



INFORMATION TECHNOLOGY APPLICATION & DEVELOPMENT IN THE FINANCIAL AND ECONOMIC MANAGEMENT AND INNOVATION: AN EXPERIMENTAL INVESTIGATION

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Abstract: Information has a significant impact on daily life. Information technology is standard in finance and economic management. IT also promotes the steady development of Bangladesh's financial and economic control to a certain extent. Hence, careful and reasonable analysis of information technology is necessary only in this way. In such fierce competition, the development of financial companies is looking for a bright future.

Index Terms - Information Technology, Financial and Economic Management, Innovation.

I. INTRODUCTION

Financial enterprise is a social and economic activity of the leading carrier, and its time closely linked, need to keep pace with the times. The unprecedented development of information management is inevitably affecting the future direction of financial management development. The two penetrate and merge, and it is an inevitable trend that is not changed by the will of man. *University of Exeter Han Mengxue* has been in "*A Brief Talk about the Innovation of Financial Management Informationization*" (2016). It is mentioned that financial managers use modern networks to gather information and resources, and the new model used in management is for enterprises to enhance their core competitiveness in the critical future way. It can be said that financial management information is of great significance to enterprises to take the road to stable growth. In addition, with **Bangladesh's** innovation-driven development war slightly positive implementation, information technology in the development of financial enterprises, the road is gradually widening, As *Zhang Ling* in "*The financial support system for innovation-driven development strategies*" (2015). It is pointed out that Bangladesh's financial innovation-driven status quo, economic enterprise management knot continuous optimization, has more vitality and vitality. Believe with information in the financial enterprise management in the deepening and financial management bottleneck will continue to burst social and economic activities such as venture capital and equity fund creation will also enter a new one stage.

II. THE APPLICATION OF INFORMATION TECHNOLOGY IN THE FINANCIAL ECONOMY

The application of information technology to financial management refers to the gold that managers are making in the economic work, through a series of information means and technology to dig big into the data age, customer information, to improve the impact of information technology on enterprises. Through scientific and technological means to explore and discover and strengthen business operations specific approaches to the level of capacity and management, which can contribute to a certain extent to promote the rapid and stable development of financial enterprises.

At present, the main focus of financial enterprises is **Bangladesh's** supervision and control; there are other aspects, of course. For example, IT information outsourcing guarantees the method of the smooth operation of **Bangladeshi** financial enterprises. It can help financial firm's better weather the danger to some extent time limit. Bangladesh's existing financial institutions classify, mainly financial insurance, silver banks securities, in three categories. But from the development of such financial institutions as banks, it is not difficult to find that the bank's business mainly includes traditional banking and more complex companies with technical levels. The complexity of the technology business mainly includes financing, listed investment, and so on. Although the

current letter from **Bangladesh's** level of interest rate is constantly improving, compared with developed countries, **Bangladesh's** letter the level of interest is still low. Financial business is the third in the process of urbanization, one of the industry service industries. **Bangladesh** financial enterprises face scientific and technological information, choose to continue the traditional challenges, or information integration requires careful analysis to understand that information technology is such as the financial enterprise management process to play a role, with can be divided into the following points.

III. INFORMATION CREATES FINANCIAL ENTERPRISES TO A CERTAIN EXTENT

There is no denying that information is, to some extent, the basis of the financial industry's development, which can improve enterprises' management ability. There are many relevant examples in the financial sector; for instance, at the beginning of its development, one bank in Bangladesh called for unification development policy: unified development, unified management, and unified needs. Based on this development exhibition policy, other banks pursue information development and adhere to this issue. The banks that have taken the show have their unified platform ahead of the others. Because to a certain degree of a high degree of uniformity, the bank in the management of the way and management behavior is more regulated and advanced than other banks. The bank in **Bangladesh** was the first to realize the exchange of electronic banking and various counters function, and this information application is widely accepted. It is called the excellent bank business in financial management. Thus, information technology is in the banking business has brought great benefits, while at the same time in society for the bank elves established a technologically leading social image of banking.

Distribution of Internet finance projects

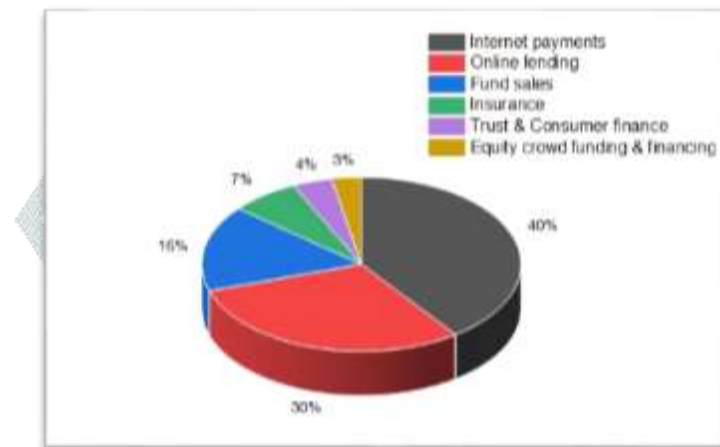


Fig 01: A divisional map of internet finance projects for 2020

As shown in Figure 01 above, relying on the internet information platform, the financial industry to broaden and increase sales channels. Online lending and consumer finance do not occupy the core position of the information platform financial business. Information technology for financial enterprises the development of the industry provide a platform. It points out the direction, its invisible decision a new way and new channel for the management of financial enterprises have been decided. And as the internet continues with rapid development, **Bangladesh's** regulations and legislation on e-commerce will be implemented one after another. The standardization of financial management will bring new project transformations to financial enterprises' opportunities and challenges.

3.1. DATA SETS CAN IMPROVE THE MANAGEMENT EFFICIENCY OF FINANCIAL ENTERPRISES

As far as the specific situation of **Bangladesh** is concerned, **Bangladesh's** commercial banks and parts of the database of financial institutions are still under construction and belongs to an online location, the stage of management. The data set processing economic enterprise management efficiency is very high. Bangladesh's financial industry information development trend has reached the silver reinventing, and virtual businesses have come to Bangladesh's domestic banking sector forefront. Figure 02 below shows the trend column of the information investment scale in the financial industry (*20 financial industries*) in 2014-2020. The chart from the overall investment scale shows a rising trend. It also reflects that information technology has played a role in improving the efficiency of enterprise management important facilitation role.

3.2. INFORMATION TECHNOLOGY IS INTEGRATED INTO THE MANAGEMENT OF FINANCIAL ENTERPRISES

At present, the information of financial enterprise management is gradually taking shape, using large numbers according to the regulation mode of the financial enterprise. It is also steadily over-modernized from tradition. Root this phenomenon is illustrated by the change of market concentration of banking solutions development.

Information investment in the financial industry

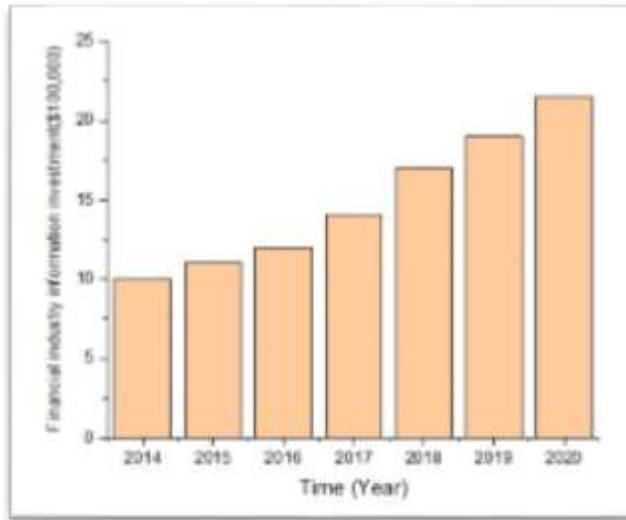


Fig 02: 2014-2020 financial industry information investment trend chart

Changes in the market concentration of IT solutions

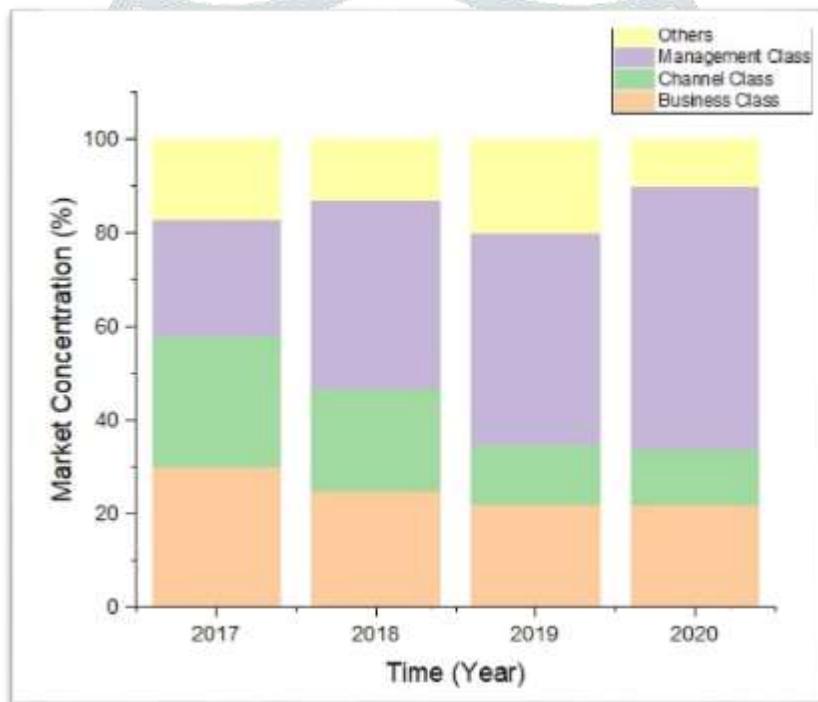


Fig 03: A map of changes in the market concentration of IT solutions

IT solutions for four financial giants, as shown in Figure 03 above the change value of market concentration can be seen, the degree of informationization of financial enterprise management model is gradually improving, management business accounted for the IT solutions market concentration year by year improvement can also objectively reflect the gradual improvement of Bangladesh's information technology to financial enterprises impact of industry management.

3.3. INFORMATION TECHNOLOGY FOR THE DEVELOPMENT OF E-COMMERCE DEVELOPMENT OF DEVELOPMENT HAIR

The emergence and development of information technology can promote the development of information technology in Bangladesh. The application of information technology can improve the service efficiency of the financial industry, which is mainly because information technology can grasp the psychological needs of customers through data, which is excellent reduce the complexity of the service process, improve the efficiency of the service, and further effective improve the financial enterprise's economic benefits, with the financial industry's service level in the continuous improvement, can bring a better consumer experience for most consumers. **Table 1** below is a statistical table of the role of information technology in the financial field. From this, we can learn that the process of information is accelerating, which can be for the development of the economic area bring more help.

Table 1 Statistical table of the leading role of information technology in the financial field

Serial Number	Types of finance	The main role
1.	Financial economy	Mining customer information to explore management methods
2.	Management	Improve the efficiency of enterprise management
3.	Business operations	Easy to extract and protect related information
4.	Information technology	Improve the efficiency of enterprise services

IV. INFORMATIONIZATION MAY EXIST IN THE APPLICATION PROCESS OF FINANCIAL AND ECONOMIC MANAGEMENT

In everyday life, the emergence of any new thing that will bring benefits will also bring disadvantages and encounter many problems, this phenomenon in information technology. It also exists in financial and economic management as a new information Technology. Bangladesh lacks the training and related applications of talents in this field experience, so in the process of information-based financial, economic management will appear some very the most common problems, after analysis, summarize the following points:

4.1. THE MANAGEMENT CONCEPT IS BACKWARD

In the current economic globalization, the development of internet information technology is speedy. The result of information technology is changing rapidly. Still, Bangladesh lacks more professional management concepts, so the development of financial enterprises cannot be based on the development of the market and technology and the need for the perfect combination. Moreover, there is no precedent for combining information technology with management in the traditional management of financial enterprises. Although information technology is in with continuous development, the management of financial enterprises is still difficult to manage, and information skills effectively fusion the technique. Many managers are still accustomed to using financial firms the traditional management method. Still, the conventional information technology type with the Internet high-speed hair exhibition demand cannot be matched. The traditional technology of enterprise development is not too big and hinders the development of financial enterprises.

4.2. MANAGERS' MANAGEMENT PHILOSOPHY AND METHODS ARE NOT CORRECT

In the process of financial enterprise management, some managers do not consider the cost of enterprise development and the single pursuit of enterprise benefits, which may lead to the phenomenon of possible losses of enterprises, and will lead to enterprise management at this stage cannot keep up with the pace of development. In this information stage, the development of the world has been at the forefront. So many large enterprises have their management system for the development of enterprises. To provide better development services, if enterprises also use backward management systems, it will lead to enterprise development lag and even lead to system crashes and data errors.

4.3. THE LEVEL OF PROFESSIONAL TRAINING IS BACKWARD

The development of information technology in Bangladesh started late, so Bangladesh lacks relevant information technology professional training and long-term training mechanism. In most of Bangladesh's high in recent years, the school has gradually paid attention to the activity of internet information technology professionals.

Therefore, Bangladesh's financial and economic information management still lacks a lot of professional practitioners. Many practitioners are in many jobs, which to a specific extent, staff efficiency is decreasing. Although Bangladesh has been connected to the internet in recent years, the importance of network information is increasing. However, many enterprises still do not entirely feel the convenience brought by the construction of information technology. Still, the application of information limitations in an aspect of the enterprise, people's understanding of information technology is not sufficient, should be not popular enough. It needs to increase the information in the later financial enterprise management process application of information technology.

V. COUNTERMEASURES TO PROMOTE THE DEVELOPMENT OF BANGLADESH'S INFORMATION TECHNOLOGY

5.1. SPEED UP THE DEVELOPMENT OF INFORMATION TECHNOLOGY ENVIRONMENT AND INFORMATION SYSTEM CONSTRUCTION

Given the significant problems of Bangladesh's information development, Bangladesh's related politics government departments should further study the effect of information technology and improve the relevant laws, regulations, and policies to ensure that Bangladesh's information industry is in the development process. There are laws to follow, give full play to the guiding role of rules and regulations, for information development to create a good environment, to create a level playing field in the market atmosphere, to lay the foundation for the development of information technology. Establish and improve the supervision mechanism of information technology, forming a government-led participation in all aspects, standard unified information credit system, establish a fair and equitable market system.

5.2. INCREASE INVESTMENT IN INFORMATION INFRASTRUCTURE

Bangladesh should take information infrastructure construction as an essential strategy to ensure that the financial industry's information development is on track. As far as Bangladesh is concerned, there is still a clear gap in the construction of information infrastructure compared with developed countries such as the United States, China, and Japan. Recently, Bangladesh's top officials have targeted to promote the implementation of national big data strategies and accelerate the improvement of digital infrastructure, to promote the integration of data resources, put forward the corresponding reform bill, you can say information infrastructure will become an essential strategic asset for the country in support of social informatization construction, has a prominent role.

5.3. DRIVE BIG DATA MINING ANALYTICS

Big data is mainly to analyze and study the characteristics of users of different information platforms, according to the various shopping needs of other groups of people, understand the shopping trends of different groups of people, through the network big data to predict the volume of different products demand. It can reduce the hoarding of certain products, actively establish standardized, intelligent reserve centers in central cities as far as possible to achieve local logistics and distribution, not only to reduce logistics costs but also to improve the efficiency of logistics and distribution. As far as the overall situation is concerned, Bangladesh's information technology is at a start stage. To fully develop and be accepted by the public, it is necessary to explore, change existing shortcomings, and actively research innovation constantly. In addition, but also actively learn from foreign successful information cases. Still, the learning process cannot make a real need for selective learning to

select the right situation and society for Bangladesh as a whole the excellent way of the environment as far as possible to develop Bangladesh's information platform. The government of Bangladesh should also strongly support the development of information technology. Bangladesh's information development to add bricks constantly improves the information technology development process requiring software and complex facilities. In addition, Bangladesh should also train more information-related talents, and people are the decisive factor in developing this industry. Only talent and policies are synchronized development can promote the rapid growth of Bangladesh's information technology and shorten information technology time.

VI. THE IMPACT OF INFORMATION TECHNOLOGY ON MANY ASPECTS

6.1. THE IMPACT OF INFORMATION TECHNOLOGY ON BANGLADESH'S ECONOMIC DEVELOPMENT

With the rapid development and popularization of the internet and Bangladesh's internet ring the environment gradually stabilizes, the faster and faster the development of information technology in Bangladesh, as a new type of economy, which is also vital to Bangladesh's economic growth the significant impact, to a certain extent, changed Bangladesh's labor market to e-cab's shopping platform, for example, two of thousands of individuals and enterprises operating into E-cab, two of thousands of buyers in the platform shopping, sellers in one to a certain extent to solve the seller's own employment problems, and when buyers and sellers reach into a consistent delivery of goods will be involved in Bangladesh's express delivery industry, in the information model style did not develop significantly when Bangladesh's express delivery industry is not depressed, even entered the low stage, but after the rapid development of information technology model, Bangladesh courier companies in the express industry are springing up, and courier lines industry also provides jobs for couriers themselves, to a certain extent solved the employment problem of some people in Bangladesh. Even now, Bangladesh's information technology has made an indelible contribution to economic development and is currently in the line of information technology market share in Bangladesh's economy. Already accounts for a large proportion of the market; for example, we believe that information technology may become the backbone of Bangladesh's economic development in different industries in the future.

6.2. THE IMPACT OF INFORMATION TECHNOLOGY ON LIFE

Information technology has a significant impact on Bangladesh's economy and national life, and its influence is mainly reflected in the transformation of shopping mode, education mode, entertainment mode, and tourism form. First of all, in the way of shopping, with the continuous development of information technology, people have changed from traditional shopping to online shopping. In addition, people out the way banks pay has also been transformed, with more and more people traveling from cash payments are converted into bkaash, ucash, rocket, nagad or others payments. It brings people the convenience of income and the ability to query the silver through the information platform bank accounts, transfers, transactions, etc. These acts are not time-limited, or exempt location restrictions have significantly changed people's lives to a certain extent.

Second, in education, students can buy courses and learn on the internet; network education has the advantage of rich information and rapid query. Teachers and students can also be carried out on a platform through an information platform in a different place. The study of distance education, to a certain extent, is the impact of traditional education. Again, the way people entertain and entertain has been changed, compared with the earlier countries. There are only times of political and economic exchanges between families. Now it is more of a cultural phase shock each other, people at home can hear and see the music and pictures of various countries depending on your work, you can also learn current news from around the world on the internet. Other than that, online games are also emerging. People in the intense work and study after choosing a game that relaxes you in a wide variety of games, these phenomena are the manifestation of the transformation of people's entertainment and leisure style. In short, the popularity of the internet and the development of information technology for Bangladesh's economic growth, the exhibition has made a significant contribution and brought about changes in people's lives, letting people's daily lives have a new experience.

6.3. THE IMPACT OF EDUCATION

The influence of information technology is reflected in people's daily lives and has also brought positive impetus to the development of education. The promulgation of the curriculum is based on the continuous development of internet and information technology and innovation based on the emergence of in the field of education, such as flipping the classroom, micro-class education needs to rely on the Internet platform and multimedia information technology to achieve. Now, with the support of advanced information technology, the teaching model in the field of education is abundant the improvement of rich and teaching quality is further guaranteed.

6.4. THE INFLUENCE OF INFORMATION TECHNOLOGY IN THE FIELD OF MEDICAL CARE

The impact is mainly reflected in the diagnosis of the disease and the surgical site legally. In Bangladesh's medical technology field, the integration of information technology makes some based on network platform and information technology advanced diagnostic equipment to be produced and responded to not only improves the efficiency of disease diagnosis but also improves the accuracy of diagnosis first. There has been an improvement like this advantage also has the technical aspects of surgical treatment embodied. In addition, from the patient's point of view, the integration of information technology in getting its treatment and diagnosis has realized the integrated service that relies on the network platform business. Reduce its upfront cost, so that the problem of medical treatment gradually to information and the direction of convenience.

VII. THE CONCLUSION OF THE STUDY

The main research object of this paper is the innovation of financial enterprise management, in information the question of how to proceed in the present moment. Bangladesh's financial enterprises face management style, management philosophy, and talent development of multiple deficiencies. Such a question's objective existence directly affects the result of an innovative way of financial enterprise management. This paper starts with the application of information in the financial economy. It analyzes the importance of technology and data set to the management of financial enterprises leads to many problems in the development of economic enterprise informationization today. Based on this, a corresponding solution is proposed. At the end

of the article, it also aimed information of the application of other fields of the country, carried out a simple expansion, and reflects the letter from the side the shadow of a worldwide trend that does not change with the will of the human person far-reaching. The financial enterprise management model is only essential in its scope of influence, one of the core.

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CONFLICT OF INTEREST

The authors declared that there is no conflict of interest for this research.

REFERENCES

- [1] Audrey Paul Ndesaulwa, Jaraji Kikula. The Impact of Technology and Innovation (Technovation) in Developing Countries: A Review of Empirical Evidence. *Journal of Business and Management Sciences*. Vol. 4, No. 1, 2016, pp 7-11. <http://pubs.sciepub.com/jbms/4/1/2>.
- [2] Bresnah, B. a. H. (1998). Information Technology workplace Organization and the Demand for skilled Labour Firm-Level Evidence NBER Working paper.
- [3] Atalay. (2013). The Relationship between Innovation and Firm Performance: An emperical evidence frm Turkish Automotive Supplier Industry. *Procedia social and Behaviour Science*, 75, 226-235; 10.1016/j.sbspro.2013.04.026.
- [4] Schmookler, J. (1966). *Invention and Economic Growth*. (1st ed.). United States of America: Harvard University Press; doi/10.4159/harvard.9780674432833.
- [5] Terziovski. (2010). Innovation and its Performance Implication in Small and Medium Entreprices in Manufacturing Sector: A resource based view. *Strategic Management Journal*, 31(8), 892 – 902.
- [6] New Zealand Ministry of Business, Innovation and Employment (2016), Final Report: Review of the Financial Advisers Act 2008 and the Financial Service Providers (Registration and Dispute Resolution) Act 2008.
- [7] Courbe, J. (2017). *Financial Services Technology 2020 and Beyond: Embracing disruption*. Retrieved from <https://www.pwc.com/gx/en/financial-services/assets/pdf/technology2020-andbeyond.pdf>.
- [8] Haddad, C., & Hornuf, L. (2016). The emergence of the global fintech market: Economic and technological determinants.
- [9] IOSCO. (2017). *Research Report on Financial Technologies (Fintech)* Retrieved from <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD554.pdf>.
- [10] Juengerkes, B. E. (2016). FinTechs and Banks—Collaboration is Key. *The FinTech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries*, 179-182.
- [11] Bowonder, B. and Miyake, T. (1988). Measurement of technology at industry level: A case study of the steel industry in India and Japan. *Sci. Public Policy*, 15, 4: 249-269.
- [12] Hasan, R. (2002). The impact of imported and domestic technologies on the productivity of firms: Panel data evidence from Indian manufacturing firms. *J. Develop. Econ.*, 69:23-49.
- [13] Khalil, T. M. and Ezzat, H. A. (2005). Management of technology and responsive policies in a new economy. *Int. J. Technol. Manage.*, 32, 1/2: 88-111.
- [14] Malecki, E. J. (1997). *Technology & Economic Development*, 2nd edn. Longman, Essex, UK.
- [15] Martin, S. A., McHugh, R. and Johnson, S. R. (1993). The influence of location on productivity: Manufacturing technology in rural and urban areas. *Growth Change*, 24: 459-486.
- [16] Ramanathan, K. (1988). Measurement of technology at the firm level. *Sci. Public Policy*, 15,4: 230-248.
- [17] Sharif, M. N. (1986). Measurement of technology for national development. *Technol. Forecast. Soc.*, 29: 119_172.
- [18] Technology Atlas Team. (1987a). A framework for technology based national planning. *Technol. Forecast. Soc.*, 32:5_18.
- [19] Wever, E. and Stam, E. (1999). Clusters of high technology SMEs: The Dutch case. *Reg. Stud.* 33, 4: 391-400.
- [20] Bangladesh Bank, (2012), “Bangladesh Bank: Comparative Scenarios of Financial Inclusion and Other changes (2002-05 vs. 2009-12)”, Dhaka, Bangladesh.
- [21] BIBM (2013), “BIBM Activity Report 2013”, Bangladesh Institute of Bank Management, Dhaka, Bangladesh.
- [22] Khan, M. H, Islam, M. A., Fatima, J. K., Ahmed, K. (2011) "Corporate Sustainability Reporting of Major Commercial Banks in Line with GRI: Bangladesh Evidence", *Social Responsibility Journal*, Vol. 7 Iss: 3, pp.347 – 362.