PROMOTING EXPORT OF ICT BASED SERVICES THROUGH THE EXPORT POLICY OF BANGLADESH

A DISSERTATION BY SONIA HASAN

SUBMITTED TO THE BRAC INSTITUTE OF GOVERNANCE AND DEVELOPMENT BRAC UNIVERSITY DHAKA

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF

MA IN GOVERNANCE AND DEVELOPMENT





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BRAC UNIVERSITY, BANGLADESH

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DECLARATION

I do hereby declare that this dissertation entitled "Promoting Export of ICT Based Services through the Export Policy of Bangladesh" is the output of my own research under the supervision of Mr. Shah Mohammad Sanaul Hoque, PhD., Joint Secretary, Government of Bangladesh, and Adjunct Faculty of BIGD, BRAC University, Bangladesh. The total dissertation is prepared for academic purpose and solely aimed for the partial fulfillment of the degree of Master of Arts in Governance and Development (MAGD).

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Abstract

The service sector that provides a service, not an actual product that could be held in one's hand, is in fact, an important part of a country's economy. In Bangladesh, ICT has been identified as one of the major sub-sectors in the service sector of the country. Export policy of Bangladesh, designed for 2015-2018, has included 12 highest priority sectors considering their special export potentials, where software and ICT enabled services is one of them. The policy has some certain goals for promoting export of ICT based services, e.g. ensuring improvement of information communication system, examining possibility of setting up marketing centers abroad, taking initiatives of IT Villages for increasing export, facilitating availability of high speed data transmission line and strengthening the base of the ICT sector regionally, providing facilities to develop the ICT sector through the ICT Business Promotion Council, ensuring country branding through Export Promotion Bureau and missions abroad.

The broad objective of the study is to analyze export policy of Bangladesh related with ICT based service and the overall situation of policy implementation and under this broad objective specific objectives are (1) to evaluate the role of export policy of Bangladesh in promoting ICT based service export and (2) to find if there is gap between Bangladesh export policy for ICT based service and implementation of the policy. For analysis of data, combination of both qualitative and quantitative method has been used. To understand whether the ICT based service related export policy of Bangladesh is sufficient or not, content analysis of qualitative type has been done. To understand the opinion and views of business entrepreneurs regarding the policy and government initiatives, a survey has been performed with structured questionnaire. Qualitative analysis has also been used to examine the performance of the policy and to find gaps with policy implementation. For this purpose, in-depth interviews were taken with key informants. Implementation of export policy related with ICT based service export is the dependent variable for the study.

Findings of the study show that the policy lacks some very important issues needed to be addressed for capitalizing high potentials ICT based service export sector. Though the policy has emphasized on some important steps (e.g. setting up marketing centers abroad, establishing IT Village, facilitating high speed data transmission line, developing ICT sector through IBPC, country branding through EPB, etc.), ICT service sector demands some more initiatives of the government for flourishing of it. Some of the required initiatives (e.g. taking up programs to develop ICT professionals and skilled personnel) have been considered by other national polices. But there is no policy statement for supporting ICT entrepreneurs to have better access to institutional financing, making transaction of e-business and international money transaction easier, stopping pulling away professionals into other sectors, and increasing demand for ICT based services in the domestic market. Findings also show that among five goals set in the policy, implementation is not effective for generating strong export market in global premises, taking necessary steps by EPB and foreign missions for country branding. For the other goals (i.e. establishing IT villages in the country, availability of high speed data transmission line and improvement of information communication system) entrepreneurs in the ICT service sector are not happy with the implementation.

Among the variables that affect policy implementation, political will and support have been appreciated by the ICT entrepreneurs. The goals which are not being implemented at satisfactory pace are probably being hampered by lack of required amount of financial allocation, lack of related policies complementing this policy, and to some extent for lack of technical skill and knowledge of the implementers. Increased participation of entrepreneurs in this sector will be helpful to harvest the benefit from policy implementation.

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List of Abbreviations

a2i Access to Information
AIT Advance Income Tax

BASIS Bangladesh Association for Software and Information Services

BDT Bangladeshi Taka

BHTPA Bangladesh Hi-Tech Park Authority

EPB Export Promotion Bureau
FDI Foreign Direct Investment
GDP Gross Domestic Product

GoB government of Bangladesh

IBPC ICT Business Promotion Council

ICT Information and Communication Technology

ICTeS ICT-enabled services
IT Information Technology
STP Software Technology Park

USD United States Dollar

CHAPTER ONE:

INTRODUCTION

1.1 Background

After the liberation in 1971, Bangladesh was a highly aid-dependent country. From there, in last two decades, it has evolved in a vibrant outward-oriented economy. In 2016, the growth rate in gross domestic product (GDP) of Bangladesh was 7.11% which is much higher than world average (3.1%) (Bangladesh Bank, 2017). This growth needs to be accelerated in an inclusive manner in order to have the maximum poverty reduction impact. Surveying many evidences, economists conclude that rapid and sustained GDP growth is closely associated with a fast pace of export growth (Brenton, P. and Newfarmer, R. 2007). Considering the importance of trade for ensuring growth, export-oriented development should be a strategic goal for the Bangladesh economy in its quest to achieve middle income status by 2021.

In 2013, export to GDP ratio for Bangladesh was 20.2 where the South Asian average was 16.0 (Sattar, Z. 2015). The export growth was 9.77 percent in FY2015-16, which was significantly up from 3.39 percent in the previous fiscal year (Bangladesh Economic Review, 2016). Despite noticeable export growth backed by supportive policy measures, the export basket has not been diversified. The range of exports is disproportionately dependent on ready-made garments and knitwear products, which now accounts for approximately 82% of total exports (Bangladesh Economic Review, 2016). Bangladesh has not been able yet to realize its full export potential because of serious lack in trade in diverse sectors. To overcome this situation export diversification opportunities through service sectors should be explored.

The services sector is playing an increasingly important role in the global economy and in the development of many countries. Services trade may be carried out through four modes of supply namely: cross-border supply, consumption abroad, commercial presence and presence of a natural person (UNCTAD, 2013). As international trade in services through these modes does not physically cross

national border, it is not affected by customs tariffs and other taxes applied to merchandise trade. According to World Bank (2010) growth in the services sector has higher contribution to poverty reduction than the contribution of growth in the agriculture or manufacturing sectors. In developing countries, service trade is the new frontier for realizing development gains by enhancing their participation in international trade.

The average contributions of service sector, industry sector, and agriculture sector to the GDP in Bangladesh in FY 2016-17 are 52.73%, 32.48% and 14.79% respectively (Table 1.1). So, the contribution of service sector is the highest in the national economy. This sector has the potentiality to be driver of sustainable economic growth and significant poverty alleviation in Bangladesh (Islam, M. S., Musa, M. and Das, R. K., 2012). Bangladesh tries to promote its export in service sector, especially tourism and the information and communication technology (ICT) sector.

Table 1.1: Bangladesh's GDP by Broad Industry Sector, 2013-14 to 2016-17 (Million BDT)

Broad industry sector	2013-14	2014-15	2015-16	2016-17
GDP				
1. Agriculture	1,225,702	1,266,498	1,301,786	1,346,029
2. Industry	2,195,739	2,407,999	2,675,137	2,955,962
3. Services	4,008,360	4,240,887	4,505,812	4,798,607
Total GVA at constant basic price	7,429,801	7,915,384	8,482,734	9,100,598
Share				
1. Agriculture	16.50	16.00	15.35	14.79
2. Industry	29.55	30.42	31.54	32.48
3. Services	53.95	53.58	53.12	52.73

Total GVA at constant basic	100.00	100.00	100.00	100.00
price				
Growth rate				
1. Agriculture	4.73	3.33	2.79	3.40
2. Industry	8.16	9.67	11.09	10.50
3. Services	5.62	5.80	6.25	6.50
Total GVA at constant basic	6.15	6.54	7.17	7.28
price				
price				

Source: Bangladesh Bureau of Statistics, 2017

ICT has been identified as one of the major sub-sectors in the service sector in Bangladesh. ICT subsector has grown from a negligible size industry to one that was worth USD 350 million in annual revenues in 2009, with software exports nearly trebling from a little less than USD 13 million in 2005 to USD 35 million in 2009 and further to USD 47.3 million in 2011 (Raihan, S. and Cheong, D., 2013). ICT-enabled services (ICTeS) constitute the bulk of these exports. According to the World Bank, ICT service export as percentage of total service exports in Bangladesh was measured at 28.29 in 2015 (Figure 1.1).

40 30 20 10 1996 2000 2004 2008 2012 2015

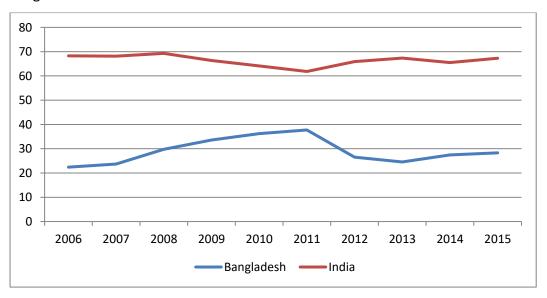
Figure 1.1: ICT service exports (% of service exports; BoP) in Bangladesh (1996-2015)

Source: World Bank

A variety of factors have contributed to the rapid growth of ICT industry in Bangladesh. The government of Bangladesh (GoB) has also taken up several policies towards the development of public ICT projects. The government has clearly mentioned its vision of 'Digital Bangladesh' and promotion of the ICT and egovernance in the Seventh Five Year Plan. The sector has been benefited from growing tele-density, rising internet penetration, falling bandwidth costs, and a growing and maturing market for telecom services. The rapid growth in freelance outsourcing has been driven by the ease of setting up operations, growing internet penetration, and limited infrastructure requirements.

Although the ICT sector of Bangladesh has almost all the necessary ingredients for success, there are some lacks in this industry too. Insufficient skills of the labor force, lack of finance available for entrepreneurs in the ICT business, pulling away professionals into other sectors, physical infrastructures, etc. are some of the major challenges for this sub-sector (Raihan, S. and Cheong, D., 2013). Although the contribution of the services to economy is the largest, export in services still remains very low. Figure 2 shows how Bangladesh is lagging behind if compared with export in ICT sector of India.

Figure 1.2: Comparison of ICT service exports (% of service exports, BoP) of Bangladesh and India



Source: World Bank

Though the economic growth of Bangladesh is the result of effort of various stakeholders playing role in the economy, but the key driver of it is government itself. Export policy of Bangladesh helps to keep a trade-friendly environment which allows economic growth to continue through business. Export promotion incentives designed in the export policy continue to play a crucial role, as complementary to the liberalization process. The incentives ensure that exporters are subsidized and investment in export-oriented industries is encouraged. Earlier, the Bangladesh government had a two-year export policy. However, to get a long-term vision, the policy is now being developed for a three-year period.

The latest export policy of Bangladesh has been designed for 2015-2018 period. In this policy, service sector has included the services identified under General Agreement on Trade in Services (GATS) of WTO, such as (1) ICT based activities; (2) Construction business; (3) Health service activities e.g. hospital, clinic and nursing services; (4) Hotel and tourism based services; (5) Consulting Services; (6) Laboratory testing; (7) Photographic activities; (8) Telecommunications; (9) Transport and communication; (10) Warehouse and container services; (11) Banking activities; (12) Legal and professional services; (13) Education service, etc; (14) Security service; (15) Pre-shipment inspection (PSI); and (16) Outsourcing and Indenting services.

The latest export policy of Bangladesh has included 12 highest priority sectors considering their special export potentials. Software and ICTeS is one of the priority sectors. According to the policy paper, best use of ICT will be ensured in the country for the improvement of information communication system, the possibility of setting up marketing centers abroad will be examined, initiatives for establishment of an "IT Village" for export of software will be strengthened, necessary measures will be taken to connect the sub-marine optical fiber cable to the national ICT backbone to facilitate availability of high speed data transmission line, and strengthen the base of the ICT sector regionally, measures will be taken to provide facilities to develop the ICT sector through the ICT Business Promotion Council (IBPC), necessary steps will be taken for country branding through Export Promotion Bureau (EPB) and Bangladesh missions abroad.

Effective planning and regulation will help ICT service trade to grow rapidly in Bangladesh. Different types of complementary policies will also help to maximize the benefits of ICT service export. But the result of a good policy is always subjected to successful implementation of it. Considering issues discussed above, the title of the study has been selected as "Promoting Export of ICT Based Services through the Export Policy of Bangladesh".

1.2 Objectives of the Study

The broad objective of the study is to analyze export policy of Bangladesh related with ICT based service and the overall situation of policy implementation. Under this broad objective the current study has following specific objectives-

- 1. To evaluate the role of export policy of Bangladesh in promoting ICT based service export.
- 2. To find if there is gap between Bangladesh export policy for ICT based service and implementation of the policy.

1.3 Scope of the Study

This study has taken into consideration only the export of services regarding ICT of Bangladesh. Comprising more than two-thirds of the world economy, services are now commonly traded across borders, helped by technological progress and the increased mobility of persons (Cattaneo, O., Engman, M., Saez, S. and Stern, R., 2010). Services can provide an alternative engine of growth, enabling latecomers to development to leapfrog the traditional manufacturing route. Meanwhile, despite strong global growth, services exports continue to make up less than 25% of world exports (International Trade Centre, 2016). The discrepancy between the size of the sector and its importance in exports points to a major untapped potential in services trade. Businesses and governments are often not aware of the opportunities of growing through service trade.

Fisher, A.G.B (1939) introduced the concept of primary, secondary, and tertiary industries. Primary production included agriculture, pastoral production, fishing, forestry, hunting, and mining. Secondary production consisted of manufacturing and construction. Finally, tertiary production was composed of various services. Fisher argued that as income rises demand shifts from the primary to secondary and then to tertiary sectors. As incomes continue to rise, people's needs become less "material" and they begin to demand more services *e.g.* in health, education, entertainment, and many other areas.

The service sector produces intangible goods, some of which are well-known like health and education; and some are quite new e.g. information and modern communications. Producing services tends to require relatively less natural capital and more human capital than producing agricultural or industrial goods. As a result demand has grown for more educated workers, prompting countries to invest more in education which creates an overall benefit to their people. Another benefit of the growing service sector is that by using fewer natural resources than agriculture or industry, it puts less pressure on the local, regional, and global environment. Conserving natural capital and building up human capital may help global development become more environmentally and socially sustainable.

For the past several decades, many countries like China and Malaysia have witnessed strong economic growth and have become successful industrialized countries. But for many years they were stuck in a "middle-income trap". The middle-income trap is generally associated with the notion that countries get stuck in a certain range of income distribution and rarely manage to reach high-income status. To leap from the trap expanding trade in service sector is important for them. Bangladesh is now a lower-middle income country with the Gross National Income (GNI) per capita \$3,790. Bangladesh has the aim to become an upper-middle income country by the year 2021. To achieve this goal, it is required to increase the GNI to \$4,126. For becoming high income country by 2041, it will require to achieve the GNI of \$12,476 or more. This can be possible if the growth rate can be accelerated, which is currently around 7.11 percent. To maintain this positive trend of growth international trade of Bangladesh must be well managed.

The present sound growth rate of Bangladesh can be seen as the result of government's export-oriented growth strategy. Performance of a country's integration into international value chain is largely depended on export policy it has. But even a good policy has no implication until it is successfully implemented to achieve the goal for which it has been formulated. Analysis in current study will allow knowing whether the existing export policy for promoting export of ICT based service has a gap with the implementation functions. For this, it will take into consideration the stakeholder's perceptions and opinions about how far the Export Policy of Bangladesh (2015-2018) has been implemented for successful promotion of ICT based service exports, as well as their opinions about the contents of the policy, and what should be covered for promoting the exports.

Other ICT related policy issues will also be discussed in relation with the Export Policy of Bangladesh (2015-2018), but the content and implementations of those policies are not thoroughly covered here. The main concern of the study is to analyze the role of the Export Policy of Bangladesh (2015-2018) in terms of its contents and the extent of successful implementation for promoting export of ICT based services in Bangladesh.

1.4 Rationale of the Study

International trade and economic development are long debated issue. There are also various dimension of international trade policy reform in the country. The debate is increasing day by day because both the dimension of cause and effect are increasing gradually in the national and international economy (Hossain & Papadopoulou, 2010). Bangladesh economy cannot be out of this debate. Because the country has already integrated its economy with the international market through unilateral and multilateral trade liberalization process since it's born as free country.

In Bangladesh, many researches have been done in the field of relationship between trade liberalization and poverty, impact of trade openness on economic growth, impact of trade policy reform on industrial capacity and employment, trade deficit in the foreign trade, etc.; but, in spite of significant structural transformation and policy changes, there was no significant attempt in Bangladesh to study implementation of export policy for the development of international trade. Moreover, ICT based service export has got very little research attention in Bangladesh. The ability to use ICTs is important for productivity growth and trade in developing countries. But the sector is still underdeveloped in Bangladesh as in many other developing countries, although improvements are visible. It will be worthy to take the views of entrepreneurs of Bangladesh about the export policy to understand the gaps in the policy. The present study is expected to produce knowledge how Bangladesh can grow faster than now in ICT service export.

1.5 Research Questions

To fulfill the objectives the study will try to find answers of the following research questions-

- 1. Is the content of Bangladesh's export policy sufficient to promote export of ICT based services?
- 2. How effectively the export policy (the part which is relevant to export of ICT based services) is being implemented in Bangladesh?

1.6 Methodological Overview

For the present study, a combination of both qualitative and quantitative methods has been used. To understand whether the ICT based service related export policy of Bangladesh is sufficient or not, content analysis of qualitative type has been done. Important contents that have been analyzed include export policy of Bangladesh for 2015-18, ICT policy of Bangladesh, official websites of related government organizations, etc. Qualitative analysis has also been used to examine the performance of the policy and to find gaps with policy implementation. For this

purpose, besides conducting a survey among ICT business entrepreneurs, ten key informants were interviewed in-depth. Key informants were selected from different sectors and they were government officials, entrepreneurs in the ICT business industry, Individual freelancers, startup entrepreneurs, and manager of Bangladesh Association for Software and Information Services (BASIS).

To understand the opinion and views of business entrepreneurs regarding the policy and government initiatives, a survey has been performed with structured questionnaire. There are 1022 companies listed as member of BASIS. Besides, there are 4,500+ registered Software and ITES Companies in Bangladesh. For the purpose of survey the contact email addresses of 250 companies were collected from websites, mostly from BASIS website. A structured survey questionnaire, transcript into 'Google form', was sent to those addresses. Within the deadline of submission total 40 responses were received. A quantitative analysis method has been done to analyze the data obtained from those 40 responses.

Table 1.2: Methodological overview of the study

No.	Purpose	Methods
1	Examining content of Bangladesh's	Qualitative data analysis through content
	export policy.	analysis.
2	Examining the performance of the	Qualitative analysis of in-depth
	policy and gaps with policy	interviews with 10 key informants, and
	implementation.	secondary data.
		Quantitative analysis of data obtained
		from survey with structured
		questionnaire.
3	Understanding the opinion and views	Quantitative analysis of data obtained from
	of stakeholders.	survey with structured questionnaire.

CHAPTER TWO:

LITERATURE REVIEW AND THEORITICAL FRAMEWORK

In this chapter literature review has been done in two distinguished phases. First, published articles of empirical studies, related with present study, have been reviewed to generate ideas from their discussions. Then literature has been reviewed to find competent theory that can be applied for the study. From the theoretical review analytical framework has been framed to facilitate the analytic part of the study.

2.1 Literature Related Empirical Studies

Various studies have been conducted around the world related export of ICT based services, though the number is not quite satisfactory in Bangladesh.

In a report of International Labour Organization (ILO), Raihan, S. and D. Cheong D. (2013) explores the impact and potential of the rise of Bangladesh's ICT exports, its linkages with employment and policies, and actions required for realizing that potential. It analyzed a database created from a survey of 300 ICT firms in Bangladesh and responses from several interviews of stakeholders. The report underlined the need for Bangladesh to consider policy measures for the enhancement of productivity and the competitiveness of ICT enterprises. Their study suggests that under different scenarios relating to ICT export growth there will be positive impacts at the macro, sectarian, and household levels. It also argues that a positive export shock in the ICT sector would lead to a rise in employment not only in the ICT sector, but also in all other sectors in the economy and indirect employment generation would be much higher than direct employment generation.

From the survey data, authors reported that the stakeholders highlighted a need for the formulation of a universal access policy and broadband policy for ensuring equity in IT-based growth and development. To implement these, details of the relevant rules such as the Patent Law, Secrecy Act, Consumer Protection Act, Trade Mark Act, Foreign Exchange Regulation Act, and Income Tax Act should be taken into

consideration so that there is no infringement of rights or violation of existing rules when implementing the ICT Policy. The stakeholders stressed the importance of advertising more vigorously the existing incentives, including fiscal and financial incentives for attracting local investment and foreign direct investment (FDI) in ICT through the Public-Private Partnership (PPP) initiative. The major focus of the country needs to be on export promotion. ICT firms should focus more on marketing activities such as commercial representation, networking, and advertising.

KPMG (2012), a joint team of KPMG India and KPMG Bangladesh, undertook the study to explore the ICT/ICTeS sector in Bangladesh. The team conducted in-person interviews with Bangladesh ICT/ICTeS industry players, government functionaries, trade associations and global ICT services buyer community, which was supported by extensive secondary research. The study illustrates some of the key challenges that still lie ahead. Many domestic business leaders recognize that Bangladeshi outsourcing industry could better market its strengths to the international community. Negative perception about Bangladesh needs to be countered. Government needs to take a holistic approach towards promoting the ICT/ICTeS industry -including investment climate, taxation, remittances, legal framework and flexible working hours.

Islam M. S., Musa, M. and Das, R. K. (2012) analyze the comparative contribution of service sector of Bangladesh with other sectors, the impact of trade liberalization of service sector and to provide the recommendations for development of service sector. It is taken a sample of ten years data of GDP from 2000-01 to 2009-10 for analyzing the comparison of service sector with other sectors (industry and agriculture). The average growth rate of service sector, industry sector, and agriculture sector are found 6.17%, 7.49%, 3.21% respectively. The growth of service sector is more than the agriculture sector but less than the industry sector. They reveal that total trade deficit of service is increasing over the year. The average employments of Agriculture, Industry, and Service to total employment are 58.89%, 12.39% and 25.36% respectively. Authors emphasize for the development of Tourism sector, Software, Transportation and Financial service, Education with quality, etc.

With the passage of time, the globe is being changed from analogue to automation. During last few years Bangladesh showed enormous success in Software and ICT Sector which can enlarge the extent of her service market (BASIS 2010). The current size of Bangladesh ICT Industry and software/ICTeS industry is still smaller compared to the overall economy and the number of population. Over the last few years the industry has been grown considerably and is expected to grow at that rate for some time.

Cali, M., Ellis, K. and Te Velde D.W. (2008) conducted a study focusing on contribution of services to development and the role of trade liberalization and regulation. Authors reviewed the literature on those issues for six service sectors including ICT. The contribution of services to development significant contribution to GDP and job creation, and provides crucial inputs for the rest of the economy, thus having a significant effect on the overall investment climate, which is an essential determinant of growth and development. The service sector accounts for a significant proportion of GDP in most countries, including low-income countries, where it frequently generates over 50% of GDP. The process of development usually coincides with a growing role of services in the economy. Thus, services constitute an increasing percentage of GDP in nearly all developing countries. Trade in services can help create opportunities for countries to expand their outputs of services in sectors where they have a comparative advantage, thus creating jobs, contributing more to GDP and generating foreign exchange. Services exports can be an important part of a developing country's growth strategy. For example India has been capitalizing on a boom in exports of ICTeS as firms have increasingly outsourced certain administrative functions to lower cost countries.

Other complementary policies can also help to maximize the benefits and minimize the risks of service sector liberalization. These vary from sector to sector, and may include: the provision of education and training (e.g. in IT, medicine or languages), that will enable domestic firms as well as individuals to take advantage of service sector export opportunities; mechanisms to enhance spillovers and technological diffusion from foreign export providers; or a strategy to manage the temporary

migration of individuals abroad to provide a service, to facilitate greater remittances and maximize the chance of return with enhanced skills, etc.

ICT also enable trade in ICTeS through off-shoring. The off shoring of service occurs when activities of companies are transferred to other countries through outsourcing or FDI. Call centers and online programmers are key examples of the off-shoring of ICTeS to countries such as India and South Africa. Off-shoring of services has begun to bring great benefits and new opportunities to those developing countries that have appropriate ICT and skills, including those that are landlocked. A country can be benefitted from an appropriate regulatory framework embedded in an overall strategy that enhances technological development and supports innovation. Different types of complementary policy help maximize the benefits of regulatory reform in the ICT sector. Key complementary policies to promote off-shoring and enhance the role of regulatory reform include promoting a high-quality and appropriate skills base.

Bajwa G. S. (2003) tries to bring out the role of Indian state as an actor in responding to the ICT policy. Response means 'role' played by the Indian state towards putting policy statements into practice. The underlying intent of the theories is the belief that information would be the prime mover in information or knowledge societies. It is strongly believed that ICT will propel India into the league of developed nations. At the same time they raise some important issues and questions: What are the broad objectives of major policies on ICT for development? To what extent policies formulated at the highest decision-making bodies find their way for implementation? Is there a gap between 'Theory' and 'Practice'? To what extent ICT policies influenced different stakeholders in the society? And what kinds of responses have been generated by different policies? The aim focus of the study is on the responses of different stakeholders especially the state with respect to the ICT policies and discourse.

Jensen, J. B. (2011) identifies the significant share of services that US multinational firms can trade internationally and analyzes the impact trade in services has on US firms and US workers. He finds that, in spite of US comparative advantage in service

activities, service firms' export participation lags manufacturing firms. Jensen evaluates the impediments to services trade and finds evidence that there is considerable room for liberalization- especially among the large, fast-growing developing economies. He argues that the United States should not fear trade in services. It should be pushing aggressively for services trade liberalization. Because other advanced economies have similar comparative advantage in service, the United States should make common cause with the European Union and other advanced economies to encourage the large, fast-growing developing economies to liberalize their service sectors through multilateral negotiations in the General Agreement on Trade in Services and the Government Procurement Agreement. Jensen notes that the coming global infrastructure building boom is of historic proportions and provides an enormous opportunity for US service firms if the proper policies are in place. Increased trade in services might help rebalance the global economy, and both developed and developing economies would benefit from the productivity-enhancing reallocation brought by increased trade in services.

Rondeau, F. and Roudaut, N. (2014) studied exports of 64 developing countries to understand the influence of trade diversification on GDP per capita growth. They found that the effect of product diversification is twice as large as the effect of geographic diversification. They argued that to implement economic growth, developing countries should extend exports of new products rather than exports to new partners.

Table 2.1 summarizes major findings from various studies that have been reviewed in this section.

Table 2.1: Summary of literature from empirical study

Researcher/ Major Findings		Major Findings	Comments
Organizat	ion		
Raihan,	S.	ICT export growth	Importance of ICT
and	D.	- has positive impacts on the macro,	service export for the
Cheong	D.	sectorial, and household level	country's
(2013)		- lead to a rise in employment also in all	development is

	other sectors in the economy	perceived. Present
	Stakeholders stressed	study has
	- for considering relevant rules such as the	stakeholder's survey
	Patent Law, Secrecy Act, Consumer	too. Stakeholder's
	Protection Act, Trade Mark Act, Foreign	opinions may be
	Exchange Regulation Act	compared and
	- the importance of advertising for	crosschecked.
	attracting local investment and FDI in IT	
KPMG	Government needs to take a holistic	This study reveals
(2012)	approach towards promoting the ICT/ICTeS	importance of
	industry -including investment climate,	supporting policies.
	taxation, remittances, legal framework	Relevant policy is the
		independent variable
		of the current study.
Islam M. S.,	• Development of Tourism sector, Software,	ICT service industry is
Musa, M.	Transportation and Financial service,	to grow more in
and Das, R.	Education with quality, etc. should be	future. The current
K. (2012)	emphasized	study analyses policy
	Over the last few years the industry has	level to find way to
	been grown considerably and is expected	allow the industry so.
	to grow at that rate for some time.	
Cali, M.,	Services exports can be an important part	What are the relevant
Ellis, K. and	of a developing country's growth strategy.	policies to support ICT
Te Velde	Different types of complementary policy	service export policy,
D.W. (2008)	help maximize the benefits of regulatory	will be explored
	reform in the ICT sector.	through the current
		study.
Bajwa G. S.	The structure and orientation of ICT policy	The study will discuss
(2003)	initiatives, in a large measure are directed	initiatives, as per the
	towards market-oriented demands of	policy for
	globalization.	strengthening export

		of ICT based services
		through establishing
		"IT Villages".
Jensen, J. B.	• In spite of US comparative advantage in	Bangladesh is also
(2011)	service activities, service firms' export	largely dependent on
	participation lags manufacturing firms.	manufacturing firms
	• Both developed and developing	for its export basket.
	economies would benefit from the	Bangladesh has the
	productivity-enhancing reallocation by	comparative
	increased trade in services.	advantage of
		producing ICT service
		and can be
		capitalized.
Rondeau, F.	To implement economic growth, developing	The research is
and	countries should extend exports of new	focused on products
Roudaut, N.	products rather than exports to new	to be traded. ICT
(2014)	partners.	service will help to
		ensure export
		diversification.

2.2 Theoretical Discussions

To understand the role of export policy in promoting ICT based service export, the current study is focused on implementation of the policy. Implementation literally means carrying out, accomplishing, fulfilling, producing or completing a given task. According to founding fathers of implementation, Pressman and Wildavsky (1984), policy implementation may be viewed as a process of interaction between the setting of goals and actions geared to achieve them. O'Toole (2003) defines policy implementation as what develops between the establishment of an apparent intention on the part of government to do something or stop doing something and the ultimate impact of world of actions. More concisely, he remarks that policy implementation refers to the connection between the expression of governmental intention and actual result. As part of policy cycle, policy implementation concerns how governments put policies into effect.

There have been many attempts to understand, explain, and analyze the relationship between policy and implementation. Although a multitude of case studies with varying conceptual frameworks exist, there is no generally accepted theory to provide guidance to research on policy implementation (Carr Copeland and Wexler, 2015). Two schools of thought developed as to the most effective method for studying and describing implementation- top-down and bottom-up.

Top-down theorists see policy designers as the central actors and concentrate their attention on factors that can be manipulated at the central level. Bottom-up theorists emphasize target groups and service deliverers, arguing policy really is made at the local level. Matland, R.E (1995) stated that most reviewers now agree that some convergence of these two perspectives, tying the macro level variables of the top-down models to the micro level variables "bottom-uppers" consider, is necessary for the field to develop. According to him, top-down model is traditional and based on the public administration tradition. It presents an accurate description of the implementation process when policy is clear and conflict is low.

2.2.1 Mazmanian and Sabatier's Model

In the most fully developed top-down model, Mazmanian and Sabatier (1989) present three general sets of factors (tractability of the problem, ability of statute to structure implementation, and non-statutory variables affecting implementation) which they argue determine the probability of successful implementation. These factors then are developed into a set of sixteen independent variables that are hypothesized to influence goal compliance. Seven variables related to "ability of the statute to structure implementation" are (1) clear, consistent objectives; (2) adequate causal theory; (3) financial resources; (4) hierarchical integration within and among implementing institutions; (5) decision rules of implementing agencies; (6) recruitment of implementing officials; (7) formal access by outsiders. Four variables are related to "tractability of the problem"- (1) technical difficulties; (2) diversity of target group behavior; (3) target group as a percent of population; and (4) extent of behavioral change. Finally, five variables are "non-statutory variables affecting implementation", which are (1) socioeconomic conditions and technology; (2) public support; (3) attitudes and resources of constituency groups; (4) support from sovereigns; and (5) commitment and leadership skill of implementing officials.

The 16 variables in the model are then linked to five dependent variables: (1) Outputs of implementing agencies; (2) Compliance of target groups; (3) Actual impacts of policy output; (4) Perceived impacts of policy outputs and (5) Major revision in the statute. These variables are then distilled into six conditions of effective implementation:

- 1. The enabling legislation or other legal directive should have clear and consistent objectives and provide substantive criteria for resolving conflict.
- 2. The enabling legislation must incorporate a sound theory identifying the principal factors and causal linkages affecting policy objectives.
- 3. The enabling legislation must structure the implementation process so as to maximize the probability that implementing officials and target groups will perform as desired.
- 4. The leaders of the implementing agency must possess substantial managerial and political skill.

- 5. The programme must be supported by organized constituency groups and by a few key legislators throughout the implementation.
- 6. The relative priority of the objectives should not be undermined over time by the emergence of conflicting public policies.

For Mazmanian and Sabatier clear and consistent policy objectives; a sound causal theory; structuring of implementation during policy formulation; capacity at the implementation level; local and legislative support throughout the implementation; and avoiding conflicting public policies along the way are important for ensuring effective implementation.

2.2.2 Van Horn and Van Meter Model

It assumes three distinct areas of policy implementation studies: Policy, an intermediate area, Performance. In the first two areas clusters of variables are suggested: policy standards; policy resources; communications; enforcement; implementing agency; political conditions; economic and social conditions; and the dispositions of implementers. The model recognizes the inter-relationships that exist between the three areas.

2.3 Analytical Framework

On the basis of theoretical discussions and considering objectives of the research, implementation of export policy related with ICT based service export is the dependent variable for the study. Dependent and independent variables that have been identified for this study have been listed in Table 2.2.

Table 2.2: List of variables identified for the current study

Dependent Variable	Independent Variables and Indicators	
Implementation of policy	 Policy standard and objectives 	
- number of goals achieved	- clarity of the objectives	
- number of goals not	- conceiving by stakeholders	
achieved	 Allocation of resources 	

-	gap	between	policy	and
	practices			

- financial allocation in annual budget
- money spent in previous years
- Political environment
 - level of political will
 - level of support from the political leaders
- Characteristics of implementing agencies
 - level of technical skill of implementers
- Coherence with related laws and policies
 - number of facilitating laws/policies
 - number of obstructing laws/policies
- Stakeholders' participation
 - number of private organizations being engaged

Effective implementation depends on the nature of policy to be carried out and the specific factors contributing to the realization or non-realization of policy objectives. Funds are needed for implementation and inadequate fund makes reaching policy objectives difficult. Political environment are important for creating the relationship between objectives and results. The competence and size of an agency's staff, degree of hierarchical control of processes within implementing agencies are also important factors affecting successful implementation. Implementing agencies may require technical advice and assistance that can be achieved through communication and coordination. If there is any other policy conflicting with the policy under consideration, its implementation is obstructed. Finally, stakeholder's motivation and their participation matter as the policy under consideration of the study is to be implemented through various stakeholders.

CHAPTER THREE:

ICT SERVICE SECTOR IN BANGLADESH

Although the economy has become increasingly open in recent years, total merchandise exports have remained limited, averaging 20.2% of GDP since 2013. Exports remain highly concentrated both in terms of products and destinations, which carries some risk, with readymade-garment (RMG) exports to the EU and the U.S. the current mainstay. However, as a reputable low-cost producer of garments, Bangladesh has gained global market share in recent years. Bangladesh has outlined a vision of becoming a middle-income country by 2021. This would require it to grow by at least 8% per year, compared to the current 6%-7%, driven by accelerated growth in the industrial and services sectors.

Services represent half of Bangladesh's GDP (2010) and have been the fastest growing component of the economy in the last decade (average growth rate per year 6%-7%). The services sector employs about one-third of the labor force, mainly in trade, hotel and restaurant services. Leading services include: wholesale and retail services; telecommunications; transport; and social and personnel services. The services sector is expected to maintain its fast growth in the coming years as the Government continues to focus on developing services trade, in particular the country's outsourcing capabilities.

Although services constitute nearly half of the country's GDP, services exports represent less than 10% of Bangladeshi exports, despite being included in chapter 6 of the Export Policy, 2015-18. EPB has been tasked with preparing a comprehensive plan of action for increasing services exports and maintaining export statistics for the services sector. Based on Bangladesh Bank statistics, services imports are approximately twice the size of services exports. (WTO, 2012)

Bangladesh's services exports have doubled during 2005 and 2010, from USD 1,249 million in 2005 to around USD 2.4 billion in 2010. The contribution of traditional services, such as transport and travel, has declined, while that of other services, in

particular communication, other business services, and, to some extent, computer and information services, has grown over this period. Government services, however, dominate, constituting almost half of other services exports. Thus the service export data for the past decade suggest that Bangladesh is increasingly moving towards new services and indicates the role of two main factors, policy reforms and liberalization and the country's comparative advantage in labor-based The growth in other business services and computer and information services reflects Bangladesh's large pool of manpower and the growing opportunities in emerging services to export skill-intensive and professional services. (Raihan, S. and D. Cheong D., 2013)

Table 3.1: Value and Share of Exports and Imports for different Service Subsectors

	2005				2010				2012/13	
	Export		Import		Export		Import		Export	Import
	value (USD million)	Share (%)	value (USD million)	Share (%)	value (USD million)	Share (%)	value (USD million)	Share (%)	Total = 2 786.48 (USD million)	Total = 5 965.61 (USD million)
Total services	1249.00	100.00	2206.66	100.00	2418.17	100.00	4395.55	100.00	Share (%)	Share (%)
Transport	113.01	9.05	1544.73	70.00	173.59	7.18	3440.64	78.28	16.22	74.40
Travel	70.01	5.61	136.27	6.18	81.22	3.36	260.60	5.93	3.80	5.35
Construction	14.16	1.13	1.07	0.05	6.91	0.29	6.29	0.14	1.42	0.40
Insurance	5.03	0.40	150.65	6.83	6.84	0.28	26.32	0.60	0.42	0.52
Financial services	17.97	1.44	13.27	0.60	40.84	1.69	45.35	1.03	2.19	6.98
Computer, information and communications	42.62	3.41	24.88	1.12	315.42	13.04	25.65	0.58	12.36	0.46
Royalties and license fees	0.26	0.02	2.75	0.12	0.52	0.02	17.64	0.40	0.02	0.18
Other business services	210.01	16.81	137.72	6.24	582.15	24.07	305.70	6.95	11.19	5.50
Personal, cultural and recreational services	1.14	0.09	0.03	0	1.93	0.08	0.13	0	0.17	0.12

Government services	774.79	62.03	195.30	8.85	1208.76	49.99	267.25	6.08	50.42	6.05
Memo item: Commercial services	474.21	37.97	2011.36	91.15	1209.41	50.01	4128.30	93.92	Others=	Others= 0.04

Source: UNCTADSTAT

3.1 ICT Based Services in Bangladesh

Bangladesh's ICT subsector has grown from a negligible size industry to one that was worth USD 350 million in annual revenues in 2009, which in FY 2015-16 amounted to USD 650 million. ICT based service export nearly trebling from a little less than USD 13 million in 2005 reached to USD 35 million in 2009 and further to USD 70.8 million in 2012, while the exports amounted to USD 151.83 million in 2016. ICT service and non-voice ICTeS constitute the bulk of these exports.

Exports (in million USD) 160 140 120 100 80 60 40 20 0 2008-09 2010-11 2012-13 2009-10 2011-12 2013-14 2014-15 2015-16

Figure 3.1: Export Trends of ICT Service in Recent Years

Source: BASIS

According to BASIS industry statistics, there currently are over 4,500 ICT and ICTeS companies registered in Bangladesh. The total industry turnover is estimated around 800 million USD. Bangladesh has climbed up 24 places in United Nations E-Government Development Index. The country has secured an impression leap upward to the 124th position in 2016 from 148th in 2014. At present, Bangladesh is

exporting ICT based services to more than 70 countries of the world. The main export markets are North America (accounting for 39.33 per cent), Followed by Western Europe (accounting for 31.74 percent), and Asia Pacific (19.14 percent). Figure 3.2 shows the percentage of markets of ICT based services from Bangladesh to different geographical areas.

Top Export Destinations

45
40
35
30
25
20
15
10
North America Western Europe Asia Pacific Latin America Others

Figure 3.2: Top destinations of ICT service export

Source: BASIS

3.2 Export Policy and Other ICT Related Policy Issues

In June 1997 the GoB recognized ICT as a sector that can make an important development impact. Committee of Export of Software and Data Processing Services was appointed to look into barriers and opportunities to export software from Bangladesh. The committee recommended the government in the short term to support the ICT industry with tax holidays and specific exemptions, to provide the necessary authority to the Bangladesh Computer Council (BCC) to function as the primary facilitator, to review computer science curricula, and to prepare over 1,000 new trainers for national universities. For the medium term the committee recommended the creation of a 'Market Promotion Fund' to support installation of fiber optic cables and to coordinate setting up a communication hub in Bangladesh. (Ministry of Commerce, GoB, 1997)

In 2009 the National ICT Policy was broadly reformulated across areas including education, science and technology, infrastructural development, employment generation, private sector development, agriculture, health and nutrition. The GoB included an e-governance vision and promotion program for the ICT sector in the sixth Five Year Plan. In the seventh Five Year Plan the targets are spending on Research and Development to constitute 1% of GDP; increase proportion of primary government schools with a computer laboratory; and improve teledensity to 100%. This vision should support the aim of delivering significant gains in terms of productivity and employment for both domestic as well as foreign investors, including the progress with poverty reduction, income inequality and lagging regions during the Sixth Five year Plan. The GoB also initiated 'Digital Bangladesh' intending to set up infrastructure for enhanced connectivity. In addition to policy development the GoB is maintaining close relationships with industry associations such as BASIS, BCS and BCC.

Export Policy: The latest export policy of Bangladesh has been designed for 2015-2018 period. The latest export policy of Bangladesh has included 12 highest priority sectors considering their special export potentials. Software and ICTeS is one of the priority sectors. According to the policy paper, best use of ICT will be ensured in the country for the improvement of information communication system, the possibility of setting up marketing centers abroad will be examined, initiatives for establishment of an "IT Village" for export of software will be strengthened, necessary measures will be taken to connect the sub-marine optical fiber cable to the national ICT backbone to facilitate availability of high speed data transmission line, and strengthen the base of the ICT sector regionally, measures will be taken to provide facilities to develop the ICT sector through the IBPC, necessary steps will be taken for country branding through EPB and Bangladesh missions abroad.

National ICT Policy: For the development of ICT sector within the framework of overall national development, the Government has approved the National ICT Policy in October 2002. The vision of this policy is to build an ICT-driven nation comprising of knowledge-based society. In view of this, a country-wide ICT-infrastructure will be developed to ensure access to information by every citizen to facilitate

empowerment of people and enhance democratic values and norms for sustainable economic development by using the infrastructure for human resources development, governance, e-commerce, banking, public utility services and all sorts of on-line ICTeS. Some important policy statements of national ICT policy are-

- i. Take up programmes to develop quality ICT professionals and skilled personnel to ensure success in the global software and ICTeS market.
- ii. National Information Infrastructure will be developed and it will be directly connected to Global Information Infrastructure to sell software and provide ICTeS to the world-market through involvement of both the public and private sectors.
- iii. The EPB and Commercial wing of Bangladesh Missions abroad shall take vigorous steps to identify and explore markets for export of software, data entry services and ICTeS from Bangladesh, including outsourcing opportunities.
- iv. An annual target of export of software, data entry and ICTeS shall be revised periodically to match the growth of the market.
- v. Software Technology Park with dedicated and advanced data communication facilities shall be established and software development and export companies will be encouraged to set up workspace in those parks at preferential terms.

Intellectual Property Rights (Copyright) Policy: To help the ICT sector flourish in the country, there is a need for an effective legal framework. Timely and suitable legal reforms can create an ICT-friendly legal environment. Such an environment will help this sector grow by attracting investment. In order to create such a legal environment, the amendment of the Copyright Act 2000 incorporating issues related to ICT is in the process of finalization.

Law on Information Technology: To create a smooth environment for e-Commerce and to safeguard the dealings over the net and to check the threat to computer communication, the government has drafted The Digital Security Law, which are in the process of enactment by the Parliament. The Information Technology (Electronic

Transaction) Act and The Digital Security Law will provide a legal framework that recognizes digital signatures and other electronic documents and have enough provisions to check cyber-crimes, which are not covered by any existing law of the land. The draft has been made based on the Model Law on E-commerce framed in 1996 by the United Nations Commission on International Trade Law (UNICITRAL).

ICT Incubation Centre (STP): In order to encourage startup companies in software/ICTeS development and export, the government has set up an ICT Incubation Centre at a rented space of 68,000 sq. ft. in the heart of Dhaka City. At present, about 48 IT/software related companies have set up operations in this facility. The facility has been provided with 24-hour power supply and internet gateway facility from the Development of Infrastructure for ICT Applications Project of BCC.

Software Technology Park in Janata Tower: Sajeeb Wazed Joy, information and communication technology (ICT) adviser to Prime Minister Sheikh Hasina, inaugurated the park, located at Dhaka's Karwan Bazar. The 60,000 square feet spaced software park will consist of IT firms. Already space has been allotted to the best 10 startups companies after screening for 1 year with necessary seed fund and overall cooperation. Rest of the best 40 companies have been given chance to use the space for 1 year as per their demand and necessity with overall cooperation. Also, currently 16 companies are conducting their activities there. In future, a floor in all Hi-tech Cities/ IT Parks/ Technology parks shall be allotted to the startups.

Sheikh Hasina Software Technology Park in Jessore: Prime Minister Sheikh Hasina has formally inaugurated the newly-built Sheikh Hasina Software Park in Jessore on 10 December, 2017, opening a new horizon of potentiality in the country's ICT sector. Construction work on the project began on 232,000 sq ft of land in Bejpura's Shankarpur area on April, 2014. In addition to the 15-storey main building, a 12-storey dormitory was also constructed at the site. The dormitory features a gym, a convention centre and underground parking. A 33KVA power sub-station was built to meet the power needs. The cost of the project is Tk 3.05 billion. Software development, call centre services, freelancing and research and development work

will be conducted at the park. The park will create jobs for 5,000 young people in the ten districts of the Khulna division. Fifty-five companies, including two from Japan, have been allocated space inside the park. An entire floor has been allocated for young start-up companies free of charge. The government hopes the park will play a pivotal role in achieving the \$5 billion in ICT sector exports it hopes to achieve by 2021.

The IDEA Project: To implement new ideas, Bangladesh ICT Ministry has taken a project called "Innovation, Design & Entrepreneurship (IDEA) Project". Along with BASIS and World Bank, this "IDEA Project" aims to aims to provide different facilities like funding, mentorship and office space to implement upcoming extraordinary business ideas. It is targeted to create the new products, and services by assisting the information-technology based innovative, creative youths via seed fund and venture capital and through the research and development. The implementation of the project will require the expenditure of TK. 229.74 crores. The "IDEA Project" will work on bringing the startup, established entrepreneur, researcher, government officer, business leader, consultant, students and others under the single umbrella.

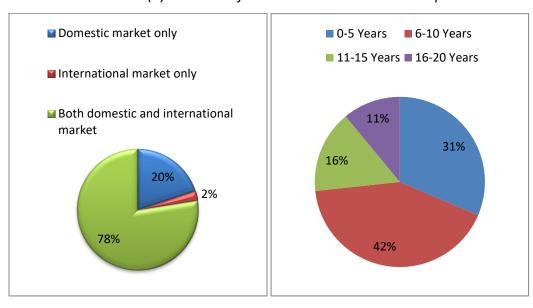
CHAPTER: FOUR

FINDINGS AND DISCUSSIONS

4.1 Export of ICT/ICT enabled services from Bangladesh

Among the 40 companies, 20% of the companies are domestic market based, 2% (1 Company) operate for international market only and the remaining 78% operates both in domestic and international market (Figure 4.1.a). Domestic market for ICT/ICT enabled services is dominated by custom application development. Few companies are doing implementation and customization of foreign products, graphics and work in other domains. Size of domestic market is small due to limited government procurement. Private corporate business segment has also not yet reached significant level to generate enough cash flow for the total number of ICT enterprises. Major export markets for the companies include USA, Japan, UK, Denmark, Sweden, Norway, Netherlands, Germany, Australia, Saudi Arabia and UAE.

Figure 4.1: Percentage of surveyed companies (a) Operating in international and domestic market and (b) Duration of their business in ICT based export services



(a) Market of operation (n=40)

(b) Years in export market (n=32)

Among the surveyed companies, 73% have started exporting ICT based services within the last ten years, indicating that the Bangladesh software and ICTeS industries have started to be focused by the overseas investors in this time (Figure 4.1.b). This growth is expected to continue which is supported by good software export trends and large demand for ICT automation in domestic market. In recent years, a very strong trend of freelancing has emerged where a lot of young professionals are serving overseas clients. These people do not own registered enterprises, they mainly work from home.

4.2 Types of services provided

The ICT based service market is also dominated by software development and website services. Survey shows 85% of the companies are involved in software development whereas website services are provided by 70% of the surveyed companies. Other important services that are provided are engineering services, research and development, content development, data entry, ICT infrastructure, etc. At this moment only 25% of the companies are providing call center services which is expected to be increased in coming years.

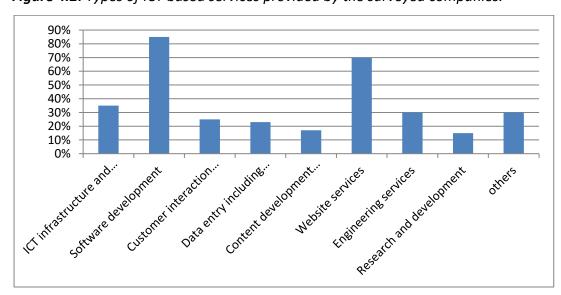


Figure 4.2: Types of ICT based services provided by the surveyed companies.

Number of Respondents=40

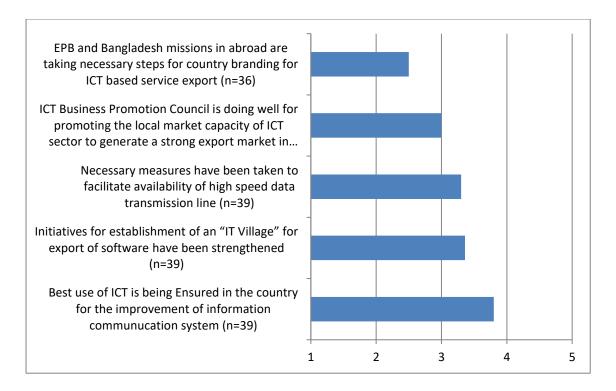
Most of the software exporting companies is mainly involved in small to midsized custom application development, though industry specific matured products are very few. There are some companies who work as direct offshore development center (ODC) for an overseas ICT company. Another type is general software development service providers working on relatively mid-level of technology/domain knowledge expertise and serving clients of different countries of different nature.

It is believed that readiness of Bangladesh for ICT export is more pertinent for ICTeS than for software exports. The required skill level for exporting ICTeS is generally lower in some ICTeS areas such as graphics, engineering drawing, customer support, accounting etc. Also, this sector has more scope for employment creation. There are now a few successes in the fields of Computer Aided Design (CAD), engineering/architectural drawing conversion, and accounting back office.

4.3 Implementation of policy: Goals set in export policy

Five specific goals have been declared in the export policy for 2015-2018. If these goals have been achieved the key beneficiary would be the entrepreneurs of ICT sectors. So, the study has tried to find the advancements on the way to those goals from the perception of the entrepreneurs. From the mean score of agreement/disagreement regarding achieving the goals, the figure 4.3 shows that policy implementation is lagging behind in generating strong export market in global premises, taking necessary steps by EPB and foreign missions for country branding, and establishing IT villages in the country. But the respondents are to some extent happy with availability of high speed data transmission line and improvement of information communication system through best use of ICT.

Figure 4.3: Respondent's perception regarding achievement of the goals set in export policy for promoting ICT service export.

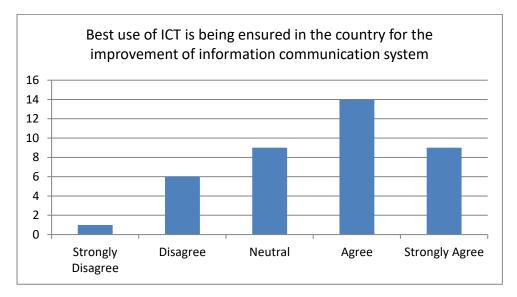


(Strongly disagree = 1.0, disagree = 2.0, neutral = 3.0, agree = 4.0, strongly agree = 5.0)

4.3.1 Improvement of information and communication system

Figure 4.4 shows that a good number of respondents agree about ensuring the best use of ICT in the country for the improvement of information and communication system.

Figure 4.4: Respondent's agreement/disagreement about the statement "Best use of ICT is being ensured in the country for the improvement of information communication system"



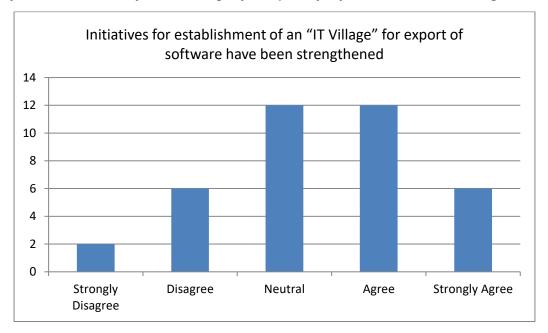
Number of Respondents= 39

Access to Information (a2i) program under Prime Minister's Office has strategic priorities of 'Digital Bangladesh'. To achieve the expected impact of Digital Bangladesh, one of the identified outcome areas is boosting ICT as an export oriented sector to earn foreign currency and generate employment. M-banking and electronic payments as well as electronic business transactions are but a few operational priorities in this regard.

4.3.2 Establishment of an "IT Village"

Figure 4.5 shows respondent's agreement/disagreement about the statement "Initiatives for establishment of an "IT Village" for export of software have been strengthened".

Figure 4.5: Respondent's agreement/disagreement about the statement "Initiatives for establishment of an "IT Village" for export of software have been strengthened"



Number of Respondents=38

The IT village idea stagnated for a while but recently, the govt. has engaged effort to set some of these villages. Bangladesh Hi-Tech Park Authority (BHTPA) is responsible for the establishment and expansion along with management, operation and development of 'IT villages' within the country. BHTPA was established in 2010 as one of the key driving forces for realizing the goals of Vision 2021 by creating employment opportunities in ICT/ICTeS sector. Kaliakoir Bangabandhu Hi-Tech City, Sheikh Hasina Software Technology (IT) Park in Jassore, Sylhet Hi-Tech Park, Mohakhali IT Village, Janata Tower Software Technology Park, Sheikh Kamal IT Training and Incubation Centers in 7 regions of the country, It Business Incubator in CUET and 12 IT Park Establishment project at different parts of the country are important and priority projects for development of IT sector as well as industrialization of Bangladesh.

The major objectives of establishing such IT villages are (i) to create world-class business environment for establishing ICT and other knowledge-based Hi-Tech industries in the parks; (ii) to help develop sustainable technology and firm-level innovation; and (iii) to provide capacity building support for Hi-Tech Park related

institutions, private sector ICT/ICTeS companies, ICT/ICTeS association members, skills development training, Freelancers training enabling improved and enhanced business environment with increased opportunities for growth.

Kaliakair Bangabandhu Hi- Tech City: It was the first initiative taken by the government for establishing IT Park. Later on, the Kaliakoir hi-tech park has been renamed as Bangabandhu hi-tech city as a mark of respect to Father of the Nation Bangabandhu Sheikh Mujibur Rahman. Its construction work is rapidly in progress on 355 acres of land in Kaliakair upazilla of Gazipur district which is 40 km. north from Dhaka city. It will be considered as specialized zone to attract investor especially foreign investors where they could utilize vast potential of young educated and technically skilled work force. It is stated that on completion of the project, there will be employment opportunities of 70,000 people.

Two developer firms have been appointed dividing into five blocks for development of infrastructure under Public Private Partnership (PPP). Summit Technopolis Ltd. Is doing the development work of block no. 2 and 5; while Fiber at Home Consortium Bangladesh Technocity Ltd. is doing the infrastructure development work of block-3. A memorandum of understanding has already been signed by the Information and Communication Division with a Sri Lankan firm named Oasis and Al Razi Group of Saudi Arabia.

Sheikh Hasina Software Technology Park in Jessore: Prime Minister Sheikh Hasina has formally inaugurated the newly-built Sheikh Hasina Software Park in Jessore on 10 December, 2017, opening a new horizon of potentiality in the country's ICT sector. The cost of the project is Tk 3.05 billion. Software development, call centre services, freelancing and research and development work will be conducted at the park. The park will create jobs for 5,000 young people in the ten districts of the Khulna division. The government hopes the park will play a pivotal role in achieving the \$5 billion in ICT sector exports it hopes to achieve by 2021.

Mohakhali IT Village: Mohakhali IT Village is another important project for BHTPA.

RFP has been issued to responsive developer to establish Mohakhali IT Village under

PPP Model on 47 acres of land at Mohakhali, Dhaka. This park is located in the

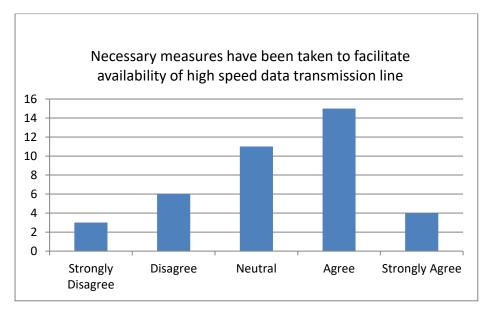
prime location of the capital city and well connected to other places by road, rail and air.

Bangabandhu Silicon City in Rajshahi: Government has allocated 31.62 acres of land to establish a Hi-Tech Park in Rajshahi in the North-Western region of Bangladesh, named Bangabandhu Silicon City. TK. 238.70 crore Has been estimated for the project. This will be implemented by 2019.

Sylhet Electronic City: Hi-Tech Park named Sylhet Electronic City is going to be established in Companijong upazilla under Sylhet district. Government has allocated 162 acres which is only 12 km away from the International Airport. Land development and electricity line from two feeders is establishing under Support to Development of KHTP.

4.3.3 High speed data transmission line

Figure 4.6: Respondent's agreement/disagreement about the statement "Necessary measures have been taken to facilitate availability of high speed data transmission line"



Number of Respondents=39

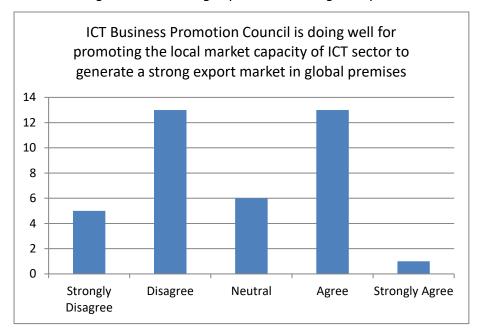
Bangladesh was connected to the information super highway through submarine cable in 2006. The Info Sarkar-1 and 2 projects by BTCL have completed the installation of internet connection to district and upazila levels. Now Info Sarkar-3 Project has been taken, whereby 2600 unions will be taken under the connection of the fibre optical cable. This will establish the national high-speed data backbone. After this high-speed national data backbone is completed, a flurry of ICTeS and related business activities will happen all over Bangladesh. But it is believed that although network is being established but the network ability and speed is poor. For this more extended monitoring is needed by the govt. to facilitate this growth. If this growth is left to the private sector, then Bangladesh will ultimately lose as connectivity and infrastructure should ideally be provided by the government in the cities of today and tomorrow.

4.3.4 ICT Business Promotion Council (IBPC)

One of the reasons for which growth of export of ICT industry is below the expected levels, is absence of government level initiatives in promoting country brand. National export policy adopted the strategy for formation of the product based Business Promotion Councils, and implementation of this strategy lead to form IBPC under the auspices of the Commerce Ministry in the year 2003. The prime objective of forming the Council is to promote the sector to achieve competency in the local and global context as well as to help the industry building capacities in the fields of human resources and acquiring technologies.

The Council bears the testimony of having partnership between the private sector and the government under Companies Act, 1994 as a limited company. Since its inception in 2003, IBPC is working hand on hand with the industry for building capacity in the fields of knowledge acquiring and dissemination, quality and productivity improvement through human recourses development, awareness building, sending market promotion teams & delegations abroad, organizing ICT fairs at home, monitoring issues related to productivity, quality, compliance, technology trends etc. Besides, IBPC have several training and awareness programs aimed at domestic capacity building of the industry.

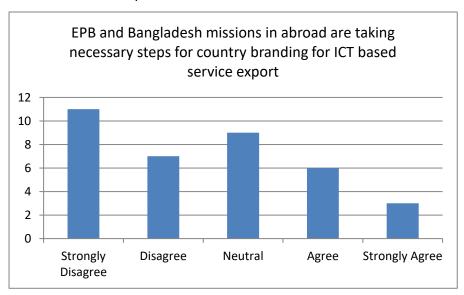
Figure 4.7: Respondent's agreement/disagreement about the statement "ICT Business Promotion Council is doing well for promoting the local market capacity of ICT sector to generate a strong export market in global premises"



Number of Respondents=39

4.3.5 Country branding for ICT based service export

Figure 4.8: Respondent's agreement/disagreement about the statement "EPB and Bangladesh missions in abroad are taking necessary steps for country branding for ICT based service export"



Number of Respondents=36

The govt. is perhaps making some in roads, but ICT trained govt. officials must play a role in foreign embassies. There is a need to setup govt. sponsored centers initially overseas that ICT firm can easily access and run meetings overseas without paying too much. The govt. can create some funds quickly and show its sense of urgency. Experts agree that the govt. is trying to be active in this domain. NRBs can have a pivotal role too. People of Bangladeshi community working in the industry can help support in bringing necessary strategic, marketing and financial support for their backward linkage support in Bangladesh.

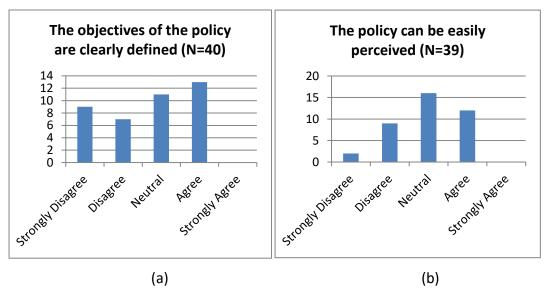
4.4. Independent variables

Among the variables that affect policy implementation, like policy standard, financial allocation, political environment, competency of implementing agencies, coherence with related laws and policies, and stakeholder's participation will be discussed in this section.

4.4.1 Policy standard

Policy standard is very important factor playing role in implementation of the policy. A well formulated policy should be easily perceived by the implementer as well as other stakeholders. Objectives of the policy should be clearly depicted in a good policy paper. Figure 4.9 shows that respondents of the survey didn't agree that the objectives are clearly defined or the policy is easily perceived. . In a 5-point scale (1 for strongly disagree and 5 for strongly agree) the means of agreement/disagreement are 2.7 and 2.9 respectively.

Figure 4.9: Respondent's agreement/disagreement about the statement (a) "The objectives of the policy are clearly defined" and (b) "The policy can be easily perceived"



4.4.2 Financial allocation

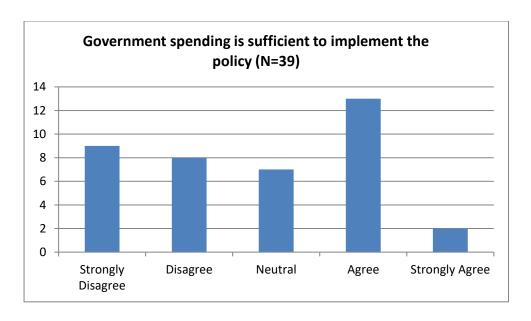
In recent years government has increased the budget for ICT division. Table 4.1 shows the budget of ICT division for 2017-18 and 2018-19 and projection for 2019-20. But 43.6% respondents of the survey are not quite happy with the allocation of money for achieving the goals, while 38.5% of the respondents are agreed that, government spending is sufficient to achieve the goals described in the ICT service related export policy (Figure 4.10).

Table 4.1: Medium term expenditure for ICT Division (Amount in thousand BDT)

Description	Budget 2017-18	Projection		
		2018-19	2019-20	
Revenue	1045,21,75	1150,00,06	269,49,10	
Capital	2928,46,25	3221,04,94	4538,66,90	
Total	3973,68,00	4371,05,00	4808,16,00	

Source: Ministry of Finance

Figure 4.10: Respondent's agreement/disagreement about the statement "Government spending is sufficient to implement the policy"

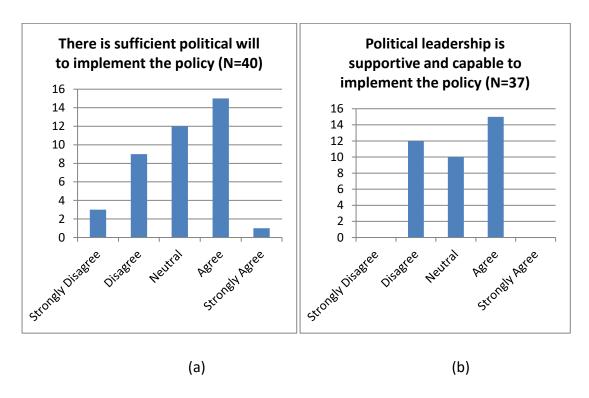


Number of Respondents=39

4.4.3 Political environment

Entrepreneurs, when asked about the political environment for implementing the policy related to ICT service export, showed their satisfaction in some extent. Figure 4.11 shows, 70% of the respondents either opined that there is sufficient political will to implement the policy or they remained neutral in this regard. Regarding the capability and supportiveness of political leaders for implementation of the policy, only 32% of the respondents have perception that leaders don't have those.

Figure 4.11: Respondent's agreement/disagreement about the statement (a) "There is sufficient political will to implement the policy" and (b) "Political leadership is supportive and capable to implement the policy"



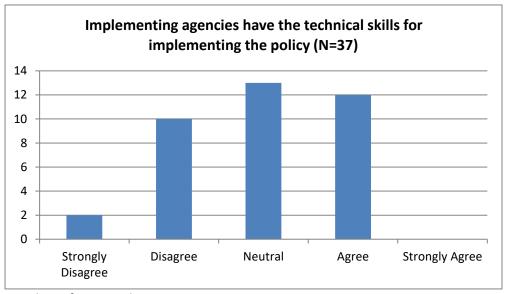
Digital Bangladesh slogan shows the intention of the govt. to turn Bangladesh into a digitally connected Bangladesh. However, it is believed that the govt. is more on the show off side rather than putting forth the real energy to truly channelize the prospects of Bangladesh. Additionally, the Govt. needs to extend its idea of digital connectivity by creating virtual learning possible and introduce legislature to allow digital content, schools, colleges and universities to run. The govt. of Bangladesh must show resolve by bringing MPs to have online community chats and discussions.

4.4.4 Implementing agencies

Respondents showed a mixed perception regarding technical skills of the implementing agencies. 32% of the respondents agreed that implementing agencies have the technical skills that are much needed for successful implementation; on the

other hand 32% said agencies don't have it, whereas 35% respondents remained neutral.

Figure 4.12: Respondent's agreement/disagreement about the statement "Implementing agencies have the technical skills for implementing the policy"

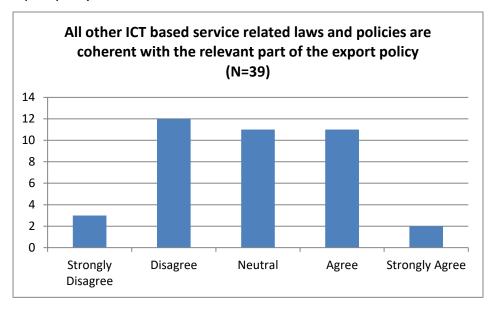


Number of Respondents=37

4.4.5 Coherence with related laws and policies

If other policies and laws are coherent, any policy becomes smoother to be implemented. At present, number of laws and policies of the government are related (e.g. national ICT policy, law on information technology, etc.). Among the respondents, only 33% think that all other ICT based service related laws and policies are coherent and they are supplementing relevant parts of the national export policy (Figure 4.13).

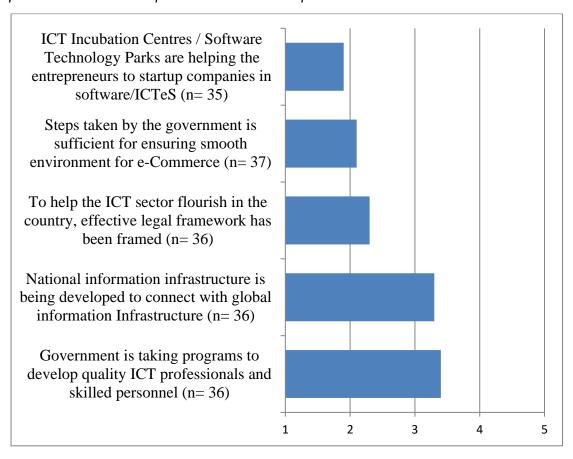
Figure 4.13: Respondent's agreement/disagreement about the statement "All other ICT based service related laws and policies are coherent with the relevant part of the export policy"



Number of Respondents=39

Figure 4.14 shows that entrepreneurs in ICT sector possess good perceptions regarding government initiatives to develop skilled ICT professionals and to connect national information infrastructure with global infrastructure. But government is doing well in formulating effecting legal framework, creating smooth environment for e-commerce or introducing effective ICT incubation system to help entrepreneurs. In fact, the legal framework is very weak. Many experts think that the govt., the judiciary and the lawyers community have very thin knowledge on ICT issues and ICT related legal perspective. The govt. should immediately create standard ICT and legal framework trainings and introduce mandatory courses in this domain. The courses must be vetted at an appropriate international and national level.

Figure 4.14: Respondent's perception regarding achievement of the goals set in other policies with a view to promote ICT service export.



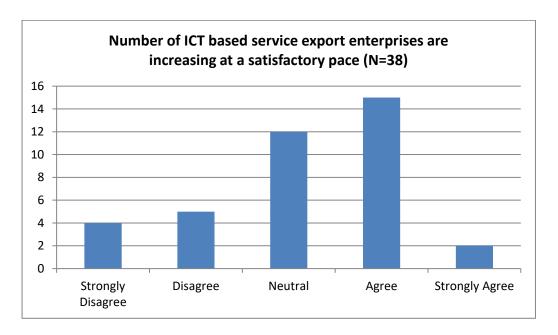
(Strongly disagree = 1.0, disagree = 2.0, neutral = 3.0, agree = 4.0, strongly agree = 5.0)

4.4.6 Stakeholders' participation

A good portion of respondents (45%) think that, number of ICT based service export enterprises are increasing in the industry at a satisfactory pace (Figure 4.15). But some experts opine that we need many more entrepreneurs. According to them the biggest obstacle is the govt. and Bangladesh Bank policy. These institutions have virtually less understanding on the business process of an ICT firm and they do not have any moral, legal or ethical compulsion to gather knowledge on this field and introduce changes in their policies. These new ventures should be strongly promoted so that one such venture turns out to be a billion dollar ICT industry from Bangladesh in no time. The global powerhouses like the google, facebook, yahoo, twitter,

snapchat, ebay, alibaba, etc. models and financing must be looked at seriously and based on these assessments, the govt. needs to move ahead quickly.

Figure 4.15: Respondent's agreement/disagreement about the statement "Number of ICT based service export enterprises are increasing at a satisfactory pace"



Number of Respondents=38

Now government has taken many initiatives to solve the problems. For example, government has declared ICT sector as a thrust sector and provided incentives such as tax exemption, reduced rate or free-taxation on import items for the entrepreneurs of this sector to boost up the growth of national economy with the aid of ICT. To solve the capital/investment problem for the ICT entrepreneurs and companies of the country, BASIS and IDLC have officially launched a complete financial service program. A number of loan facilities will be offered under this program including loans for startups, short term loan, and loan to buy domestic software or ICTeS and commercial space. Another step is that, the government has taken a project to train 3,000 rural underprivileged women as freelancers and entrepreneurs and create job opportunities for them. The main objective is to develop female ICT freelancers and entrepreneurs so the less educated rural women

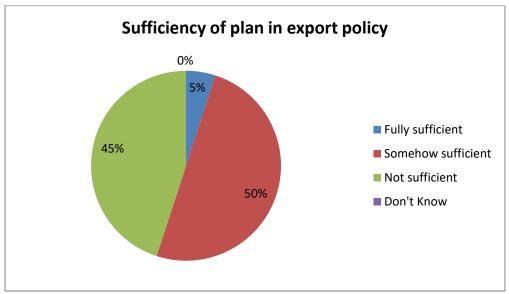
can generate incomes from home. The SME Foundation, in collaboration with the Access to Information (a2i) Programme of Prime Minister's Office and Bangladesh Women in Technology (BWIT), has been supporting the government's efforts to create new women entrepreneurs. In last three years, the government has created 1,600 women ICT entrepreneurs, freelancers and professionals across the country.

Another great initiative of the government is Learning and Earning Development Project, which has been started with the aim of conducting training program to catalyze the growth of freelancer for self-employment and promoting on-line outsourcing. Some specific objectives of the project are: to train 45,000 persons and develop them as skilled manpower to be a freelancer in IT/ICT sector; to expose outsourcing capabilities in IT/ICT era into global market leading; to create a new job facilities in the global market and improved national awareness in all level; and to create master trainers in freelancer area to disseminate the training program in the grass root level. Under this project, 20 thousand women and 1920 media persons have already been trained. But some respondents think that this training should be conducted by more professional and skilled people, and it should be more intensive.

4.5 Sufficiency of plan in export policy

Respondents were asked whether the plans of national export policy are sufficient to ensure expected growth in the export of ICT services or not. Figure 4.16 shows that only 5% of the respondents think that it is fully sufficient. Though 50% of the respondents have said it is somehow sufficient but 45% of the respondents think it is not sufficient. Probably, this is because this sector has still several problems and the policy has not addressed all of them.

Figure 4.16: Respondent's opinion about the sufficiency of plans drawn in national export policy for promoting ICT service export.



Number of Respondents=40

4.6 Problems in the ICT service export sector

In the survey respondents were asked to rank some problems which were identified from the literature. They rank the problems as following way-

- <u>Physical infrastructures:</u> Absences of sufficient ICT Park/Software Technology Park, high internet cost, no ample submarine cable, power shortage are some of the common infrastructural problems for most of the ICT enterprises.
- International competitors: International competitors manly India and Vietnam
 create problem for export market of Bangladesh. Though Bangladesh has got
 the advantage of cheap labor, but in terms of skilled labor they get more
 advantages. Higher education in our country cannot ensure high performance.
 There is also problem of efficiency in English Language.

- 3. <u>Lack of government initiatives for country branding:</u> Growth of export of ICT industry is below the expected levels due to inadequacy in entrepreneurial dynamism, limited overseas marketing budget and absence of government level initiatives in promoting country brand. Though for first time National ICT Day was celebrated on 12 December, 2017, But more initiatives are needed for promoting international branding.
- 4. <u>Lack of finance available for entrepreneurs in the ICT business:</u> ICT companies (mainly the software and ICTeS) have very limited access to institutional financing, both for working capital as well as project financing. Banking and financial institutions are not ready to understand the nature of knowledge industry and their products, services and attitude are not knowledge-industry friendly, not enough market size etc.
- 5. <u>Transaction of e-business:</u> There is no sufficient legal framework for e-business or e-commerce. People feel helpless if they are cheated through e-business, because they cannot file cases for this.
- 6. <u>Pulling away professionals into other sectors:</u> Though a significant number of educated and qualified entrepreneurs have started ICT ventures during last couple of decades, most of ICT enterprises (except for hardware companies) in the country are either stuck in the 'small size-low growth' situation or moving towards other sector because of various reasons including fund constraint for growth investment, unfavorable market situation and lack of required resources.

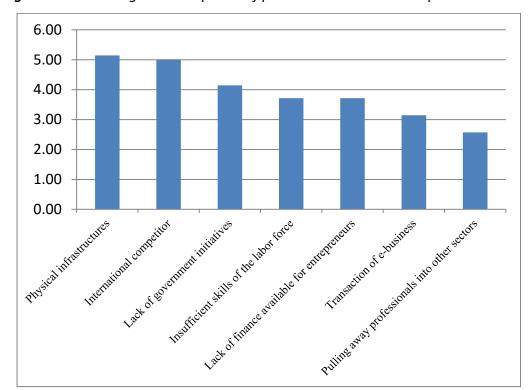


Figure 4.17: Ranking and rank points of problems in ICT service export sector.

Other important problems identified from the survey and interviews are-

- Size of domestic market is small due to limited government procurement.
 Private corporate business segment has also not yet reached significant level to generate enough cash flow for the total number of ICT enterprises. Also the predominant business model is still very much one-off 'client-vendor' model, not long term solution provider model. Hence the ICT companies cash flow are often erratic and cyclical, not favoring long term strategic growth planning.
- High cost of bandwidth deters growth of domestic market for ICTeS.
- Most of the companies face difficulty in mid and top level management leadership position that would drive the company growth.
- International money transaction is complex which is creating problem.
 Although PayPal has been introduced on a small scale, it is not still effective for a large scale of transactions for all. So a large people are using erratic informal transactions.

- Lack of government incentive of venture capital.
- Weak internet network in rural areas.
- Though government declared tax exemption for ICT service export, companies face difficulties in getting tax exemption certificate from NBR. As a result, Banks are still deducting 10% AIT.
- There are plenty of individual freelancers in the country who are not under any legal framework as they are not formally registered. There is no specific database of those freelancers. So it is difficult to get information about their exact transactions.

CHAPTER FIVE:

RECOMMENDATIONS AND CONCLUSION

In this chapter, analytical framework of the study will be revisited and answer for the research questions will be drawn to reach the research objectives. Based on the findings in the study some recommendations will be made for enhancement of the growth in ICT based service export sector. And finally conclusion will be drawn with some indications of scope for further study in this field.

5.1 Research Questions

The first question for the study was whether the content of Bangladesh's export policy is sufficient to promote export of ICT based services. Findings of the study show that the policy lacks some very important issues needed to be addressed for capitalizing high potentials ICT based service export sector. Though the policy has emphasized on some important steps (e.g. setting up marketing centers abroad, establishing IT Village, facilitating high speed data transmission line, developing ICT sector through IBPC, country branding through EPB, etc.), ICT service sector demands some more initiatives of the government for flourishing of it. Some of the required initiatives (e.g. taking up programs to develop ICT professionals and skilled personnel) have been considered by other national polices. But there is no policy statement for supporting ICT entrepreneurs to have better access to institutional financing, making transaction of e-business and international money transaction easier, stopping pulling away professionals into other sectors, and increasing demand for ICT based services in the domestic market.

Concern of the other research question was the effectiveness of export policy (relevant to ICT based services) implementation. Findings show that among five goals set in the policy, implementation is not effective for generating strong export market in global premises, taking necessary steps by EPB and foreign missions for country branding. Though many of them agreed about govt. initiatives for establishment of an "IT Village" for strengthening export of software, some of them argued that it is

necessary to monitor whether the objectives of establishing those "IT Villages" are fulfilled or not; because they think that some people are using those space for only selling computers, printers, hardwares and other local services, like printing, photocopy etc., in local market only. For the other two goals (i.e. availability of high speed data transmission line and improvement of information communication system) entrepreneurs, the beneficiary of the policy, are not also quite happy with the implementation.

Among the variables that affect policy implementation, political will and support have been appreciated by the ICT entrepreneurs. Probably this is the factor which facilitating improvement of information communication system in Bangladesh. The goals which are not being implemented at satisfactory pace are probably being hampered by lack of required amount of financial allocation, lack of technical skill and knowledge of the implementers, and lack of related policies complementing this policy. Though existing of favorable political environment and lack of sufficient budget are contradictory, it can be hoped that budget will be increased for successful implementation in coming years. Increased participation of entrepreneurs in this sector will be helpful to harvest the benefit from policy implementation.

5.2 Recommendations

Many options for promoting ICT service sector have already been mainstreamed in many other countries, but in Bangladesh we are only scratching the surface of the true potential and have to ensure that the facility truly achieves a sustainable model with the right tool mix. To maximize the benefit from the potentialities that we have in the ICT service sector following issues are recommended to incorporate in policy level.

- 1. Provide fund facilities from local banks for the entrepreneurs.
- 2. Introduce ICT in teacher's training program and make it mandatory, introduce policies across the nation in phases to have ICT and online science lab and introduce some form of ICT and digital media based learning.

- 3. Introduce a very high-end govt. Multimedia/Science University bringing the best persons to study there with high end ICT training and ICT adaptiveness focus.
- 4. Introduce medium to large global summits where local ICT is exposed globally and invite international companies to set up hub here.
- 5. Invite Bangladesh entrepreneurs to open ICT/Professional business hubs/incubation/business links in China, India, Africa, etc. Repeated and sustained efforts must be given by the govt. there and the govt. must give support for local companies to create opportunity in those countries and region.
- 6. Multimedia corridor can be a virtual option to setting up physical infrastructure. The govt. of Bangladesh can give some bulk discount on internet lines, discount purchase of computers, UPS, and ICT materials. This support will create small pockets of ICT businesses nationwide.
- 7. Need to update the PPR template so that Local market may get the 60% of the work.
- 8. NBR should be more co-operative in providing Tax exemption certificate that the software/IT companies are supposed to have till 2024.
- PayPal or other legal money transaction gateway should be made more effective and allowed for use on a large scale by all involved with this service export.
- 10. All the unregistered individual freelancers should be brought under one umbrella with legal framework.
- 11. Extensive quality monitoring should be conducted on a regular basis in all the Hi-tech and Software Parks to ensure whether they are being used to meet the purpose.

5.3 Conclusion

Government has prudently identified ICT service as priority sector considering its prospect in the export market. Export of ICT based service was first promoted formally by incorporating in national export policy in 2012 for the first time. So, it is new era and the present growth in this sector has been surely facilitated by the export policy. The policy has still time to be fully implemented as it has been designed for up to end of 2018. But the best outcome can be ensured if the policy is implemented efficiently and effectively. Moreover the unaddressed issues, which are also important for the sector, should be included in formulating export policy for the next period.

In this field of study, some more researches are required to create knowledge how Bangladesh can make sure that the potentiality of ICT services export may be utilized at its best level. Comparative study can be conducted with similar policy paper of some successful country like India, China, Vietnam etc. Such comparative study will show gaps in the policy. More independent variables can be considered to examine whether they are favorable or adverse for the implementation of the policy.

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Appendix I

Survey Questionnaire

(This questionnaire has been designed to collect information for the study entitled "Promoting Export of ICT Based Services through the Export Policy of Bangladesh". It is an academic research and the information provided here will be used exclusively for the research purpose only.)

01.	Pleas	se me	ention 	the 	name	of	your	organization:
02.	What is vo	our design	ation?					
		Chairma						
			 Ig Directoi	•				
		CEO	.6					
	_	Senior e	xecutive					
		Other:						
03.	For how	many y	ears you	r orgai	nization is	exporti	ng ICT b	ased services?:
	Year(s)							
04.	(Please re	ead the fo ich are rel	llowing ite evant)	ems and	d put a ched			ur organization: e box before the
		ICT infra	structure	and cor	nsulting			
			e developr					
					vices includi	ing call o	centers	
		Back offi	ce operat	ions				
		Data ent	ry includir	ng acco	unting or h	uman re	source se	rvices
		Transcri	otion and	transla	tion service	S		
		Content	developm	ent inc	luding anim	nation a	nd design	
		_	ing servic	es				
		Website	services					
		Online e	ducation					
		Data dig	itization					
		Research	n and deve	elopme	nt			
		Others:			• • • • • • • • • • • • • • • • • • • •			······································

05.	In v	which market your organization is in operation? ☐ Domestic market only ☐ International market only ☐ Both domestic and international market
06.	bas	ngladesh export policy (2015-18) has considered some plans for promoting ICT sed service export. In that regard, how strongly do you agree or disagree with e following statements?
	a)	Best use of ICT is being ensured in the country for the improvement of information communication system.
		$\hfill\Box$ Strongly disagree $\hfill\Box$ Disagree $\hfill\Box$ Neutral $\hfill\Box$ Agree $\hfill\Box$ Strongly agree $\hfill\Box$ Don't know
	b)	Initiatives for establishment of an "IT Village" for export of software have been strengthened.
		□ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree □ Don't know
	c)	Necessary measures have been taken to facilitate availability of high speed data transmission line.
		$\hfill\Box$ Strongly disagree $\hfill\Box$ Disagree $\hfill\Box$ Neutral $\hfill\Box$ Agree $\hfill\Box$ Strongly agree $\hfill\Box$ Don't know
	d)	ICT Business Promotion Council is doing well for promoting the local market capacity of ICT sector to generate a strong export market in global premises.
		□ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree □ Don't know
	e)	EPB and Bangladesh missions in abroad are taking necessary steps for country branding for ICT based service export.
		□ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agree □ Don't know
07.	im	you think that export policies that are mentioned in question number 06, if plemented properly, are sufficient to ensure growth in ICT base service port?
		Fully sufficient Somehow sufficient Not sufficient Don't

- **08.** In reference to export policy (2015-2018) of Bangladesh, how strongly do you agree or disagree with the following statements?
 - a) The objectives of the policy are clearly defined.

		now
b) T	he policy can be easily perceived.
		Strongly disagree Disagree Neutral Agree Strongly agree Don't now
c	:) G	Sovernment spending is sufficient to implement the policy.
		Strongly disagree Disagree Neutral Agree Strongly agree Don't now
d	d) T	here is sufficient political will to implement the policy.
		Strongly disagree Disagree Neutral Agree Strongly agree Don't now
e	e) P	olitical leadership is supportive and capable to implement the policy.
		Strongly disagree Disagree Neutral Agree Strongly agree Don't now
f) Ir	mplementing agencies have the technical skills for implementing the policy.
		Strongly disagree Disagree Neutral Agree Strongly agree Don't now
g		all other ICT based service related laws and policies are coherent with the elevant part of the export policy.
		Strongly disagree Disagree Neutral Agree Strongly agree Don't now
h		lumber of ICT based service export enterprises are increasing at a atisfactory pace.
		Strongly disagree Disagree Neutral Agree Strongly agree Don't now
е	expo	ral other policies of the government are also relevant to ICT based service rt. In that regard, how strongly do you agree or disagree with the following ements?
а	sl	Sovernment is taking programs to develop quality ICT professionals and killed personnel to ensure success in the global software and ICT-enabled ervices market.
		Strongly disagree Disagree Neutral Agree Strongly agree Don't now

	b)	National Information Infrastructure is being developed and it directly connected to Global Information Infrastructure.	t has been
		$\hfill\Box$ Strongly disagree $\hfill\Box$ Disagree $\hfill\Box$ Neutral $\hfill\Box$ Agree $\hfill\Box$ Strongly agreence	ee □ Don't
	c)	To help the ICT sector flourish in the country, effective legal frambeen framed by the government.	nework has
		□ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agr know	ree 🗆 Don't
	d)	Steps taken by the government is sufficient for ensuring smooth e for e-Commerce and to safeguard the dealings over the net.	nvironment
		□ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly agr know	ree □ Don't
	e)	ICT Incubation Centre (STP) is helping the entrepreneurs companies in software/ICTeS development and export.	to startup
		$\hfill\Box$ Strongly disagree $\hfill\Box$ Disagree $\hfill\Box$ Neutral $\hfill\Box$ Agree $\hfill\Box$ Strongly agree know	ree 🗆 Don't
10.		hat are the problems in the ICT based service exporting ngladesh? Please rank the problems.	industry in
		☐ Insufficient skills of the labor force	
		☐ Lack of finance available for entrepreneurs in the ICT business	
		☐ Pulling away professionals into other sectors	
		☐ Physical infrastructures	
		□	
11.	Wh	nat are the other problems in this sector?	
	••••		
	•••••		

12.	What more steps can be taken by the government at policy level to promote ICT based service export?

Thank You.

Appendix II

Interview Checklist

- ১। পৃথক রপ্তানি খাত হিসেবে বাংলাদেশে আইসিটি সেবা খাতের সম্ভাবনা কতটুকু? আন্তর্জাতিক বাজারে প্রতিযোগিতায় এক্ষেত্রে বাংলাদেশের সুবিধাজনক অবস্থান আছে কি?
- ২। দেশে আইসিটি সেবা খাতের রপ্তানি বৃদ্ধির পথে উল্লেখযোগ্য বাধাসমূহ কী কী?
- ৩। আইসিটি সেবা খাতের রপ্তানি সম্প্রসারণের জন্য প্রবাসী বাংলাদেশীদের উল্লেখযোগ্য ভূমিকা রাখার সুযোগ আছে কি?
- ৪। আইসিটি খাতের রপ্তানি সম্প্রসারণের জন্য বিদেশে বিপনন কেন্দ্র খোলার প্রয়োজনীয়তা আছে কি? বিদেশে বিপনন কেন্দ্র স্থাপিত হলে তা কী ভূমিকা রাখতে পারে? বিদেশে বিপনন কেন্দ্র খোলার বিষয়ে সরকারের উদ্যোগ রয়েছে কি?
- ৫। সফটওইয়্যার উৎপাদন ও রপ্তানির জন্য দেশে এক বা একাধিক আইটি ভিলেজ স্থাপনের সুবিধা কি? সরকারের এ বিষয়ে উদ্যোগের অগ্রগতি কতটুকু? আইটি ভিলেজ স্থাপনের অন্যান্য বিকল্প কি হতে পারে?
- ৬। আইসিটি খাতে উন্নয়নের জন্য আইসিটি বিজনেস প্রমোশন কাউন্সিল কতটুকু ভূমিকা রাখতে পারছে?
- ৭। আইসিটি খাতের রপ্তানি প্রসারের লক্ষ্যে বাংলাদেশ 'আইসিটি ইন্ডাস্ট্রি ব্রান্ডিং' এ কতটুকু সফলতা পেয়েছে? রপ্তানি উন্নয়ন ব্যুরো এবং বিদেশে বাংলাদেশী মিশনসমূহ এ বিষয়ে কাংক্ষিত ভূমিকা রাখতে পারছে কি?
- ৮। সেবা খাতের রপ্তানি আয়, বিশেষতঃ আইসিটি ভিত্তিক সেবা খাতের রপ্তানি থেকে জাতীয় আয়ের সঠিক হিসাব প্রাপ্তিতে অন্তরায় কী?
- ৯। নিকট ভবিষ্যতে সারাদেশে ব্রডব্যান্ড ইন্টারনেট সংযোগ প্রদান সম্ভব হবে কি? এ বিষয়ে সরকারের উদ্যোগ কি জোরালো? ইন্টারনেট ব্যান্ডউইথের মূল্য কি বর্তমানে আইসিটি সেবা উৎপাদনের জন্য উপযোগী মাত্রায় রয়েছে?

- ১০। আইসিটি ভিত্তিক ব্যবসা উৎসাহিত করতে এবং ই-কমার্স নিরাপদ করতে বাংলাদেশে বিদ্যমান আইনি কাঠামো যথেষ্ট সহায়ক কি? কোন বিদ্যমান আইন/ নীতি কি এ খাতকে বাধাগ্রস্ত করছে?
- ১১। আইসিটি সেবা খাতে নতুন উদ্যোক্তা যথেষ্ট পরিমানে তৈরী হচ্ছে কি? সরকার এ ক্ষেত্রে প্রয়োজনীয় ভূমিকা রাখতে পারছে কি?
- ১২। আইসিটি সেবা খাতের উন্নয়নে রপ্তানি নীতিমালা বাস্তবায়নের ক্ষেত্রে রাজনৈতিক সদিচ্ছা এবং প্রশাসনিক সক্ষমতা কতটুকু? এটি বাস্তবায়নে সরকারী বরাদ্য কি যথেষ্ট?
- ১৩। আইসিটি সেবা খাত সংশ্লিষ্ট রপ্তানি নীতি সম্পর্কে আপনার সামগ্রিক মূল্যায়ন কী?
- ১৪। আইসিটি খাতের উন্নয়নে এবং আইসিটি ভিত্তিক সেবা খাতে রপ্তানি বৃদ্ধির লক্ষ্যে নীতি নির্ধারনী পর্যায়ে আর কী কী সিদ্ধান্ত গ্রহণ করা যেতে পারে?