews the literature relating to the hard and soft factors that cause success and failure for BPR implementations, classifies these factors into subgroups, and identifies critical success and failure factors. Finally, it explains how these factors influence the process of BPR implementation in the higher institutions. Primary data were collected by means of survey questionnaires from academic staff members and interviews with the academics core process owners. One hundred sixty survey questionnaires were distributed to Mekelle (110) and Aksum (50) universities.

Keywords : *Business process reengineering, Ethiopian Ethiopian higher education institutions.*

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Evaluation on BPR Implementation in Ethiopian Higher Education Institutions

Hailekiros Sibhato[α] & Ajit Pal Singh[σ]

Abstract - This paper analyzes business process re-engineering (BPR) implementation at Ethiopian higher education institutions (EHEI's) i.e., Mekelle University, Mekelle, and Aksum University, Aksum. It investigates the current status and effectiveness of BPR implementations at the EHEI's. It reviews the literature relating to the hard and soft factors that cause success and failure for BPR implementations, classifies these factors into subgroups, and identifies critical success and failure factors. Finally, it explains how these factors influence the process of BPR implementation in the higher institutions. Primary data were collected by means of survey questionnaires from academic staff members and interviews with the academics core process owners. One hundred sixty survey questionnaires were distributed to Mekelle (110) and Aksum (50) universities. All the questionnaires were filled and properly received from both universities. The respondents for the survey were all academic staff members from all departments and posts (technical assistant, graduate assistant, assistant lecturer, lecturers and professors). The findings of the research show that the institutions' performance is not effective in terms communicating and accomplishing the goals and objectives of BPR. The current progress of BPR in the institutions is also at low level. The findings also show that effective utilization of resources, having BPR motivated by customer demands, good information exchange and flow, continuous performance improvement, using technology as enabler not as solution, developing and communicating clear written goals and objectives, proper alignment of BPR strategy with the corporate strategy, using progress evaluation are the most important factors that enable BPR implementation to be successful, whereas lack of employee training, unrealistic report to outsiders that hide actual progress of BPR implementation, management frustration with slow business results, lack of management determination, top management reluctance to fund BPR implantations, lack of senior management enthusiasm, incapability of information technology (IT) to support BPR requirements are negatively associated with successful implementation of BPR in education higher institutions.

Keywords : Business process reengineering, Ethiopian Ethiopian higher education institutions.

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I. Introduction

Business process reengineering is dramatic change that represents the overhaul of organizational structures, management systems, employee responsibilities and empowerment, performance measurements, incentive systems, skills development, and the use of information technology. Successful BPR model can result in great reductions in cost or cycle time, and improvements in quality and customer services. On the other hand, BPR projects can fail to meet the inherently high expectations of reengineering. Some organizations even destroy the morale and momentum of employee built up over their lifetime because of poor BPR implementation.

According to Ranganathan & Dhaliwal (2001), BPR is a popular management tool for dealing with rapid technological and business changes. As per Al-Mashari & Zairi (2000), BPR creates changes in people, processes and technology. It tries to integrate stakeholders and get a better way of doing things, Siha & Saad (2008) and Cheng et al. (2006). Shin & Jemella (2002) stated that Successful BPR implementation enables organizations to improve their performances.

According to Hammer (1990), Davenport & Short (1990), many organizations have reported dramatic benefits gained from the successful implementation of BPR. However, not all organizations implementing BPR projects achieve their desired results. According to Hammer & Champy (1993) 70% and Hall et al. (1993), 50-70% of BPR initiatives fail to deliver the expected results. Implementation of BPR requires fundamental organizational transformations. Thus the implementation process is complex, difficult and needs to be checked against several success and failure factors.

As per Remenyi & Heafield (1996), the failure of BPR projects is costly, because of the resources invested, the disruption it brings to the organizations and the adverse effect to the morale of the workers. This effect will be more adverse to higher institution like Ethiopia's where the economic and human resources are limited and underdeveloped. Since 2008, many studies have been done focusing on reengineering and implementing BPR in EHEI's. But little focus was given to the investigation of the progress or effectiveness of BPR implementations at the universities. This study fills the gap by assessing the effectiveness of BPR implementation in the EHEI's.

According to Al-Mashari & Zairi (1999) to ensure success, one should adopt certain best practices and watch out for certain pitfalls. As Davenport (1998) stated, all over the world and also in Ethiopia BPR is a big catchphrase in the business environments and so popular that one wonders if it actually delivers value or is just propaganda. According to Mayer & DeWitte (1998), many organizations even use improperly or are simply adopting BPR without analyzing their business environments. Many studies have shown that success in BPR is not easy and indeed failure is not an exception, Marchand & Stanford (1998). According to Girmay et al. (2009), Ethiopian universities are not able to effectively discharge their national responsibilities in producing qualified human power and BPR was started to solve the problem and enhance the universities performance.

The general objective of this study is to identify critical success factor's (CSF's) and examine the effectiveness of BPR implementations in EHEI's. The specific objectives of the study are to evaluate and examine the current status of BPR, identify major factors that affect BPR implementation at EHEI's, and evaluate the methodologies followed while implementing BPR at EHEI's.

The practice and effectiveness of BPR implementation at EHEI's is assessed with respect to:

- What was planned to be achieved through BPR?
- What is accomplished so far? Did BPR implementation bring improved performance?
- What are the key success or failure factors for BPR implementations?

According to Porter (1990), the performance of higher education is very critical for the competitiveness of nations. Therefore, assessing BPR implementation and identifying the success factors at universities is highly significant. First, the impact of the different factors on the implementation of BPR was not adequately investigated empirically. Second, the paper investigates the issue from a public institution of a developing country, which most past literatures did not yet give enough attention. Thus, the paper will contribute to the body of knowledge of the existing literature and provide a decision support system for decision makers.

Existing literature, like Hall et al. (1993), Ascari et al. (1995), and Altman & Iles (1998), suggest that the assessment of BPR in organizations, also in EHEI's, would benefit more by investigating in depth the real experience of implemented BPR. In this study Mekelle and Aksum Universities are selected for detail analysis of the academic core business process.

As per Davenport & Short (1990) BPR is defined as the analysis and design of work flows and processes within and between organizations. Hammer & Champy (1993) have defined as the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance. Talwar (1993) has focused on the rethinking, streamlining of the business structure, processes, methods, management systems and external relationships through which value is created and delivered. Hammer & Champy (1993) stated that BPR is not about fixing anything, it means starting from scratch. Petrozzo & Stepper (1994) see BPR as harmonized redesign of processes, organizational structures, and supporting systems to achieve improvements. According to Lowenthal's (1994), the rethinking and redesign of operating processes and organizational structure is focused on core competencies to achieve dramatic progress in organizational performance. BPR can bring critical performance improvements, but its proper implementation is difficult and complex hence the success and failure factors should be critically assessed and evaluated.

a) BPR Implementations

As per Furey & Timothy (1993), the implementation stage is where reengineering efforts meet the most resistance and by far the most difficult stage. According to Obolensky & Nick (1994), it would indeed be sensible to run a culture change program simultaneously while analyzing, redesigning, and planning the migration. Moreover corporate culture, change management and government and organizational policies had significant roles in BPR acceptance in various organizations and countries, Huang & Palvia (2001) and Sheu et al. (2003).

b) Success Factors of BPR Implementations

According to Peppard & Fitzgerald (1997), ambitious objectives, creative teams, process based approach and integration of IT are among the main success factors. Ascari et al. (1995) had also added culture, processes, structure, and technology as success factors. According to Al-Mashari & Zairi (1999), the dimensions of the CSFs for BPR includes: change management, competency and support in management, information infrastructure, and project planning and management system. Since the CSFs may differ based on the type of organization, it is indispensable to understand the nature of organization.

As described by Hutton (1996), many factors including rigid hierarchy and culture, varied stakeholders, changes in policy direction, overlapping of initiatives, broad scope of activities, and above all the staff resistance are crucial parts of public sectors. As higher institutions naturally are gifted with the above factors more emphasis should be given for these factors to achieve the radical changes. Hutton (1996) suggested that human issues should be given more due for BPR to be performed in this sector.

c) Failure Factors of BPR

Many authors also highlighted some failure factors in implementing BPR. According to Aggarwal

(1998), managers' arrogant behavior, rigid resistance, cost, vision; Hammer & Champy (1993), failure to have a process perspective, flexible and responsive condition; Aggarwal (1998), Ranganathan & Dhaliwal (2001), lack of support from organization members and strategic vision; Aggarwal (1998), Al-Mashari & Zairi (1999), lack of top management support and financial resources; Stoddard et al. (1996), Peppard & Fitzgerald (1997), Mumford (1999) and Ranganathan & Dhaliwal, (2001), people resistance; Al-Mashari & Zairi (1999), Ranganathan & Dhaliwal (2001), Smith (2003), IT related problems; and Al-Mashari & Zairi (1999) and Smith (2003), lack of project management systems are some of the critical failure factors.

II. Research Methodology

According to Hall et al. (1993), Ascari et al. (1995), Altman & Iles (1998), the assessment of BPR implementation in higher institutions (HIs) and other organizations, would give more benefit by investigating the real experience of implemented BPR. Therefore, in this study two EHEI's which had embarked on BPR are considered for detailed study.

These universities are selected based on accessibility for data collection, BPR implementation progress, representativeness of both the new and old universities and international recognitions. Mekelle University, which has about one thousand and three hundred academic staff members, is one of the fast growing universities and is among the first universities which had studied and implemented BPR in the academic core process (CC & M, 2009). Aksum University, with about four hundred and fifty academic staff members, is among the newly established universities and implementing BPR.

a) Target Population

In this study Mekelle Univerity, Mekelle, and Aksum University, Aksum are taken as cases and assessment was done only on the academic core process reengineering. As academic staff members are more involved in the academic core process, data are gathered from academic staff members of universities through questionnaire with questions rated from 1 to 5 Likert scale. A total population of one hundred and sixty, sum of academic staff members from the two universities is taken for the research.

b) Data Type and Collection

This study is descriptive study, taking the EHEI's as a case, it assessed the status of BPR implementation in detail and described various factors that would have significant impact on BPR implementations. In order to achieve the stated objectives, primary data both quantitative and qualitative are used. Quantitative data is collected from academic staff members using self administered questionnaires. And the qualitative data is collected through interviews of officials and reengineering teams from the respective universities. Theoretical reviews, BPR reports, the strategic plan of the Ministry of Education and universities and other relevant BPR documents are used to collect further information related to BPR implementations in the higher institutions.

c) Sampling and Sampling Techniques

In this study, cluster sampling is applied to select the universities, academic core process and the academic staff members as population to be considered. Stratified sampling technique is also used to classify academic staff members in to sub groups based on their exposure, involvement to BPR implementation and related responsibilities. Based on these staff members with position of lecturer and above was consider as one group, graduate assistant-II and assistant lecturers as second, and technical assistant and graduate assistant-I as the third group.

The sample size is determined using the standard tables for sampling using the confidence level of 95% and 10% confidence interval. Based on the standard the sample size for a population of one thousand and three hundred for Mekelle University is ninety. And for Aksum University a population of four hundred and fifty the sample size needed is forty. To minimize the error a 25% percentage of the total population is added to each sample. The samples for both universities is summarize in Table1.

Table 1: Sample size from each university.

Name of university	Number of academic staff members (on duty)	Sample size from respective university
Mekelle University	1300	110
Aksum University	450	50
Total	1750	160

d) Data Processing and Analysis Method

In the data processing phase data editing, coding, entering, and cleaning have been made so as check the consistency and validity of data collected with different tools. In analyzing the data both quantitative and qualitative methods are used. Qualitative analysis is employed for the data collected through interviews. SPSS is used to make the quantitative analysis of data that has been collected through questionnaires. Simple descriptive statistics relative importance index (RII), are employed to summarize the data or to describe the relationship between the key parameters and implementation progress of BPR in the institutions. RII is given in terms of weight, number of respondents and scale level as follows.

$$RII = \sum W \div A \times N$$

Where : W=total weight, A=highest value of the scaled used 5 (for 5-points Likert), N=number of active respondents

III. Result and Discussion

a) Research Strategy

According to Swanson & Holton (2005) survey studies are relevant when conducting research in organizations where the intent is to study systems, individuals, programs, and events. Yin (2003) stated that surveys are appropriate when an in-depth understanding of a phenomenon or process is required. The objective of the research is to examine if the BPR implementation in EHEI's is effective or not. The other objective of the study is to identify, and provide in-depth insights to the key success or failure factors that determine the success or failure of higher institution in their BPR implementation efforts. Both of these objectives require a detailed understanding of the institutions' processes and systems; hence the survey study is used for this research.

The primary data is collected using a structured questionnaire; the respondents are provided with a 1 to 5 Likert scale statements to select their extent of agreement to close ended questions. The questionnaires are intended to gather the respondents' opinion in the effectiveness of BPR implementation, and its current status in the higher institutions. Lastly, the respondents are requested to provide their extent of agreement or disagreement to a number of statements framed to identify BPR critical success or failure factors.

According to Swanson & Holton (2005) the purpose of data analysis is to search for important meanings, patterns, and themes in the researcher's area of study. The data collected from the questionnaires are coded using a scale of 1 to 5, where 1 is coded for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree and 5 for strongly agree. According to Swanson & Holton (2005), coding breaks up and categorizes the data into more simplified categories. Once the data are coded and fed in to the SPSS worksheet it is analyzed and studied for patterns and actual performance of BPR implementation in the higher institutions. Simple descriptive statistics like measures of frequency, weighted mean, standard deviation, percentages and RII are used for analyzing the data.

b) Data Analysis, Results and Discussions

The study presents the findings on the effectiveness, and critical success and failure factors of BPR while implementing in the academic core business process of Mekelle and Aksum Universities. The data are analyzed in order to understand the key objective of the study, which is to evaluate and examine whether BPR implementation in higher institution is effective or not. In addition, the responses are analyzed for potential reasons for the success or failure of the BPR initiative against the key success or failure factors for implementing BPR.

c) Extent to Which Goals and Objectives are Communicated in BPR Plans

The respondents are asked to state their extent of agreement with different statements relating to the extent to which goals and objectives are communicated in BPR project plans before the implementation phase. Each of the questions is framed in a 5–point Likert scale ranging from not at all to highest extent. The data are then coded with a weight of 1 for not at all, 2 for smaller extent, 3 for moderate extent, 4 for higher extent and 5 for highest extent. The percentages, means and RII's of all responses for each question from both universities are shown in the following tables.

Table 2, shows the level of respondents' agreement in percentages. Accordingly, 34.9% agreed to a moderate, 27.9% to smaller extent. 22.3% the respondents rated the communication as higher level. While 8.7% of the respondents in Mekelle University believe that no goals and objective are communicated, only 6.5% deemed that it is communicated to the highest level. Generally, 71.55% of the total respondents in Mekelle University rated the communication of goals and objectives in the BPR plan to maximum of moderate extent.

Table 3, shows that 28.2% of the respondents agreed to moderate, 24.4% to smaller extent, 20.4% of the respondents generally seeing no goals and objectives, and 18.6 % to major extent. Only 8.4% of the respondents agreed to highest extent. In Aksum University, 71.2% of the total respondents rate the communication, of goals and objectives in the BPR plan from smaller to higher extent. According to Davenport (1993) & Jackson (1997), effective communication is considered a major key to successful BPR-related change efforts. It is needed throughout the change process at all levels and for all audiences even with those not involved directly in the re-engineering project. But this is not followed by both universities. Although there is a small variation in the percentages of respondent's agreement, majority of respondents from the universities, 73% from Aksum University and 71.55% from Mekelle University agreed that the goals and objectives are communicated below moderate level.

Table 2 : Responses with regard to the extent to which goals and objectives of BPR are communicated at Mekelle University.

Questions		Responses					Total
		Not at all	Smaller extent	Moderate extent	Higher extent	Highest extent	
Ensure quality of teaching-learning	Frequency	7	35	34	26	8	110
	Percent	6.36	31.82	30.91	23.64	7.27	100
	Cum. percent	6.36	38.18	69.09	92.73	100	
Assess educational needs of society regularly	Frequency	8	28	48	20	6	110
	Percent	7.27	25.45	43.64	18.18	5.45	100
	Cum. percent	7.27	32.73	76.36	94.55	100	
Satisfy educational needs of society	Frequency	9	35	36	25	5	110
	Percent	8.18	31.82	32.73	22.73	4.55	100
	Cum. percent	8.18	40	72.73	95.45	100	
Ensure international recognition of academic programs	Frequency	8	29	49	19	5	110
	Percent	7.27	26.36	44.55	17.27	4.55	100
	Cum. percent	7.27	33.64	78.18	95.45	100	
Recruit competent Students	Frequency	12	34	30	26	8	110
	Percent	10.9	30.91	27.27	23.64	7.27	100
	Cum. percent	10.9	41.82	69.09	92.73	100	
Provide seamless services to students	Frequency	12	22	44	26	6	110
	Percent	10.9	20	40	23.64	5.45	100
	Cum. percent	10.9	30.91	70.91	94.55	100	
Recruit qualified academic staff	Frequency	6	23	42	30	9	110
	Percent	5.45	20.91	38.18	27.27	8.18	100
	Cum. percent	5.45	26.36	64.55	91.82	100	
Provide state-of-the-art infrastructure	Frequency	16	36	32	22	4	110
	Percent	14.5	32.73	29.09	20	3.64	100
	Cum. percent	14.5	47.27	76.36	96.36	100	
Establish teaching learning quality assurance system	Frequency	11	31	29	30	9	110
	Percent	10	28.18	26.36	27.27	8.18	100
	Cum. percent	10	38.18	64.55	91.82	100	
Recruit qualified support staff	Frequency	7	34	40	21	8	110
	Percent	6.36	30.91	36.36	19.09	7.27	100
	Cum. percent	6.36	37.27	73.64	92.73	100	
Overall percent		8.73	27.91	34.91	22.27	6.18	100
Overall cumulative (Cum.) percent		8.73	36.64	71.55	93.82	100	

Scale: 1=Not at all, 2=Smaller extent, 3=Moderate extent, 4=Higher extent, 5=Highest extent.
Source: Own survey, 2011.

Table 3 : Responses with regard to the extent to which goals and objectives of BPR are communicated at Aksum University.

Questions		Responses					Total
		Not at all	Smaller extent	Moderate extent	Higher extent	Highest extent	
Ensure quality of teaching-learning	Frequency	8	8	22	10	2	110
	Percent	16	16	44	20	4	100
	Cum. percent	16	32	76	96	100	
Assess educational needs of society regularly	Frequency	11	12	11	11	5	110
	Percent	22	24	22	22	10	100
	Cum. percent	22	46	68	90	100	
Satisfy educational needs of society	Frequency	3	22	14	8	3	110
	Percent	6	44	28	16	6	100
	Cum. percent	6	50	78	94	100	
Ensure international recognition of academic programs	Frequency	14	18	10	3	5	110
	Percent	28	36	20	6	10	100
	Cum. percent	28	64	84	90	100	
Recruit competent students	Frequency	18	19	8	5	0	110
	Percent	36	38	16	10	0	100
	Cum. percent	36	74	90	100	100	
Provide seamless services to students	Frequency	7	7	20	16	0	110
	Percent	14	14	40	32	0	100
	Cum. percent	14	28	68	100	100	
Recruit qualified academic staff	Frequency	6	4	22	10	8	110
	Percent	12	8	44	20	16	100
	Cum. percent	12	20	64	84	100	
Provide state-of-the -art infrastructure	Frequency	17	4	21	5	3	110
	Percent	34	8	42	10	6	100
	Cum. percent	34	42	84	94	100	
Establish teaching learning quality assurance system	Frequency	7	14	3	16	10	110
	Percent	14	28	6	32	20	100
	Cum. percent	14	42	48	80	100	
Recruit qualified support staff	Frequency	11	14	10	9	6	110
	Percent	22	28	20	18	12	100
	Cum. percent	22	50	70	88	100	
Overall percent		20.4	24.4	28.2	18.6	8.4	100
Overall cumulative (Cum.) percent		20.4	44.8	73	91.6	100	

Scale: 1=Not at all, 2=Smaller extent, 3=Moderate extent, 4=Higher extent, and 5=Highest extent.
Source: Own survey, 2011.

From the responses in Table 4, the objectives to recruit qualified academic staff (RII=0.624), establish teaching learning quality assurance system (RII=0.59), ensuring quality of teaching-learning (RII=0.588), provide seamless services to students (RII=0.586), are communicated to a moderate extent. The plan or objective to provide state-of-the-art infrastructure was communicated smaller extent. A weighted mean of 2.5 and above is accepted level of significance for Likert means. Therefore, using the weighted mean of 2.89 and RII values for the case it can be said that the overall goals and objectives of BPR are communicated only to a moderate extent.

Table 4 : Mean, standard deviation (Std. Dev.), and RII for the response with regard to the extent to which goals and objectives of BPR are communicated at Mekelle University.

Q.No.	Questions	Mean	Std. Dev.	RII
Q1	Ensure quality of teaching-learning	2.94	1.05	0.588
Q2	Assess educational needs of society regularly	2.89	0.97	0.578
Q3	Satisfy educational needs of society	2.84	1.02	0.568
Q4	Ensure international recognition of academic programs	2.85	0.95	0.57
Q5	Recruit competent students	2.85	1.12	0.57
Q6	Provide seamless services to students	2.93	1.05	0.586
Q7	Recruit qualified academic staff	3.12	1.01	0.624
Q8	Provide state-of-the-art infrastructure	2.65	1.07	0.53
Q9	Establish teaching learning quality assurance system	2.95	1.14	0.59
Q10	Recruit qualified support staff	2.9	1.02	0.58
	Weighted mean	2.89		0.53

Scale: 1=Not at all, 2=Smaller extent, 3=Moderate extent, 4=Higher extent, and 5=Highest extent.
Source: Own survey, 2011.

As it is shown in Table 5, the objectives to recruit qualified academic staff (RII=0.64), establish teaching learning quality assurance system (RII=0.632), provide seamless services to students (0.58), ensure quality of teaching-learning (RII=0.56) are communicated to a moderate extent. The plan or objective to recruit competent students is communicated to minor extent. A weighted mean of 2.70 shows that the goals and objectives are communicated to a maximum of moderate extent.

Comparatively, the mean and RII values of the goals and objectives are higher at Mekelle University than at Aksum University. This implies that, though the goals and objectives are communicated below moderate extent, Mekelle University communicates better than Aksum University about the goals and objectives.

Table 5 : Mean, standard deviation (Std. Dev.), and RII for the responses to extent to which goals and objectives are communicated at Aksum University.

Q.No.	Questions	Mean	Std. Dev.	RII
Q1	Ensure quality of teaching-learning	2.8	1.07	0.56
Q2	Assess educational needs of society regularly	2.74	1.31	0.548
Q3	Satisfy educational needs of society	2.72	1.01	0.544
Q4	Ensure international recognition of academic programs	2.34	1.24	0.468
Q5	Recruit competent students	2	0.97	0.4
Q6	Provide seamless services to students	2.9	1.02	0.58
Q7	Recruit qualified academic staff	3.2	1.18	0.64
Q8	Provide state-of-the-art infrastructure	2.46	1.23	0.492
Q9	Establish teaching learning quality assurance system	3.16	1.4	0.632
Q10	Recruit qualified support staff	2.7	1.33	0.54
Weighted mean		2.70		0.54

Scale: 1=Not at all, 2=Smaller extent, 3=Moderate extent, 4=Higher extent, and 5=Highest extent.
Source: Own survey, 2011.

d) The Extent to Which BPR Goals and Objectives are Accomplished

The same questions used for rating the extent to which goals and objectives are communicated as in the project plan of BPR are used for respondents to rate the extent to which these goals and objectives are actually accomplished. The responses are summarized in Tables 6 to 9. Analyzing the detailed responses from

Table 6, shows that 34.36% of the respondents agreed that the goals and objectives are accomplished to a moderate extent, 29.5% to smaller extent 19% to higher extent and 13% of the respondents deemed that the goals and objectives were not accomplished. Only 3.7% are in agreement that the accomplishment was to highest extent. Generally, 83.3% of the respondents believe that the accomplishment is from smaller to higher extent.

Table 6 : Responses to extent to which goals and objectives are accomplished at Mekelle University. Questions

Questions		Responses					Total
		Not at all	Smaller extent	Moderate extent	Higher extent	Highest extent	
Quality of teaching-learning ensured	Frequency	20	32	30	24	4	110
	Percent	18.18	29.09	27.27	21.82	3.64	100
	Cum. percent	18.18	47.27	74.55	96.36	100	
Assess educational needs of society regularly	Frequency	13	37	37	16	7	110
	Percent	11.82	33.64	33.64	14.55	6.36	100
	Cum. percent	11.82	45.45	79.09	93.64	100	
Satisfy educational needs of society	Frequency	18	30	45	14	3	110
	Percent	16.36	27.27	40.91	12.73	2.73	100
	Cum. percent	16.36	43.64	84.55	97.27	100	
Ensure international recognition of academic programs	Frequency	15	35	36	24	0	110
	Percent	13.64	31.82	32.73	21.82	0	100
	Cum. percent	13.64	45.45	78.18	100	100	
Recruit competent students	Frequency	14	35	40	18	3	110
	Percent	12.73	31.82	36.36	16.36	2.73	100
	Cum. percent	12.73	44.55	80.91	97.27	100	
Provide seamless services to students	Frequency	12	25	43	26	4	110
	Percent	10.91	22.73	39.09	23.64	3.64	100
	Cum. percent	10.91	33.64	72.73	96.36	100	
Recruit qualified academic staff	Frequency	11	33	36	23	7	110
	Percent	10	30	32.73	20.91	6.36	100
	Cum. percent	10	40	72.73	93.64	100	
Provide state-of-the -art infrastructure	Frequency	15	39	33	21	2	110
	Percent	13.64	35.45	30	19.09	1.82	100
	Cum. percent	13.64	49.09	79.09	98.18	100	
Establish teaching learning quality assurance system	Frequency	12	29	33	26	10	110
	Percent	10.91	26.36	30	23.64	9.09	100
	Cum. percent	10.91	37.27	67.27	90.91	100	
Recruit qualified support staff	Frequency	13	30	45	21	1	110
	Percent	11.82	27.27	40.91	19.09	0.91	100
	Cum. percent	11.82	39.09	80	99.09	100	
Overall percent		13	29.55	34.36	19.36	3.73	100
Overall cumulative (Cum.) percent		13	42.55	76.91	96.27	100	

Scale: 1=Not at all, 2=Smaller extent, 3=Moderate extent, 4=Higher extent, 5=Highest extent.
Source: Own survey, 2011.

Table 7, indicates that 29.2% of the respondents agreed that the goals and objectives are accomplished to smaller extent, 25.2% to moderate extent, 14.6% to higher extent and 19.2% of the respondents deemed that the goals and objectives are not accomplished at all. Only 11.8% were in agreement that the accomplishment is to highest extent. Generally, 69% of the respondents believe that the accomplishment is from smaller to higher extent.

Table 7 : Responses to extent to which goals and objectives are accomplished at Aksum University.

Questions		Responses					Total
		Not at all	Smaller extent	Moderate extent	Higher extent	Highest extent	
Quality of teaching-learning ensured	Frequency	16	17	9	3	5	50
	Percent	32	34	18	6	10	100
	Cum. percent	32	66	84	90	100	
Assess educational needs of society regularly	Frequency	8	20	14	3	5	50
	Percent	16	40	28	6	10	100
	Cum. percent	16	56	84	90	100	
Satisfy educational needs of society	Frequency	4	19	16	6	5	50
	Percent	8	38	32	12	10	100
	Cum. percent	8	46	78	90	100	
Ensure international recognition of academic programs	Frequency	20	14	4	7	5	50
	Percent	40	28	8	14	10	100
	Cum. percent	40	68	76	90	100	
Recruit competent Students	Frequency	13	19	13	5	0	50
	Percent	26	38	26	10	0	100
	Cum. percent	26	64	90	100	100	
Provide seamless services to students	Frequency	6	3	29	3	9	50
	Percent	12	6	58	6	18	100
	Cum. percent	12	18	76	82	100	
Recruit qualified academic staff	Frequency	7	6	16	12	9	50
	Percent	14	12	32	24	18	100
	Cum. percent	14	26	58	82	100	
Provide state-of-the-art infrastructure	Frequency	8	23	2	12	5	50
	Percent	16	46	4	24	10	100
	Cum. percent	16	62	66	90	100	
Establish teaching learning quality assurance system	Frequency	5	13	8	16	8	50
	Percent	10	26	16	32	16	100
	Cum. percent	10	36	52	84	100	
Recruit qualified support staff	Frequency	9	12	15	6	8	50
	Percent	18	24	30	12	16	100
	Cum. percent	18	42	72	84	100	
Overall percent		19.2	29.2	25.2	14.6	11.8	100
Overall cumulative (Cum.) percent		19.2	48.4	73.6	88.2	100	

Scale: 1=Not at all, 2=Smaller extent, 3=Moderate extent, 4=Higher extent, 5=Highest extent.
Source: Own survey, 2011.

As per the data on Table 8, goals and objectives are deemed by the respondents to have accomplished with an overall weighted mean of 2.72. That is, the goals and objectives are accomplished to a maximum of moderate extent. Establishment of teaching learning quality assurance system (RII=0.588), provision of improved services to students (RII=0.572), recruitment of qualified academic and support staff (RII=0.568), and regular assessment of educational needs of society (RII=0.54) are the top ranked

responses. The respondents are in agreement that these goals and objectives were accomplished more or less to moderate extent. In addition to the mean value the standard deviations have very small differences and this implies that there is less variation on the understanding or assessment of respondents on the accomplishment status of the goals and objectives.

Table 8 : Responses to extent to which BPR goals and objectives are accomplished at Mekelle University.

Q.No.	Questions	Mean	Std. Dev.	RII
Q1	Ensure quality of teaching-learning			
		2.64	1.12	0.528
Q2	Assess educational needs of society regularly			
		2.7	1.06	0.54
Q3	Satisfy educational needs of society			
		2.58	1	0.516
Q4	Ensure international recognition of academic programs			
		2.63	0.98	0.526
Q5	Recruit competent students			
		2.65	0.99	0.53
Q6	Provide seamless services to students			
		2.86	1.02	0.572
Q7	Recruit qualified academic staff			
		2.84	1.07	0.568
Q8	Provide state-of-the-art infrastructure			
		2.6	1.01	0.52
Q9	Establish teaching learning quality assurance system			
		2.94	1.14	0.588
Q10	Recruit qualified support staff			
		2.7	0.94	0.54
	Weighted mean	2.72		0.544

Scale: 1=Not at all, 2=Smaller extent, 3=Moderate extent, 4=Higher extent, and 5=Highest extent.
Source: Own survey, 2011.

As per the data on Table 9, goals and objectives were deemed by the respondents to have been accomplished with an overall weighted mean of 2.72. The accomplishment overall rate was to a moderate extent. Recruiting qualified academic staff (RII=0.64), establishing teaching learning quality assurance system (RII=0.636), providing seamless

Table 9 : Responses to Extent to which goals and objectives are accomplished at Aksum University.

Q.No.	Questions	Mean	Std. Dev.	RII
Q1	Ensure quality of teaching-learning			
		2.28	1.26	0.456
Q2	Assess educational needs of society regularly			
		2.54	1.15	0.508
Q3	Satisfy educational needs of society			
		2.78	1.09	0.556
Q4	Ensure international recognition of academic programs			
		2.26	1.38	0.452
Q5	Recruit competent students			
		2.3	1.16	0.46
Q6	Provide seamless services to students			
		3.12	1.15	0.624
Q7	Recruit qualified academic staff			
		3.2	1.28	0.64
Q8	Provide state-of-the-art infrastructure			
		2.66	1.29	0.532
Q9	Establish teaching learning quality assurance system			
		3.18	1.27	0.636
Q10	Recruit qualified support staff			
		2.84	1.31	0.568
	Weighted mean	2.72		0.544

Scale: 1=Not at all, 2=Smaller extent, 3=Moderate extent, 4=Higher extent, and 5=Highest extent.
Source: Own survey, 2011.

services to students (RII=0.624), recruiting qualified support staff (RII=0.568) are the top ranked responses. The respondents were in agreement that these goals and objectives are accomplished more than moderate extent.

Figure 1, shows that more or less there is direct relationship between the extent of accomplishment and the degree of communication of goals and objectives. That is the higher the extent of goals and objectives are communicated the higher will be the extent of accomplishment. In all the responses given the extent to which goals and objectives are accomplished is below the extent to which goals and objectives are included and communicated.

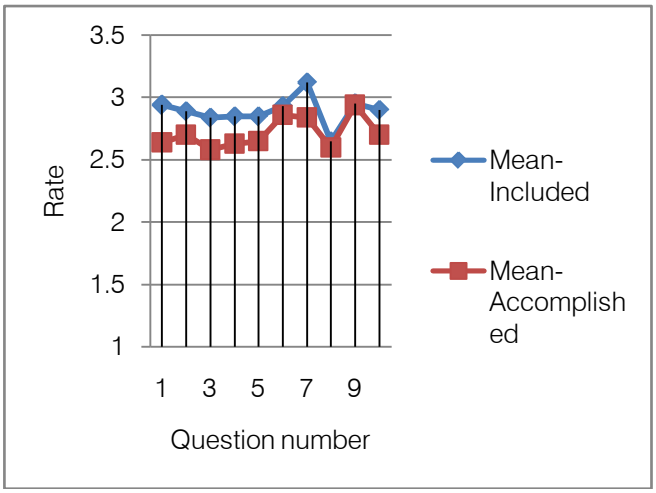

Fig.1 : Comparison of plan versus accomplishment of goals and objectives at Mekelle University.

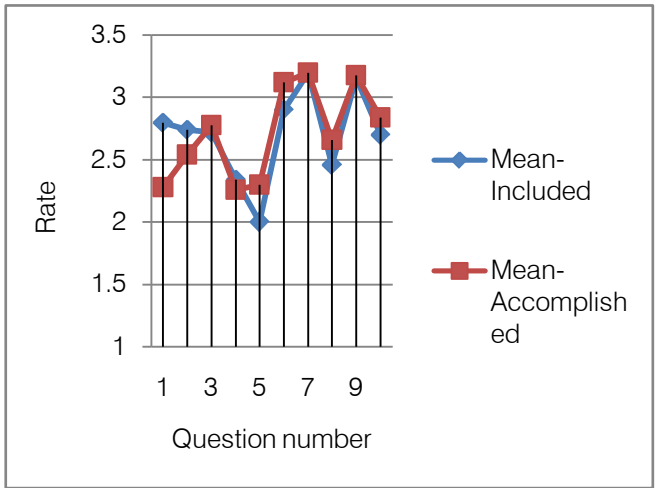

Fig. 2 : Comparison of plan versus accomplishment of goals and objectives at Aksum University.

From the weighted means, percentages, RII and the graphs, while Aksum University performance and accomplishment rate in eight of the goals and objectives is above the planned rate, Mekelle University accomplishment level is below the plan. In both cases the accomplishment rates are below moderate level.

According to Talwar (1993) & Hinterhuber (1995), effective communication between stakeholders inside and outside the organization is necessary to make BPR program effective, to ensure patience and understanding of the structural and cultural changes needed, as well as the organization's competitive situation. Therefore, organizations, implementing BPR should openly communicate about the radical change. But in these cases, the goals and objectives of BPR were not well communicated at the planning phase and consequently low accomplishment rates.

e) Important Factors for Successful BPR Implementation in Education Higher Institutions

The respondents were asked to state their extent of agreement with thirty different statements related to important factors that determine the success of BPR implementations. Each of the questions was rated in a 5–point Likert scale ranging from strongly disagree (1) to strongly agree (5). The frequency and mean of all responses for each question is shown in Tables 9 and 10.

Figure 2, shows that the accomplishment is less than the plan in ensuring the quality of teaching-learning and regular assessment of educational needs of society. In all the other goals and objectives, the extent to which goals and objectives are accomplished is greater than the extent to which goals and objectives are communicated.

As shown in Table 10, the success factors have been classified in to six major success categories viz., external factors, employee empowerment, operational factors, and communication, methods and tools, leadership. Some factors have effects on more than one category, thus they are included in more than one category. As shown in Table 10, the average weighted value of almost all the factors is above 3. Although the degree of importance is somewhat different, this implies that all respondents deemed that the factors are important for the success of BPR implementation in higher institutions. Looking the factors under external category using industry specialist and having the BPR motivated by customer demand on average are considered to be more important success factor than having BPR motivated by competitive pressure. In terms of operational factors, focusing on outcomes than on task, adequate job integration approach, creating supportive teaching learning environment, effectively utilization of resources, implementing continuous performance improvement are five top rated success factors. Similarly active involvement of staff members and empowering workers in decision making deemed to be more important than training and motivational factors. In the communication category use of progress evaluation to determine what is working and what is not, developing and communicating mission and vision statements, sharing and exchanging information are considered to be relatively important. Continuous performance improvement, targeting critical processes first, adequate job integration approach, progress evaluation to determine what is working and what is not are rated high in the methods and tools category.

Finally, targeting critical processes first, proper alignment of BPR strategy with the corporate strategy, regular revision of implementation procedures are consider important in the leadership of BPR

implementation process. Generally, all the factors are rated by the respondents above 3. Based on the RII values on Table 10, continuous performance improvement, active involvement of staff members, progress evaluation, creating supportive teaching learning environment, developing and communicating the mission and vision statements, effective utilization of resources are top rated success factors in the implementation of BPR in higher education institutions.

Category wise, operational (RII=0.66), and methods and tools (RII=0.656) related factors have the highest RII values. This is in line with the theoretical frameworks. Continuous improvement, proper use of IT, proper utilization of resources and other factors under these categories are consider to basic requirements for the effective BPR implementations.

Table 11, outlines the success factors classified in to six majored mutually inclusive success categories same classification as Table 10. As it can be seen from Table 11, the average weighed value of all the factors is above 2 and below 4. That means all respondents deemed that the factors are important for the success of BPR implementation at Aksum University. Looking the factors under external category having BPR motivated by customer demands is considered to be most important success factor than having BPR motivated by competitive pressure and using industry specialist. In the operational related factors; effective utilization of resources, using technology as enabler, reducing cost by automation, focusing on outcomes than on task, implementing continuous performance improvement are among top rated success factors.

Similarly training of employees on what BPR and active involvement of staff members are deemed to be more important than empowering workers and motivational factors in the employee empowerment category. In the communication category sharing and exchanging of information, use of progress evaluation to determine what is working and what is not, developing and communicating mission and vision statements are considered to be relatively important. Outcome and group technology oriented, proper design and continuous performance improvement methods and tools are considered to be important success factors.

Finally, proper alignment of BPR strategy with the corporate strategy, targeting critical processes first, use of group technology and motivated and accountable top managers are consider to be relatively important in the leadership of BPR implementation process.

As can be seen from Tables 10 and 11, having BPR motivated by customer demands, effective utilization of resources, good information exchange and flow, continuous performance improvement, using technology as enabler not as solution, developing and communicating clear written goals and objectives, proper alignment of BPR strategy with the corporate strategy, using progress evaluation are the most important critical success factors at both universities. In addition to this, the weighted average and RII values show slight differences between the universities. Therefore, to have effective BPR implementations, the success factors should be analyzed and fitted to the organizations working condition and handled properly.

Table 10 : Classification of BPR implementation success factors at Mekelle University.

Factors	Mean	Std. Dev.	RII
External factors:			
Using industry specialist	3.27	1.13	0.654
BPR motivated by customer demands	3.26	1.27	0.652
BPR motivated by competitive pressure	3.13	1.1	0.626
Overall	3.22		0.644
Employee empowerment:			
Empower workers to be decision makers	3.28	1.28	0.656
Active involvement of staff members	3.49	1.25	0.698
Staff motivation through a reward program	3	1.44	0.6
Train and retain employees on what BPR actually is	3.1	1.3	0.62
Overall	3.22		0.6435
Operational factors:			
Use resources effectively	3.37	1.21	0.674
Implementing BPR as planned and scheduled	3.18	1.28	0.636
Reduce cost by automation	3.19	1.18	0.638
Reduce time by automation	3.15	1.19	0.63

Technology as enabler not as solution	3.27	1.12	0.654
Target critical processes first	3.32	1.11	0.664
Accept continuous performance improvement	3.52	1.12	0.704
Focus on outcomes than on task	3.32	1.28	0.664
Adequate job integration approach	3.33	1.17	0.666
Create supportive teaching learning environment	3.42	1.27	0.684
Proper understanding of BPR projects	3.25	1.26	0.65
Overall	3.3		0.660364
Communication:			
Share and exchange information willingly	3.26	1.23	0.652
Regular and scheduled meeting of project managers to get feedback on BPR implementation progresses	3.01	1.15	0.602
Develop and communicate clear written mission and vision statements	3.39	1.18	0.678
Use progress evaluation to determine what is working and what is not	3.47	1.22	0.694
Use of group technology to simplify operations	3.16	1.2	0.632
Overall	3.26		0.6516
Methods and tools:			
Regular and scheduled meeting of project managers to get feedback on BPR implementation progresses	3.01	1.15	0.602
Use progress evaluation to determine what is working and what is not	3.47	1.22	0.694
Adequate job integration approach	3.33	1.17	0.666
Target critical processes first	3.32	1.11	0.664
Focus on outcomes than on task	3.32	1.28	0.664
Accept continuous performance improvement	3.52	1.12	0.704
Use of group technology to simplify operations	3.16	1.2	0.632
Revise implementation procedures regularly	3.25	1.26	0.65
Use proper design to identify major issues	3.16	1.23	0.632
Overall	3.28		0.656
Leadership:			
BPR motivated by top manager and should be held accountable	3.18	1.02	0.636
Effective BPR Teams	3.2	1.17	0.64
Proper alignment of BPR strategy with the corporate strategy	3.27	1.19	0.654
Target critical processes first	3.32	1.11	0.664
Revise implementation procedures regularly	3.25	1.26	0.65
Determine the quality expected before implementation	3.22	1.3	0.644
Use of group technology to simplify operations	3.16	1.2	0.632
Staff motivation through a reward program	3	1.44	0.6
BPR initiated and led using top down system	2.93	1.13	0.586
Overall	3.17		0.634

Scale: 1=Strongly disagree, 2=Disagree. 3 =Neutral, 4=Agree, and 5=Strongly agree.
Source: Own survey, 2011.

Table 11 : Classification of BPR implementation success factors at Aksum University.

Factors	Mean	Std. Dev.	RII
External factors:			
Using industry specialist	2.6	1.47	0.52
BPR motivated by customer demands	3.56	1.46	0.712
BPR motivated by competitive pressure	2.6	1.34	0.52
Overall	2.92		0.584
Employee empowerment:			
Empower workers to be decision makers	2.6	1.43	0.52
Active involvement of staff members	2.82	1.44	0.564
Staff motivation through a reward program	2.22	1.58	0.444
Train and retain employees on what BPR actually is	2.96	1.26	0.592
Overall	2.65		0.53
Operational factors:			
Use resources effectively	3.24	1.32	0.648
Implementing BPR as planned and scheduled	3.04	1.43	0.608
Reduce cost by automation	3.16	1.22	0.632
Reduce time by automation	2.3	1.2	0.46
Technology as enabler not as solution	3.18	1.32	0.636
Target critical processes first	2.82	1.48	0.564
Accept continuous performance improvement	3.02	1.39	0.604
Focus on outcomes than on task	3.06	1.35	0.612
Adequate job integration approach	2.76	1.24	0.552
Create supportive teaching learning environment	2.6	1.54	0.52
Proper understanding of BPR projects	2.86	1.26	0.572
Overall	2.91		0.582
Communication:			
Share and exchange information willingly	3.28	1.29	0.656
Regular and scheduled meeting of project managers to get feedback on BPR implementation progresses	2.68	1.32	0.536
Develop and communicate clear written mission and vision statements	3.04	1.41	0.608
Use progress evaluation to determine what is working and what is not	2.84	1.46	0.568
Use of group technology to simplify operations	2.84	1.42	0.568
Overall	2.936		0.5872
Methods and tools:			
Regular and scheduled meeting of project managers to get feedback on BPR implementation progresses	2.68	1.32	0.536
Use progress evaluation to determine what is working and what is not	2.84	1.46	0.568
Adequate job integration approach	2.6	1.54	0.52
Target critical processes first	2.82	1.48	0.564
Focus on outcomes than on task	3.06	1.35	0.612

Accept continuous performance improvement	3.02	1.39	0.604
Use of group technology to simplify operations	2.84	1.42	0.568
Revise implementation procedures regularly	2.62	1.47	0.524
Use proper design to identify major issues	2.9	1.31	0.58
Overall	2.82		0.564
Leadership:			
BPR motivated by top manager and should be held accountable	2.76	1.36	0.552
Effective BPR teams	2.56	1.42	0.512
Proper alignment of BPR strategy with the corporate strategy	3.12	1.35	0.624
Target critical processes first	2.86	1.26	0.572
Revise implementation procedures regularly	2.62	1.47	0.524
Determine the quality expected before implementation	2.74	1.45	0.548
Use of group technology to simplify operations	2.84	1.42	0.568
Staff motivation through a reward program	2.22	1.58	0.444
BPR initiated and led using top down system	2.52	1.46	0.504
Overall	2.69		0.538667

Scale: 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly agree.
Source: Own survey, 2011.

f) Current Status of the BPR Implementation

The respondents are asked twenty five questions related to the expected output of BPR implementation, which can be used to evaluate the current status of BPR implementation at Mekelle University and Aksum University. The questions, weighted mean, RII and standard deviation are outlined in Tables 12 and 13.

From the responses in Table 12, most respondents rated the implementation status below 3 and the weighted mean is 2.64. Thus, the implementation of BPR at Mekelle University is at lower status. This is further supported by the detailed analysis of Annex-1, where over 75% of the respondents do not know or disagree with questions on the status of BPR implementation.

Table 12 : Responses to current status of BPR implementation at Mekelle University.

Questions	Mean	Std. Dev.	RII
Continuous assessment being practiced	3.43	1.13	0.686
Summative exams given based on student convenience	3.29	1.1	0.658
Student centered teaching learning processes are installed	2.9	1.2	0.58
All academic recruitment are made based on open competitions	2.87	1.23	0.574
Students are assigned to departments based on their interest	2.86	2.11	0.572
Efforts are made to raise staff commitment to implement BPR recommendations	2.85	1.13	0.57
Academic staff members devote 75% their time on academics researches and community services	2.83	1.29	0.566
Proper documentation of academic related documents	2.83	1.19	0.566
Flat organizational structure developed	2.82	1.12	0.564
There is continuous staff training and upgrading	2.75	1.26	0.55
There is stable course schedule	2.73	1.2	0.546
Demand driven programs are being designed and developed	2.7	1.12	0.54
Efforts are made to assess training needs	2.69	1.18	0.538
Remedial programs are given regularly	2.63	1.15	0.526
Continuous career guidance and support provided to students	2.62	1.06	0.524

Academic staff members devote 25% their time on researches and community services	2.62	1.18	0.524
The leaders are role models in implementing BPR	2.56	1.27	0.512
Committed and strong leadership	2.48	1.13	0.496
Up-to-date learning materials are available	2.46	1.15	0.492
There is sufficient ICT support for teaching learning process	2.42	1.13	0.484
There is on line registration to students	2.25	1.21	0.45
There is 24 hours a day and 7 days a week information access to students	2.25	1.02	0.45
Staff members are motivated with BPR progress	2.12	0.95	0.424
Staff complains are handled properly	2.11	1.07	0.422
There is online grade submission system	1.0	1.07	0.2
Overall implementation status	2.64		0.528

Scale: 1=Strongly disagree, 2=Disagree. 3=Neutral, 4=Agree, and 5=Strongly agree.
Source: Own survey, 2011.

Generally, more than 28% of the respondents are neutral to the status of the implementations. 25% disagree that BPR implementation was installed as per the recommendations of BPR. 21% of the respondents strongly disagree that BPR recommendations are being implemented and practiced. About 18% agree with the implementation, but only 6.5% of respondents rated implementation as very high. From the mean and percentage figures it can be concluded that BPR recommendations are not installed and practiced as expected at Mekelle University. Only two parameters (the practice of continuous assessment and giving summative examinations based on student convenience) are rated above 3. As it can be seen from Table 12, standard deviation for the assignment of students to departments is high; respondents have great differences on this issue.

From the responses shown in Table 13, most respondents from Aksum University rated the implementation status below 3 with a weighted mean of 2.44. This implies that implementation of BPR at Aksum University is at lower status. This is further supported by the detailed analysis of Annex-2; over 57% of the respondents disagree with questions on the status of BPR implementation. That is 36.96% of the respondents strongly disagree and 20.24% disagree that the implementation is as per the BPR recommendations. While 17.12% of the respondents are neutral to the status of the implementations, 14.16% of the respondents agree that BPR recommendations are being implemented and practiced, but only 11.52% of respondents rated implementation status very high. Both the mean and percentage figures show that BPR recommendations are not installed and practiced as expected. Only five out of twenty five parameters (continuous assessment, remedial programs, student centered teaching learning processes and documentation) are rated above 3 at Aksum University.

Table 13 : Responses to current status of BPR implementation at Aksum University.

Questions	Mean	Std. Dev.	RII
Continuous assessment being practiced	4.14	1.28	0.828
Remedial programs are given regularly	3.88	1.26	0.776
Student centered (participatory) teaching learning processes are installed	3.34	1.42	0.668
Proper documentation of academic related documents	3	1.25	0.6
Continuous career guidance and support provided to students	2.82	1.45	0.564
Summative exams given based on student convenience	2.82	1.3	0.564
There is stable course schedule	2.74	1.35	0.548
Demand driven programs are being designed and developed	2.58	1.47	0.516
There is on line registration to students	2.52	1.36	0.504
Academic staff members devote 75% their time on academics researches and community services	2.5	1.31	0.5
Students are assigned to departments based on their interest	2.42	1.44	0.484

Staff complains are handled properly	2.4	1.58	0.48
Flat organizational structure developed	2.32	1.24	0.464
All academic recruitment are made based on open competitions	2.16	1.28	0.432
There is 24 hours a day and 7 days a week information access to students	2.08	1.12	0.416
There is sufficient ICT support for teaching learning process	2.08	1.47	0.416
Efforts are made to assess training needs	2.04	0.76	0.408
There is online grade submission system	2.04	1.43	0.408
Efforts are made to raise staff commitment to implement BPR recommendations	2.02	0.94	0.404
Up-to-date learning materials are available	2.02	1.36	0.404
Academic staff members devote 25% their time on researches and community services	1.98	1.3	0.396
Committed and strong leadership	1.98	1.2	0.396
Staff members are motivated with BPR progress	1.72	1.07	0.344
There is continuous staff training and upgrading	1.7	1	0.34
The leaders are role models in implementing BPR	1.66	0.92	0.332
Overall weighted average	2.44		0.488

Scale: 1=Strongly disagree, 2=Disagree, 3 =Neutral, 4=Agree, and 5=Strongly agree.
Source: Own survey, 2011.

Comparatively the implementation status is rated higher at Mekelle University than at Aksum University. But the overall performance of BPR in the institution is rated below 3. As it is discussed, from the communication and accomplishment of BPR section, communication about BPR in planning and implementation phases were poor and the goals and objectives are accomplished to maximum of moderate extent. Tables 11 and 12 are in line with these ideas. That is goals and objectives are not achieved to the desired level and the overall status of BPR implementation in the higher institutions is at lower status.

g) BPR Implementation Failure Factors

A list of thirty questions proposed in literature as potential BPR problems are provided to the respondents. They are asked to rate the extent that each problems would have a negative effect on BPR implementation in higher education institutions. The overall responses are summarized in Tables 14 and 15.

From Table 14, it can be seen that all the factors are ranked with mean above 2.5 and the overall. Thus the respondents deemed that all the factors are important problems in BPR implementation processes. While factors like unrealistic report that hides actual progress of implementation (RII=0.72), lack of management determination (RII=0.72), lack of employee training (RII=0.64) and lack of leadership to confront major business risks (RII=0.68) are among the top rated problems. Lower employee productivity (RII=0.54), high resistance to change (RII=0.54) and unfriendly working environment (RII=0.53) are at the lowest extreme. This can be further analyzed by classifying in to organizational environment, planning, operational, results, side effects and implementation cost related factors.

Based on the classification shown on Table 13, lack of leadership to confront major business risks, downsizing but keeping old organizational structure and lack of senior management enthusiasm are the most severe problems in organizational environment that facilitates the failure of BPR implementation. Lack of employee training to implement BPR, downsizing but keeping old organizational structure, conflict between traditional performance and BPR goals and top management reluctant to fund for BPR implantations are top rated problems in the BPR implementation planning. Operationally, on average, the most critical problems are long BPR implementation time, lack of training, incapability of IT to support BPR requirements and unrealistic report that hide actual progress of BPR implementation. Top management reluctant to fund for BPR implantations is the core cost related problem in implementation of BPR. BPR implementation projects seem to have many problems that could be considered as side effects. The most severe side effects that hinder the implementation of BPR in higher institutions are making business mistakes due to pressure to make quick results, lower employee morale, resignation of productive personnel and trying to change too much too quickly. Lastly, some BPR failure factors are basically lack of results. These include management frustration with slow business results, lower employee morale and lower employee productivity.

As shown in Table 15, all the factors are ranked with mean above 2.5 and above 0.5 RII values. Thus the respondents from Aksum University deemed that all the factors are critical problems in BPR implementation processes. Factors like lack of employee training (RII=0.888), unrealistic report to outsiders that hide actual progress (RII=0.812), management frustration with slow business results (RII=0.804), top management reluctant to fund (RII=0.784), disruptive in its nature (RII=0.78) are among the top rated problems. On the other hand employee high resistance to change (RII=0.616), employee working culture (RII=0.604), downsizing but keeping old organizational structure (RII=0.604) and lower employee productivity (RII=0.544) are at the lowest extreme.

The critical failure factors can be further analyzed by classifying them in to organizational environment, planning, operational, results, side effects and implementation cost related factors as shown in Table 15. Some factors have effects on more categories and they are included in more than one category. Unrealistic report to outsiders that hide actual progress, lack of leadership to confront major business risks, lack of management determination, employees' attitude, inconvenient working management are the most severe problems in organizational environment that facilitates the failure of BPR implementation. Lack of employee training to implement BPR, top management reluctant to fund for BPR implantations, lack best technology, inability of IT to support BPR requirements and conflict between traditional performance and BPR goals are top rated problems in the BPR implementation planning.

Operationally, on average, the most critical problems are unrealistic reports that hide actual progress of BPR implementation, disruptive out puts of BPR and incapability of IT to support BPR requirements. Top management reluctant to fund for BPR implantations is the core cost related problem in implementation of BPR. BPR has many side effects. The most severe side effects that hinder the implementation of BPR in higher institutions are unfriendly working environment, resignation of productive personnel, trying to change too much too quickly. Lastly, some BPR failure factors are basically lack of results. These include management frustration with slow business results, lower employee morale and lower employee productivity.

Considering the mean and RII values of Tables 14 and 15, lack of employee training, unrealistic report to outsiders that hide actual progress of BPR implementation, management frustration with slow business results, lack of management determination when problem comes, top management reluctance to fund BPR implantations, employees' negative attitude, lack of top managers enthusiasm, lack of IT to support BPR requirements are the top ranked obstacles to BPR implementation in the higher institutions.

Higher institutions should critically evaluate the failure factors and implement the BPR properly to minimize the failure rate of the BPR projects. As described above the problems are more of on human related problems like lack of training, hiding actual progress, management frustration and the like. Therefore, to be effective on BPR implementations organizations should invest on their human and human related capital.

Table 14 : Responses to BPR implementation problems at Mekelle University.

Questions	Mean	Std. Dev.	RII
Organizational environment:			
The company's working management is not conducive to BPR implementation	2.99	1.15	0.6
BPR created unfriendly working environment	2.64	1.16	0.53
Downsizing but keeping old organizational structure	3.29	1.16	0.66
Difficult to implement BPR due to teams communication barrier	3.02	1.11	0.6
Lack of leadership to confront major business risks	3.39	1.09	0.68
Lack of senior management enthusiasm	3.26	1.14	0.65
Lack of employee consensus to see through it	3.2	1.09	0.64
Unrealistic report to outsiders that hide actual progress of BPR implementation	3.61	1.05	0.72
Lack of management determination when problem comes	3.59	1.03	0.72
Lack of employee consensus to see through it	3.2	1.09	0.64
Employees' "this too shall pass" attitude	3.28	1.11	0.66
Overall	3.22		0.64

Planning:			
Difficulty to use best technology	3.11	1.22	0.62
Missing employee working habits	3.17	1.02	0.63
Making business mistakes due to pressure to make quick results	3.23	1.09	0.65
Downsizing but keeping old organizational structure	3.29	1.16	0.66
Lack of understanding of BPR implementation requirements	3.24	1.23	0.65
BPR project was larger than anticipated	2.99	0.98	0.6
Conflict between traditional performance and BPR goals	3.28	1.17	0.66
IT unable to support BPR requirements	3.19	1.01	0.64
Long BPR implementation time	3.1	1.01	0.62
Top management reluctant to fund for BPR implantations	3.27	1.16	0.65
No enough employee training to implement BPR	3.48	1.11	0.7
Overall	3.21		0.64
Operational:			
BPR project was larger than anticipated	2.99	0.98	0.6
Time consuming learning curve	3.01	0.98	0.6
BPR was too disruptive to the teaching learning process	2.78	1.09	0.56
IT unable to support BPR requirements	3.19	1.01	0.64
Unrealistic report to outsiders that hide actual progress of BPR implementation	3.61	1.05	0.72
Long BPR implementation time	3.1	1.01	0.62
No enough employee training to implement BPR	3.48	1.11	0.7
Overall	3.17		0.63
Implementation costs:			
Top management reluctant to fund for BPR implantations	3.27	1.16	0.65
There is high cost of implementation of BPR in academic process	2.89	1.02	0.58
Overall	3.08		0.62
Side effects:			
Trying to change too much too quickly	3.08	1.18	0.62
Making business mistakes due to pressure to make quick results	3.23	1.09	0.65
BPR created unfriendly working environment	2.64	1.16	0.53
Lower employee productivity	2.69	1.09	0.54
Lower employee moral for implementing BPR	3.14	1.21	0.63
Resignation of productive personnel	3.08	1.14	0.62
Employee high resistance to change	2.68	1.13	0.54
Overall	2.93		0.59
Lack of Results:			
Lower employee productivity	2.69	1.09	0.54
Lower employee moral for implementing BPR	3.14	1.21	0.63
Management frustration with slow business results	3.25	1.02	0.65
Overall	3.03		0.61

Scale: 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly agree.
Source: Own survey, 2011.

Table 15 : Responses to BPR implementation problems at Aksum University.

Questions	Mean	Std. Dev.	RII
Organizational environment:			
The company's working management is not conducive to BPR implementation	3.64	1.63	0.728
BPR created unfriendly working environment	3.66	1.24	0.732
Downsizing but keeping old organizational structure	3.02	1.45	0.604
Difficult to implement BPR due to teams communication barrier	3.38	1.43	0.676
Lack of leadership to confront major business risks	3.76	1.1	0.752
Lack of senior management enthusiasm	3.44	1.28	0.688
Lack of employee consensus to see through it	3.46	1.39	0.692
Unrealistic report to outsiders that hide actual progress of BPR implementation	4.06	1.19	0.812
Lack of management determination when problem comes	3.66	1.26	0.732
Lack of employee consensus to see through it	3.46	1.39	0.692
Employees' "this too shall pass" attitude	3.64	1.35	0.728
Overall	3.56		0.712364
Planning:			
Difficulty to use best technology	3.76	1.29	0.752
Missing employee working habits	3.16	1.45	0.632
Making business mistakes due to pressure to make quick results	3.02	1.3	0.604
Downsizing but keeping old organizational structure	3.16	1.45	0.632
Lack of understanding of BPR implementation requirements	3.22	1.25	0.644
BPR project was larger than anticipated	3.24	1.04	0.648
Conflict between traditional performance and BPR goals	3.48	1.13	0.696
IT unable to support BPR requirements	3.46	0.99	0.692
Long BPR implementation time	3.42	1.03	0.684
Top management reluctant to fund for BPR implantations	3.92	1.08	0.784
No enough employee training to implement BPR	4.44	0.84	0.888
Overall	3.48		0.696
Operational:			
BPR project was larger than anticipated	3.24	1.04	0.648
Time consuming learning curve	3.18	1.55	0.636
BPR was too disruptive to the teaching learning process	3.9	1.3	0.78
IT unable to support BPR requirements	3.46	0.99	0.692
Unrealistic report to outsiders that hide actual progress of BPR implementation	4.06	1.19	0.812
Long BPR implementation time	3.42	1.03	0.684
No enough employee training to implement BPR	4.44	0.84	0.888
Overall	3.67		0.734286
Implementation costs:			
Top management reluctant to fund for BPR implantations	3.92	1.08	0.784
There is high cost of implementation of BPR in academic process	3.44	1.31	0.688
Overall	3.68		0.736

Side effects:			
Trying to change too much too quickly	3.38	1.46	0.676
Making business mistakes due to pressure to make quick results	3.16	1.45	0.632
BPR created unfriendly working environment	3.66	1.24	0.732
Lower employee productivity	2.72	1.47	0.544
Lower employee moral for implementing BPR	3.1	1.43	0.62
Resignation of productive personnel	3.22	1.52	0.644
Employee high resistance to change	3.08	1.58	0.616
Overall	3.188		0.637714
Lack of results:			
Lower employee productivity	2.72	1.47	0.544
Lower employee moral for implementing BPR	3.1	1.43	0.62
Management frustration with slow business results	4.02	1	0.804
Overall	3.28		0.656

Scale: 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly agree.
Source: Own survey, 2011.

IV. Conclusion

Although the desired and stretched goals and objectives of BPR are clearly written and documented at the universities, these goals and objectives were not well communicated and set in to the staff members mind and attention. Consequently, the institutions are unable to manage and accomplish the goals and objectives to the desired level. This was explained by the fact that all the goals and objectives have lower RII and weighted mean scores both in the plan and accomplishment status. Having poor accomplishment rate of the goals and objectives, the current status of BPR is rated by the respondents to be below the moderate extent (below 3 in the Likert scale) in both the universities. This implies effectiveness of BPR implementation is below average and the institutions are not gaining the competitive advantages expected from the radical change.

In this research on average, having BPR motivated by customer demands, effective utilization of resources, good information exchange and flow, continuous performance improvement, using technology as enabler not as solution, developing and communicating clear written goals and objectives, proper alignment of BPR strategy with the corporate strategy, using progress evaluation are rated as the most critical success factors. Lack of employee training, unrealistic report to outsiders that hide actual progress of BPR implementation, management frustration with slow business results, lack of top management determination, top management reluctance to fund BPR implantations, employees' negative attitude, lack of top managers enthusiasm, lack of IT to support BPR requirements are the top ranked obstacles to BPR implementation in the EHEI's.

V. Recommendations

Higher education institutions and also other organizations undertaking, or planning to undertake BPR efforts should consider critically the success factors, tackle the BPR related problems and evaluate all these factors against their organizational working environments to ensure that their BPR-related changes are comprehensive, well-implemented, and with minimum chance of failures.

Based on the findings of the study, organizations should not rash to implement the radical changes as BPR, if not handled properly, can lead to competitive disadvantages. In order to undertake BPR, the most important factor to ensure success is to analyze the current situation to identify goals, objectives and possible strategies. These goals, objectives and strategies should be openly and well communicated to the stakeholders. If there is a good case to undertake the changes, the stakeholders (top management and employees) must support the change and drive it through to success. All critical success factors must be taken care of and minimize all factors that lead to failure of the BPR initiatives.

As BPR requires continuous improvement, progress measurement and performance evaluation of outputs against the objectives and customer (internal and external) satisfaction, which is lacking point in most of the education institutions now, should be continuously monitored.

This study is focused on the assessment of effectiveness of BPR implementation in the academic core process and identifies the success and failure factors related to the academic in the EHEI's. Further study on the assessment of the other core process and

linking the key success factors and competitive advantage should be done to evaluate the overall success or failure of BPR in EHEI's.

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Annex-1 : Status of BPR at Mekelle University.

Items		Response					
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
Efforts are made to raise staff commitment to implement BPR recommendations	Frequency	14	29	35	24	8	50
	Percent	12.73	26.36	31.82	21.82	7.27	100
	Cum. percent	12.73	39.09	70.91	92.73	100	
There is online grade submission system	Frequency	49	29	21	9	2	50
	Percent	44.55	26.36	19.09	8.182	1.82	100
	Cum. percent	44.55	70.91	90	98.18	100	
Efforts are made to assess training needs	Frequency	20	33	23	29	5	50
	Percent	18.18	30	20.91	26.36	4.55	100
	Cum. percent	18.18	48.18	69.09	95.45	100	
There is 24hrs a day and 7days a week information access to students	Frequency	28	42	29	7	4	50
	Percent	25.45	38.18	26.36	6.364	3.64	100
	Cum. percent	25.45	63.64	90	96.36	100	
Students are assigned to departments based on their interest	Frequency	22	36	32	14	5	50
	Percent	20	32.73	29.09	12.73	4.55	100
	Cum. percent	20	52.73	81.82	94.55	99.1	
Remedial programs are given regularly	Frequency	19	36	29	19	7	50
	Percent	17.27	32.73	26.36	17.27	6.36	100
	Cum. percent	17.27	50	76.36	93.64	100	
There is online registration to students	Frequency	40	26	26	12	6	50
	Percent	36.36	23.64	23.64	10.91	5.45	100
	Cum. percent	36.36	60	83.64	94.55	100	
There is stable course schedule	Frequency	21	28	27	28	6	50
	Percent	19.09	25.45	24.55	25.45	5.45	100
	Cum. percent	19.09	44.55	69.09	94.55	100	
Continuous career guidance and support provided to students	Frequency	17	35	35	19	4	50
	Percent	15.45	31.82	31.82	17.27	3.64	100
	Cum. percent	15.45	47.27	79.09	96.36	100	
Up-to-date learning materials are available	Frequency	25	37	26	16	6	50
	Percent	22.73	33.64	23.64	14.55	5.45	100
	Cum. percent	22.73	56.36	80	94.55	100	
Demand driven programs are being designed and developed	Frequency	20	25	38	22	5	50
	Percent	18.18	22.73	34.55	20	4.55	100
	Cum. percent	18.18	40.91	75.45	95.45	100	
Student centered (participatory) teaching learning processes are installed	Frequency	17	23	35	24	11	50
	Percent	15.45	20.91	31.82	21.82	10	100
	Cum. percent	15.45	36.36	68.18	90	100	
Continuous assessment being practiced	Frequency	9	12	29	43	17	50
	Percent	8.182	10.91	26.36	39.09	15.5	100
	Cum. percent	8.182	19.09	45.45	84.55	100	

Annex-1 : Continued.

Items		Response					
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
Summative examinations are based on student convenience	Frequency	10	11	40	35	14	50
	Percent	9.091	10	36.36	31.82	12.7	100
	Cum. percent	9.091	19.09	55.45	87.27	100	
Academic staffs devote 25% their time on researches and community	Frequency	23	30	29	22	6	50
	Percent	20.91	27.27	26.36	20	5.45	100
	Cum. percent	20.91	48.18	74.55	94.55	100	
Academic staffs devote 75% their time on academics researches and community services	Frequency	20	29	24	24	13	50
	Percent	18.18	26.36	21.82	21.82	11.8	100
	Cum. percent	18.18	44.55	66.36	88.18	100	
Flat organizational structure developed	Frequency	18	17	51	15	9	50
	Percent	16.36	15.45	46.36	13.64	8.18	100
	Cum. percent	16.36	31.82	78.18	91.82	100	
All academic recruitment are made based on open competitions	Frequency	18	23	37	19	13	50
	Percent	16.36	20.91	33.64	17.27	11.8	100
	Cum. percent	16.36	37.27	70.91	88.18	100	
There is sufficient ICT support for teaching learning process	Frequency	28	31	33	13	5	50
	Percent	25.45	28.18	30	11.82	4.55	100
	Cum. percent	25.45	53.64	83.64	95.45	100	
There is continuous staff training and upgrading	Frequency	20	32	26	20	12	50
	Percent	18.18	29.09	23.64	18.18	10.9	100
	Cum. percent	18.18	47.27	70.91	89.09	100	
The leaders are role models in implementing BPR	Frequency	27	32	23	18	10	50
	Percent	24.55	29.09	20.91	16.36	9.09	100
	Cum. percent	24.55	53.64	74.55	90.91	100	
Committed and strong leadership	Frequency	27	28	34	17	4	50
	Percent	24.55	25.45	30.91	15.45	3.64	100
	Cum. percent	24.55	50	80.91	96.36	100	
Staffs are motivated with BPR progress	Frequency	33	40	29	7	1	50
	Percent	30	36.36	26.36	6.364	100	100
	Cum. percent	30	66.36	92.73	99.09	100	
Staff complains are handled properly	Frequency	42	27	30	9	2	50
	Percent	38.18	24.55	27.27	8.182	1.82	100
	Cum. percent	38.18	62.73	90	98.18	100	
Proper documentation of academic related documents	Frequency	22	17	34	32	5	50
	Percent	20	15.45	30.91	29.09	4.55	100
	Cum. percent	20	35.45	66.36	95.45	100	
Overall percent		21.42	25.75	28.18	18.07	6.55	100
Overall cumulative		21.42	47.16	75.35	93.42	100	

Annex-2 : Status of BPR at Aksum University.

Items		Response					
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
Efforts are made to raise staff commitment to implement BPR recommendations	Frequency	19	13	16	2	0	50
	Percent	38	26	32	4	0	100
	Cum. percent	38	64	96	100	100	
Efforts are made to assess training needs	Frequency	13	22	15	0	0	50
	Percent	26	44	30	0	0	100
	Cum. percent	26	70	100	100	100	
There is 24 hours a day and 7 days a week information access to students	Frequency	20	13	12	3	2	50
	Percent	40	26	24	6	4	100
	Cum. percent	40	66	90	96	100	
Students are assigned to departments based on their interest	Frequency	20	9	6	10	5	50
	Percent	40	18	12	20	10	100
	Cum. percent	40	58	70	90	100	
Remedial programs are given regularly	Frequency	3	7	3	17	20	50
	Percent	6	14	6	34	40	100
	Cum. percent	6	20	26	60	100	
There is on line registration to students	Frequency	15	13	8	9	5	50
	Percent	30	26	16	18	10	100
	Cum. percent						
There is stable course schedule	Frequency	12	9	17	4	8	50
	Percent	24	18	34	8	16	100
	Cum. percent						
Continuous career guidance and support provided to students	Frequency	12	10	14	3	11	50
	Percent	24	20	28	6	22	100
	Cum. percent						
Up-to-date learning materials are available	Frequency	27	9	4	6	4	50
	Percent	54	18	8	12	8	100
	Cum. percent						
Demand driven programs are being designed and developed	Frequency	17	9	10	6	8	50
	Percent	34	18	20	12	16	100
	Cum. percent						
Student centered (participatory) teaching learning processes are installed	Frequency	8	7	8	14	13	50
	Percent	16	14	16	28	26	100
	Cum. percent						
Continuous assessment being practiced	Frequency	4	3	4	10	29	50
	Percent	8	6	8	20	58	100
	Cum. percent						
Summative exams given based on student convenience	Frequency	10	12	10	13	5	50
	Percent	20	24	20	26	10	100
	Cum. percent						

Annex-2 : Continued.

Items		Response					
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
Academic staffs devote 25% their time on researches and community services	Frequency	26	12	2	7	3	50
	Percent	52	24	4	14	6	100
	Cum. percent	52	76	80	94	100	
Academic staffs devote 75% their time on academics researches and community services	Frequency	17	6	16	7	4	50
	Percent	34	12	32	14	8	100
	Cum. percent	34	46	78	92	100	
Flat organizational structure developed	Frequency	17	10	18	5	0	50
	Percent	34	20	36	10	0	100
	Cum. percent	34	54	90	100	100	
All academic recruitment are made based on open competitions	Frequency	24	7	6	13	0	50
	Percent	48	14	12	26	0	100
	Cum. percent	48	62	74	100	100	
There is sufficient ICT support for teaching learning process	Frequency	25	14	1	2	8	50
	Percent	50	28	2	4	16	100
	Cum. percent	50	78	80	84	100	
There is continuous staff training and upgrading	Frequency	29	12	4	5	0	50
	Percent	58	24	8	10	0	100
	Cum. percent	58	82	90	100	100	
The leaders are role models in implementing BPR	Frequency	27	18	5	0	0	50
	Percent	54	36	10	0	0	100
	Cum. percent	54	90	100	100	100	
Committed and strong leadership	Frequency	27	6	8	9	0	50
	Percent	54	12	16	18	0	100
	Cum. percent	54	66	82	100	100	
There is online grade submission system	Frequency	29	6	3	8	4	50
	Percent	58	12	6	16	8	100
	Cum. percent	58	70	76	92	100	
Staffs are motivated with BPR progress	Frequency	31	8	5	6	0	50
	Percent	62	16	10	12	0	100
	Cum. percent	62	78	88	100	100	
Staff complains are handled properly	Frequency	24	6	3	10	7	50
	Percent	48	12	6	20	14	100
	Cum. percent	48	60	66	86	100	
Proper documentation of academic related documents	Frequency	6	12	16	8	8	50
	Percent	12	24	32	16	16	100
	Cum. percent	12	36	68	84	100	
Overall percent		36.96	20.24	17.12	14.16	11.52	100
Overall cumulative		36.96	57.2	74.32	88.48	100	

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Appropriateness of Extension Services of Small- Scale Industry

By Dr. Md. Mushfiqur Rahman
Pabna Science & Technology University

Abstract - Since Bangladesh is an agriculture dependent and over-populated country, so the over manpower should be made as resource through industrialization of the country. It is evident that the excess manpower lie mainly in agriculture sector and as small-scale industry sector is labor-intensive and small capital-requiring industry, so this paper has emphasized on the development of small-scale industry sector. This paper is explanatory in nature and data have been collected for conducting the study mainly from secondary sources. The main objective of the study is to find out the need-based appropriate extension service for small-scale industry sector. In order to present the appropriateness of extension services for the development of small-scale industry, the researcher has concentrated to find out the usual/major and even the trifling problems faced by the small-scale industrial units as well as small industrialists at first and then scrutinize the suitability of different types of extension services to remove the problems of this sector.

Keywords : *Itinerant, Staffing, Development, Extension Service, Voluntary, Close-Mutual, Close Counseling, Demonstration.*

GJMBR-A Classification : *FOR Code: 150306, JEL Code: L70, L80, P23*

Strictly as per the compliance and regulations of:

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Abstract - Since Bangladesh is an agriculture dependent and over-populated country, so the over manpower should be made as resource through industrialization of the country. It is evident that the excess manpower lie mainly in agriculture sector and as small-scale industry sector is labor-intensive and small capital-requiring industry, so this paper has emphasized on the development of small-scale industry sector. This paper is explanatory in nature and data have been collected for conducting the study mainly from secondary sources. The main objective of the study is to find out the need-based appropriate extension service for small-scale industry sector. In order to present the appropriateness of extension services for the development of small-scale industry, the researcher has concentrated to find out the usual/major and even the trifling problems faced by the small-scale industrial units as well as small industrialists at first and then scrutinize the suitability of different types of extension services to remove the problems of this sector. Problems have been identified from two points of view i.e. from the view point of government and small industrialists' associations as well as from the view point of industrial unit and owner of the industry. The problems for that are responsible the earlier one are the defects and loopholes in manufacturing process, suitability of machinery and technology, cooperation and coordination between government agencies and voluntary associations, financing, marketing, obtaining or providing information to the small industrialists. The problems for that responsible the industrial unit and owners of the industry are problems regarding organization of the concern/firm, marketing and staffing. The main problem lies in finding out the needs and providing appropriate extension services especially the consultancy, training and financing to small industrialists. Over and above, selection of genuine entrepreneurs, evaluation, implementation and ultimately monitoring of the projects are also the vital problems of this sector. This study has emphasized more on different types of extension services that should be provided to small-scale industries. Itinerant demonstration team and plant have been regarded as the most beneficial extension service for the small industrialists in this study. Providing Consultancy and training services to the owners, managers, employees and workers are the most effective extension one because through these services close mutual exchange and close-counseling are possible with them (as mentioned above). The role of different international organizations is a vital matter in developing small-scale industry sector in the developing countries. This study discusses the importance of foreign training and workshop in developing this sector as well as removal of the ignorance of small industrialists about the needs of the industrial units and of their own.

Finally the researcher has tried to recommend some effective measures to overcome the problems that are facing by small-scale industry sector.

Keywords : Itinerant, Staffing, Development, Extension Service, Voluntary, Close-Mutual, Close Counseling, Demonstration.

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I. Introduction

Bangladesh is an agriculture dependent and overpopulated country. It is also evident that agriculture sector is overmanned one. The excess manpower of this sector should be shifted to other sectors for employing the excess manpower of one in particular as well as unemployed people of the country in general. As the small-scale industry sector is laborintensive and small capital-requiring one as well as the raw materials to be required for manufacturing goods of this sector may largely be of agriculture sector, so this sector may solve the unemployment problem of the country in easier manner to a great extent than that of other sectors. Over and above, small-scale industry sector can increase foreign exchange earning through exporting its product abroad as well as reduce cash outflow for importing goods through manufacturing indigenous goods. Thus export-import imbalance of the country to some extent might be minimized. In fact, after the independence of Bangladesh, the government has been undertaking different initiatives in different plan-period for the development of this sector. But it is a matter of great regret that no industry-matching and need-base initiative has ever been undertaken and the initiatives that are undertaken have been properly implemented and monitored neither by the government nor by any small industrialists' associations. So, employment generation and contribution to G.D.P. of this sector till to date is not up to the expectation though these have been being increased for years together. In the consequences, it may be concluded that the development scenario of small-scale industry in Bangladesh is not remarkable. A statistics may be presented in respect of this.

Agriculture sector employs 79% and 59% of labor force in mid 70's and mid 80's respectively whereas in 2002-2003 this sector employs 51.69% of labor force following the industry sector 13.56%. So, it is evident here that the employment rate of agriculture sector has been declining over the years. Again, the contribution of agriculture sector to G.D.P was 33.07%,

29.23%, 25.03% and 21.11% in the year of 1980, 1990, 2001-2002 and 2006-2007 respectively. On the other hand, the contribution of industry sector to G.D.P in those years was 17.31%, 21.04%, 26.20% and 29.77% respectively (Economic Review Bangladesh; 2007:24). It is evident from another review that agriculture sector employs the highest number of labor force which is 43.6% of total labor force where as the industries sector employs 13.56%. At the same time, the contribution of agriculture sector to GDP is 20.29% where as the contribution industries sector to GDP is 29.93% in 2009-2010 (Economic Review of Bangladesh-2011:20).

From the above discussion, it is realized that various reasons are responsible for slow development of small-scale industry sector. For rapid and expected development of small-scale industry sector, the problems prevailing in this sector should be found out and accordingly they should be solved immediately considering as the prioritized sector. For the development of this sector as well as substantial economic development of the country, extension services to this sector would be provided and expanded in proper form. To this end, the problems that are faced by small-scale industries are presented in the following sections.

Some processes are to be maintained in manufacturing and selling goods of small firms. If they are to be efficiently performed and have to be carried out on a larger scale, the cost of product would be minimized and accordingly profit would be maximized. To operate the concern/firm efficiently or reduce the cost of production or maximize the profit, it is evident that promotion and extension services should be provided properly to the small industrialist.

Large firms may employ specialists on their own staffs to provide all these services. If a small firm, which has no capability to provide these services - has no own specialist or ability to hire such type of specialists but it needs such type of services. Such type of small industries do not get any facility or advice from any corner i.e. neither government nor private initiative because of their smallness. Considering this point of view as well as the economic development of the country, the progress of small-scale industries sector is a prime need for a developing country. So there is no scope to avoid such type of extension services for small-scale industries - for owners, managers as well as staffs in a developing country like Bangladesh.

If the needs of small firms as already pointed out to some extent are provided in proper form, the wholesalers and retailers can achieve economies by handling the products of many different producers and thus relive the small industrialists in many lines. But in fact, many small managers, in highly developed as well as less developed countries, are not aware of their own needs and in some cases even if they are aware of their needs, they cannot afford to hire advisory or research services on a commercial basis. Especially in industrially less developed countries, there is likely to be little or no effective market demand among small firms for the kinds of services that management consultants and research institute can provide. There is scope and need for action the government and associations of small producers to provide services and facilities for small industries that may develop the existing state of the industry.

Actually, extension services have an important role to play in this connection. The main extension services are advisory/consultancy, training, information and as a supporting activity, research services. Most of the developing countries cannot maintain coordination and cooperation among the concerned agencies as well as public and private initiatives for providing extension services to small-scale industries. This paper is concerned with certain general problems for small-scale industry of Bangladesh. The researcher makes his effort to find out the problems prevailing in small-scale industry sector and examine the adequacy and appropriateness of extension services those are provided for the development of small-scale industry and ultimately recommend some measures to overcome the problems of this sector in this paper in respect of Bangladesh. The findings of the study may be utilized for the policy makers of Bangladesh as well as for other developing countries of the world also. In Bangladesh, it is evident that though the government has been extending hands for the progress of small-scale industries for years together but there is a lack of evaluation, implementation and monitoring activities of the undertaken projects. Over and above, though there are some small-scale industrialists' associations in Bangladesh as stated earlier, but in practice, they have no significant role for the betterment of small-scale industries or small industrialists. It is also evident that there is no cooperation and coordination among the ministries, departments or agencies concerned as well as between the state assistance and voluntary efforts in Bangladesh. Since, the economic emancipation of an over-populated and developing country like Bangladesh depends upon the generation of employment opportunity and utilization of indigenous raw materials through the development of small-scale industry sector and the development of this sector is mainly dependent on providing appropriate extension services, so the researcher has undertaken the research topic titled, "Appropriateness of Extension Services of Small-Scale Industry."

II. Objectives Of The Study

The main objective of the study is to find out the need-based appropriate extension service for small-scale industry sector and the specific objectives are:

i) To identify the different problems regarding extension services those are facing by small-scale industry as well as small industrialists
ii) To examine the cooperation and coordination between the government agencies and voluntary associations
iii) To way out the owners and managers to be aware of their needs and acknowledge them about new technology
iv) To select the need-based appropriate extension services for the development of small-scale industry sector
v) To suggest some possible measures and the acceptable methods/approaches for identifying the problems and select appropriate extension services for the development of small-scale industry sector.

III. Methodology

Mainly secondary data have been collected for conducting the study. Data have been collected from industrial policies prepared in different plan period in Bangladesh. Beside these, annual report of BSCIC, Published official documents, Newspaper, Statistical book, Economic review of Bangladesh, Economic trend of Bangladesh and so on. A few primary data have been collected through interviewing with the executives of BSCIC, SCITI, SDC and ministry of industry as per the interview schedule. Quantitative and qualitative data have been discussed and analyzed in the study. For obtaining the significant and pragmatic result of the research work as well as the convenience of conducting the study as much as possible the aspects those may affect the small-scale industrial development have been discussed in this paper.

IV. Organization Of The Study

This study is explanatory in nature. For bringing smoothness and fluency in discussion, this paper has been organized with seven sections. These are as follows:

Section I produces the brief introduction with an endeavor to give an idea on the necessity of extension services to small-scale industry, nature of the study, statement of the problem and justification of the study.

Section II sets the main and some specific objectives of the study.

Section III highlights the methodology of the study.

Section IV is the organization of the study that consists of the highlights of different sections of this paper.

Discussion and analyses of the study have been made in section V dividing into twelve sub-sections.

Section V.I discusses the role of different international organizations in developing the small-scale industry sector.

Section V.II focuses on the different problems of organization of small_scale industrial units.

Section V.III emphasize on the cooperation between government agencies and voluntary associations of small_scale industry.

Section V.IV presents the essence of coordination of different government agencies or bodies.

Section V.V has made an effort to acknowledge the different types of organization prevailing in small-scale industry and ultimately recommended a suitable organogram for different types of small-scale industries.

Section V.VI ways out a financing as well as staffing arrangement that would be beneficial for the small industrialists. It also discusses different problems of financing in small-scale industries.

Section V.VII describes some approaches and their techniques and strategies of providing extension services to different small-scale industry.

Section V.VIII highlights of several important extension services.

Section V.IX has focused on the necessity and applicability of demonstration or model plant for providing training consultancy and information to small industrialists, employees and workers also.

Section V.X emphasizes on demonstration and training plant for providing extension services to small industry sector.

Section V.XI presents the role of itinerant demonstration and training teams for similar type problematic small industry.

Section V.XII produces the necessity and technique of creating market of the small industrial products.

Section VI finds out some findings of the conducted study.

The final section suggests and recommends some possible measures to overcome the problems of small-scale industry sector.

V. Discussion And Analysis

V.I Role of International Organizations

It is common belief and fact that the shortage of qualified personnel is a major obstacle in the development of small-scale industry in the less developed countries. A limited but important contribution towards overcoming this shortage can be made through the technical assistance that is available to less developed countries through international organizations or on a bilateral basis from individual more developed countries. Such assistance makes provision both for placing temporarily at the disposal of the less developed countries experts and specialists from more developed countries and through fellowships, for the training abroad of selected nationals from the less developed countries.

Under the Expanded Technical Assistance Programme of the United Nations and its specialized agencies help is available at the request of government of individual countries or on a regional basis. Such help has been provided by the United Nations and the International Labor Organization in the field of handicraft and small-scale industries for a number of countries. (Services for Small-Scale Industry, I.L.O. 1961:53). Broadly speaking the United Nations is concerned with economic aspects of problems of promoting development and productivity in small-scale industries, while labor and social aspects are primarily matters for the I.L.O. which also has recognized contributions to make in matters of management development and the promotion of cooperative activities. The activities of the two organizations are closely related, they have cooperated in several joints projects. United Nations and I.L.O. experts have collaborated in carrying out surveys of possibilities of development of small-scale industries in different countries of the world.

Since the inception of the Technical Assistance Programme, experts have been provided by the I.L.O. and by the United Nations to government for surveying, advising, training personnel and assisting in carrying out programmes for developing small-scale industries. In some countries over-all surveys have been carried out and other special surveys have been conducted for particular areas or for the development of particular industries. Assistance has been provided for initiating and carrying out training and development programmes in handicrafts and small-scale industries within the framework of community development or fundamental education projects in Asia, The Middle East and Latin America. Advisory services have been rendered and training programmes conducted for the development of particular industries such as textiles, coir and other fibres, lacquerware, pottery, tiles, bricks and tanning and leather works.

As parts of its more general work to promote higher levels of productivity, the I.L.O. has also provided experts for a number of countries to help, chiefly by means of training and demonstration, in spreading knowledge of methods by which productivity may be increased. Several of these missions have provided successive courses about eight weeks duration in the elements of work study including practical work carried out by trainees in selected plants under the supervision of the experts. Though these productivity missions have been concerned with plants of all sizes and have not thus far given special attention to the problems of small–scale industry as such, some trainees have come from and some practical work has been carried out in relatively small plants.

The United Nations has extended assistance for the establishment of institutional facilities related to economic development, including technical research organizations and service institutes. The United Nations and the I.L.O. have in addition, provided numerous fellowships for the training abroad of carefully selected persons from less developed countries in methods that will help them make valuable contributions to the development of small-scale industries in their own countries. Besides technical assistance, certain other activities of the United Nations and other international agencies have been designed to assist the less developed countries in promoting the development of their small-scale industries and in dealing with problems arising in connection with efforts in this direction.

V.II Problems of Organization

There is considerable difference in pattern and emphasis of the services to help small-scale industrial managers in different countries. This diversity is to be expected in view of differing conditions, needs and resources in different countries and actually no one pattern or type of organization can be held up as a model to all countries.

There are, however, certain problems of organization that are encountered in varying forms in all countries. In the following section the researcher shall touch on the problems of the relationships between state assistance and voluntary effort and among different government departments or agencies; considerations regarding the degree of centralization and specialization of services appropriate in the different conditions; and finally questions of financing and staffing.

V.III Cooperation between the State and Voluntary Association

The role of voluntary association of small producers is one important question of this section. Such associations are active in a number of countries. Accordingly there are some small industrialists' associations in Bangladesh, which have affiliation of central organization, BSCIC. These are the private organization, and their purposes are a) to represent the interest of artisans and small industrialists, in connection with legislation and related matters; and b) to further-technically, economically, socially and artistically- the development and progress of small-scale industry.

The various departments, Banks and the Corporation of Bangladesh have been furnishing numerous services to small industrialists, designed to assist them in the efficient conduct of their businesses and strengthen their competitive position. Recently, through the establishment of small-scale industry Sales centre with the initiative of Corporation and the Corporation has undertaken to promote the marketing of the product of handicrafts and small industries. In the expert field, the Corporation cooperates with privately owned company which has established sales organization in several markets for the export of different articles and other products of small-scale industries.

With the initiative of the Corporation, a training centre named SCITI (Small and Cottage Industries Training Institute) has been established which renders training services mainly to the officers and employees of BSCIC and at times it arranges some special training and counseling programmes for the entrepreneurs for building awareness among them. Besides, 15 skill development centres have already been established at different locations of the country. There is no so provision of encouraging measures/incentives for the trainees imparted. The training programmes that exist in Bangladesh are not worthy or effective for acquiring job for the unemployed people. After completion of the training programme, there is no pragmatic measure of evaluation and monitoring system by the concerned departments. The existence of a strong and effective association of small industrialists might help in pertaining training to the entrepreneurs and strengthen different government agencies involved in respect of extension services through holding reciprocal discussion and taking initiatives. The Government and the association of small producers are working together in various countries of the world. There are good reasons for trying to establish some sort of working partnership between Government and small producers in providing initiative and direction for extension services. It is noted here that the Government can provide resources, continuity and coordination that are made possible by an over-all view of the requirements of the national economy. Representatives of small producers can provide enthusiasm, ideas and voluntary work to the small industrialists.

In Bangladesh, it is mention worthy and matter of regret that the members of small producers association do not ever try for the betterment of this sector at all or for the other members rather they play a role of a broker through macsul-manism due to unethical takings in obtaining loan from different financial institutions and as such cooperate to divert the loan for their personal purpose. In a matter of fact, for healthy development of small-scale industry, a body may be formed that are exist in some countries of the world for providing appropriate extension services to small industry with the representatives of small producers association and of public and semi-public agencies/departments as well as with other interested quarters of the society who are capable to play positive role in this respect.

V.IV Coordination of Government Agencies

Ensuring the most fruitful cooperation between public and private efforts in this field may be the best solution to the problem in providing extension services to small-scale industry. There is no another best solution other than coordinating activities of the different government departments or other public agencies to the very real problem. Initiatives have to be taken to promote the healthy development of small-scale industry among different government departments/bodies and at different levels - central, regional and local. Ministry of finance, Commerce and Industry, Labor and social welfare, and education may all be concerned with different aspects of work in this field. So also may government development Departments, Boards or Development Corporations in countries where these exist. Probably, it will be conducive to a good administration is to the avoid the worst features of bureaucracy and as such the main responsibility for carrying out such as government wishes to undertake to promote the development of small industry is entrusted to some one department, clear decisions having been taken and announced regarding a) the kind of help for which it can look central departments and b) the functions and responsibilities that are to be decentralized and entrusted to regional or local government bodies.

The definition of function and responsibilities of the different departments and agencies has to be determined as per the needs and requirements of small-scale industry after a careful study and an analysis of the factors that hampers its development. Since needs, requirements and conditions are changed over the course of time, a continuous programme of research into economic, social and technological problems of small-scale industry is called for, and decisions taken regarding the kinds of services to be provided and the way in which they are provided need to be reviewed from time to time in the light of research findings. If activities are not undertaken to aid small-scale industry based on careful study and analysis may be misdirected. For example, measures that might be appropriate to help certain small-scale undertakings for absorbing unemployed people in an area with a high population density may not be appropriate for large-scale industry. The measures or extension services may differ for a different socio-economic structure also. Usually, small firms is operated using hand-operated manufacturing techniques or in some cases, with vocational training. The trainees remain anxious whether the training and skills that are being imparted would be utilized or sufficient demand of ones would be created or not in future. Whether the efforts that are made for improving a backward technology would be fruitful or not without creating market of the products. In short, efforts may be abortive because they are ignorant what it is required in a given situation, or because they cannot succeed improving only one aspect of the problems that are facing whereas they might be very successful if accompanied by appropriate measures of other kinds. So, a careful study is necessary to take any initiative. Well designed research projects cannot throw only light on the urgency of different needs and the nature of obstacles to progress; research can and should also be designed to evaluate the result of efforts made and services provided.

V.V Types of Organization

Extension service has to cater for different regions and for different industries, each having its specific problems and it has to provide different types of services - consultancy services, training or research. Questions arise as to how these different types of requirements are to be reflected in the organizational structure of the extension service or services. At one extreme, one might envisage a single central service, catering for all regions or all industries and providing all types of services, but its work is presumably have to be split up in some way of divisions or departments. At the other extreme, one might envisage a multiplicity of institutes or agencies, each providing one type of service for one industry in one region; but without some coordination there would almost certainly be a great deal of waste and overlapping. The important practical question in each case is how much autonomy is to be enjoyed by individual working units, whether they have sections, branches or departments of a centralized services or independent agencies subject to some of central coordination. Between the two extremes distinguished above the possible combination are legion. Some but not all, services may be provided on a national basis for all industries; other may be provided on a regional basis for all industries or on an industrial basis for all regions; yet other may be provided by institutes or agencies that are both decentralized by region or specialized to serve a particular industry. Besides, some problems will remain beyond these initiatives/extremes, which may be filled through special interference of the organization.

The guiding principles, mentioned above are not the best one solely. However, certain guiding principles may be suggested in first extreme, the purpose of centralization is to prevent waste and duplication and to ensure that so far as possible, important gaps in services are filled. Waste and duplication may arise if a unit is set up to provide some services that could be provided more effectively and economically by existing agencies. Often economies of scale may be achieved by providing certain services in combination and spreading their overhead cost. For example, some people who are equipped by training and experience to provide consultancy services are likely to be well qualified for "vetting and reporting on the merits of application for loans. They will be probably well qualified to provide at least certain kinds of training. Again, a laboratory equipped to test materials and products of a certain industry in a certain region may be able to provide the same services for the same industry establishing separate laboratories for each region In fact, the centralization as well as decentralization move among other things, depend upon the size of a country. Such as, services may appropriately be much more centralized in a small country like Bangladesh than in a big country like India. As regards the question of the specialization by industry the purely the technological problems of different industries are apt to be entirely different, but many of their more general management and marketing problems are very similar. While one would not expect the same expert to advice on, say, cutting speeds for machine tools and glazes for ceramics, one would expect that an expert in cost accounting could give useful advice both in small engineering works and in a small pottery. These differences between specialized technological problems and other more general problems of management need to be taken into account in organizing extension services.

A second general principle that may be suggested is that there is no virtue in centralization over and above what may be needed for the purpose indicated above. On the contrary, there is a strong case for the largest measure of decentralization that is compatible with adequate coordination and the achievement of the available economies of scale. Over-centralization tends to lead to bureaucratic red tape. Over and above, it is very much difficult to know the decision of people on the spot regarding local conditions and problems staying at remote location. Regional decentralization and specialization by industry may help to a great extent in possibly economic manner. In this case, small-scale managers have confidence in the experts who advice and help them, because these experts come from, or at least are very familiar with, their own regions and their own industries, and speak to them, literally and metaphorically, in their own language.

Thirdly one should hesitate, merely for the sake of imposing tidy and logical organizational pattern, to clip the wing of or otherwise interfere with an established service that is functioning well and meeting a need.

But there remains an interest in solving a question of how these various problems have been tackled in different region of the country as well as in different counties of the world. The following different bodies/team may solve the problem of providing extension services to small-scale industry.

i) A group of field officers who pay visits to small undertakings and if necessary stay for days together at the industrial unit which seek their advice on a wide range of questions (for example, the establishment or extension of factories and problems of materials, product improvement, equipment, energy supply and financing). In Bangladesh, the BSCIC is performing such type of activities decentralizing its office in different districts as well as at different upazila also. But these activities would be beneficial for this sector if these are performed in above mentioned manner.

ii) At least one chemical engineer stationed at each regional office and charged with assisting the field

officers on chemical questions, the field officers would be mainly of mechanical engineers. In district office of BSCIC, there are engineers but all of them are not skill enough to evaluate the trade-wise project i.e. not like of above structured.

iii) A documentation and information service set up under the control of the patent office at each regional office of the corporation. The library of the documentation and information centre is thus made available to small-scale industrialists and field officers through the services of two engineers who advice on, and help to find documentation literature and technical information. Small manufacturers with new ideas can consult these engineers on the availability of applying for patents. These branches also operate an international mail inquiry service and serves as a centre for international contacts in the technical field. In divisional office of BSCIC, there is a library mere in the name of library but sufficient documents and information are not available here. Actually, it is confined within one or two almirahs of the office. In district office of BSCIC, there is no library.

iv) An efficient team consisting of ten engineers stationed at each regional office to assist small industrialists on question of management and efficiency that are too specialized to be handled by the field officers or that call for more sustained work in individual plants than the field officer can combine with their other duties. On the request of a field officer a member of this team may visit a plant for a week or a fortnight, talk over the main problems with the management, study the situation and administration and make suggestion for improving the efficiency of operations.

v) A handicrafts service consisting of some assistants stationed at various places throughout the country; and

vi) A mechanical workshop with adequate number of mechanical engineers working on ideas for new machinery developed by small entrepreneurs and testing and demonstrating new machinery and production methods.

V.VI Financing and Staffing

Methods of financing services for small industrialists differ. Although in certain countries certain services are provided free in charge, there appears to be a good case of making some charge of service rendered to individual firms. For one thing, usually people are apt to value a service more highly if they have to pay something for it. So, it may be advised that a fee is payable only those small industrialists who are serious in their desire to make use of service. Secondly the fees strengthen the finances of service. A given amount of money provided from public sources will go further and permit setting up a more extensive and more useful organization if it is supplemented by fees. Thirdly, a service that depends at least partly for its revenue upon fees voluntarily paid by users has an incentive to give satisfaction that may be lacking in one that is entirely financed from public funds. Moreover, comparisons of the amounts received in fees from year to year from different kinds of services will help to show which of the latter are in the greatest demand, and will create an incentive to expand these rather than other forms of activity.

On the other hand, if a service is intended to be entirely self-supporting financially, it will inevitably be rather costly to the users. Though good administration and concentration on essentials keep down the costs, nevertheless it is likely that many small industrialists who could benefit from the service will be differed from doing so by the relatively high fees that will have to be charged. In most countries the combination of the grants and fees probably constitutes the most appropriate type of financial arrangement. In Bangladesh, the small industrialists are facing very much difficulty for paying high interest on loan that hampers the development of this sector. The following table gives an idea regarding the interest on industrial loan.

Table 1 : Interest on Loan

Name of financing institutions	Large and Medium Industry		Small-Scale Industry	
	2002	2007	2002	2007
Sonali Bank	9-13	12.5	11.5-12.0	12.0-12.5
Janata bank	10.0-12.0	11.0-12.58	11.5	10.0-12
Agrani Bank	10.0-12.0	13.0	11.5-12.0	12.0
Rupali Bank	10.0-12.0	12.5	11.0-12.0	12.0
BKB	10.0-13	11.5	12.0-13.5	10.0-11.5
BSB	10.0-12.0	10.0-12.0	10.0	10.0-11.0
RAKUB	12.5	12.0	10.0-12.5	12.0
BSRS	10.0-12.0	10.0-12.5	10.0	11.0
BASIC	13.0	11.5-13.5	11.5-12.0	11.5-12.5

Source: Economic Review of Bangladesh -2007:50

From the above table it is revealed that all most all the financing institutions have increased the interest rate on loan in 2007 in respect of 2002 whereas, it was supposed to reduce the rate of interest on loan in the immediate past industrial policy, 2005.

Although, the interest rate on loan has come down to 12.37 in the fiscal year of 2009-2010 from 13.46

in 2008-2009. But it has gone up high again in 2010-2011 to 12.52. So, the high interest rate is an impediment in the pace of industrial development (Economic Review of Bangladesh -2011:58).

It is fact as well as common belief that the success of service for small-scale industry very largely will depend upon the caliber of the staff. If there is any degree of specialization within the service the quality and qualifications required will vary in some degree according to the type or branch of activity concerned.

The combination of qualities makes a man a good management consultant. It may not be identical with the quality of a good classroom instructor in a vocational subject or of a good research worker. However, the extension service must demand of its staff in all branches a high standard technical knowledge and professional competence, quality of integrity and devotion , a sincere interest in their work, an ability to express themselves in simple language and a fair understanding of the jargon of the branch of the industry concerned. Moreover, since an extension worker, whatever his main specialization, is liable to have to turn his hands to a great variety of different jobs, versatility flair and imagination are of major importance.

These combinations of quality are rare indeed, even in highly developed countries, and still more in the less developed countries would be a false economy to try to save on the salaries of the staff. To get the right people it will be necessary to offer satisfying careers, with salaries and conditions of service comparing favorably with what men with the qualifications required can earn elsewhere in the country. If this means that fewer people can be employed, it will always is far better to have two first-rate men than three mediocrities.

V.VII The Choice of Extension Method

In many countries at different levels of development the establishment of national and regional technological centres or institutes or techno-economic institutes as a good way of organizing extension services for small-scale industries. Whatever the name given to the operational unit or units of the service, however questions arise as to the method to be adopted. Different methods of extension work are adapted to different purposes and the choice of method should largely depend upon the availability of resources with the view to matching the services with that industrial unit. The researcher like to divide the extension services into three groups which are as follows: a) the individual approach, in which direct contacts are maintained between the extension worker and the small industrial unit; b) the group approach through training classes, the establishment of pilot plants and other devices catering for groups of small industrialists and c) the mass approach through meetings, exhibitions and other mass media such as radio and films. The individual approach in disseminating technical information is a most effective one, as the methods to be applied can be fully adapted to the particular conditions of the individual unit, taking into account the skills and aptitudes of the head of the firm and his workers and his financial and other resources. An individual approach is particularly effective when extension work is directed towards small-scale units which are mechanized or semi-mechanized and employ an applicable amount of hired labor: as the manufacturing unit grows in size and becomes technically and organizationally more complicated in comparison with domestic and cottage industries, improved methods and modern forms of industrial organization have to be adapted to specific individual requirements if the best results are to be obtained. If an individual approach is possible, the extension worker may review a variety of problems affecting the production and earning capacity of the unit, such as wastage of raw materials, technical innovations, plant layout, the quality of the production in relation to market conditions, need for simple administrative procedures and similar problems – these leading up to a review of the manufacturing unit as an organic whole, and to an appreciation of the interdependency of the steps that need to be taken. An important advantage of the individual approach is that it provides an opportunity for disseminating information both to the head of the firm and to the workers, which may contribute a general understanding within the unit of the advantages to labor and management alike of the measures proposed. On the other hand, in domestic and cottage industries, with only minor variations in methods and conditions of work among various units, the main emphasis may be placed on extension methods directed at groups of small industrialists, although here too there is scope to apply the individual approach.

The group approach is most effective when information to be given is generally applicable by selected groups of small industrialists of the same social and economic level and technical skills and where variations in methods and conditions of work in the individual units are not large. Thus, it may be used in providing training in simple management technique such as bookkeeping, elementary cost accounting and principle of cooperative actions. The group method may be supplemented by individual training, to meet specific demand of particular small enterprises. It is also a valuable device for providing general technical training in production techniques such as the use of new raw materials or the manufacture of new commodities within the scope of existing skills.

The group approach is more or less indispensable for the introduction of modern method which is only fully applicable through the joint effort of a group of small industrialists. For its efficient operation it requires close collaboration between the participating units and the common plant. It is so highly desirable that the small industrialists acquire a full understanding the

needs of their individual activities in conformity with the manufacturing and operational pattern of the common plant. Joint technical training under a group approach can help to install in the participating small industrialists an appreciation of the collective action which is the basis for success in this kind of industrial development. Of course, the mass approach cannot be expected to have the same result, in depth, as the individual or group approach in the teaching of new methods, especially when the training in these requires a certain education level or a degree of concentration or sustained activity. However, it has its value, especially for propaganda purposes. It can help by means of meetings, films, radio, exhibition and other media to create a livelier understanding of the place of small industry in the national economy and a keener awareness of the opportunity offered by modern method and forms of organization to raise the social and economic status of small industrialists and workers. Mass extension method may contribute to a change in outlook which is often important prerequisite of social and economic progress; they can most usefully supplement the individual and group approaches by preparing a ground for a fruitful application of specific methods and forms of organization.

Indeed all these three types of extension activities are complementary rather than competitive and may be usefully employed in collaboration. Thus, in the development of common servicing plants on a cooperative basis each of the three approaches may play its part; the individual approach to induce an influential member of small industrial community to take the lead in carrying out a comprehensive set of measures designed to modernize his plant; the group approach both for the training of a few understanding and management, and for demonstration and initial training of workers through establishment of pilot manufacturing plants and mass approach in order to arouse the interest of the industrial community to be served by such plants, initiate them in the basic principles of coordination development their loyal and service participation in the cooperative group through which the central plant is organized.

It is evident that the choice of extension approach will also be greatly influenced by the availability of funds and of qualified extension personnel. Being frequently understaffed and operating with limited financial resources, extension services usually faced dilemma. The mass approach may have some impact on a large number of people. The individual approach is likely to have a much deeper impact on a much smaller number. The group approach combines in different degrees the advantages and disadvantages of the other two approaches. The most effective combination depends upon circumstances and is a matter of judgment. This is one of the questions in respect of which research designed to appraise the effectiveness of different services provided can be very helpful in providing a factual basis for sound decision.

V.VIII Some Specific Extension Services

Realizing the need of extension services to the small industrialists for the development of small-scale industry, the researcher shall have to more say about consultancy services, training, information, and research. However, the above mentioned extension services may be provided to an industrialist according to his/her need or suitability i.e. in some cases solely and in some cases two or more jointly.

V.IX Individual Demonstration/Model Plants

Training is much more effective when it accompanied by practical demonstration. It may sometimes be possible to persuade an individual small industrialist to allow his plant to be used as a demonstration plant. A progressive small industrialist may be selected who is prepared to apply improved methods suggested by extension worker and to allow others to visit his plant for the purpose of acquainting themselves with the benefit of improved techniques and methods of production, marketing and the increased earning capacity. Both the plant and owner-manager should be carefully selected and the plant should be reasonably representative of others in the industry and region so that those to whom improvements are demonstrated can see how to apply them in their own plants. Credit or other facilities may be employed to induce the small industrialist to have his plant used as a demonstration and information centre.

This method has the additional advantage of keeping the extension worker practical in this advice, as he can see for himself the financial consequences of his activities. In addition, the pooling of the more theoretical knowledge of the extension worker with the practical experience of a progressive small industrialist; increases the likelihood that the right solutions will be found for the problems encountered. This point is especially important as many extension workers are trained in institutions where technical operations are conducted under controlled conditions which generally differ considerably from those under which small industry actually operates.

Extension work performed through a selected individual demonstration plant offers only limited opportunities of providing actual training for workers from outside, for which adequate facilities are usually lacking in a plant that is already operating as going concern. This method thus serve mainly to demonstrate the improved of techniques applied consistently within an existing small industrial establishment with a view to encouraging other small industrialists to apply similar techniques. If for this purpose they or their workers need specific training, the extension method has to be supplemented, e.g. by itinerant demonstration and training units.

Demonstration projects may be valuable not only to managers and workers in individual plants selected as demonstration plants, and to others in the neighborhood who can see and copy the improvements made, but also as a means of providing training and experience for extension workers.

V.X Demonstration and Training Plants

A method of extension work whereby training in new techniques and methods of production is provided on a commercial basis may be arranged through the establishment of special plants for demonstration and training. Such plant are designed to reproduce actual operating conditions as accurately as possible and to ensure that training is carried out as an integrated part of the production process in the demonstration unit. Training can be placed on a realistic commercial footing and improved methods can be tested on their practical merits in actual production. This type of unit helps like the selected individuals demonstration plant, to assist the extension worker toward full recognition of actual working condition in small industry and thereby to make extension activities increasingly practical. An additional advantage is that the cost of training can be wholly or partly covered through sale of the products of the plant. The demonstration plant is especially effective when a new manufacturing process is to be introduced of which the community has no experience. In certain cases it may be appropriate to start with the training of the workers in those parts of the manufacturing process, if any they can carried on in the workers own homes, organized through the demonstration and training plant on a sub-contracting basis. As training is gradually extended to other processes as-well full-fledged small industrial units may develop, so that later the plant may be transferred to other areas for similar development work.

V.XI Itinerant Demonstration and Training Team

Extension work may be provided through itinerant demonstration and training teams. Through this team, training is given to small industrialists in specific methods of work. It is a useful technique for spreading training over a wide area than is possible through the establishment of training centres and demonstration plants. It is necessary for such training team to have a permanent training base. It needs to have an extension centre or a techno-economic institute. This permits two-way traffic to develop between the technical base and itinerant team. Earlier one (extension centre) channels a continuous flow of practical information and the later one (techno-economic institute) provides technical guidance steadily. This method of extension work can only be applied in cases where the training does not require elaborate training equipment or extensive accommodation. This method is suitable where the location of the industry is such that concentration of a number of units is found in widely dispersed areas. It can be used for the improvement of specific skills within the existing technological and organizational framework of a particular small industry. The itinerant team ought to stay in any industrial community depending upon number of factors, including the nature of the technique to be imparted and might range from a few days to six months. Periodical follow-up visits by the team are advisable to assess the result of the training imparted and occasionally post training refresher courses may be needed. Follow-up with other appropriate extension methods have also to be considered. In case, it becomes clear in the course of the time that the technique imparted has not taken firm root in the community, it will be necessary to examine the need for revising either the technique in question or the method of training – or more likely, for removing certain other obstacles to progress, such as deficiencies in raw material supply, or credit or marketing arrangements.

Since institutional factors may greatly affect the applicability of improved methods, it will often be desirable to attach to itinerant team. In addition to technical specialists and instructors, extension workers are well versed in commercial problems and in general industrial organization. This will enable the team to approach the problems in an integrated manner by evolving appropriate measures to support technical modernization. To facilitate such a process, the team may also be authorized to recommend or advice on the disbursement of grants or loans through appropriate agencies. Thus links technical training with the supply of necessary material facilities. In appropriate cases cooperative specialists may usefully participate in the work of such team, suitable measures should in such cases be taken to ensure close collaboration and a common policy between industrial and cooperative services, if these operate as separate agencies.

V.XII Marketing Arrangements

The holding of marketing arrangement may be an effective method of disseminating useful information to small industrialists on the marketability of their products. Such an arrangement may in appropriate cases be conducted by itinerant demonstration and training teams. In suitable centres of small industrial production, exhibitions may be arranged of selected products manufactured in various small industrial units. These products are inspected and appraised by one or more specialists of the team, paying attention to feature of design and packing, quality, weight, size and other factors that affect marketability and price. On the basis of these appraisals, suggestions are made to each exhibitor as to ways of improving the marketability of his product and information is given to him regarding market requirements. Since, in many instances, small industry is not fully geared to the requirements of an expanding market economy, with its changing consumers' tastes and preferences, such marketing

arrangement may help small industry towards an intelligent appraisal of the place of its products in the market and of the measures to be taken to improve their salability.

VI. Findings of The Study

This paper has identified the different problems of small-scale industry sector as well as need-based and appropriate extension services for small-scale industry. Many findings have been extracted from the study and disclosed that the ignorance of small industrialists about the needs of the industrial units and of their own is one of the vital problems of this sector. On the other hand, need-based consultancy, trade-wise training and the easy availability of funds are the most appropriate extension services for this sector. Consultancy and training programme may be the best weapon of making the owners, managers as well as employees-workers aware of the needs and future doings for the development of their units. Mutual cooperation and coordination between the government agencies and industrialists' associations is essential for paving the way of providing appropriate extension services to small-scale industry. Well staffing is also helpful for keeping congenial environment in the industrial unit that may increase production, interaction among the inside people and thus makes the industry long lasting. Itinerant demonstration and training team is very much helpful to the small industrialists for making them skilled as well as meting their needs. Lack of proper evaluation, implementation and monitoring of the project has been found as the ultimate problem in developing this sector that hinders the extension services to small-scale industry sector.

VII. Suggestions And Recommendations

Many problems that are facing by small-scale industrial units and small industrialists regarding extension services have been found out from the endeavor made by the researcher. Suggestions and recommendations have been given for finding out the problems and scrutinizing the appropriateness of extension services to small-scale industry as well as small industrialists for future within the purview of the study. The study recommended as follows:

1. The major/usual and even the trifling problems should be identified. The itinerant Demonstration team can play a vital role in this regard staying in the small undertakings for a reasonable time.
2. The need-based extension services have to be selected for individual industrial undertakings.
3. The itinerant demonstration team should be consists of chemical engineer, mechanical engineer and some field officers in conformity with other developing countries of the world.
4. Frequent consultancies have to be held with the owners, managers as well as employees and workers and imparted them to trade-wise training and acknowledged about new technology.
5. Easy availability of funds has to be ensured to small industrialists.
6. Maintain a good coordination between the government agencies and small industrialists' associations. These associations have to be strengthened through the strong patronization of the government. The associations have to play significant role for the interest of obtaining appropriate extension services and if necessary bargain with competent authority.
7. The owners and the managers should be imparted a special training for marketing the products and well staffing in their units.
8. A strong and pragmatic implementation and monitoring cell have been formed to implement and monitor the projects. The authority assigned for performing this task has to be empowered adequately.
9. A panel of experts in Industrial Management in underdeveloped countries should be formed consisting of the interested people in this direction.
10. For strengthening the research work much more fellowships have to be managed from different international organizations as well as the existing documentation and information centre at divisional level should be enriched and a rich documentation and information centre should be set up at each district for easy availability of information regarding small-scale industry.

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Examine the Effect of Social Factors on Information Technology Acceptance in Accounting Profession by Using TAM Model

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Abstract - Nowadays, Information technology (IT) is considered as a very important and most useful part of industry, economic and culture, accounting is the system of recording and summarizing business which provide the users with information in their decision making process this research tries to examine the effect of social factors on IT acceptance to by using TAM model. The research method is descriptive-survey based on which the author used descriptive and deductive statistic to meet the research goals. The results indicate the lack of perceived ease of use among ease accountants.

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GJMBR-A Classification : *FOR Code: 150307, JEL Code: O15*

Strictly as per the compliance and regulations of:

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Akbar Allahyari[α], Farhad Garabaghi[σ] & Morteza Ramazani [ρ]

Abstract - **Nowadays, Information technology (IT) is considered as a very important and most useful part of industry, economic and culture, accounting is the system of recording and summarizing business which provide the users with information in their decision making process this research tries to examine the effect of social factors on IT acceptance to by using TAM model. The research method is descriptive-survey based on which the author used descriptive and deductive statistic to meet the research goals. The results indicate the lack of perceived ease of use among ease accountants.**

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I. Introduction

What factors make a person to admit new technology in his profession? Are these factors merely dependant on technology specially and its factors? To how extent persons' factores affect this fission? How do these factors affect the process of technology acceptance?

Considering the rapid expansion of using computer in the organizations, IT has developed its dominion over all aspects of our life. Virtually each organization empheizes on greater importance of computer science and skills. Computer has absolute domination over some fields as education, commerce, hubbies and our daily life. For example, computer, internet, multimedia and computer nets utilized in education and educational institutes have employed technological tools to improve the quality of their performance and directions in general, organizations use IT to enhance efficiency, effectiveness and improvement of quality in their performance because the believe that the informational technology can provide organizations with valuable opportunities to enhance efficiency and performance (awm and Quinet, 2002). It is necessary to state that organizations have not always equal opportunities to benefit from technology because they don't use IT systems in effective way. Bradly and Rashel believe that organizations use their financial resources to purchase and establish computer systems and fry to improve their performance but they are not always successful in their operations. When there is a resistance against using technology it is difficult to point oriented goals than organizations will lose their money, time and other resources (Nuan, 2001). In this research we try to examine the effect of social factors on IT acceptance Iranian accountants by following written assays in this field among (Hyo-Jeong Kim, Michael Mannino and Robert J. Nieschwietz, 2009).In this research, social factors have been classified into three groups as research main variables Internalization and Image.

II. Theoretical Background

a) Technology Acceptance Model

Technology Acceptance Model (TAM) is most influential model of testing information system. TAM posits that perceived usefulness and perceived ease of use technology (Davis et al.1989; Venkatesh and Morris 2000; Venkatesh, Morris and Davis 2003) determine an individual's intention to use a system with intention to use serving as a mediator of actual system use. TAM model is shown in Figure.1 Perceived usefulness is also seen as being directly impacted by perceived ease of use. Perceived usefulness is the extent to individual believes that using an information system will enhance his/her productivity. Perceived ease of use technology is extending to individual perceived that using an information system is free of effort (Davis et al. 1989). Moon and Kim (2001) stated perceived playfulness is the extent to an individual perceives attentions which are related on the interaction within information system.

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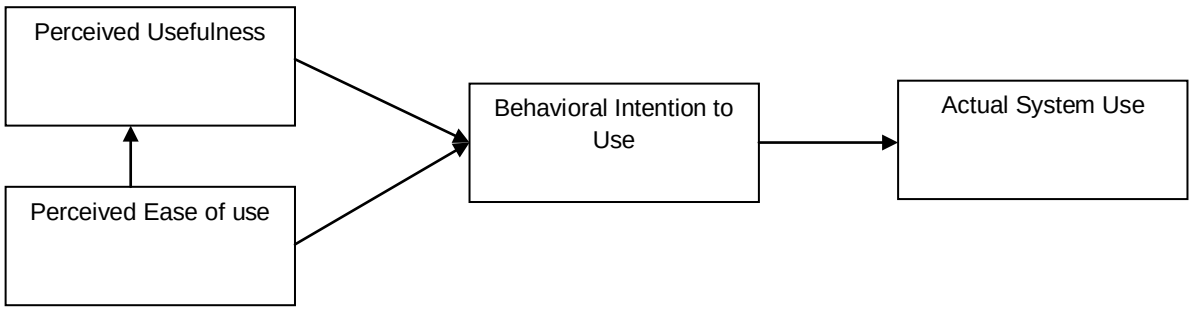

Fig.1 : Technology Acceptance Model

b) The Use of ICT in Accounting Education

In the past years several researchers have studied the application of technology in the accounting classroom (Apostolou et al, 2001, Watson et al, 2003). Halibi et al (2002) surveyed introductory accounting trainees to determine trainee attitudes towards tele-teaching versus traditional in-class lectures. They found that most trainees preferred the traditional face-to-face approach of teaching. Moreover, Lane and Porch (2002) studied the impact of computer aided learning on performance of accounting undergraduates in the UK and found that computer-aided learning technology has negatively affected the trainees' perception of accounting as a subject. Peterson and Reider (2002) reported that trainees had an overall positive experience for the use of computers in certification in financial management. Crandall and Philips (2002) found that hypertext learning could be used in accounting classes to enhance case based instruction. Rudolph et al (2002) found that only 17% of the trainees would take another interactive television course when examining the impact of interactive television on learning. Mahoney and Welch (2002) reported that 96% of their accounting trainees sample indicated that the use of PC movies was very beneficial. These findings indicate that there is a variety of reactions towards the use of advanced and different information and communication technologies in teaching in general and in specific disciplines in particular.

The sample of accounting trainees studied by McCourt and Radcliff (2000) reported that computer based instruction made the material more interesting and stimulating from trainees in the UK. Moreover, Green, Reinstein, and McWilliams (2000) found that trainees' interest in accounting increased in the interactive courseware group when compared with the traditional lecture problem solving group and that trainees generally found the interactive courseware to be easy to use and as effective as the traditional methods. Most of the research was conducted in developed nations. No present evidence indicates that such research and results can be applied to developing nations, especially with the varying environments and the role of different cultures that affects the introduction, diffusion and use of information and communication technology. The Technology Acceptance Model-TAM (Davis, 1989) is suitable for testing the application of IT in accounting education in developing nations since it has shown robustness across the spectrum of IT applications, has been well researched, and gives easily interpretable results (Rose and Straub, 1998). In other terms, TAM has been reported to be a consistently good predictor of the use of IT in developed countries (Kamel and Assem, 2003, Rose and Straub 1998, Adams et al, 1992, Davis, 1989 and 1985).

Loch, Straub and Sevcik (2000) offer two main reasons why the transfer of IT to developing nations is difficult and that relate to a) the cultural differences affecting systems development and implementation and b) the prevailing government policies and regulations that influence IT transfer. Within the context of testing the effectiveness and reliability of using information and communication technology in teaching accounting, it is important to assess the role of culture in the technology transfer in light of the arguments made by Loch et al (2000). The impact of the role of culture represents a milestone in the successful diffusion of IT since it varies from one nation to another and is bound to a number of complex definitions and shared values amongst other aspects (Straub et al, 2002). It is important to note that research has proved in many contexts that culture impacts the acceptance of technology. Respectively, it is important to understand the impacts and role of culture to be able to project the likelihood of the success of the introduction of IT (Loch el al, 2000). However, the role of culture is more or less localized and that is why it is important to study the role of culture within the environment of implementation because although the role of culture is powerful, cross cultural conflicts between different nations affects the IT systems and processes (Straub e al, 2001).

III. Research Objectives

This research tries to examine the effect of social variables on IT acceptance among Iranian accountants. Determine the affect of social factors makes firms' managers to provide reliable and on- time information for correct decision making by investing on employees' facilities and education.

1. Therefore this research insists on following objectives:
2. Determine the extent of social factors affection technology acceptance.
3. Provide suitable frameworks to help the acceptance of technology among accountants.
4. Discern perceived usefulness and perceived Ease use of technology to help T- acceptance among accountants.

IV. Research Hypothesis

1. Perceived usefulness has positive effect on IT acceptance among Iranian accountants.
2. Perceived Ease of use has positive effect on IT acceptance among Iranian accountants.
3. Perceived Ease of use has positive effect on perceived usefulness.
4. Social factors have positive effect on perceived usefulness among Iranian accountants.
5. Social factors have positive effect on perceived Ease of use among Iranian accountants.

V. Research Model

This research model on the basis of TAM model and on the base of research that Mrs (Hypo- Jeong Kim, Michael Mannino and Robert, Mieschwietz, 2009) have performance about IT acceptance in the internal audit profession in American 2009 has been figure.2 following from:

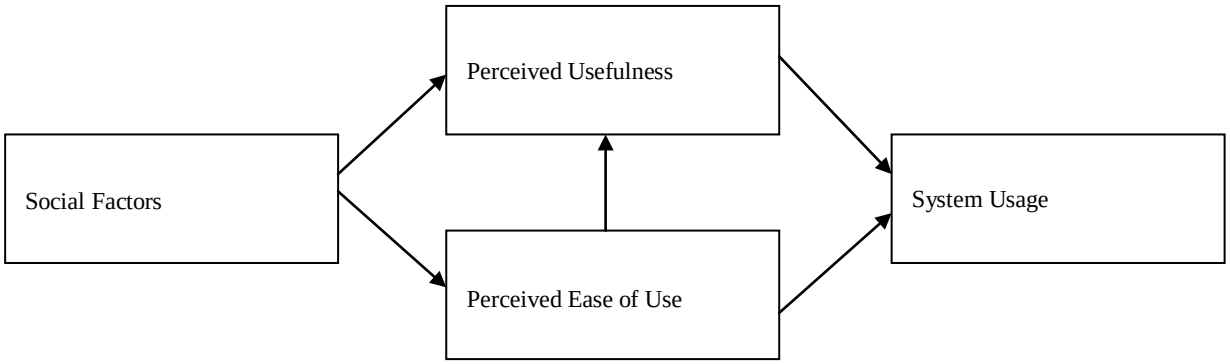

Fig.2 : The model of research

a) Conceptual Definition of Social Factors

Social Factors	Definition of Factors
Internalization	"When an individual accepts influence because the content of the induce behavior the ideas and actions of which it is composed is intrinsically rewarding."(Kelman, 1958, 53).
Image	"The degree to which use of an innovation is perceived to enhance one's status in one's social system (Moore and Benbasat, 1991, 195).

Social factors are also considered as external variables. Thompson et al. (1991) were interested in social factors which had a strong influence on PC utilization. Malhotra and Galletta (1999) tried to understand the role of social influences in the TAM and found that identification and internalization had a strong positive relationship with attitude toward using while compliance had a weaker negative relationship with attitude toward using. Subjective norm is influenced by both peer and superior (Mathieson, 1991; Taylor and Todd, 1995). The effect of subjective norm on technology acceptance had conflicting results. Davis et al. (1989) reported no significant relationship between social norms and usage because of the weak psychometric properties of their social norms scale and particular IS context. Mathieson (1991) found no significant effect of subjective norm on intention while Taylor and Todd (1995) found a significant effect on intention. Venkatesh and Morris (2000) showed that subjective norm had a strong influence on technology usage decisions; however the effect of subjective norm was diminished over time. Through the TAM2, Venkatesh and Davis (2000) explained a large impact of social influence process (subjective norms, voluntariness, and image) on technology acceptance. Social influence process significantly affects the technology acceptance through perceived usefulness (Venkatesh and Davis, 2000). Subjective norms are positively related to intention and moderated by experience and voluntariness, and also negatively associated with perceived usefulness and moderated by experience. Subjective norms positively influence image and image positively affects perceived usefulness. Through the UTAUT model, Venkatesh et al. (2003) confirmed that social influence was a direct determinant of intention to use.

VI. Research Methodology

In this study, research methodology is descriptive- survey and in applied kind. In the direction of entrance to research district have also used field

method. In the direction of gathering required information in research has been also driven profit two data primary and secondary bunches that in direction of secondary data, documents, evidences, books, articles, internet, searching motors and connected sites are collected circles. Techniques of interview and questionnaire have also used for gathering primary research data at statistical society simultaneously and questionnaire has used by likert five choices spectrums perfectly agree or disagree.

Statistical population uses these study active accountants in profession that use IT whether in case or continuously.

In process of data use method of descriptive and decomposing and analyzing statistic and interpreting information inferential statistics methods in respect testing present variables in research, correlation of independent variables on each other has been used Pearson correlation coefficient method.

VII. Result and Analyze

a) Research Validity and Reliability

With regard to the fact that a good test must has some desirable features such as objectivity, executive ease of use, practicable, is of interpretation and expression, validity and reliability. The most important mentioned cases in this features is validity and reliability. Researcher for research reliability has used Cranach's Alpha method that according to table No.1 counted Cranach's Alpha value by SPSS software is equal 0.828 bigger than 0.7. Thus test has acceptable reliability and answers have suitable validity and for validity of test 10 used questionnaires again to the reader and uniting result of opinions is chronological period at one week has shown that indicate suitable validity of questionnaires.

Table No.1, Reliability Statistics	
N of Items	Cranach's Alpha
22	.828

b) Testing Research Hypothesizes

Table No.2, Frequencies of Social Factors			
Social Factors	N	Mean	St. Deviation
Internalization	*145*	*2.5655*	*0.66472*
Image	*145*	*2.4448*	*0.76856*

With regard to the results of Pearson correlation test, research hypothesizes result is described in table No.2

First Hypothesis : With regard to Pearson Correlation 0.368 and P-value = 0.00 hypothesis in the level of error 0.01 is accepted then could resulted that perceived usefulness has positive impact on technology acceptance by accountant.

Second Hypothesis : With regard to Pearson Correlation -0.160 and P-value = 0.054 hypothesis in the level of error 0.01 is rejected then could resulted that perceived ease of use hasn't positive effect on technology acceptance by Iranian accountant.

Third Hypothesis : With regard to Pearson Correlation 0.337 and P-value = 0.00 hypothesis in the level of error 0.01 is accepted then could resulted that perceived ease of use has positive impact on perceived use fullness.

Table No.2, Pearson Correlation Results					
Hypotheses \ Factors			Perceived Usefulness	Perceived Ease of Use	Result
First Hypothesis	System Usage	Pearson Correlation	0.368		Accept
		Sig. (2-tailed)	0.000		
		N	145		
Second Hypothesis	System Usage	Pearson Correlation		-0.160	Reject
		Sig. (2-tailed)		0.054	
		N		145	
Third Hypothesis	Perceived Usefulness	Pearson Correlation		0.337	Accept
		Sig. (2-tailed)		0.000	
		N		145	
Forth Hypothesis	Social Factors	Pearson Correlation	0.203		Accept
		Sig. (2-tailed)	0.014		
		N	145		

Fifth Hypothesis	Social Factors	Pearson Correlation		0.260	Accept
		Sig. (2-tailed)		0.002	
		N		145	

Fourth Hypothesis : With regard to Pearson Correlation 0.203 and P-value = 0.014 hypothesis in the level of error 0.01 is accepted then could resulted that existence of social factors has positive impact on perceived use fullness by Iranian accountant.

Fifth Hypothesis : With regard to Pearson Correlation 0.260 and P-value = 0.002 hypothesis in the level of error 0.01 is accept then could resulted that existence of social factors had positive impact on perceived ease of use by accountant.

VIII. Results And Research Findings

Research results indicate second hypothesis refusal which demonstrates the lack of accountant's motive to learn IT. Acceptance of first hypothesis indicates the perceived usefulness among accountants acceptance of third hypothesis denotes direct effect of perceived ease of use on perceived usefulness.

Also, the acceptance of forth hypothesis demonstrates the positive effect of social factors on perceived usefulness in other words. The acceptance of forth hypothesis states the positive effect of social factors on perceived ease of use indicating the perceived ease of use among accountants and their colleagues and making positive approach toward perceived ease of use.

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Electricity Consumption and Economic Growth in Bangladesh: Co-Integration and Causality Analysis

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Abstract - This paper tries to investigate the relationship between economic growth, electricity consumption and investment for Bangladesh through co-integration and causality analysis over the period 1981 to 2011. Using ADP and PP unit root tests it is found that all the three variables are integrated of order 1. The Johansen co-integration tests indicate that all the variables are co-integrated with one co-integrating vector. The Granger F test results Confirmed the existence of unidirectional causality running from electricity consumption to economic growth, electricity consumption to investment and investment to economic growth without feedback in the short run. The source of causation in the long run is also found to be the error correction terms from electricity consumption and economic growth to investment. The long run elasticity of economic growth with respect to electricity consumption and investment are higher than their short run elasticity. This implies that over time higher electricity consumption and investment in Bangladesh give rise to more economic growth.

Keywords : *Electricity consumption, economic growth, investment, short-run and long-run elasticity, co-integration, granger causality.*

GJMBR-B Classification : *FOR Code: 140202 JEL Code: C32, E21, Q43, O47*

Strictly as per the compliance and regulations of:

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Abstract - This paper tries to investigate the relationship between economic growth, electricity consumption and investment for Bangladesh through co-integration and causality analysis over the period 1981 to 2011. Using ADP and PP unit root tests it is found that all the three variables are integrated of order 1. The Johansen co-integration tests indicate that all the variables are co-integrated with one co-integrating vector. The Granger F test results Confirmed the existence of unidirectional causality running from electricity consumption to economic growth, electricity consumption to investment and investment to economic growth without feedback in the short run. The source of causation in the long run is also found to be the error correction terms from electricity consumption and economic growth to investment. The long run elasticity of economic growth with respect to electricity consumption and investment are higher than their short run elasticity. This implies that over time higher electricity consumption and investment in Bangladesh give rise to more economic growth.

Keywords : *Electricity consumption, economic growth, investment, short-run and long-run elasticity, co-integration, granger causality.*

I. Introduction

Electricity is a flexible form of energy and critical resource for modern life and a vital infrastructural input for economic development. In all economies, households and companies have extensive demand for electricity. This demand is driven by such important factors as industrialization, extensive urbanization, population growth, rising standard of living and even the modernization of the agricultural sector. There is widespread discussion and research over the topic of relationship between electricity consumption and income particularly since early seventies of the last decades. Obviously, the degree of interest intensified since the Kraft and Kraft (1978) findings. They found evidence of a uni-directional causal relationship running from GNP to energy consumption in the United States using data spanning from 1947 to 1974.

Electricity is a major source of energy in the industrial and agricultural sectors in Bangladesh. These two sectors collectively contribute to 50.3% of Bangladesh's GDP. The contribution of agricultural and industry sector to GDP in fiscal year 2010-11 was 19.9% and 30.4% respectively (Bangladesh Bank, 2012). The share of agriculture and industry sectors in electricity consumption is increasing gradually. According to the Bangladesh Power Development Board (BPDB) statistics about 45% (1995 to 2010) of total electricity was consume by agriculture and industrial sectors. These statistics indicate that industry and agriculture together contribute significantly to GDP and electricity consumption as well. From this we can infer, therefore that electricity consumption plays an important role in economic growth of Bangladesh. It is, therefore important to identify the relationship between electricity consumption and national output and also their direction of causality to get a better understanding of the issues involved and determine the policy strategies. That is why in this study the main purpose is made to examine the causal relationships between electricity consumption, economic growth and investment for Bangladesh using the time series data spanning from 1981 to 2011.

This paper is divided into six sections. The section one of this study is the introductory part. The rest of the study is organized into another five sections. The second section of the study will present contextual information of the study where we discussed regarding current and future situation of Bangladesh's power sector. Section three is the literature review section, where we present relevant literatures that will give us sound conception of the fact. The section four provides an avenue regarding research methodological approach and the relevant information on the time series data sets that are used for this study, while section five is discussed the empirical results. Finally, section six will provide the conclusion that will point out the possible policy recommendations of the study.

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II. Contextual Information Of The Study

The electricity infrastructure plays an important role in economic growth and employment generation for developing countries more than the developed ones (Chen et. al. 2007). In Bangladesh, expansion of economic activities is restrained by the underdeveloped electricity infrastructure. The energy sector is poorly managed (Mozumder and Marathe, 2007) and characterized by the limited coverage of supply, inefficiency, poor quality of services and huge government subsidies (Temple, 2002). The supply of electricity is inadequate to meet the growing demand. As a result frequent electrical power outages or load-shading are used to manage the gap between power generation and demand of electricity in Bangladesh (Buysse et. al. 2012). The production of electricity has increased over the years but failed to match the high demand of electricity leading to chronic shortage in power supply. Therefore, historically Bangladesh is electricity deficit country that has clear impact on economic activities. Though per capita electricity consumption increased from 75.88 Kilowatt hour (KWh) in 1995 to 180.08 KWh in 2011(BPDP, 2011) but remained one of the least per capita electricity consuming economies in the world (CPD, 2011).

At present 50% of the people in Bangladesh have access to electricity and the demand of electricity is increasing at a rate of 10% every year (FD, 2011). Considering the necessity of electricity and the achievement of 10 percent Gross Domestic Products (GDP) growth by 2021, Government has undertaken immediate, short, medium and long term programs for overall balanced development and revamps the electricity sector. Some of these development programs include i) installment of gas based power generation plants ii) establishment of nuclear power plants iii) generating environment friendly electricity from renewable energy sources iv) massive transmission and distribution programs to ensure uninterrupted power supply v) energy savings and energy efficiency programs for billing efficiency, optimum use of electricity and reduction of system loss vi) rehabilitation and enhancement of efficiency of old power plants and set up new power plants through public-private participation and regional co-operation to import electricity from neighboring countries (FD, 2011).

According to the Bangladesh Power Development Board (BPDB) estimation, peak demand of the electricity will be increased faster rate. The peak demand of electricity will be 10,283 Megawatt (MW) by 2015. In Bangladesh a huge amount of natural gas is used to generate electricity, as most of the existing power plants are gas-based. About 83% of total electricity was produced from gas-based power plants and rest of the electricity produced from fuel in 2011(FD, 2011). To achieve the target to generate 10,283 MW by 2015 huge amount of public and private investment required. In this regard Government has taken necessary steps to increase the foreign and domestic investment. Government has also increased the budget allocation in power sector over time. The development budget allocation gradually increased over the year. The allocation of total development budget in 2009-10 fiscal year was about TK. 20 billion and for fiscal year 2011-12 it is TK. 71.53 billion, which is about 26% of total development budget and 7.5 percent of national budget (FD, 2011).

III. Review Of Related Study

The study of the characteristics of economic dynamics and electricity sector has been an area of interest of researchers for long time. However, the pioneering work is investigating causal relationship between economic growth and energy consumption was done by Kraft and Kraft (1987). The existing literature focuses on developed and some developing economies. Different results have been found for different countries and different time periods. Those studies used different proxy variables for energy usage. This study will concentrate on the existing literature that is similar to our study.

a) Literature Review: Bangladesh

Reviewing the existing literature on economic growth and electricity consumption, we find only a few studies regarding Bangladesh. Most of those studies fall into the omitted variable(s) trap as they only examined the energy-growth nexus in a bi-variate framework. But our study include important variable like investment. Ahmad and Islam (2011) conducted a research on Bangladesh scenario. They found short-run uni-directional causality running from per capita electricity consumption to per capita GDP without feedback applying co-integration and VECM based Granger-causality test for the period spanning from 1971 to 2008. They also found long-run bidirectional causality running from per capita electricity consumption to per capita GDP. Asaduzzaman and Billah (2008) found positive relationship between energy consumption and economic growth for Bangladesh using data spanning from 1994– 2004 and reported that higher level of energy use led to higher level of growth. Buysse et. al. (2012) investigated the possible existence of dynamic causality among electricity consumption, energy consumption, carbon emissions and economic growth in Bangladesh. The results indicate that uni-directional causality exists from energy consumption to economic growth both in short and long run, While bi-directional long run causality exists between electricity consumption and economic growth but no causal relationship exists in short run. Applying Granger causality tests on the nexus between economic growth

and electricity generation, Alam and Sarker (2010) claims that there exists short run causal relationship running from electricity generation to economic growth without feedback. On the other hand Mozumder and Marathe (2007) found reverse relationship that is unidirectional causality from GDP to electricity consumption for Bangladesh over the period 1971 to 1999 by employing Co-integration and Vector Error Correction Model (VECM).

b) Literature Review: South Asia

There are some notable studies conducted in the South Asian region. Ghosh (2002) conducted a study using annual data covering the period of 1950–51 to 1996–97 in India and found that unidirectional Granger causality existed running from economic growth to electricity consumption. But, the same author in 2009 claimed that there was unidirectional causality running from economic growth to electricity consumption in the short run. Lean and Shahbaz (2012) claim that electricity consumption has positive impact on economic growth and bi-directional Granger causality has been identified between electricity consumption and economic growth in Pakistan. However, Ahmad and Jamil (2010) using annual data for the period of 1960–2008, found the presence of unidirectional causality from economic activity to electricity consumption. Morimoto and Hope (2004) pointed out that current as well as past changes in electricity supply have a significant impact on a change in real GDP in Sri Lanka. Saeki and Hossain (2011) found existence of unidirectional causality from economic growth to electricity consumption in India, Nepal and Pakistan, and from electricity consumption to economic growth in Bangladesh.

c) Literature Review: Developed and Developing Countries

Asafu-Adjaye (2000) investigated the existence of causal relationship between energy consumption and output in four Asian countries using the co-integration and error-correction mechanism and pointed out that unidirectional causality ran from energy consumption to output in India and Indonesia. However, bi-directional causality was found in case of Thailand and the Philippines. Akinlo (2009) conducted a study in Nigeria to investigate relationship between economic growth and electricity consumption during the period 1980 to 2006. The result exhibits that there is unidirectional Granger causality running from electricity consumption to real GDP and suggested use of electricity could stimulate the Nigerian economy.

China, the largest developing country uses huge amount of energy. Recently, more attention has been given in China to determine the short run and long run causal relationship between electricity consumption and economic growth. However, conflicting result have been revealed by different researchers. Using yearly data covering the period 1978 to 2004 and applying co-integration and Granger causality approaches Yuan et. al. (2007) indicated that electricity consumption and real GDP for China were co-integrated and there was unidirectional Granger causality from electricity consumption to real GDP. Shiu and Lam (2004) claimed that causality existed running from electricity consumption to economic growth for the period 1971 to 2000. On the other hand, Lin (2003) covered the 1978–2001 period and found that economic growth causes electricity consumption.

Chontanawat et. al. (2008) investigated the existence of causal relationship between energy economic growth nexus in 30 OECD developed economies and 78 non-OECD developing economies. They pointed out that causality running from energy consumption to GDP. However, the result was more prevalent in the developed OECD economies compare to the developing non-OECD economies. Employing co-integration and VECM, Belloumi (2009) pointed out Tunisian per capita energy consumption in the short-run caused to per capita GDP and there were bidirectional long-run causal relationship between the series for the period of 1971 to 2004. Ouedraogo (2010) found that there was a long run bi-directional causal relationship between electricity consumption and GDP for Burkina Faso for the period spanning from 1968 to 2003 and claimed electricity was a significant factor in economic development. Chandran et. al. (2010) considered the relationship between electricity consumption and real GDP growth in case of Malaysia. Employing autoregressive distributed lag (ARDL), the result indicated that there was positive relationship between electricity consumption and real GDP. The causality test confirms the uni-directional causal flow from electricity consumption to real GDP and the findings conclude that Malaysia is an energy-dependent country.

Therefore the above literature reveals that due to the application of different econometric methodologies and different sample sizes, the empirical results are very mixed and even vary for the same country and are not conclusive.

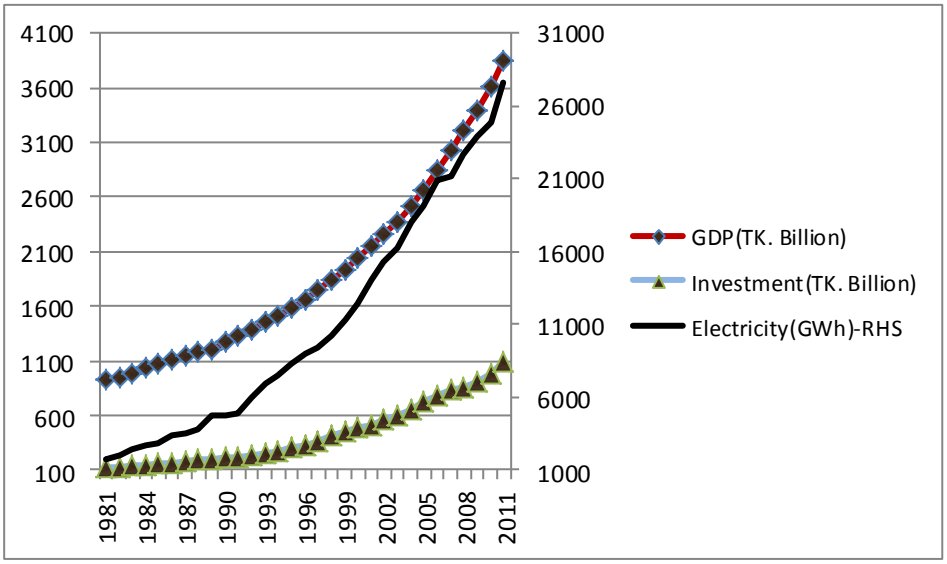
IV. Data Description And Research Methodology

a) Data Description

The empirical analysis of the study is conducted by using time series data of total Electricity consumption, total real Gross Domestic Product (GDP) and total investment for the period spanning from 1981 to 2011 (Fiscal Year, July to June). The choice of the starting period was constrained by the availability of time series data on electricity consumption. The data of total electricity consumption is expressed in terms of Gigawatt hours (GWh) and obtained from annual report, published by Bangladesh Power Development Board's

(BPDB). On the other hand, real GDP (which is a proxy to economic growth) and total investment series is in constant price (base year 1995-96) of BDT (Billion) and obtained from Bangladesh Bureau of Statistics (BBS). The following figure-1 describes the historical movements of total electricity consumption, real GDP and total investment over the time period 1981 to 2011. All the series shows upward trend.

Fig.1 : Historical trends of total electricity consumption (GWh), total real GDP and total investment



Source: BPDB and BBS, 2011

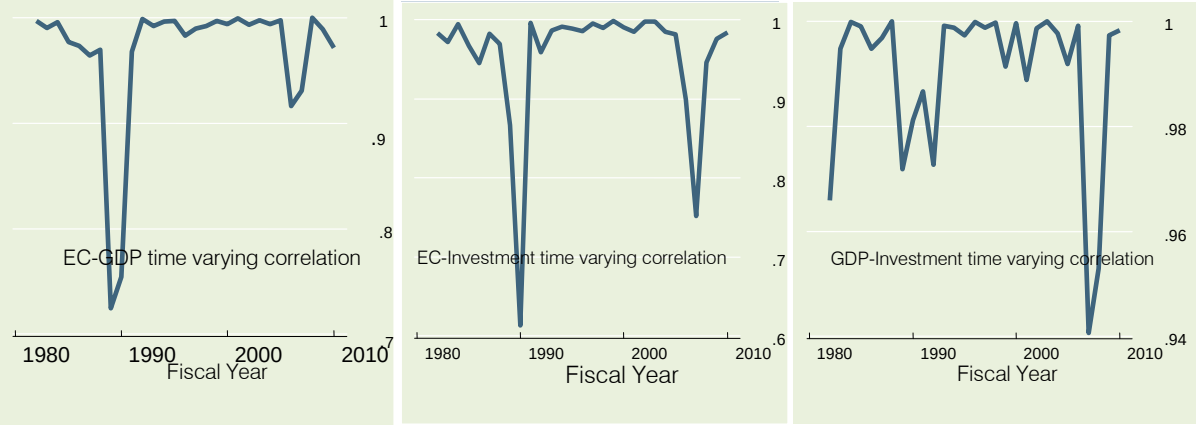
To provide an overall understanding of the chosen variables we include summary statistics for full sample in the following table-1. The table shows that during the period average electric consumption, average real GDP and average investment was 11,015.35 GWh, TK. 1914.21 billion and TK. 436.20 billion respectively. The high standard deviations indicate that electricity consumption, GDP and investment are increased in the recent past in Bangladesh.

Table1 : Summary Statistics of real GDP, Investment and Electricity Consumption

	GDP	Electricity Consumption	Investment
Observations	31	31	31
Mean	1914.219	11015.35	436.2097
Maximum	3848.900	27592.40	1095.300
Minimum	923.6000	1748.700	118.3000
Std. Dev.	858.1762	7900.470	291.4863

It should be mentioned here that electricity consumption and economic growth shows almost constant correlation in Bangladesh. The other two pairs also presence high time varying correlation. Considering the GDP and electricity consumption, the plotted time varying correlations range in a corridor with the lowest value of 0.91 in 1989 and almost near 1.00 rest of the years, while correlations between electricity consumption and investment to be found lowest 0.61 in 1990(Figure-2). We also note that the correlation between GDP and investment maintains high correlations except very little deviations (6%) in 2007.

Fig 4.2 : Time Varying Correlation between Electricity Consumption-GDP, Electricity Consumption- Investment and GDP-Investment



a) Research Methodology

i. *b1 Unit Root Test*

Generally we see that time series data is non-stationary but the model can only be built once the given time series are stationary. According to the Engle and Granger (1987) if independent series are stationary then the series are said to be co-integrated. To investigate, whether the given time series are stationary, there are several procedure found in the econometric literature. It is evident that each test has its own merits and demerits. In our study, we use two test in this regard such as Augmented Dickey Fuller (1979) and Phillips Peron (1988) test to avoid the criticisms of individual test. Appropriate lag lengths are selected according to the Akaike Information Criterion (AIC) method.

We performed the ADF tests based on the following model

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum_{i=1}^{n} \alpha_1 \Delta y_i + e_t \quad \text{..... (i)}$$

Where Δ = first difference operator, n= optimal number lags, e_t = disturbance term consider as a white noise error, y= time series that is GDP, investment and electricity consumption.

The PP test are based on the following model

$$\Delta Y_t = \alpha + bY_{t-1} + \varepsilon_t \quad \text{.....} \quad \text{(ii)}$$

Where Δ = first difference operator, α = constant, ε_t = error term and y= time series that is GDP, investment and electricity consumption.

ii. *b2 Johansen Co-integration and VECM*

For co-integration test it is required that the chosen time series that is GDP, investment and electricity consumption to be integrated of the first order I (1), when this condition satisfy then we can move into examine the existence of long run co-integration relationship of the chosen time series. In this regards, we will be employed Johansen co-integration test. Johansen method indicates the maximum likelihood procedure to identification of existence of co-integrating vectors for chosen non-stationary time series data. The Johansen methods allow us to determining the number of co-integrating vector. These tests directly investigate the integration in Vector Auto-regression (VAR) model. Appropriate lag lengths are selected according to the Akaike Information Criterion (AIC) method. We can write the VAR of order p in the following way.

$$z_t = c + A_1 z_{t-1} + \text{.....} + A_p z_{t-p} + \mu_t \quad \text{.....} \quad \text{(iii)}$$

Where z_t represents n×1 vector that integrated I (1) and μ_t is n×1-vector innovations.

There are two different likelihood ratio test are proposed by the Johansen namely,

Trace Test=

$$\lambda_{trace} = \text{-T} \sum_{j=r+1}^{k} \ln(1-\hat{\lambda}_j) \quad \text{..... (iv)}$$

Maximum Eigen Value Test= $\lambda_{\max}$ = -T ln(1-$\hat{\lambda}_{r+1}$) ..... (v)

Where T= Sample size and $\hat{\lambda}_j$ = Estimated values of characteristic roots ranked from largest to smallest.

It should be mentioned that above equation (iv) that is trace test(λ_{trace}) tests the null hypothesis of co-integrating vector against the alternative hypothesis of n co-integrating vectors and equation (v) that is maximum Eigen value test ($\lambda_{\max}$) tests the null of r co-integrating vectors against the alternative hypothesis of r+1 cointegrating vectors.

If two or more series co-integrated then it implies that causality exists among the series but it does not indicate the direction of the causal relationship. Thus

the dynamic Granger causality can be captured based on Vector Error Correction Model (VECM) will be employed to determine the causality direction between economic growth, electricity consumption and investment. To ascertain the causality direction, we estimate the following VECM:

$$\begin{bmatrix} \Delta EC_t \\ \Delta GDP_t \\ \Delta Invest_t \end{bmatrix} = \begin{bmatrix} \alpha_1 \\ \alpha_2 \\ \alpha_3 \end{bmatrix} + \begin{bmatrix} A_{11i} & A_{12i} & A_{13i} \\ A_{21i} & A_{22i} & A_{23i} \\ A_{31i} & A_{32i} & A_{33i} \end{bmatrix} \times \begin{bmatrix} \Delta EC_{t-i} \\ \Delta GDP_{t-i} \\ \Delta Invest_{t-i} \end{bmatrix} + \begin{bmatrix} \delta \\ \gamma \\ \lambda \end{bmatrix} \times [ECT_{t-1}] + \begin{bmatrix} \omega_{1t} \\ \omega_{2t} \\ \omega_{3t} \end{bmatrix} \quad \ldots\ldots\ldots \text{(vi)}$$

Where ECT_{t-1} refers to the error correction term derived from the long-run co-integrating relationship. This is also measures the magnitude of the past disequilibrium and the coefficients of ECT_{t-1} represents the deviation of the dependent variables from the long run equilibrium.

iii. *b3 Short-run and long-run elasticity*

Saeki and Hossain (2011) applied following model to obtain short-run (Model –vii) and long-run (Model- viii) elasticity. We will be employed the same.

$$\Delta \text{LnGDP}_t = \alpha \Delta \text{LnEC}_t + \beta \Delta \text{LnInvest}_t + \mu \text{ECM}_{t-1} + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots \text{(vii)}$$

Where ε_t the random error term, α and β are the parameters to be estimated

$$\text{LnGDP}_t = \mu + \alpha_1 \text{LnEC}_t + \beta_1 \text{LnInvest}_t + \sum_{j=-k_i}^{k_i} \lambda_1 \Delta \text{LnGDP}_t + \sum_{j=-p_i}^{p_i} \gamma_1 \Delta \text{LnEC}_t + \sum_{j=s_i}^{s_i} \delta_1 \Delta \text{LnInvest}_t + u_t$$

…….. (viii)

This equation is augmented with lead and lagged differences of the dependent and explanatory variables to control for serial correlation and endogenous feedback effects.

V. Empirical Results

The order of integration of the time series is investigated by applying both Augmented Dickey Fuller (1979) and Philips Perron(1988) tests. We include trend and constant term in the both tests. The following table-2 exhibits the results of unit root tests on natural logarithms of the levels and the first differences of real GDP, electricity consumption and investment, where evidence was found in favour of the null hypothesis that all series contain unit roots at level. However, we reject the null hypothesis for the first differences of all series. Therefore, it is concluded that all the series are integrated of the order 1 i.e. I (1). Thus co-integration tests can be applied for all variables.

Table 2 : Unit root test results

Variables	Level				First Difference			
	ADF	P-value	PP	P-value	ADF	P-value	PP	P-value
GDP	0.124 Lag(1)	0.99	-0.346 Lag(1)	0.98	-4.58* Lag(3)	0.00	-5.95* Lag(3)	0.00
Electricity Consumption	-0.108 Lag(3)	0.99	-1.694 Lag(3)	0.75	-6.92* Lag(1)	0.00	-6.68* Lag(1)	0.00
Investment	-1.300 Lags(1)	0.88	-1.764 Lag(1)	0.72	-6.92* Lag(1)	0.00	-3.3** Lag(1)	0.05

*Notes: *indicates significant at 1% level, ** indicates significant at 5% level*

Our next aim is to investigate whether or not real GDP, electricity consumption and investment share common long run relationships. To achieve this, as explained earlier we consider both the trace statistic and Maximum Eigen Value Statistic test to investigate the long run relationship among the variables. The primary step in the Johansen co-integration test is to determine the optimal lag length for each VAR model. This study identified the optimal number of Lag by using Akaike Information Criteria (AIC) and considered the minimized

criterion value. The results of Johansen co-integration test shown in table-3, where we find that the null hypothesis of no co-integration can be rejected using both the trace statistic (λ_{trace}) and Max Eigen Value Statistics ($\lambda_{\max}$) at 5% level. The calculated values are both greater than the critical values. This simply means that there is a long run relationship among electricity consumption, real GDP and investment for Bangladesh.

Table 3 : Result of the Johansen Co-integration Test

	Null hypothesis	Trace Statistic (λ_{trace})	05% Critical Value	Max Eigen Value Statistic($\lambda_{\max}$)	05% Critical Value
Total GDP, Electricity Consumption and Investment	r=o	110.24	29.68	102.19	20.97
	r≤1	8.04	15.4	6.59	14.07
	r≤2	1.44	3.76	1.44	3.76

We have found that the chosen time series are co-integrated and there exist long run relationship that indicates there must be Granger causality in at least one direction, but it does not indicate the direction of temporal causality among the variables. The direction of causality can be divided into short and long run causation. We then, therefore explore the dynamic Granger causality in the (Vector Error Correction Model) VECM specification to obtain both short-run and long-run direction. The short-run causal effects can be obtained by the F-test of the lagged explanatory variables, while the t-statistics on the coefficient of the lagged error correction term in model (vi) indicates the significance of the long-run causal effect.

Beginning with the long-run causality, the coefficient of ECT_{t-1} is having a negative sign in all equations except when GDP acts as the dependent variables. In investment equation we can see that the coefficient of ECT_{t-1} is -0.35 (table-4) and is significant at 05% level that confirms the unidirectional long run relation from GDP and electricity consumption to investment with no feedback. The significant negative coefficient of error correction term implies that the variable is not overshooting and thus the long run relationship is attainable in investment equation. That is if the system is exposed to a shock, it will be converge to the long run equilibrium at 35% per year. The coefficient of ECT_{t-1} is negative in electricity consumption equation but insignificant. The coefficient of ECT_{t-1} is positive in GDP equation which means that any exogenous shock in one of the variables may be lead to divergence from equilibrium. Therefore in case of shock in the GDP, there may be 3% divergence from equilibrium per year.

In the short-run there is unidirectional causality running from electricity consumption to GDP, Electricity consumption to Investment and Investment to GDP but not the reverse. This implies that electricity consumption acts as a stimulus to investment and economic growth as well and high levels of economic growth demands a high level of electricity consumption. The result also show that in the short run investment causes GDP, which simply suggests that a high level of investment leads to high level of economic growth. These finding indicates that in Bangladesh electricity generation polices should aimed at improving the power infrastructure and increasing the power supply are the appropriate options to boost the economic growth.

The finding of our study is on the line with earlier findings of Ahamad and Islam (2011); as they revealed the causality from energy consumption to GDP for Bangladesh. Our result is also consistent with the finding of Asaduzzaman and Billah (2008) as they claims higher level of energy use led to higher level of growth in Bangladesh. Our result also consistence with the finding of Alam and Sarker (2010), as they revealed that short run causal relationship running from electricity generation to economic growth without feedback. The findings of our study also partly consistent with the findings of Buysse et. al. (2012) as their results indicate that uni-directional causality exists from energy consumption to economic growth both in short and long run while bi-directional long run causality exists between electricity consumption and economic growth but no causal relationship exists in short run. However, our result is totally conflicting with the finding of Mozumder and Marathe (2007) because they reveal that there is unidirectional causality from GDP electricity consumption for Bangladesh over the period 1971 to 1999. This contradiction can be argued upon with a plausible view that the time series are different.

Table 4 : Short run and long run causality results

	Source of Causation -Short Run (F-statistic)			Source of Causation Long Run (t-statistic)
	ΔGDP	ΔElectricity	ΔInvestment	ECT_{t-1}
ΔGDP	-	3.23*(.083)	4.15**(0.050)	{0.034} 0.54 (0.595)
ΔElectricity	.038(0.84)	-	0.0310(0.861)	{-0.228} -1.02 (.318)
ΔInvestment	1.36(0.505)	22.11***(0.000)	-	{-0.358} -2.44** (0.022)

*Note: ***, **, * denote significance level at 1%, 5% and 10% respectively. { } denote coefficient of the corresponding ECT_{t-1} Numbers in parentheses ( ) are the corresponding P-values.*

iv. *Short-run and long run elasticity*

We estimate the short and long run elasticity based on model (vii) and viii). The estimated results are given below in table-5. The findings indicate that the short-run and long-run electricity consumption and investment have significant positive impact on economic growth for Bangladesh. The long-run elasticity of economic growth.

with respect to electricity consumption is (0.12) higher than short-run elasticity (0.09) and also the long-run elasticity of economic growth with respect to investment is (0.78) higher than short-run elasticity (0.50), indicate that over time higher electricity consumption and higher investment in Bangladesh give rise to more economic growth.

Table 5 : Short-run and long run elasticity

Short run elasticity						
	$\Delta LnEC_t$		$\Delta LnInvest_t$		ECT_{t-1}	
Dependent variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
$\Delta LnGDP_t$	0.099	.012**	0.50	.000***	0.067	.000***
Long run elasticity						
	$LnEC_t$		$LnInvest_t$			
Dependent variable	Coefficient		P-value	Coefficient	P-value	
$LnGDP_t$	0.12		.029**	0.78	.000***	

*Note: ***, **, * denote significance level at 1%, 5% and 10% respectively.*

v. Conclusion and Policy Implications

The main goal of this paper was the examination of causal interdependences between economic growth, electricity consumption and investment in Bangladesh. For this purpose, the study focused on total electricity consumption, total real GDP and total investment for the period spanning from 1981 to 2011. This paper applies the ECM model to examine the causal relationship among the chosen variables. Prior to testing for causality, the ADP/PP test and Johansen co-integration test were used to examine for stationarity and long-run co-integration. Results from the Johansen co-integration test show the existence of long run equilibrium among the variables, while the causality results confirm unidirectional causal relationship running from electricity consumption to economic growth in the short run. The causality results also exhibit that electricity consumption causes investment and investment causes economic growth but not the vice versa. The source of causation in the long run is also found to be the error correction terms from electricity consumption and economic growth to investment. The long run elasticity of economic growth with respect to electricity consumption and investment are higher than their short run elasticity. This implies that over time higher electricity consumption and higher investment in Bangladesh give rise to more economic growth. Our overall findings indicate that Bangladesh is an energy (electricity) dependent country. This implies that an increase in electricity consumption raises economic growth. We also find that an increase in electricity consumption raises investment and obviously an increase in investment raises economic growth. Therefore, emphasis should be given on electricity generation and more investment.

There is no other alternative for economic growth than to generation more power for Bangladesh, needed especially for transforming into a middle income country by 2021. However, a question may be raise as to whether electricity consumption could boost the economic growth alone; the answer is simply no. Because, electricity consumption is one of the influencing factors not all. Along with generation of more power, government should ensure a business friendly environment to encourage local and overseas investors to invest more. Only in that case more electricity will lead to increased economic activities otherwise it would be costly. In this regard, government may take policy action to increase power generation as well as attract local and foreign investors to invest in energy and other sectors.

As we mentioned earlier, the findings of our study emphasizes the consumption of electricity as a prerequisite of achieving higher economic growth for Bangladesh so high priority should be placed not only on power generation but also on the issues of appropriate electricity distribution and management system in the short-run and medium term policies of the government to take the country to middle status by 2021.

Bangladesh use huge amount of gas and fuel to generate electricity (Finance Division, 2011). So, Ministry of power, energy and mineral resources may continue to investigate and exploit the possibilities of renewable energy and more use of coal for electricity generation as it can reduce reliance on imported fuels. Renewable energy source and alternative source of electricity generation may change the power structure of Bangladesh. The Ministry of Power and energy resources may extract coal from the Dinajpur coal field and generate electricity. Renewable energy technology has an enormous potential to solve electricity problem in Bangladesh. The energy provided by the sun (solar energy) is many times greater than the current electricity demand. The wind, waves and tides have a large potential as well. It is to be understood that renewable energy may be the one of the vital source of future electricity supply and the said traditional energy source like gas and fuel are coming to an end.

As investment positively affects GDP growth and electricity consumption affects investment, Bangladesh Bank (Central Bank of Bangladesh) may under take appropriate monetary policy to provide loan at cheaper rate in banking sectors. The enhancement of capitalization towards small investors at cheaper cost helps in expanding existing business and generates new business activities as well that means crates more employment opportunity, increase purchasing power. So, investment considered as a leading indicator of economic activity, prosperity and hence economic growth.

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Credit Sales Evaluation Model for a Small Firm

By Ms. Jyoti
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Abstract - Credit sale is the need of every small or big firm. It is really crucial for small firms to initiate credit sale to survive in competitive environment. At the same time, the selection of customers to whom goods and services can be sold on credit is also vital. In this paper, a credit control model is developed for numerically scoring the creditworthiness of existing customers for further credit sale. The model is constructed for small manufacturing firms which cannot handle the extra cost of complex methods used for credit evaluation. Such model will support small firms to rank their customers based upon certain forecasted and current sales values and accordingly deciding whether to give credit or not and how much should be given?

GJMBR-A Classification : FOR Code:150304 JEL Code: D22, C20

Strictly as per the compliance and regulations of:

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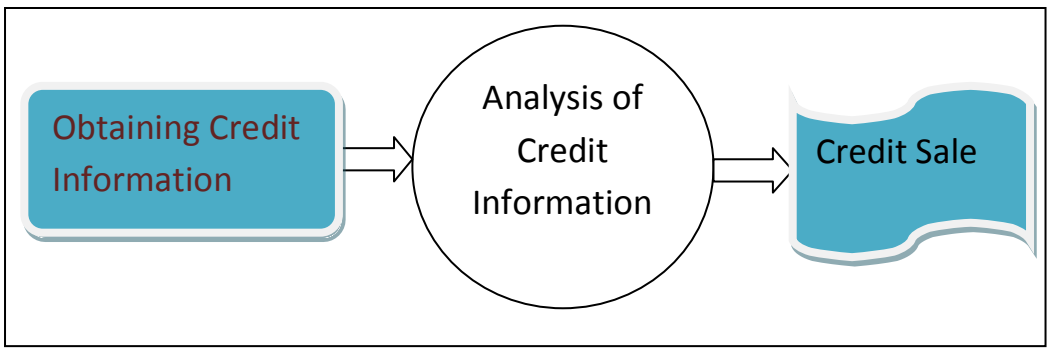
I. Introduction

Credit sale is instigated to increase sales, improve profitability, attract customers and increase market share. This is not only a trend but also a necessity in the today's competitive environment. A credit sale is as important for small as for large organizations.

Credit sales are generally treated as a marketing tool to aid the sales of goods which requires no formal acknowledgments of debt obligation through financial instruments (Khan et al 2008), but it has certain costs and risk. It necessarily involves certain future costs-like cost for collection, cost of failure to pay in time, cost of default, etc.

To overcome or reduce such costs, a firm needs to follow adequate credit policy which is neither too liberal nor too tight. Credit policy of an organization outlines its strategic and operational requirement for credit sale. It is the determination of credit standards and based on the set standards performing a credit analysis. Standards are the minimum requirements for extending credit to a customer while credit analysis involves obtaining credit information and evaluation of the applicants using certain parameters.

Figure 1 : Credit Sale Analysis



The credit information about the customer can be collected through internal sources like customer records, behavior of customer in terms of payments etc., and external sources like financial statements, bank references, trade references, credit bureau reports, etc. (Figure 1).

After collecting the credit information, the information is analyzed quantitatively and qualitatively and then a credit report is prepared of the customers to be considered for credit sale based upon the recommendations of credit manager in the report. The process is not much difficult in the case of existing customers but for a new customer, all the factors are analyzed in detail.

Another important aspect of credit policy is the period for which credit is granted i.e. the credit period. Lengthening the credit period pushes sales up by inducing existing customers to purchase more and attracting additional customers. However, the extension in credit period involves heavy cost whereas shortening of credit period would have opposite influences like lower sales, decreased investment in debtors, and reduction in bad debt loss. So deciding the appropriate credit period and trying to collect the debts (credit sales) within that period is crucial for a firm.

The credit worthiness of customer can be assessed in terms of 3Cs like Character, Capacity and Capital with the help of numerical credit scoring and several other models. A paper (Natasha et al, 2006) on Modeling customer revolving credit scoring using logistic regression, survival analysis and neural networks

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discuss credit scoring modeling of a customer revolving credit depending on customer application data and transaction behavior data.

Jae H. Min et al. (2008) proposed a DEA-based approach to credit scoring. Compared with conventional models such as multiple discriminant analysis, logistic regression analysis, and neural networks for business failure prediction, which require extra a priori information, this new approach solely requires ex-post information to calculate credit scores.

Arie Ben(2009) compares machine learning models with expert systems when applied to the same problem domain.

Steven Finlay (2009) determined the impact on performance that results from having different objectives for model construction and model assessment and empirically showed that all models perform similarly well, suggesting that modeling and business objectives are well aligned.

Nan-Chen Hsieh (2009) focused on predicting whether a credit applicant can be categorized as good, bad or borderline from information initially supplied. An Ensemble classifier is constructed by incorporating several data mining techniques, mainly involving optimal associate binning to discrete continuous values; neural network, support vector machine, and Bayesian network are used to augment the ensemble classifier

All these studies results quite scientific and mathematical models for credit scoring of customers. For a small manufacturing firm the use of such techniques is not only difficult but expensive also. Hence an economical model based on sales volume and certain forecasting techniques is developed for tiny firms.

This paper is an attempt to construct such an economical numerical credit scoring model for classifying the existing customers of a manufacturing firm into various categories. The resulted model will help in evaluating the performance of customers. It will also support the credit managers of manufacturing firms to take a decision whether to sell their goods and services on credit to a specified customer or not. This model will assist in assessing the credit limit which can be granted to an individual customer.

II. Credit Rating Model For A Manufacturing Concern

a) Purpose of the Model

- Providing a support to small manufacturing firms
  - o To rate credit worthiness of a customer.
  - o To analyze the risk bearing capacity of the organization through credit analysis of existing customers.
  - o To define the credit period, credit limit (monetary terms), of the various customers.
  - o Management of the funds, keeping in view the fund requirement of the organization and the cost of capital required in funding the creditors.

b) Methodology for Model

- A three point grading system is incorporated in categorizing the customers within different grades.
- The three points taken into consideration are
  1. Sales Volume.
  2. Timely return by the customer of the credit given.
  3. The period for which the customer requires credit.
- The grading of the customers will be done accordingly.
- The future sales with the same customers will be predicted and thus the Credit Limit of the customers will be decided using the formula (equation 1).
- Here Multiplying Factor is the ratio of the predicted Future sales to the Current Sales for the period considered under analysis. The future sales are estimated based on past sales data.
- The model can be examplified with the help of given illustration. (Table 1).
- Illustration (Table 1).

Suppose a company XYZ Ltd. has following details for sales and credit period- Table 1

Customers	Sales (Rs. Lacs)				Average Sales (4 Months)	Estimated Average Sales* (4 months)	Multiplying Factor
	Jan	Feb	Mar	April			
ABC	100	140	130	150	130	186*	1.430769
DAC	150	140	150	150	148	152*	1.027027
CAG	140	160	180	100	145	105*	0.724138
*The average future sales is based upon estimated future sales of the company based upon past data using Ms-excel sheet.(Annexure 1)							

Here two cases can be analyzed. One, if company has the policy of providing equal credit period all its customers irrespective of the sales volume. Second, the company has decided different credit period for different customers based upon sales volume or other qualitative factors. The average sale is assumed for the period of four months.

III. Assumptions of The Model

1. Past sales are the best estimator of future sales.
2. There are no taxes considered.
3. The credit limit is needed to be defined and is separate policy of individual organization.

The concern should be able to identify its customer's credit worthiness.

5. The illustrations are based on randomly generated numbers.

Case 1 : If the company has a policy of 2 months similar credit period for all customers, the result will be according to following table (Table 2).

Table 2 : Details of Party-wise Credit Rating and Proposed Credit Limit (Rs Lacs)- Case 1

S.no.	Customer Name	Customer no.	Segment	Multiplying Factor	Credit limit	Category
1	ABC Ltd.	456	OEM	1.430769	372	A
2	DAC Ltd.	457	OEM	1.027027	304	B
3	CAG Ltd.	458	OEM/EPC	0.724138	210	C

Case 2 : Suppose the Company has decided 15 days credit for customer ABC Ltd., 2 months Credit for DAC Ltd. and 3 months credit to CAG Ltd. based upon some customer relationship feedback. The results will be according to table 3.

Table 3 : Details of Party-wise Credit Rating and Proposed Credit Limit (Rs Lacs)- Case 2

S.no.	Customer Name	Customer no.	Segment	Multiplying Factor	Credit limit	Category
1	ABC Ltd.	456	OEM	1.430769	93	C
2	DAC Ltd.	457	OEM	1.027027	303	B
3	CAG Ltd.	458	OEM/EPC	0.724138	315	A

The customer name and customer number is assumed as specified in the books of accounts. Customer segment represents the OEM (Original Equipment Manufacturer) or EPC or OEM/EPC category. The result shows that if the credit limit can be reduced by tightening the credit period and it can be increased by expansion of credit period.

IV. Advantages Of Credit Control Model

- The developed model is highly suitable for a manufacturing firm for rating its customers.
- This can be a less expensive method to rate the customers' credit worthiness instead of getting it done from external agency.
- The credit control model helps to decide the credit terms that shall be abided to while dealing with the various parties.
- Limitations of the Model
- The future sales is an estimation based upon past data, here better technique for estimation can be utilized.
- The model serves the purpose for manufacturing concerns only and unable to rate the customers of a service industry.
- The model is only suitable for existing customers and not suitable for new customers for the concern.

V. Conclusion And Suggestions

Effective credit control is a vital part of maintaining a healthy cash flow. Good credit management runs through the whole business from sale to the collection of payments. Hence it is recommended to have separate cell or department for resolution of queries or disputes and smooth relation building with customers.

Besides quantitative analysis, the qualitative analysis should also be the vital part of the credit policy. As some customers may have good relationship with owner or company personnel but they may be very poor based on quantitative analysis or some customers may be of bad quality based on credit rating but may have high trade prospects.

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Annexure 1

Months\Customers	Abc	Dac	Cag
Jan	100	150	140
Feb	140	140	160
Mar	130	150	180
Apr	150	150	100
May	165*	150*	120*
Jun	179*	151*	110*
Jul	193*	152*	100*
Aug	207*	153*	90*
Average Sale For May To Aug	186	151.5	105
Average Sale For Jan To April	130	147.5	145
Multiplying Factor	1.430769	1.027119	0.724138

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Impact of Personality Match/Mismatch on Employee Level Performance Which Ultimately Affects Organizational Performance

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Abstract - The quality of the relationships employees have with each other determines the quality of the work outcomes. Personality of employees effects their roles and responsibilities in the organization. However, personality match between employee/employer has a strong impact on the interaction and communication patterns of the employees, as well as the subjective experiences of individuals which results in different forms of organizational integration and also in managing the interrelationships synergistically. On the other hand, every good employee that an organization fails to retain, walks out the door costing the business money, every poor or mismatched recruit can result in missed opportunities and can severely damage your culture and organizational reputation. Our paper is about how personalities matter in work environments and ultimately results in superior organizational performance. Too much difference among personalities at the work place creates difficulty in retaining employees. Mismatch can cause coordination problems.

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Impact of Personality Match/Mismatch on Employee Level Performance Which Ultimately Affects Organizational Performance

Sara Khan[α], Hira Amin[α] & Muqaddas Bin Tahir[α]

Abstract - The quality of the relationships employees have with each other determines the quality of the work outcomes. Personality of employees effects their roles and responsibilities in the organization. However, personality match between employee/employer has a strong impact on the interaction and communication patterns of the employees, as well as the subjective experiences of individuals which results in different forms of organizational integration and also in managing the interrelationships synergistically. On the other hand, every good employee that an organization fails to retain, walks out the door costing the business money, every poor or mismatched recruit can result in missed opportunities and can severely damage your culture and organizational reputation. Our paper is about how personalities matter in work environments and ultimately results in superior organizational performance. Too much difference among personalities at the work place creates difficulty in retaining employees. Mismatch can cause coordination problems. While matching personalities complement each other which lead to motivation at work place. We propose that personality match leads to positive attitudes. Furthermore, it creates emotional alignment at employee level, which contributes to increased organizational performance; develops emotional integration and a deep collaborative culture. Once all these factors are established the whole organization creates fit or connectedness which of course complements other aspects of emotional integration, collaborative culture and positive attitudinal alignment.

I. Introduction

Although recent research has clearly demonstrated the effects of "implicit theories," of leadership on leader ratings, their impact on performance and overall output, still there has been a lack of attention to the aspect that shows the impact of match / mismatch of personalities of leaders and members on performance, both on individual level and organizational level. Theoretical analysis of leadership argue that leaders shift their emphasis from task to relationship orientation which pays more consideration to the phenomenon of personality match/ mismatch among leaders and followers, specially, in the context of Pakistan, a collectivistic country.

Leader-follower similarity and personality match in the workplace is a crucial element which affect the outcomes as quality of leader-member relationships (Bauer and Phillips) as well as performance (Pulakos & Wexley, 1982) . Early research on attraction and similarity carries the view that individuals prefer others who are similar to themselves (Berscheid and Kandel). Individuals select partners who are similar in terms of attitudes, values, and traits (Byrne; Caspi and Hill). Once there is seen to be a large discrepancy between the way an organization functions with the individuals preferences and values it is clear that the organization will fail to retain thus costing it highly therefore a collaborative culture which recruits similar others from the start is crucial.

Match of leader-followers personalities builds the grounds for values alignment and attitudinal similarity. It plays a pivotal role in emotional integration of individuals, leading them to go an extra mile. If the personality of leaders and followers match is established then it creates the basis for culture of collaboration as well as it enables employees to fit with their work and organization.

The personality match of leaders and followers can be beneficial in the development of a climate of high performance such as ; Enhanced performance of leaders even when they or the employees are under pressure; Increased levels of empathy in leadership group; Leaders learn to adapt their behaviour as well as to create positive and productive environments for their workgroups; Leaders increase their range of their responses to suit the demands of different situations they face; and leaders learn to develop the mental toughness and flexibility which is required to lead their workgroups through times of instability and uncertainty.

Alternative to theories which promote the importance of universal traits and behaviors for leaders, some have proposed that the effectiveness of leader behaviors depends on the environment. These "contingency" theories contend that leader behaviors may be helpful or harmful, depending on the personality traits of subordinates and the situation. For instance, the Vroom-Yetton model of supervisory decision-making promotes a careful consideration of situational factors before determining the most effective decision-making strategy (Vroom & Yetton, 1973). Also, the Path-Goal theory calls for leaders to consider the needs of subordinates before deciding on a leadership strategy (House, 1996).

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If employees have a personality match, each person's some personality characteristics compliment the other personality in such a way that their motivation level is increased and they work together more willingly and will do their best in a particular situation. For example, according Harris, Harris & Eplion, (2007) 'The personality traits each tap into different aspects of a subordinate's motivation, confidence, and initiative and thus would be expected to be positively related to LMX quality'. Which pin points the fact that personality match would create high quality of relationship. This kind of relation can also create a high-high style of leadership, which is the most effective style according the 'style approach' of leadership. This means that the quality of work (tasks assigned) as well as of the employee/employer relation is quite high which makes it more effective. It creates a relationship of mutual trust and friendship. . These relations express emotions to each other and also influence each others' attitudes. People having positivity in their personality is shown through their positive emotions, are more likely to be favoured by others and get positive responses (Staw, Sutton & Pelled, 1994). Such people reflect a positive image on others. Positive outcomes are experienced by positive people (Dunning and Story, 1991).Similarly Emotional alignment depends on mutual trust as well. Therefore, the quality of relationship that exists between employee/employer impacts their performance. Thus we propose that a personality match can help employees to develop an emotional connection which further integrates the whole organization to perform better.

II. Propositions

a) Proposition 1

Positive alignment and similarity between attitudes of employee/employer enhance performance.

An attitude represents an individual's degree of like or dislike for something. Attitudes are generally positive or negative views of a person towards some, place, thing, or event— this is often referred to as the attitude object.

Little empirical research has focus on personality differences of the leaders and followers, and their consequent impact on attitude similarity of individuals. In leadership research, similarity between leaders and followers attitudes has predominantly been analyzed as a predictor of leader-member exchange (e.g., Deluga, 1998; Dose, 1999). Similarity has also been examined in terms of value congruence (e.g., Jung & Avolio, 2000). When discussing similarity, the following distinctions have to be made. First, one should distinguish between surface-level and deep-level similarity (Hiller & Day, 2003). Surface-level similarity refers to demographic characteristics such as gender, age, and ethnic background (social category diversity; Jehn, Northcraft, & Neale, 1999). Deep-level similarity is based on more psychological characteristics such as values, personality, and attitudes (Harrison, Price, & Bell, 1998). Whereas indicators of surface-level similarity are salient and, consequently, likely to be perceived very quickly, indicators of deep-level similarity have to be derived from observed behaviors and/or interaction and communication.

A lot of studies highlight the importance of attitude alignment between employee/employer for increased performance. Similarity is one of the most central theoretical and empirical constructs in cognitive psychology (Medin, Goldstone, & Gentner, 1993).

The impact of deep-level attitudinal similarity between Leaders and followers has been tested on interrelations between leaders and members, and outcomes was analyzed. It is noted that similarity in terms of subjective meaning of work, occupational self-efficacy, and emotionality, impacts the overall performance. Empirical study found a negative interrelation between leaders and their teams' goal fulfillment when followers scored higher than their leaders on subjective meaning of work and when followers were more emotionally irritated than their leaders.

The LMX model also suggests that attitudinal similarity is an important influence on leader and follower interaction, being a prime determinant of successful ongoing relationships.

Employees who are less at attitudinal fit to a work group and leader participate less in performing activities associated to them, thus hampering the overall performance (Lichtenstein, Alexander, Jinnett, & Ullman, 1997). Individuals with no match of their attitude with their leaders, they are perceived as less effective workers, and lack on output (Baugh & Graen, 1997) resultantly making them feel low in their self esteem, discouraging them to put in extra efforts which will ultimately affect their performance negatively. Thus, dissimilarity of attitudes may limit an individual's integration or involvement in work, yet this integration is critical for performance (Maznevski, 1994; Shaw & Barrett-Power, 1998).

(Liden, Wayne, & Stilwell, 1993) has investigated the influence of attitudinal similarity on leader member relationship. Attitudinal similarity would make it an entire process. It is really necessary for the leader to change employees' attitudes from negative to positive, create attitudinal allignment and enhance employees performance as well as organizational success. The factors that influence positively to attitudinal alignment and increase worker performance requires that leaders must understand some of the underlying elements that may create behaviorally distant workers. Researchers in the study reported that five elements contributed negatively to attitudinal similarity of employees, which include excessive workload; concerns about leadership effectiveness; anxiety about job and

financial security; lack of challenging work, boredom, frustration; and insufficient recognition. No or less attitude match among leaders will ultimately hamper the employee performance. Increased alignment of attitudes in turn generates the atmosphere of understanding, self respect and trust, which further effects performance positively

Match of personalities of leaders and followers, in addition to understanding and maintaining fit, also effects outcomes of leader-member exchange by creating attitude similarity which positively affects the workgroup cohesion, follower's affective commitment and overall performance. There are some elements within organization that contribute positively to create attitudinal alignment of employees and leader, such as: having a sense of self-worth i.e. having confidence, feeling competent and in control of their work and work experience; the contributions workers as well as leader helping their organizations succeed; and being rewarded and recognized i.e. knowing that their contributions are recognized and compensated, emotional integration of leaders and members etc. Knowing some of the factors that cause employees to be emotionally distant from their work, as well as some of the elements that are valued by employees are mandatory to create and enhance attitudinal similarity among members, which will ultimately boost the employee performance. Individuals with no or less attitudinal alignment with leader fit less to work group, resultantly contribute less to group tasks (Kirchmeyer, 1993).

It is important to discuss that only positive attitudinal match can contribute to performance. Leaders can start changing employees' attitudes to a positive mindset by identifying and communicating priorities. Setting priorities with employees helps them to focus on important tasks, and may help to lessen some of the stress they feel when they're overwhelmed by a heavy workload. Leaders should set expectations for the outcome, and provide direction only when needed. Allowing workers a greater sense of autonomy and authority in deciding how to conduct the work breeds trust, and invests employees in the process, as well as the outcome. To build positive attitude leader must talk to employees about their workplace concerns, address them quickly and confidently. Dispel rumors with the facts. Be honest about mistakes and problems. The alignment of these positive attitudes of leader and followers will enable employees to fall in discretionary behaviors which in turn enable them to go an extra mile. Attitudinal similarity of leaders and followers will make employees to own the organizational goals, which will ultimately have a positive influence on performance. Personality match between leader\member has a strong impact on the patterns of interaction of individuals, which bring leaders and followers on the same page, thus contributing to attitudinal alignment According to Zenger & Lawrence(1989), individuals with personal attitudes mismatch engage in less frequent output, and negatively impact overall performance.

Phillips & Bedeian in 1994 found a positive relation of attitudinal similarity with the exchange quality. Research finds that attitudinal similarity of leaders and employees' about work can positively affect the organizational success. It is noted that less or no attitudinal alignment among leaders and followers have a negative impact on performance and adversely affect productivity, profitability, performance, and retention which are the key factors in organizational success. Attitudinal similarity of leaders and followers bring similarity of values among them, which ultimately improves the quality of working relationship, leading to enhanced level of productivity. The phenomenon of personality match has a positive influence in bringing the attitude alignment of leaders and followers which enhances the quality of relationships employees have with each other, which further determines the quality of the work outcomes. Moreover, personality match between leader\member has also strong impact on the interaction and communication patterns of the employees which positively effects owning their roles and responsibilities in the organization, leading to improved performance.

Thus, personality match creates an environment of respect, trust and friendship which help individuals to associate them in a bonding and help the organization to be more emotionally integrated as stated in our next proposition.

b) Proposition

Employer\employee personality match facilitates an organization to achieve emotional integration.

An organizations main challenge today is retention of good employees and to manage their working relations synergistically. If personalities working in it matches with each other, it may result in better interrelationships.

Emotional alignment among the people of an organization results in an emotional integration of the whole organization. This further can help people understand each other's capabilities and only then their best utilization is possible. In a broader perspective, linked with the same identity, gives individuals a sense of belonging that emotionally connects every employee to the ethos of their work place (Samantra & Goshal, 2002). Employees working collectively through shared knowledge with common objectives, integrates the organization in a social, emotional and intellectual, way.

Emotional alignment among employees keeps them focused on their shared future. It keeps the employees engaged across different work styles, departments and businesses.

To engage employees, an organization must capture their minds and hearts by sharing and communicating its strategic direction and goals, and this phenomenon stems from leadership (Seijts & Crim, 2006). The role of leader in engaging employees at work place is very important. Leader/member or colleagues and match between their personalitiesfacilitates the communication process in a more friendly way. The nature of their relationship affects their performance. These factors make them emotionally aligned and emotionally engaged at the work place. They understand each other's interests and perceptions easily and will be more professionally engaged as well.

According to Law et al. (2004) employee emotional intelligence influences work outcomes via the quality of interpersonal relationships of employees, inside the organization. These relationships in turn allow employees to perform effectively.

Personality match can align employees emotionally, creating a connection among the workers of the whole organization into the business objectives. Indeed if supervisors and subordinates share a similar tendency to manage and utilize emotion in their workplace interactions (e.g. Law et al. 2000), thus may validate self perceptions regarding their use of emotion, resulting in increased interpersonal attraction and LMX.

According to LMX theory, supervisors assign roles to those who they view as more competent, trustworthy and the subordinates develop a strong relationship with their supervisors, characterized by trust and emotional support (Harris, Harris & Eplion, 2007). It makes them feel that they are treated with respect and trust, where they invest most of their time throughout the week. This is possible usually when employee/employer share the same personality traits as the general idea that prevails says that one's own actions/ perceptions are over estimated and though to be better than others.

However, it's the emotional aspects of the business that form the core of the working environment, they connect all other elements and that make the real difference in employees' minds. These emotional aspects include the unique culture that differentiates each business from others. This kind of emotional connectivity makes employees show up each day at the work place. It actually makes people tick, who are motivated more because of their match with the supervisor/colleague. They tap into each others mental and emotional aspects and develop a long lasting motivation thus enhancing both individual and organizational performance. Emotional alignment cannot be imitated and be used as a source of sustainable competitive advantage.

If the employees are emotionally connected, it makes them feel special, as if they fit the working environment and they are investing more than forty hours a week, it shows that they want to contribute to a business ,as well as they care for where the business is going. Their supervisors having a personality match can develop trust and emotional support with them. Employees with similar personalities have tendency to work together more conveniently and willingly, and are more likely to form an emotional connection between them. Emotional integration amongst employees thus creates a deep collaborative culture which is proposed in our second proposition.

c) Proposition

Similar personality traits of (employee/employer) will create a deep collaborative culture and a superior organizational performance.

The pervasiveness and importance of values in organizational culture are fundamentally linked to the psychological process of identity formation in which individuals appear to seek a social identity that provides meaning and connectedness (Ashforth & Mael, 1989).A substantial body of research has shown that individuals tend to classify themselves into social categories, such as gender, race, ethnicity, and organizational affiliation, and to use those categories to define themselves. For instance, people appear particularly able to discriminate between in-groups and out-groups and to be attracted to those seen as similar to themselves (Brewer, 1979; Moreland, 1985).

Thus, congruency between an individual's values and those of an organization may be at the crux of person-culture fit.

Collaboration depends on mutual trust and friendship. Employees with complementary traits or with a personality match can develop trust and friendship quickly. These two factors help in the execution of shared knowledge and create value. These aspects are the key factors towards building a more collaborative and transparent culture. Such a culture of the organization is clearly connected to its business purpose. The people it employs are more aligned right from the outset, as the culture of any organization plays a role in attracting talent.

Developing such a collaborative culture will be easier with similar personality traits. This kind of Insightful way will ensure that employees you attract will be a natural cultural fit right from the beginning.

More and more companies are beginning to recognize that intellectual capital is dependent on cultural capital.

Emphasis on cultural attributes like collective actions and information sharing contribute towards developing a collaborative culture. The degree to which employees are willing to share their creativity and knowledge is dependent on how aligned they feel with the organization and the relationship they have with their direct supervisor. When there is a lack of alignment between employees' values and the organization's values, employees are less willing to share their ideas. Match between personalities plays an important role to

make workers feel encouraged to share their ideas and to go an extra mile. These kinds of relationship among leader/member develop of a positive culture that supports employee collaborative environment. By focusing on the needs of its people, the organization encourages higher levels of personal productivity and creativity. This occurs as a natural byproduct of building trust, community spirit and internal cohesion.

Culture resulting from personality match among employees can be strong based on shared values. Culture cannot be imitated by the competitors and organizations having strong cultures perform better.

In "Corporate Culture and Performance," Kotter and Heskett show that companies with strong adaptive cultures based on shared values outperformed other companies by a significant margin. Over an eleven-year period, companies that emphasized all stakeholders – employees, customers and stockholders, and focused on leadership development, grew four times faster than companies that did not. They also found that these companies had job creation rates seven times higher, had stock prices that grew twelve time faster and profit performance that was 750 times higher than companies that did not have shared values and adaptive cultures.

In "Built to Last," Collins and Porras show that companies that consistently focused on building strong corporate cultures over a period of several decades outperformed companies that did not by a factor of 6 and outperformed the general stock market by a factor of 15.

The secret to a more collaborative culture lies in building and strengthening relations between supervisor\subordinate and also among the colleagues working at the same level. And this can be more conveniently developed where personality matches exist.

According to Towers Perrin global workforce survey conducted in 2005, emphasis on collaboration and information sharing contribute to the innovativeness of an organization. They also foster learning orientation sharing of new ideas.

Information sharing can be utilized for positive organizational outcomes like productivity and creativity. Personality match improves interpersonal communications and is important for coordination. Thus information sharing and generating new ideas depends on the relationship people have at the work place. These relations further make a collaborative culture.

The notion of organizational culture has been important in the study of organizational behavior for the past decade (e.g., Barley, Meyer, & Gash, 1988; O'Reilly, 1989; Smircich, 1983). In spite of disagreements over some elements of definition and measurement, researchers seem to agree that culture may be an important factor in determining how well an individual fits an organizational context (e.g., Kilmann, Saxton, & Serpa, 1986; Schein, 1985). Thus another proposition that we propose is that personality match creates a deep collaborative culture which offers unique potential for improving fit within the organization

d) Proposition 4

Personality match offers unique potential for understanding and improving fit within organizational environment.

Much previous research has suggested that person-culture fit increases commitment, satisfaction, and performance, but very little empirical research on these relationships has been done.

The general notion of fit, or congruence, has long been important in psychology and organizational behavior (Nadler & Tushman, 1980). In studying person-situation fit, organizational behavior researchers have typically taken one of two broad paths. One has led to exploration of the interaction of individual characteristics and broad occupational attributes, the other to exploration of the fit between specific characteristics of an organization and the people in it. Examples of the second approach range from studying the match of individual skills to job requirements to studying the relationship between individual characteristics and organizational climate (e.g., Downey, Hellriegel, & Slocum, 1975).

Byrne (1971,1997) proposed that people choose to interact with similar others. Variants of this idea have been promoted in diverse contexts (e.g., Bauer & Green, 1996; Palmer & Byrne, 1970; Rubin et al., 1994; Rushton, 1995; Wetzel, Schwartz, & Vasu, 1979). McClane (1991) hypothesized that high quality leader-member exchange results from similarity.

Now a day's organizations are increasingly structuring jobs in terms of groups (Barrick, Stewart, Neubert, & Mount, 1998; Guzzo & Dickson, 1996; Levine & Moreland, 1990), yet relatively little is known about intragroup processes mediating individuals' contributions to team performance. Personality match is an important phenomenon which offers unique potential for understanding and improving fit within work groups. People feel most welcome in a culture where others think and behave as they do (Schneider, 1987). The level of their comfort highly depends on their personality and the others with whom they are interacting.

Muchinsky and Monahan (1987) distinguished between two types of person-environment congruence. Supplementary congruence occurs when "an individual supplements, embellishes, or possesses characteristics which are similar to other individuals in the environment". Complementary congruence occurs where "the characteristics of the individual serve to 'make whole' or complement the characteristics of an environment" Thus, supplementary is defined in terms of similarity, and complementarily in terms of mutual need.

Complementarity offers a unique basis for interpersonal attraction and group effectiveness. And that too depends on the degree of supplementary.

Although suggesting distinct explanations of compatibility, the similarity hypothesis can be derived as a special case of complementary, where similarity promotes mutual trait.

A key feature of interpersonal models is that trait expression is viewed reciprocally: personality compatibility results when one person's trait expression offers opportunities for the other's trait expression If trait expression is inherently rewarding (i.e., anxiety reducing), then social exchange theory implies that people will be more comfortable in a relationship to the degree that it provides opportunities for trait expression. This level of comfort then ultimately effects how individuals are going to contribute to their organization.

Tett et al. (1999) suggested that personality can contribute to three levels of person-job fit. Task-level fit occurs with respect to the immediate activities, goals, and duties that define a given job; group-level fit denotes a matching of the person to his or her co-workers; and organization-level fit results when a person's traits match the organization's culture. All these three aspects are also complementary as group cohesiveness depends on how well you interact and the interaction further depends on how well your personality matches thus creating an overall environment of mutual understanding. (Carson, 1969; Kiesler, 1983; Plut chik & Conte, 1997; Wiggins, 1979) hold that personality trait expression is a fundamental part of human nature (Bakan, 1966; Cote & Moskowitz, 1998; Wiggins & Trobst, 1997).

past research found that when used appropriately(i .e., there is a fit between the Group support system structures and the task, and the group receives appropriation support), GSS use increased the number of ideas generated, took less time, and led to more satisfied participants than if the group worked without the GSS. Fitting the GSS to the task had the most impact on outcome effectiveness (decision quality and ideas), while appropriations support the most impact on the process (time required and process satisfaction). Group support system is also complemented by individuals who have congruence in some aspects or other.

Thus, personality match plays a pivotal role in in building, understanding and managing the work fit within the organization. Personality match make the individuals more adaptive toward their roles which build a culture of mutual understanding, responsibility and care, consequently leading to better standard s of performance.

III. Conclusion

Individuals like to be lead by personalities that are similar to them. They can influence them easily. The influence employer have on employees changes their attitudes. Personality match can be used to engage the employees emotionally at the working environment and fosters a deep collaborative culture. Cultures that are strong; especially built on emotional basis i.e. emotional integration between the employees which are also difficult to imitate and can be a competitive advantage for organizations. Understanding personalities at the workplace can establish FIT in groups throughout the organization.

The similarity of personalities of employee and employer determines the worth of the relationships and level of exchange among them which in turn has a strong impact on employees as well as overall organizations performance. Personality match creates an invisible way by which the knowledge, talent and skills of employee and employer are harnessed. It arouses the feeling of trust, mutual help, friendship and cohesion which ensures productivity both at individual and organizational level.

Similar personalities not only help creating the culture of deep collaboration and understanding, it also is essential for the individuals to prove their worth and fit in organizations. It helps creating attitude alignment which in turn affects employees roles, responsibilities and collaboration in the organization. Working without the environment that promotes similarity is like many haphazard directions ending in one place putting everyone in confusion.

Thus we conclude that matching personalities complements and influences attitudes and emotions at personal level, and can lead to some very unique outcomes at organizational level like emotional integration and a deep collaborative culture which gives a company a winning edge among its competitors.

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Determination of Domestic Prices of Milk and Wheat in Pakistan: Error in Estimation

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Abstract - The domestic prices of traded goods in an open economy are a function of international prices and the levied tariff rates. The key question arising here is whether the domestic prices can be "estimated" from the information on international prices and the tariff rates given that the later two independent variables are determined out of the system? Some authors have "estimated" domestic prices from international prices and the tariff rates. However the estimation of domestic prices in such way has presented inaccurate estimates. Present study is an attempt to correct such failing in case of domestic prices of milk and wheat and strived to calculate instead of estimating the domestic prices in presence of two independently determined variables i.e. tariff rates and international prices.

Keywords : *Domestic prices, Error in estimation, Credit goods.*

GJMBR-A Classification : *FOR Code: 150311 JEL Code: D21*

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Determination of Domestic Prices of Milk and Wheat in Pakistan: Error in Estimation

Dr. Naveed Ahmed Shaikh[α], Dr. Rehman Gul[σ], Hassan Jawad Soomro[ρ] & Riaz Ahmed Mangi[ω]

Abstract - The domestic prices of traded goods in an open economy are a function of international prices and the levied tariff rates. The key question arising here is whether the domestic prices can be "estimated" from the information on international prices and the tariff rates given that the later two independent variables are determined out of the system? Some authors have "estimated" domestic prices from international prices and the tariff rates. However the estimation of domestic prices in such way has presented inaccurate estimates. Present study is an attempt to correct such failing in case of domestic prices of milk and wheat and strived to calculate instead of estimating the domestic prices in presence of two independently determined variables i.e. tariff rates and international prices.

Keywords : Domestic prices, Error in estimation, Credit goods.

I. Introduction

The domestic prices are determined from the information on international prices and the tariff rates. Since the price variations accounted for here are trade and tariff driven, it would be interesting to know how domestic prices of traded goods are determined in the local market when the tariff rates change. Pakistan, being an economically small developing country, plays the role of a price taker in the global trade sector. Thus in analogy with other small open economies, the determination of domestic prices of traded goods in Pakistan would look as follows:

$$P_i = P_{wi}(1+t_i) \quad (1)$$

Here Pi and P_{wi} are the domestic and world prices of the traded goods i respectively, and ti is the rate of tariff applied on traded goods. If the international price is exogenously determined, then the change in the local price would be established by the given change in the rate of tariff (which is also exogenously determined as it is fixed by the government). This is shown in the following set of equations.

$$dPi = P_{i2} - P_{i1} = P_{wi}(1+t_{i2}) - P_{wi}(1+t_{i1})$$

or

$$dP_i = PP_{i2} - P_{i1} = P_{wi}(t_{i2} -_{i1}) \quad (2)$$

or

$$dP_i = P_{wi}dt_i \quad (3)$$

It can be inferred from equation (3) that given exogenous world price, the absolute change in the domestic price depends upon the international price times the tariff change. Taking log on both sides to linearize equation (3) we have;

$$d\ln P = d\ln P_{wi}(1+t_i) \quad (4)$$

For simplicity reasons, here we would allow the relaxation of two strong assumptions. Firstly, there are unified products and one tariff line for imports of the same product for all countries. In this way, we are indeed relaxing the Armington assumption [Lloyd, J. P. et al. (2006)] of differentiated products with respect to their various points of origin or production (countries). Secondly, it is further assumed that the goods have similar prices throughout the whole country. See Table 1 for the summary of the percentage difference between the domestic prices of two goods in major cities of Pakistan[1].

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[1] Major cities are: Karachi (Port city), Lahore, Sialkot, Rawalpindi, Peshawar, Quetta, Islamabad.

Table 1 : Average percentage Difference in Domestic Prices of Milk and Wheat in major cities of Pakistan

	1992	1994	1996	1998	2000	2004
	%					
Wheat flour	-0.244211	-0.7886	-0.5986	-1.9057	-0.2967	-0.2348538
Milk	-1.727605	-1.711	-1.2273	-1.1534	-1.2862	-0.7658772

Though, in developing countries, this assumption may not hold in its entirety for a variety of reasons such as irregular market structures, information unevenness, etc. Nevertheless, in the case of Pakistan, owing to sea access and a relative good communication and transportation infrastructure, as well as developed markets in urban sectors, equation (4) can be a reliable exercise to determine the absolute price changes caused by a change in tariff.

II. Data

The main sources of data are FBS' (Federal Bureau of Statistics) book '50 years of Pakistan in Statistics' all volumes and FBS online statistics portal[2]; online datasets of Federal Board of Revenue (FBR), Pakistan, a public sector organization formerly known as Central Board of Revenue responsible for collecting all types of tax revenues and framing national tariff policies[3]; Food and Agriculture Organization (FAO) online datasets. Due to the unavailability of straight forward data on tariff rates on the two goods, the appropriate data has been calculated from available statistics before using in the study. The detailed description on the calculation and quality of data used in the study is provided in the following paragraphs. Following paragraphs present the issues related to the quality and availability of the data used on the domestic and international prices of the two selected goods.

The data on the import tariff per ton on the two goods is not available in a straight forward fashion instead the information on total tariff revenue collected from various commodity groups is available from the Federal Board of Revenue (FBR) for the years from 1992 to 2005. Amongst, the provided selected commodity groups are fruits, nuts and vegetables; tea, coffee and spices; milk, butter and cheese; animal and vegetable oil; edible cereals and vegetables; tobacco; fuels and oils; sugar and confectionary; and meat, fish and other preparations. The two goods, wheat and milk, selected for the present study fall in "milk, butter and cheese" and "edible cereals and vegetables" groups. The tariff per ton on each commodity group is calculated by dividing the total yearly tariff revenue in PKR for 1992-2005 by the total import (C.I.F) quantity in tons of all varieties of goods in the respective commodity group.

Table 3 : Calculation of Import Tariff from Import Revenue in PKR and Import Quantity in Tons on Wheat and Milk

	Milk, Butter and Cheese			Edible prep. Cereals and vegetables		
	Import (Tons)	Total Revenue (PKR)*	Tariff per ton in PKR**	Import (Tons)	Total Revenue (PKR)	Tariff per ton in PKR
1992	209,111.00	47,000,000.00	224.76	2,048,590.00	88,000,000.00	42.96
1993	272,664.00	44,000,000.00	161.37	2,898,168.00	72,000,000.00	24.84
1994	96,064.00	58,000,000.00	603.76	1,920,603.00	1,030,000,000.00	537.85
1995	79,416.00	163,000,000.00	2,052.48	2,696,845.00	195,000,000.00	72.31
1996	111,147.00	59,000,000.00	530.83	1,977,825.00	393,000,000.00	198.70
1997	65,887.00	117,360,000.00	1,781.23	2,507,090.00	230,000,000.00	91.85
1998	114,211.00	160,000,000.00	1,400.92	2,529,909.00	565,000,000.00	223.33
1999	127,695.00	160,000,000.00	1,252.99	3,250,130.00	524,000,000.00	161.22
2000	80,277.00	129,000,000.00	1,606.94	1,059,587.00	484,000,000.00	456.78
2001	31,745.00	95,000,000.00	2,992.60	172,038.00	517,000,000.00	3,005.15
2002	37,490.00	165,000,000.00	4,401.17	289,597.00	573,000,000.00	1,978.61
2003	79,547.00	207,000,000.00	2,602.24	167,321.00	678,000,000.00	4,052.09
2004	61,048.00	277,000,000.00	4,537.41	132,289.00	818,000,000.00	6,183.43
2005	99,513.00	550,000,000.00	5,526.92	148,196.5	880,000,000.00	593.81

*Source: *Federal Bureau of Statistics, Islamabad, Pakistan*
***Author calculated*

[2] http://statpak.gov.pk/depts/index.html
[3] http://www.fbr.gov.pk/

For example, the tariff per ton in PKR on the commodity group of milk, butter and cheese is calculated by dividing the total tariff revenue in PKR collected from the commodity group by the total sum of the import quantities in tons of milk, butter and cheese. See Table 2 for summary of the information. Since milk and wheat are the most dominant traded goods in the above two groups therefore the calculated average commodity-wise tariffs may also apply to the individual goods.

Table 3 presents the real world tariff for some years acquired from the WTO online data sets on the two commodities[4].

Table 4 : Real world tariff rate on Milk and Wheat for 1999-2002 and 2004-2005 (Average of Value Added duties in percentage)

Years	Milk	Wheat
1999	30	0
2000	30	0
2001	30	5
2002	25	25
2003		
2004	25	25
2005	25	10

International prices are taken from the FAO online dataset and are presented in the following table 4.

Table 5 : International Prices of Wheat and Milk (PKR Per Ton)

Years	Wheat	Milk
1992	7951	3649
1993	9008	4036
1994	10256	4674
1995	11280	4720
1996	12428	6004
1997	13595	7408
1998	14953	7231
1999	15620	7694
2000	15906	8244
2001	16057	7871
2002	16525	8825
2003	16525	9150
2004	16800	10696
2005	17000	11126

Source : Food and Agriculture Organization (FAO) online data set[5]

The domestic prices of selected goods are taken from FBS' 50 years of Pakistan in Statistics (from 1992 to 2005)[6] and are the averages of the prices in major cities of Pakistan. The average variation in the domestic prices of goods across major cities of Pakistan is trivial so these prices can best reflect the domestic prices in Pakistan in general. See following Table 1 above.

The domestic prices from 1997-2005 are taken from the statistical year book 2006 published by FBS. All prices have been taken in local currency (PKR) per ton. The calculated tariff per ton is then added to the international prices to determine the domestic prices.

III. Failing

The approach is based on the specifications of Porto (2003, 2006) to correct some of its methodological inaccuracies. Porto (2003) implicitly treated the import tariff rates as determined in the system which is against the fact that the trade policy of any country introduces the tariff rates on import of various commodities from

[4] http://tariffdata.wto.org/ReportersAndProducts.aspx

[5] Real world tariff rates (in percentage) are available from WTO online dataset for 1999-2002 and 2004-2005 on some goods. These tariff rates on various goods are used as a benchmark to verify the reliability and accuracy of the average calculated tariff.

[6] Volume IV. Pp. 477-503.

out of the system. Porto (2003) estimated the domestic prices on the international prices and the tariff rates. Resultantly, it produced estimated domestic prices which may not be accurate so cannot be relied for further policy making.

In present study this failing has been proved and suggested that the domestic prices can be computed instead of being estimated by exercising the simple addition of information on import tariff per ton to the international prices of the two goods. Following paragraphs show how the failings may be corrected and the calculated domestic prices reflect better approximation of domestic prices rather than the estimated domestic prices.

As an initial step, the domestic prices of wheat and milk are estimated using OLS Least Squares Method. Following section provides a detailed discussion on the regression methodology, functional form and the results.

IV. Regression

The domestic prices of wheat and milk are estimated using real tariff rates available from WTO online dataset. The functional form of the regression equation is the natural log to linearize the price equation 3 to the form of equation 4. The regression results are significant and reliable as indicated from the large t- and f-values and their significance near to zero chance of error. Fairly large R2 indicates the overall satisfactory coverage of the regression analysis. (Table 2).

Table 2 : Summary of Regression Results domestic prices of Wheat and Milk

	Coefficients		Standard Error		T		F	R^2
	Constant	International price and Tariff	Constant	International price and Tariff	Constant	International price and Tariff		
Wheat	3.942	.608	.678	.080	5.812 (0.000)	7.579 (0.000)	57.445 (0.000)	0.827
Milk	6.096	.361	1.362	.136	4.477 (0.001)	2.657 (0.021)	7.060 (0.021)	.37

Slightly large value of the constant indicates that there are some factors which affect the domestic prices of milk and wheat other than the tariff rates. However other values and the positive signs of the coefficients are in congruence with the expected and hypothesis.

The calculated domestic prices on average tariff rate are compared with the estimated domestic prices at average tariff rate and the calculated domestic prices at the real world tariff rate.[7] The calculated prices at average tariff rate are found closer to the calculated domestic prices at real world tariff rate than the estimated domestic prices.

This indicates the methodological error in Porto (2003)[8] who took the estimated domestic prices instead of calculated prices. The Figure 1 (wheat and milk estimated and calculated domestic prices) confirms that the average tariff rates calculated on various commodity groups are also applicable to the individual commodities selected in the study.

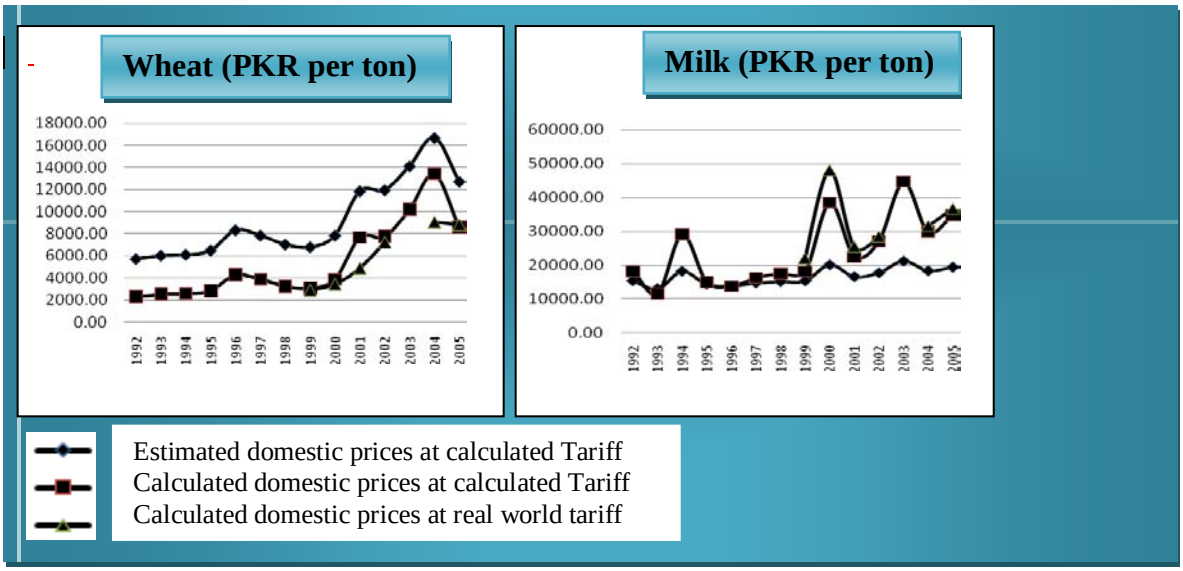

Fig. 1: Estimated and calculated domestic prices at average and real tariff rates for the available years

Table 5 indicates the three prices of milk and wheat individually for 1992-2005 period.

Table 6 : Estimated, Calculated at Average Tariff and Calculated at Real Tariff rates Prices of Milk and Wheat in PKR

	Wheat			Milk		
	Estimated Prices	Calculated Prices at average Tariff	Calculated Prices at actual tariff	Estimated Prices	Calculated Prices at average Tariff	Calculated Prices at actual tariff
1992		2303.19	5710.44		18198.05	15372.38
1993		2512.14	6020.14		11549.63	13043.77
1994		2564.06	6095.50		29086.18	18210.46
1995		2835.30	6479.90		14966.69	14324.13
1996		4274.04	8317.06		13760.75	13895.92
1997		3874.86	7835.60		16228.91	14749.33
1998		3237.58	7024.46		17524.88	15164.46
1999	2893.62	3054.84	6780.59	21909.05	18106.10	15344.27
2000	3417.45	3874.23	7834.82	47965.89	38503.78	20152.62
2001	4885.09	7657.62	11857.50	25368.37	22506.73	16599.05
2002	7216.55	7751.85	11946.03	28339.09	27072.45	17744.49
2003		10189.22	14107.03		44670.53	21263.79
2004	9040.87	13416.13	16676.47	31543.21	29771.98	18364.43
2005	8798.66	8592.59	12718.04	36635.98	34835.70	19436.73

The prices taken as an indicator of the domestic prices of milk and wheat are not the estimated ones instead they are the calculated ones obtained by adding the tariff per ton to the international prices.

V. Conclusion

Estimating the domestic prices of traded goods in presence of international prices and tariff rates may not be a good approximation since the two independent variables are exogenous and determined out of the system. Therefore the failings in the past studies may be corrected by simply adding the international prices to tariff rates to determine the domestic prices of the goods. It has been attempted here to correct this flaw by using information on the prices and tariff rates of milk and wheat for Pakistan.

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[7] Ibid 3
[8] See opening paragraph

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The Impact of Emotional Intelligence on Self Efficacy of Nursing Staff Serving In Pakistan

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Abstract - This paper attempts to quantify the impact of emotional intelligence on self efficacy of nursing staff in Pakistan. The construct of EI is in the spot light, for a decade or so, therefore its importance is highlighted through various publications of world renowned management scholars. The method of linear regression is used to fulfill the above mentioned task, the results of this peculiar study, highlight a significantly positive relation, among the constructs considered.

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Abstract - This paper attempts to quantify the impact of emotional intelligence on self efficacy of nursing staff in Pakistan. The construct of EI is in the spot light, for a decade or so, therefore its importance is highlighted through various publications of world renowned management scholars. The method of linear regression is used to fulfill the above mentioned task, the results of this peculiar study, highlight a significantly positive relation, among the constructs considered.

I. Literature Review

The brief review of the existing literature is as follows

a) Emotional Intelligence

Emotional intelligence is often defined as, one's tendency to recognize, evaluate and handle emotional state of his own and others' as well, therefore be able to use this information to accomplish certain objectives. (Choudary, 2010), another basic definition of this important construct in human resource management, referred to, EI as the designated ability to utilize the emotional condition of an individual, group or own-self to achieve a certain goal or a set of goals or objectives (Fox & Spector, 2000). This concept could be pointed out, as the ability to appreciate the emotions and identify the likely outcomes of them and finally via this knowledge, the individual or a group control others and attain goals (Prati, Douglas, Ferris, Ammeter, & Buckley, 2003)

There are a number of studies conducted all over the world featuring emotional intelligence, Kavousy, Ardahaey, & Chivaei, (2007) observe, a direct relation between degree of emotional control and sensibility towards utilizing time in an individual. This relationship is also significant with other dimensions of emotional intelligence such as self monitoring and regulation. In another similar work, the feminine functional managers are found to be more emotionally stable, in comparison with their masculine counterparts. The exposure to the business environment, norms and values also facilitate an individual to develop this particular ability. (Kaifi & Noori, 2010)

Now we turn our focus, towards academia, where, Madhar, (2010) notes, that, the emotionally sound lecturers are really a source of inspiration for the pupils, to be effective learners. The teacher should be able to tolerate difficult and somewhat ambitious questions, from the students and also should be able to provide relevant and satisfactory answers, to facilitate learning among the students. In the literature relevant to leadership, this construct is not neglected, because of its profound role, therefore, Guillen, (2011), points, that emotional intelligence plays an important role in the recognition of the leader among people, because the leader faces the insulting behavior of others in the introductory stage of his or her career, thus placing a premium on EI of leaders, which becomes an essential for forging through immense resistance for the leaders, Doaei, Alizadeh, & Tabrizi, (2010), this team of well known scholars, made an addition, that, the emotional strength of a person plays an invincible role in gaining the authority on the basis of knowledge in an organization, because a person faces the challenge of, admitting a reasonable level of knowledge, so that it should not threat the people who have the authority currently, another facet of emotional sensibility in leadership is, leaders' ability to avoid negative thinking, biasness and they also give sacrifices and understanding others' behavior to accomplish the goals of the team. These abilities are imperative for effectively successful teams. (Prati, Douglas, Ferris, Ammeter, & Buckley, 2003)

Webb, (2011) comes, with his own version of this variable, and says, the emotionally strong top managers have an imperative role in inspiring the employees, to be more productive, and increasing their job and organizational attachment as well. This observation emphasizes on the decentralization of authority, job autonomy and flexible timing, and it also has a clue for corporate level managers to increase, the interaction, with their subordinates, in the organizations, spread across different walks of life. The role of the staff with higher level of emotional control is undeniable, in increasing devotion towards the company, because they give time to the management to solve job related problems, they do not get frustrated due to long hours of work and are found contented with the pay level as well, thus supporting the company to prosper in the marketplace (Moradi & Ardahaey, 2011).

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The impact of emotional control is also a crucial factor in the performance, of teams in various sorts of organizations, members of successful teams are careful, in expressing their emotions and are coordinative, forthcoming and supportive, are also sensitive towards, others' feelings as well. (Prati, Douglas, Ferris, Ammeter, & Buckley, 2003), Lopes, Grewal, Kadis, Gall, & Salovey, (2006) also came across, the strong link between job performance and emotional intelligence, but it is to be noted here that, EI also entails, the ability to demonstrate an emotion, which is appropriate according to the situation, another interesting note is shared, by Jordan, Ashkanasy, & Harter, (2002), that, the staff with low EQ, is more prone to the pressures imposed by, uncertainty on the job for example threat of getting fired, but their counterparts with higher EQ are less affected by this situation, the former group engage themselves in negative work behavior often.

Donaldson-Feilder & Bond, (2004), mentioned a non significant relation between EI, fitness and safety of the worker, such as cognitive soundness and physical health, therefore the companies should avoid, deploying resources to enhance this relation and Kernbach & Schutte, (2005) report a positive relation between, the EI of salesperson and buyer content with the delivery of product, whenever, the transfer of product from supplier to buyer is relatively simple, this relationship enhances manifolds, but decreases slightly, if it is other way around.

Now this study fixes, the spot light on more relevant work, where, McQueen, (2004) suggests, that the medical staff is often found to be emotionally attached with the patients under care in a medical facility, but this concept is neglected, during training, on the other hand.

b) Self Efficacy

Juárez & Contreras, (2008), define self efficacy as one's determination to face various challenges, difficulties and conditions in life. On the other side, (Gist & Mitcell), (1992), mentioned it as, one's belief, to get the things right regarding a particular job, this concept depends upon the various other factors, such as the qualification, competency, ability and experience of an individual under consideration. The important facet identified here is self confidence of an individual to overcome a certain challenges or obstacles.

The factors, which cause, the self efficacy of an individual to flourish are, 1) Mastery Experiences, which entail, a person's exposure to the situation, in which he or she was able to learn a peculiar skill or task, proficiently and as well as quickly. 2) Vicarious Experiences come from noticing others, with similar personality dimensions, succeeding in a certain field. 3) Social Persuasion, it refers to the peers, friends and colleagues' collective effort to convince, an individual, that he or she has an adequate potential, to perform these tasks. (Bandura, Self Efficacy in Changing Societies, 1995)

Now, we study, the concept of self efficacy, in relation to other constructs, such as, there is a significantly positive link, discovered between the belief of a person, that he could resolve a particular interpersonal dispute and his actions to pursue the matter proactively, thus attempting to uproot the cause of the disturbance, to nullify the possibility of serious ramifications. (Eizen & Desivilya, 2005), this concept under consideration, has a close relation with entrepreneurship, because, often successful entrepreneurs, tend to be uncomfortable with their work in some organization and them, therefore search for greater challenges in their lives. The major motivating factor is their self belief, that they could run their own business more successfully. Thus this vary belief compels them to start a new venture. (Wong, Lee, & Leung, 2006)

Freudenberg, Cameron, & Brimble, (2010), identify the role of self perception in enhancing the ability of graduate students to enhance, their academic achievements, teachers and administration in academia, should work and support, students to increase their self belief and confidence, because these factors, have an immense impact on their performance. (Saleem & Shah), 2011, believe, that, self confidence has an impact of reducing the work related tension in teaching practices, because in this case the individual takes pride in his or her work and readily willing to manage, the physical and as well as mental pressures associated with the profession. Bandura, Barbaranelli, Caprara, & Pastorelli, (2001), observe, that self concept plays an imperative role, when individuals choose their occupational paths and the academic performance becomes somewhat irrelevant in this regard, because adolescents do not consider this factor while making an occupational choice. There is a strong connection between, the level of efficacy and the will to quit unhealthy and non hygienic practices (Strecher, DeVellis, Becker, & Rosenstock, 1986), so it is imperative for rehabilitation physicians, to increase, the efficacy content, in the patient to facilitate recovery, the other study on the topic of managing, work stress, depicts, that, an individual should recuperate from the psychological stress caused by the failure at the office, as soon as possible, this could be accomplished, through emotional self efficacy and emotional sensibility (Sonnentag & Kruel, 2006), these traits, would facilitate, the employee, to cope with upcoming problems, at another point of time, the medical staff, going through training, with heightened self motivation and belief, are found to be performing adequately well in their objective structured clinical exams. (Mavis, 2001)

Now on, the spot light is focused, on the area of interest that is, the degree of interaction among emotional intelligence and self efficacy in Pakistani general nursing staff, one research in this domain points out, the significantly direct relationship, among the self belief and emotional control of nursing staff working in mental hospitals, and the intensity of self efficacy and emotional intelligence rose, with the rise in age and exposure to frequent challenging tasks (Bryan, 2007), Another relevant study, reported, that the candidates in nursing school entry test, with greater degree of professional self-reliance, are believed, to have better probability of getting good to excellent scores in the exam mentioned above (McLaughlin, Moutray, & Muldoon, 2007).

As the above review of the studies, advocates, for the significantly positive relation, between EI and other relevant constructs, such as job performance, time management and so on. Similar relations, with self efficacy are observed, throughout the previous section, for example, choice of conflict management strategies and entrepreneurship and so forth.

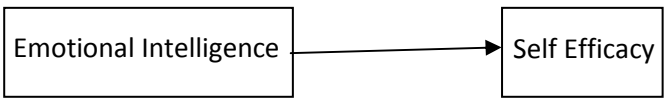
The notification of a positive relation between emotional intelligence and self efficacy, made by (Bryan, 2007), is serving as a base for this study, because there is a gap in the literature of nursing studies in Pakistan, regarding the interaction of emotional intelligence and self efficacy amongst, nursing staff in Pakistani nurses, so in the light of the above argument it is wise to generate, the following hypotheses

H_o: There is a significantly direct relation, between emotional intelligence and self efficacy, of, Pakistani nursing staff

H_1: There is no significant relation observed, between emotional intelligence and self efficacy, of Pakistani nursing staff

II. Research Model

The model of this study is as follows



a) Dimensions of Emotional Intelligence

The questionnaire was fabricated, by Rahim and Psenicka, in the study named "A model of emotional intelligence and conflict management strategies A study in Seven Countries" to measure emotional intelligence, is used as an instrument for the similar purpose in this study as well.

This instrument, quantifies, the degree of emotional intelligence, in an individual, through analyzing different aspects of, this construct, idenfied, by (Goleman, Boyatzis, & Mckee, 2002), which are self awareness, self regulation, motivation, empathy and social skills, brief descriptions of these aspects are, as follows

Self awareness which is one's ability to evaluate him or herself in the light, of their current emotional state, and should also know the reason/ reasons of particular feelings (Rahim & Psenicka, 2002), thus this is the inborn ability of oneself to appraise, his/her own emotions.

Self regulation which is concerned with the individual's tendency to emotionally discipline him or herself according to culturally and organizationally acceptable rules and norms (Rahim & Psenicka, 2002), so that others in the same setting would be more conducive, towards a particular individual, therefore readily supportive towards the beliefs of the individual under consideration.

Motivation which is the ability of an individual to pursue him or herself as well others to perform a certain act or set of actions (Rahim & Psenicka, 2002), this is the vary factor, which causes a person to attain great things in life, but if it is farfetched, it could result in the failure of an idea, cause loneliness in life, of the person who was motivated to achieve an unrealistic goal.

Empathy which refers to the art of standing in somebody else's place and evaluates the situation through other people's angle as well (Rahim & Psenicka, 2002), this feature is massively critical to the success of leaders and change agents, that without it the concept of leader becomes blurred, because this entity had to see things with everyone's perspective and show, relevant and important reward for everyone, attached with, the change.

Social skills which is the ability to build long term and short term relations with others (Rahim & Psenicka, 2002), this skill is necessary for managers, senior doctors and medical staff in a hospital or clinic, because it helps them to sneak in life of others working with them, and identify the problems and difficulties, they are facing in work and family life therefore in the process highlights the manager's role to solve them.

b) Dimensions of Self Efficacy

In this study, to quantify, the self efficacy of the respondents, instrument developed, by (Schwarzer & Jerusalem), 1995, is deployed. The dimensions, which were used, are following:

Problem Solving that refers, to the, belief of a person, to overcome, the difficult, vague and crucial job related issues (Schwarzer & Jerusalem, 1995)

Dedication of Effort and Time, this points out, towards, the will of a person, to devote, an ample amount of time and energy, for pinning down, the solution, for the problem at hand (Schwarzer & Jerusalem, 1995), but in the case of medical science, often time is scarce and stakes are high

Facing the Opposition, this dimension, refers, to the ability and confidence of a person, to withstand criticism, back beating and possibility of regretful ramifications of the actions taken to solve a professional

problem (Schwarzer & Jerusalem, 1995), under this dimension, tendency to persuade others and turn opposition into supporters, matters a lot.

Overcome the Unknown, this identifies, the tendency to be prepared for the unexpected (Schwarzer & Jerusalem, 1995), during the course of the job and calls upon, to utilize, past exposure to the similar or somewhat related conditions, to hammer out a solution to the difficulty

Prioritization, this means, the ability to plan contingencies, for two, or three most likely outcomes of a situation (Schwarzer & Jerusalem, 1995), for instance, if the patient is going to a cardiac arrest, these people will take the necessary action.

III. Research Methodology

This research is conducted, through distribution of the questionnaire, amongst nursing staff of various hospitals in Pakistan. We gave away 150 questionnaires, out of which we received 134 completely filled questionnaires.

The internal reliability of the instruments used in the research, as reported, by Cronbach alpha is as follows

- For the emotional intelligence instrument, the alpha is 0.705, and for the self efficacy part, the reliability is 0.779, which are more than 0.70, therefore acceptable
- When both of the scales are combined the alpha rose to 0.844, which certifies, these scales as highly reliable source of extracting relevant information

IV. Analysis And Results

We did a linear regression analysis, which brought us to the following results.

Coefficients

Model		Un-standardized Coefficients		Standardized Coefficients			95% Confidence Interval for B	
		B	Std. Error	Beta		Sig.	Lower Bound	Upper Bound
1	(Constant)	.726	.279		2.607	.010	.175	1.278
	EI	.743	.097	.556	7.685	.000	.551	.934

a. Dependent Variable: Self Efficacy

As by noticing the un-standardized coefficient column, we could easily create a regression equation, which is

$$\text{Self Efficacy} = 0.726 + 0.743(\text{EI})$$

It is thereby safe to assume a presence of statistically significant positive relation in the Self Efficacy and Emotional Intelligence in nursing staff in Pakistan.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.881	1	11.881	59.060	.000[a]
	Residual	26.553	132	.201		
	Total	38.434	133			

a. Predictors: (Constant), meanei
b. Dependent Variable: meanse

V. Discussion

This research effort supported, the findings of (Bryan, 2007), who mentioned the similar result few years back, so it is imperative for the medical facilities in Pakistan, to foster the sense of efficacy in the serving nursing staff. Although the nurses are found to be confident regarding their profession, but this attribute could be further boosted, if the training nurses, go through the assimilations involving highly sophisticated artificial robots playing the role of patients, this technique is applied in various developed nations and proved to be very effective. This methodology could really help medical personnel, to exercise emotional intelligence and control when necessary. Another point which is important to mention, is the

degree of role conflict, through which these employees go through, because in Pakistani culture, the responsibilities of taking care of homes and nurturing the children come in the respective domain of the females, so despite of the heightened self confidence, these females could not translate it in the excellent job performance, so in the light of this argument, we suggest the management of hospitals in Pakistan to open up day care centers near the hospitals, to facilitate the nurses, concerning their young.

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Advancing the Participation of Business Students in Study Abroad Programs

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Abstract - "Internationalizing" the curriculum is a pivotal objective of most U.S. business schools; a common internationalization initiative is to encourage business students to participate in Study Abroad programs. Our survey of 1300 undergraduate business students indicates that students are well aware of the benefits of Study Abroad, but that perceived obstacles to participation vary significantly according to different class levels (freshmen, sophomores, juniors and seniors). The findings suggest that as Study Abroad initiatives mature, targeted strategies should be used to promote Study Abroad to undergraduate business students. We suggest strategies to engage students during each of four phases over a business student's university career: an "initiation" phase a "reinforcement" phase, a "diversified experiences" phase and a "career enhancement" phase.

Keywords : *Study abroad, global business education, study abroad promotion, foreign study programs, Internationalization of curriculum.*

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Advancing the Participation of Business Students in Study Abroad Programs

Zahir A. Quraeshi[α], Mushtaq Luqmani[σ] & Ann Veeck[ρ]

Abstract - "Internationalizing" the curriculum is a pivotal objective of most U.S. business schools; a common internationalization initiative is to encourage business students to participate in Study Abroad programs. Our survey of 1300 undergraduate business students indicates that students are well aware of the benefits of Study Abroad, but that perceived obstacles to participation vary significantly according to different class levels (freshmen, sophomores, juniors and seniors). The findings suggest that as Study Abroad initiatives mature, targeted strategies should be used to promote Study Abroad to undergraduate business students. We suggest strategies to engage students during each of four phases over a business student's university career: an "initiation" phase a "reinforcement" phase, a "diversified experiences" phase and a "career enhancement" phase.

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I. Introduction

Academics, policymakers and business people in recent years have been strongly underscoring the need for our students to develop and strengthen their skills to function successfully in a multicultural, diverse workplace. Business schools in the U.S. are involved in a wide variety of internationalization initiatives to contribute towards this goal. Such initiatives include encouraging enrollment of foreign students, facilitating international faculty exchanges, including international content in functional courses in business, inviting practitioners with international expertise to share their experiences with students, increasing internationally oriented internships, and last but not the least, encouraging students to participate in short- term as well as semester long Study Abroad programs. The latter - Study Abroad programs - have become a vital ingredient of these internationalization initiatives.

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According to the Lincoln Commission (2005) on the Study Abroad fellowship program composed of prominent academics and policymakers, "Engagement of American undergraduates with the world around them is vital to the nation's well-being. It is in the national interest of the United States to send at least one million undergraduates abroad annually" (p.4).The Association of International Educators, NAFSA (2003) has recommended the establishment of a national program to bolster study abroad as an "integral part of college students' education" (p.11) to support this bold goal. "Study abroad must become the norm, not the exception, at higher education institutions in the United States. (p.3)...The United States can no longer afford to be passive about study abroad. We need to aggressively promote it to each rising generation. And we need to remove the roadblocks that stand in their way."(p.5)

II. Background

Clearly, the literature directs attention to the numerous benefits that can be realized through Study Abroad experiences. Study Abroad programs can strengthen cross-cultural awareness and self-confidence (Black & Duhon, 2006); contribute towards building a more mature personal identity (Angulo, 2008; Black & Duhon, 2006); and help to improve personal and professional self-images (Cushner & Mahon, 2002) leading to personal as well as intellectual growth (Bates, 1997; Carlson & Widaman, 1988; Carlson, Burn, Useem, & Yachimowicz,1991; Drews & Meyer, 1996; Hutchins, 1996; McCabe, 1994; Thomlison, 1991; Waldbaum, 1996; Zhai, 2000). Such programs help in enhancing abilities to have successful interactions in different cultures (Jones, 2003; Williams, 2005). This is important because, with the globalization of markets, intercultural competence has been identified as a crucial business success factor (Hilton, 2007). Clarke, Flaherty, Wright and McMillen (2009) in a review of the literature suggest that Study Abroad programs contribute to proficiencies in cross-cultural interactions and enhancing cultural sensitivity This can be particularly useful, say Curran (2007) and Norris & Gillespie (2009), at later stages of careers when employers look for attributes that include initiative and adaptability – experiences that Study Abroad programs provide. Moreover, participating in Study Abroad programs contribute towards helping to better understand one's

own cultural values and biases (Gammonley, Rotabi, and Gamble, 2007; Langley & Breese, 2005; Milstein, 2005; Mistretta, 2008; Williams, 2005) while developing less ethnocentric, more favorable attitudes toward other cultures (Carlson & Widaman, 1988); Kitsantas, 2004). Study Abroad programs help to nurture globally minded individuals with broadened perspectives, who are likely to oppose prejudice, are more accepting of alternative viewpoints (Carlson et al., 1990; Douglas & Jones-Rikkers, 2001; Golay, 2006; Hadis, 2005), and are engaged in deeper understanding of wide ranging global issues (Carlson etal., 1990; Carsello & Creaser, 1976; Douglas & Jones-Rikkers, 2001; Dwyer & Peters, 2004; Golay, 2006; Gonyea, 2008; Schuster et al., 1998).

While the benefits of Study Abroad programs are widely documented, participation of students in such programs remains low. About 270 thousand U.S. students studied abroad in 2009-2010, a mere 1.35 percent of the approximately 20 million students enrolled at U.S, institutions of higher education ; about 20% of those studying abroad are business students(Institute of International Education, 2011). A major reason is that the benefits of SA programs are largely those that are articulated by groups such as academicians and policymakers from their perspective and not by the students (in particular business students) contemplating participation in these programs.

Studies related specifically to the participation of business students in Study Abroad programs can be delineated into two categories: research based on the perceptions of those conducting these programs (Brokaw, 1996; Duke, 2000; Toncar & Cudmore, 2000; Kaufman et al., 2011) and research on the perceptions of business students (Albers-Miller, Prenshaw & Straughan,1999; Toncar, Reid & Anderson, 2005; Naffziger, Bott & Mueller, 2008; DeJong, Schnusenberg & Goel, 2010; Presley, Damron-Martinez & Zhang, 2010). At most, perceptions of business students have been contrasted with that of non-business students, for example by Toncar, Reid and Anderson (2005), who note differences in motivations for SA participation between these two groups. We argue that motivations to participate of business students may vary by student class (e.g. freshman, sophomore etc.). As Study Abroad program initiatives mature, different Study Abroad programs with progressively different learning and experiential objectives can be designed and targeted to specific levels of business students.

III. Problem Statement and Research Objectives

The present study is based on the premise that the likelihood of participation in SA programs may vary considerably between business students at different class levels. Study Abroad programs can be designed so that these are attractive to business students at different levels and encourage greater participation.

Accordingly, a survey of business students at a Midwestern university, with a large (3500 students) AACSB -accredited program in business, was conducted to examine attitudes towards participation in Study Abroad programs. Specifically, the main research objectives of the survey were to determine:

- Overall interest of business students in participation in Study Abroad programs
- Perceptions of benefits received from participation in Study Abroad
- Perceptions of deterrents to participation in Study Abroad
- Incentives that would facilitate participation in Study Abroad programs
- Differences between business students' inclinations to participate in Study Abroad programs based on their class level.

IV. Methodology

A professor who generated "active stakeholder interest" through involvement of students in her Marketing Research class directed the survey. The students assumed shared responsibilities for managing the survey procedures, including questionnaire development, data collection, and data analysis. Prior to conducting the survey, a pretest yielded a sample size of 116 completed surveys and was used to develop the constructs and refine the questions. Business students were recruited to participate in the survey through select faculty, who sent the survey link to students in their classes. The survey was available for students to take during a two-week period in November 2010. All students who participated in the survey were entered into a drawing for five $20 gift cards. The population of the survey was defined as all students who took classes at the College of Business.

The questionnaire addressed a number of issues related to study abroad, including likelihood to participate in short-term and long-term programs; perceived obstacles and benefits; knowledge of types of programs, expenses, and credit offered; perceived support of friends, family, future employers, and university personnel to overseas travel; attractiveness of incentives to participation; and basic demographics. In addition, one open-ended question was included at the end of the questionnaire, asking "What final comments do you have related to study abroad programs?"

1,388 students completed the survey. The students who responded to the survey had the following composition:

- Had participated in Study Abroad: 5.2%;
- Female: 56.3%; Male 43.7%

- Freshmen: 18.1%; Sophomores: 16.3%; Juniors: 25.0%; Seniors: 31.1%; Graduate students: 09.6%
- African American or Black: 6.9%; Asian: 4.0%; Caucasian or White: 80.2%; Hispanic or Latino: 4.5%; Native American or Native Alaskan: 0.7%; Native Hawaiian or other Pacific Islander: 0.1%; Other: 3.6% (note: based on census categories; more than one category could be selected).

Altogether, the Business student body is fairly well represented by the sample.

V. Findings

To refine the scales, factor analysis using Principal Component Analysis (PCA) with Varimax rotation was conducted. After eliminating items based on low factor loadings (<.5), high cross loadings (<.35), negative contribution to alpha, and/or low item-total correlation (Churchill, 1979; Nunally, 1978), six factors (eigenvalues>1) were retained (see Table 1).

Table 1 : Factors and Scale Items for Study Abroad Survey

Scale Items	Mean	Standard Deviation	Coefficient α
Anxiety - Related Obstacles*			0.896
I don't want to leave the comforts of my home	2.8	1.863	
I might be lonely	2.73	1.803	
I would miss my family	3.37	2.003	
I would miss my friends	2.89	1.851	
I would be nervous about going to another country	2.75	1.729	
It might not be safe	2.74	1.759	
I would miss out on school activities	2.32	1.648	
*7-pt. scale, 7=most definitely an obstacle			
Expense - Related Obstacles*			0.860
Studying abroad would be too expensive	4.99	1.935	
I simply can't afford to study abroad	4.59	2.099	
*7-pt. scale, 7=most definitely an obstacle			
Time - Related Obstacles*			0.690
I'm just too busy	3.67	1.999	
I can't afford to take time away from my studies	3.79	1.989	
I have work commitments	3.83	2.118	
*7-pt. scale, 7=most definitely an obstacle			
Perceived Benefits*			0.919
I would have an opportunity to learn about a new culture	5.25	1.522	
Study abroad would be a good activity to list on a resume	5.64	1.442	
Future employers will value study abroad experience	5.44	1.493	
I would gain confidence	5.03	1.632	
I would get to travel	5.73	1.485	
I would become more mature	4.73	1.77	
I would understand the world more	5.37	1.453	
I would learn new life skills	5.40	1.469	
I would learn more about how business is conducted in other countries	5.72	1.368	
I would be better prepared for a global career	5.72	1.403	
*7-pt. scale, 7=extremely important			

Perceived Support*			0.825
Support of family for study abroad	3.56	1.15	
Support of friends for study abroad	3.34	1.05	
Support of professors for study abroad	3.99	0.953	
Support of administrators for study abroad	3.98	0.967	
Support of future employers for study abroad	4.09	0.898	
*5-pt. scale, 5=definitely would like me to study abroad			
Perceived Knowledge*			0.945
Knowledge of the types of program offered	2.98	1.628	
Knowledge of the places where the programs are offered	3.19	1.737	
Knowledge of the costs of the programs offered	2.96	1.786	
Knowledge of the lengths of the programs offered	3.47	1.79	
Knowledge of the availability of financial aid	2.64	1.689	
Knowledge of the availability of getting course credit	2.82	1.756	
*7-pt. scale, 7=know a great deal			

The final factors were named Anxiety-Related Obstacles (seven items; α=.896), Expense-Related Obstacles (two items; α=.860), Time-Related Obstacles (three items; α=.690), Perceived Benefits (ten items; α=.919), Perceived Support (five items; α =.825), and Perceived Knowledge (six items; α=.945). The coefficient alpha of each of these scales ranges from very good to excellent, with the exception of the Time-Related Obstacles factor, which has an alpha that is "minimally acceptable" (DeVellis, 2012). In total, the six factors explain 67.98 of the variance of the sample data.

Scores for the six factors were created by averaging mean responses on the items within each factor. These mean scores were used to compare differences in undergraduates' perceptions of participation in Study Abroad, with a 95% level of confidence used in all cases. As will be described in the following section, important differences in perceptions were found in attitudes of business students according to class standing.

a) Comparison by Undergraduate Class Standing

Freshmen (n=204), sophomores (n=185), juniors (n=273), and seniors (n=319)were compared using ANOVA (analysis of variance) tests to determine if significant difference exist in perceptions related to participation in Study Abroad (see table 2).

Table 2 : Study Abroad Perceptions by Class Standing

Constructs	Fresh. (n=204) Mean	Sophs. n=185 Mean	Jrs. (n=273) Mean	Srs. (n=319) Mean	F	df	p
Likelihood of participation in a study abroad program (7-pt. scale, 7=extremely likely)	3.96[a]	3.69[ab]	3.43[b]	2.08[c]	59.194	3	.000
Likelihood of participation in a short term program (0 to 100%)	52.88[a]	5.58[b]	5.41[b]	5.39[c]	74.084	3	.000
Likelihood of participation in a long term program (0 to 100%)	36.06[a]	33.77[a]	25.56[b]	10.04[c]	53.594	3	.000
Anxiety-Related Obstacles (7-pt. scale, 7=most definitely an obstacle)	3.13[a]	3.01[ab]	2.82[bc]	2.71[c]	4.228	3	.006
Expense-Related Obstacles (7-pt. scale, 7=most definitely an obstacle)	4.96	4.88	4.61	4.57	2.522	3	.057
Time-Related Obstacles (7-pt. scale, 7=most definitely an obstacle)	3.44[a]	3.37[a]	3.77[b]	4.05[b]	9.736	3	.000
Perceived Benefits (7-pt. scale, 7=extremely important)	5.58	5.41	5.39	5.32	2.329	3	.073

Perceived Support (5-pt. scale, 5=definitely would like me to study abroad)	3.80	3.80	3.79	3.78	.021	3	.996
Perceived Knowledge (7-pt. scale, 7=know a great deal)	2.72 [a]	2.91 [ab]	3.10 [b]	3.11 [c]	3.531	3	.014

**For means on each row (by construct), groups with different subscripts are significantly different (p<.05)*

The students were asked to indicate on a 7-point scale, with 1=not at all likely and 7=very likely, how likely they felt they would be to participate in a Study Abroad program before graduating from college. As seen in Table, 2, the results show that freshmen are most likely to believe that they will participate in Study Abroad ($\bar{x}$ = 3.96), with perceived likelihood to participate in Study Abroad decreasing as class standing rises (sophomore $\bar{x}$ =3.69; junior $\bar{x}$ =3.43; and senior ($\bar{x}$ =2.08). Analysis of variance (ANOVA) techniques show that the means among classes are significantly different (F=59.194; p=.000). Likewise, lower level classmen are significantly more likely than upper level classmen to believe that they will participate in a short term Study Abroad program (F=74.084; p=.000), as well as a long term program (F= 53.594; p=.000), before they graduate.

For students of all class standings the largest perceived obstacle to participation in Study Abroad is the expense involved (Expense-Related Obstacles), with no significant differences at the 95% confidence level in mean response to the scale according to class standing (F=2.522; p=.057). Freshmen, however, are more likely to consider anxiety related to participation in Study Abroad to be an obstacle (Anxiety-Related Obstacles) in comparison to junior and seniors (F=4.228; p=.006). In contrast, juniors and seniors are more likely to view time-related constraints as an obstacle to Study Abroad (Time-Related Obstacles) than freshmen and sophomores (F=9.736; p=.000). Seniors and juniors claim to be more knowledgeable about different aspects of study abroad (Perceived Knowledge) than freshmen (F=3.531; p=.014).

There are no significant differences according to class standing in perceived benefits of participation in Study Abroad (F=2.329; p=.073) or in perceived support of others for participation in Study Abroad (F=.021; p=.996).

b) Open-Ended Comments

Quite a few of the students elected to answer the question, "What final comments do you have related to study abroad programs?" that was posed at the end of the questionnaire. The majority of the comments could be sorted into three categories: expense issues, need for information, and time and scheduling conflicts. The rest of the students' comments were labeled as miscellaneous, including such statements as noting that a friend had a good experience studying abroad, or stating that they wished that they knew a second language.

A large number of comments were related to students' perceptions that they could not afford Study Abroad. Many of these began with positive comments such as "very/extremely interested," "great opportunity," " love to do it," etc., but ended with negative comments related to the expense of participation, such as "expensive," "need funding," " scholarships needed," "parents/family can't afford," etc.

Some of the expense-related comments made by upperclassmen stated that they had initially considered participating in Study Abroad, but had later rejected the idea due to the perceived costs.

Another large group of responses related to a desire to know more information about Study Abroad. These comments commonly included phrases, such as "don't know much,"not enough info about specific programs", "not promoted well," and "need to learn more about these." Some students, generally freshmen or sophomores, simply requested more information:

Can I get more information about the study abroad program? (Female, freshman)

I would love to do something like this; I just need to get more information. (Female, freshman)

Some upperclassmen's comments related to feeling disappointment that they did not learn more information about Study Abroad earlier, such as the following:

Keep on promoting it. I'm a senior and now. I don't have time to study abroad, but one year ago I would have definitely gone if I had known about it. Try to promote these to freshmen and sophomores; this would be a great idea. (Male senior)

The final large group of comments centered around concerns about finding time for a Study Abroad experience in a schedule or worries about other commitments. Not surprisingly, the majority of the students who lamented the lack of time to include a Study Abroad experience in their college coursework were juniors or seniors. An example is the following comment from a female senior:

It's not that I don't think they are a great idea; I just don't have the time before I graduate.

A few students simply wrote, "No time."

VI. Implications And Recommendations

The findings demonstrate that students often begin their college career believing that they will likely

participate in a study abroad experience, but that as they progress from freshmen to upperclassmen they become increasingly less likely to believe that they will have this opportunity. At the same time, seniors remain interested in Study Abroad and continue to believe that participation in Study Abroad provides important benefits. These results suggest that seniors become aware of specific program offerings near graduation and many including those that are acquainted with these programs are unable to participate because of conflicting pressures to take courses required for graduation.

Considering that Study Abroad should be an on-going and integral educational tool targeted to all students, it is essential that students at all levels should have opportunities to participate in these programs. This objective can be achieved effectively if the planning and marketing efforts to increase Study Abroad participation are considered a long-term process targeted to the class level of students rather than a shotgun approach trying to appeal to all or to those that actively seek study abroad experiences. Such a process would continuously encourage students to consider participation in Study Abroad programs from the time they enter as freshmen to the time they exit the university as graduating seniors. Students might, for example, participate in a short-term Study Abroad program in their freshman year, followed by SA programs later that incorporate field experiences and internships. To support this process, it is helpful to develop a range of upgraded and unique Study Abroad programs that are closely connected to a student's academic development and to the shifting interests and expectations of students at each of the different student levels (freshman, junior, sophomores and seniors). The objective is for students to gain cultural experiences and global learning perspectives that are expansive and enriched and encourage participation in Study Abroad programs that provide diversified experiences. A college can develop and promote these varied Study Abroad experiences for business students in each of four phases over the students' university career, as shown in Table 3.

Table 3 : Study Abroad Strategies and Facilitative Actions

	Initiation Phase	Reinforcement Phase	Diversified Experience Phase	Career Enhancement Phase
Targeted Group (s)	Freshmen and incoming Sophomores	Sophomores and early Juniors	Juniors	Seniors
Targeted Study Abroad Programs	Programs with primary focus on cultural experiences	Interlocking business and cultural study abroad programs	Diversified study abroad programs tied to field experience opportunities	Study abroad programs tied to overseas internships
Targeted Strategies	-Have graduates and seniors allay travel concerns and share their positive SA experiences including cultural and social benefits -Develop and implement stringent safety procedures for SA trips -Have Health Centers provide detailed information on health precautions for SA travel -Promote the safety of SA to parents/guardians - Offer comprehensive insurance coverage to mitigate student & parent anxiety on risks of SA -Offer incentives to faculty teaching Gen Ed courses to promote SA programs -Attract potential students with SA scholarships -Clarify how total student costs for SA may be lower than perceived; provide alternative financing and support options for SA **Reasons for targeted strategies:** Reduce anxiety; reduce gaps in information and financial requirements; stimulate 'first time' study abroad; freshmen students are highly dependent on parents/guardians for financial and moral support; freshmen are most dependent on advisors for course recommendations and scheduling; Freshmen take many General Education courses; SA information from graduates has credibility	-Extend value propositions to underscore benefits of multiple study abroad experiences -Develop 'frequent flyer' type program rewards -Send email and news blasts on study abroad programs to targeted students -Reinforce and advertise benefits of SA to first time participants -identify opinion leaders among cohorts to diffuse concept of SA to potential new participants - Utilize recent SA participants to promote/ convince non-participating students - Connect concerned parents of potential new participants with parents of prior SA participants - Increase SA scholarships to deserving students -Offer tuition rebates for multiple study abroad trips **Reasons for targeted strategies:** Orient students to SA as building blocks for global learning; ; sensitize students to multiple cross-cultural nuances and differences; reward students for increased participation in SA; Prior participants are key influences on potential participants among peer groups; parents continue to exert influence over SA decision	- Emphasize importance of strengthening student portfolios through diverse international experiences; -Develop positioning strategies accentuating global field experiences -Incorporate foreign field research projects in SA -Collaborate with foreign business schools to develop and conduct joint research projects -Develop database of companies and institutions providing international field research experiences -Consider flexibility in regular course schedules and alternative course formats to accommodate SA experiences -Increase long-term funding for SA through deferred interest and loan payments **Reasons for targeted strategies:** Global field experience is valuable for student development and job placement; business schools need to cultivate overseas contact to arrange and monitor field experiences; students need course flexibility to have time for SA field experiences; need for more financial assistance to cover field research costs	-Underscore to students the value of internships and longer-term SA programs; -Develop positioning strategies accentuating overseas internships - Arrange foreign internships linked to career options -Capture global experiences of SA students through blogs, student websites, and social media -Document lessons learned from multiple study abroad programs -Develop creative financing and increase financial assistance for long-term study SA programs -Develop metrics to track and reinforce the value of SA and to improve programs spread over the study abroad phases -Provide scheduling flexibility in taking senior courses - Continue to subsidize SA expenses through student scholarships and deferred payments **Reasons for targeted strategies**; -Successful graduates are credible sources; social media is an effective visual means of communicating SA benefits and activities; internships significantly enhances student's global marketability and career skill set; students are time-starved and pressured to complete senior level courses; higher internship expenses and mounting student debts need greater financial support

Targeted Facilitative Actions	-Develop targeted information and promotional materials on SA programs -Include coverage on importance of SA during student orientations -Encourage course and curriculum advisors to recommend SA -Incorporate study abroad objectives in university guided mission statements/strategies Increase priority of planning for study abroad activities at all relevant university office levels & international office -Mobilize curriculum committees to support SA credits for Gen Ed requirements -Coordinate college initiatives to promote SA with university's international office -Disseminate information on SA at various student organizations and at university forums -Use social media to create buzz about SA	-Draw on expertise of travel agents & service providers in arranging for multiple SA trips; - Collaborate with foreign business schools to develop meaningful cross-cultural exchange SA programs -Encourage foreign business faculty exchanges to facilitate study abroad instruction and supervision -Develop and facilitate course credits for fundamental courses taken overseas -Work with business college assessment committees to develop SA metrics / assess global learning objectives -Seek business faculty teaching pre-business classes to promote and to facilitate SA programs	-Enlist help of Student Career Services to actively promote SA guided field experiences -Seek "buy-in" from faculty and college curriculum committees on granting credits for foreign field experiences - Get faculty to infuse content learnt through SA experiences in their teaching -Develop partnerships with foreign business schools to enable students to take business courses for credit overseas along with SA field experiences -Negotiate agreements with foreign institutions for discounted tuition and accommodations -Defray SA costs by seeking support from U.S. and foreign companies -Target Federal and State agencies and international foundations for global skills development funding	-Enlist Career Center to highlight global skill sets of graduating seniors to employers -advise students on ways of leveraging global experiences in job interviews -Identify a core group of U.S. and foreign companies and seek their support in providing overseas internships and financial support -Enlist help of NGOs in providing social entrepreneurship internship opportunities - Continue advocacy within curriculum committees and administrative units to grant course credits for internships -Invite graduating students and alumni to share their valued study abroad experiences with reluctant students

Initiation Phase - The first strategic "Initiation" phase of the dynamic process, aimed at encouraging participation in Study Abroad programs, targets primarily freshmen and incoming sophomores.

Our survey results indicate that interested students at all class levels perceive the two highest obstacles to Study Abroad to be 'too high expenses' and 'inability to pay'.

As far as expenses are concerned, we need to look for ways to reduce the financial burden for students in this and later phases. Study abroad programs will progressively cost more in the later phases as the range of study abroad programs begin to vary based on the length of the programs (e.g., short term - two to three weeks vs. full semesters), and the type of programs offered (cross-cultural experiences, interlocking cultural and business experiences, field research, internships).

As a start, in the "initiation" phase, to alleviate the financial costs of participation in a Study Abroad program, the university should consider providing SA scholarships to incoming freshmen. In addition, the college should examine ways to reduce SA program-related costs. Methods for alleviating the cost of travel should be explored, such as the use of frequent flyer miles, group travel discounts, and flexible travel arrangements. Expenses related to in-country logistics can also be controlled and managed by seeking alternative housing arrangements in the host country, such as dorms, hostels and local hotels. Meal costs can quickly add up to significant expenses during overseas stays. In our experience, meal expenses are considerably reduced when students are urged to explore local alternatives. Overseas partnering institutions can sometimes provide either cheaper university transportation or suggest inexpensive means to travel, particularly when the student hosts who know their way around serve as guides.

Our survey results show that at our university, as is probably true of other universities, many students at all class levels remain largely unaware of information on available university financial assistance. Besides University-wide Study Abroad fairs, we now have college specific SA events to publicize availability of financial assistance. Even with these efforts students express surprise when advised about available financial support. It would help if financial assistance information accompanies every mention of SA programs.

As Table 2 shows, our research findings indicate that freshmen exhibit greater interest than students at higher class levels in participating in Study Abroad programs. However, compared to upperclassmen, they lack knowledge related to various aspects related to Study Abroad, including the types of programs that are available. Information disseminated by centralized university Study Abroad offices need to be complemented by organized college efforts to enlist faculty, students and other facilitators to provide more substantive information to potential participants. Students are apt to pay attention to trusted faculty who have conducted SA programs and who promote the SA experience. Social media such as Facebook, Twitter and students blogs about SA trips stimulate interest among cohort peer groups. Even at the risk of being redundant, multiple sources of SA information can help to drive home the message of value of the programs to students.

Freshmen also indicate that they have significantly higher anxiety related to participation in Study Abroad, including nervousness about foreign travel and worries that they will be lonely and miss their families and friends. Three strategies could be effective in reducing anxiety or stress: 1) Invite graduates and seniors that have completed Study Abroad to talk about their positive Study Abroad experiences, including the specific benefits that they have realized from these

experiences, 2) Educate and provide assurance to parents or guardians of students of the stringent procedures and care undertaken by school administrators and program organizers to ensure the safety of students participating in Study Abroad programs, and 3) Provide additional insurance coverage to mitigate actual and perceived risks, with notification of insurance options provided as part of information sessions related to Study Abroad.

Reinforcement Phase— In the second, "Reinforcement" phase, specific strategies are directed to sophomores and beginning juniors promoting programs that emphasize an improved understanding of cultural differences and how these and other environmental differences influence how business is conducted in other countries. Such programs typically include hands-on activities to enhance cultural sensitivity and visits to business sites.

In the targeted groups, there will be those that have not participated previously in a Study Abroad program. Our findings suggest that sophomores report a lack of fundamental information related to Study Abroad programs, as well exhibit higher anxiety about foreign travel, in comparison to upper classmen. As such, students should be provided with detailed information related to the types and lengths of programs offered. Clear information about the particular activities, organizational visits and the developmental rationale for these should be provided along with a detailed breakdown of the costs involved. In addition, this group should be informed of, and provided with, financial incentives such as SA scholarships and aid to increase their likelihood of participation. Sources of such assistance need to be extended and diversified.

Sophomores and early juniors that have previously participated in Study Abroad programs can be encouraged to take a second short term program that focuses more on interlocking cultural and business experiences, or to take semester long courses overseas. This group can also serve as key influentials in encouraging their cohorts that have not participated in Study Abroad programs to consider doing so. Further financial support can be provided for those willing to be active as cohort mentors and as logistics facilitators during a Study Abroad trip.

Diversified Experience Phase - In the third "Diversified Experience" phase, strategies are targeted mostly to juniors. Here, we need to offer these students programs that provide opportunities to gain field research experiences. Such experiences can strengthen their career portfolios and demonstrate tangible career benefits. At our college, we have developed programs that include field research and consulting projects after the completion of short-term (two-week) programs. Such courses have been oversubscribed.

The results of our study indicate that, while juniors perceive that they are knowledgeable of Study Abroad options and have less anxiety related to foreign travel, they are concerned with how they can fit Study Abroad into their schedule. These students face time pressures and weigh study abroad options against opportunities to get work experiences domestically and to take courses to meet curriculum course requirements. The current practice at many institutions is to offer Study Abroad programs as credit/non-credit courses. Curricula need to be revisited with an eye towards incorporating Study Abroad courses as a viable alternative to required coursework at the University. We strongly recommend that Study Abroad courses be awarded credit in the curricula for majors. Moreover, there should be flexibility in scheduling short term Study Abroad program options, such as during semester breaks, so that students can participate in short-term Study Abroad programs without compromising their ability to take courses during the regular semesters.

Career Enhancement Phase – In the final phase, the Career Enhancement Phase, strategies targeted mainly to seniors should recognize that these students, on the verge of graduation, have an expressed need to strengthen their career opportunities and would be greatly amenable to Study Abroad programs such as those that include internship opportunities. A focus on developing such programs does not preclude seniors who have not had study abroad experiences to avail of the opportunities in SA programs discussed in the earlier phases if they are so inclined. For seniors the overseas internship adds another valuable dimension to their marketability for job placement and career advancement. Developing a program focused on overseas internships can be challenging but doable. Alternatives include for example a standalone program of an international internship or one in which the student studies abroad at a foreign university for a semester while working as an intern at an area company.

University/college career centers can assist by working with domestic and foreign companies with a presence in the regional community, to provide internship opportunities overseas. Opportunities that might be explored include alumni links with overseas business, government agencies, private companies that facilitate internships, and non-governmental organizations (NGO's). In these initiatives, based on the results of our survey, we need to be mindful that these do not delay the time for graduation that students anticipate.

Study Abroad can indeed be a very significant developmental process with considerable benefits to participating students. We want to share a caveat. An interesting result of the study was that students rated travel to be the top most perceived benefit of Study Abroad programs, while the lowest two ratings for benefits were learning about new cultures and

understanding the world. This outcome may partly be a result of the promotional appeal used by the program organizers for making students interested in a specific Study Abroad program. Though the appeal to travel to a specific and appealing foreign country often builds excitement in terms of recreation and fun, the cultural and business skills developed through this experience are understated and often conditions the students to a fun-oriented rather than learning-oriented mind-set. Travel as a "fun" experience should not be the primary driver but rather a complementary driver of studying abroad. Appealing to students merely on the former can lead to inappropriate student learning choices, notably of where and what to study and the benefits gained. Hence, the real benefits of learning, such as sensitivity to and understanding of another culture, and preparing for an increasingly globally connected and diverse workplace, while gaining valuable internship or course credits, should be emphasized in the promotion and presentation of Study Abroad programs. Similarly, career services for students need to impress upon students that potential employers value Study Abroad experiences including international internships and field experiences. To be successful, the value of Study Abroad programs ideally should be culturally ingrained within the entire university resulting in manifest efforts to facilitate the Study Abroad process for students

The college and university should also develop an articulated process to identify and cultivate meaningful beneficial collaborations with facilitators here and abroad, such as alumni who value international experiences, area companies, international profit and non-profit agencies, foreign educational and partner institutions and external Study Abroad program providers. Collectively perceived value of Study Abroad programs will help to advance participation by our business students.

VII. Conclusion

Most business schools offer Study Abroad programs to their students and hope that their students will avail of these opportunities. As these initiatives mature and gain greater attention, it is time to consider more focused strategies to encourage more business students to participate in Study Abroad programs. Based on our findings, this study proposes strategies targeted to business students at different class levels that might be more appealing based on the students expressed needs and expectations, thus improving participation. Both short-term and long-term marketing efforts and initiatives would be needed to achieve this goal. An administrative and faculty mind-set that fully embraces the commitment to strengthening and diversifying students study abroad experiences is fundamental for the process to work. We hope that business schools will be able to use our recommendations as a basis for augmenting their Study Abroad initiatives.

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4. Manuscript's Category,

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A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.

Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

· Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page

- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

Title Page:

Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.

Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to

shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

Introduction:

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.
- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

Procedures (Methods and Materials):

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic

principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.

- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

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Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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