

# Software Marketing in Bangladesh: Problems and Prospects

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## Abstract

*Bangladesh needs export diversification for improving her economic situation. Export of software in the global environment is beneficial, as exporting of software may be able to increase foreign exchange earnings of the country in a larger volume. Software marketing strategy should be redesigned, which must be accompanied with proper market requirement analysis. The author suggests that proper market planning should be accompanied with the implementation. He also comments that more investment and initiatives from the private sector for developing Information and Communication Technology (ICT) sector are required so that they can act as both complementary and substituting activities of the Government initiatives.*

## 1.0 INTRODUCTION

Bangladesh needs diversified export product. In the era of globalization, the country is still lagging behind and heavily depends on donors and foreign countries, as foreign exchange earnings are low. The global business environment is gradually going to changes, due to the expiry of the multifiber agreement after the year 2004. This may also hamper our present exporting system, as readymade garments sector will have to face stiff competition. To increase foreign exchange earnings, software should be exported in foreign countries and must act as a vehicle of source of earnings of valuable foreign exchange. Government is trying to prepare level playing field to nurture software development. In the recent cabinet meeting, national ICT policy was approved. Budgetary allocation of funds for Tk.Three hundred crore has made for developing IT sector during the current fiscal year. Export promotion Bureau under Ministry of Commerce is going to open two representative offices one in USA and another in Europe for doing promotional actives of software export. ICT

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incubator is also going to be set up at the heart of the Dhaka City in BSRS Bhaban very soon.

The country is still far away to achieve the target of exporting software and IT enabled services for US\$ 20 Billion by the year 2006. As such the country needs a long-term strategy. If the country cannot start up with proper vision and mission through SWOT analysis of comparative advantage of software export, she cannot be able to increase foreign exchange earnings and thus remove her vicious circle of dependence on donors and foreign countries.

Marketing of the software in foreign countries depends on certain strategic issues such as identification of possible buyer, proper contract with them, availability of the software as per the buyers' requirement, fulfillment of the contract with the buyer, expertise of the domestic software firm, and also export assistance. Proper market intelligences are needed so that export objectives and desired goals can be achieved through business promotional activities and can also be able to act as supportive tool for international linkage.

### **1.1 Objectives of the Study:**

The study has been undertaken with following objectives:

- 1) to ascertain present status of the software market of Bangladesh;
- 2) to identify the main draw backs of local software marketing strategies;
- 3) to find out potentialities of exporting of software;
- 4) to suggest recommendations for software export so that target of foreign exchange earnings can be achieved by the year 2006.

### **1.2 Methodology**

The study is based on both the primary sources and secondary sources. For primary sources, the study has prepared a questionnaire. Twenty-three owners of the total number of software firms are interviewed. These software firms are situated in the Dhaka City. Time period of the study is 1<sup>st</sup> September to 15<sup>th</sup> October 2002. In case of secondary data, we have duly acknowledged the exact sources.

## 2.0 LITERATURE REVIEW

Stanton (1981) describes that product planning embraces all activities that enable a company to determine what products it will market. Product development, a more limited term, encompasses the technical activities of product research, engineering and designing.

Evans and Berman (1982) comment that the overall marketing plan has five elements: identifying opportunities and potential problems, developing objectives, creating an appropriate strategy, implementing tactics and monitoring results.

Shaw and Stone (1988) advocate that working with a comprehensive corporate systems architecture help marketing management work harmoniously with system management and the rest of the business. The architecture defines how and when information flows at every stage of the marketing function's cycle of planning, executing, monitoring and reporting.

Berkowitz (1997) argues that a marketing plan is a road map for the marketing activities of an organization for a specified period of time, such as one year or five years. It is important to note that no single generic marketing plan applies to all organizations and all situations. Rather the specific format for a marketing plan for an organization depends on the following: (a) the target audience and purpose; (b) the kind and complexity of the organization; (c) the industry.

Richardson (1997) advocates for the need of interoperability between different software products, and between these and associated hardware standardization is important within the industry and the process by which standards may be evaluated.

Humphery (1999) comments that the key criteria for successful software contracting are: the vendor must be trustworthy and technically competent, the buyer must be capable of identifying technically competent vendors, the contract presumes mutual trust, software quality assurance and audit ensure honest and disciplined performing. Initially the highest priority task is to arrive at an agreement on what is to be produced, a plan to produce it, and acceptance criteria. It is recognized that the operational concept and the product requirements will evolve

throughout the contract and that appropriate provisions will be made to handle the resulting scope and plan changes.

According to Andrew et al. (2000) those who study inventions and innovations in the twentieth century think that a more complex, circular part of commercialization has widely relevant. Machinery, automotive and other manufacturing companies in Japan, Europe and North America that rely on and work closely with skilled suppliers often found their suppliers to be a source of useful ideas for further improvement.

Cannon (2000) argues that selling is a rapidly evolving discipline. Change are being forced by new understanding of the nature of the relationship between customers and clients; awareness of the factors which influence the individual spending so much time out of the firm, with no direct contact with other company staff, technological developments, recruitment problems; the changing structure of the market. Although these are changing the form of selling, they have not changed the basic tasks that the people involved in selling and merchandising performs.

Mamun and Islam (2000) describe that Bangladesh software development companies pay less importance on managing marketing efforts, which is very important in developing software market in Bangladesh. They also comment that companies should incorporate long-term strategy to grow and survive and also need to scan environment continuously and systematically.

According to Wegberg et al. (2000) the open source movement is a group of volunteer programmers that has recently caused quite a stir in the software market. Their goal is to develop useful software that is available for free and that users can support a successful development of open source software.

Gupta (2001) claims that one can easily visualize the software revolution in India. Both Government and industries in India have joined their hands to strengthen the brand equity of Indian software industry and make the country as IT super power.

Mohiuddin and Manzoor (2001) comment that in order to endure the IT services for good governance, the related software industries and human

resources should be developed and equipped properly without any loss of time.

Arora and Asundi (2002) comment that ISO certification enhances software firms' growth. They partially find that ISO certification can also exchange revenue for a given size, suggesting that firms are receiving a higher price per unit of output. They further observe that although most of the software firms see ISO certification as a marketing policy, some of them do proceed to institute more systematic and better-defined process for software development.

Karim (2002) comments that a tremendous growth potentialities of the IT industry in Bangladesh and the vast pool of available educated labor force is natural advantage waiting to be tapped for the labor hungry global IT services waited.

Lamagna and Rabbi (2002) argue that when market conditions keep on changing rapidly the development of effective incentives and long-term relationships with distribution channel members has become vital for the market success of the automobile firms.

Rahman (2002) describes that software technology park can help to encourage, promote and boost software export of the country. Under this program, prospective cities and town can be identified as software hamlets and can be developed at a fast pace to encourage software development and export. Software Technology Park of India (STPI) in Bangalore is the biggest STPI in India contributing to about one third share of software export of the country. Software Park in Bangladesh could play a similar role and public and private enterprises should take steps to setup or expand Software Park in the country.

### **3.0 PRESENT STATUS IN BANGLADESH**

When one Non-Resident Bangladeshi established a software company in Dhaka for exporting of software and IT services to Volvo Motor Company in Sweden in the year 1988, then Bangladesh entered into the global market. But the decision makers of the country cannot timely recognize due potentialities of the software industries for which progress of this software sector greatly hampered.

In Bangladesh, normally software firms develop software with the following ways: (a) In house; (b) Contract basis. In house software is usually built with the vision to sell the software after finalization. In case of contract basis, as per the requirement of the customer software is supplied.

Software which are so far developed in this country may be appended below : Several database applications are available such as Banking software, Inventory Software, Customer billing software, Security time application software, Resource Management Software, Investment-Management software, IPO software, Library management software, AGM software, Examination control system software, WEB Programming development, multimedia Programming, medical transcription services, Document conversion/Data Entry digitization for Geographic Information system /Computer Aided Design software, 2-D animation, Tailoring the modules in application software etc.

The programming languages are mostly used are as follows: Visual Basics, C/C++, MS Access, PL/SQL, MySQL, Oracle, Java, FoxPro, Developer 2000, HTML, PHP, ASP, JSP.

In the press conference organized by Bangladesh Association of Software and Information Services( BASIS) on October 12, 2002, BASIS President H N Karim claimed that during the fiscal year 2001-2002, through exporting software in 16 countries around Tk 150 crore were earned. Moreover, more than 12 firms are certified ISO - 9001 for providing quality assurance software. He claimed that export earnings could be easily increased to Tk. 1.0 billion per year if appropriate measures can be taken. (Source: The Financial Express, The Daily Janakantha, October 13, 2002).

On the basis of our survey in twenty-three software firms, we are gathering following information in Table: 1:

**Table 1: Opinion Survey**

Sl.No	Description	In %age
1	Software Developed for: a) Both Local and Foreign Market b) Only Local Market c) Only Foreign Market	73.91 17.39 8.70
2	Whether market requirement analysis is regularly done: a) No b) Yes	65.22 34.78
3	Significant marketing problem: a) Inadequate market intelligence b) Lack of good marketing professional c) Lack of well defined marketing strategy d) Lack of awareness/structured market	56.52 17.40 13.04 13.04
4	Causes of low demand in the domestic market: a) Perception of software is non-transparent b) Availability of Pirate Software c) Users do not have proper understanding on their requirement d) After sales services are poor	34.78 26.08 21.74 17.40
5	Problems in exporting foreign countries a) Poor Bangladesh Image b) Poor marketing strategies and policies c) Poor software project management d) Lack of Reference Site	43.48 34.77 17.39 4.36
6	Order for software export obtained through: a) Reference from agents/relatives b) Sub-contract from foreign firm c) Contract directly with foreign firm	43.47 30.44 26.09
7	Any Research & Development cell to identify marketing need: a) No b) Yes	73.91 26.09
8	Whether any marketing plan to create new markets through existing products: a) Yes b) No	78.26 21.74
9	Whether ISO 9001 certification obtained: a) No b) Yes	76.96 13.04
10	Experience in selling software in domestic market a) No b) Yes	65.22 34.78

On the basis of aforesaid table, we have shown Fig: 1 to Fig: 10 in Appendix.

#### **4.0 ANALYSIS OF THE FINDINGS**

From the primary survey we obtained that 73.91 percent of the firm developed software for both local and foreign markets. But the most astonishing finding is that only 34.78 percent of the firms regularly analysis market requirement. The most important significant marketing problem is inadequate market intelligence as identified by the respondents. While responding our fourth question 34.78 percent software firms argue that perception of software is non transparent and 26.08 percent claimed that availability of pirate software creates low demand in the domestic market. 43.48 percent respondents describe that they obtained order for software export through reference from agents / relatives. Only 26.09 percent software firm has research and development cell to identify marketing need. 78.26 percent respondents agree that they have the marketing plan to create new markets through existing products. Out of 23 firms only 13.04 percent receives ISO 9001 certification. But none of the software firm in Bangladesh still obtained CMM (Capital Maturity Model) certification at least up to level – 3. Only 65.22 percent of the software firms do have experience in selling the product in the domestic market.

#### **5.0 PROBLEMS IN BANGLADESH**

Software industry as a whole must be taken into the consideration with the changing environment and gradual innovation of the superior technology within the global scenario. Huge human resources are available in the country but skilled manpower is not properly developed and managed. Skill personnel for IT marketing as well as good software developer are not available. Lack of motivation to develop software along with the perception of software is non-transparent by the buyers are prevailing in the country. Moreover, most of the programmers are not satisfied with their current salary structure and many of them are considering their present job as stop gap arrangement. As such they are not steady in the same software company for long time. Managerial problem of the software firm that arising out both internal and external environment is also creating problem. To identify prospective customer for which proper market research is not regularly done. At present the software-marketing channel of the country is not properly developed. Inadequate and inefficient participation is happening in the international market. In the country market intelligence is inadequate which includes



non-availability of information on prices, market arrivals, production processes. Lack of proper marketing strategy is a serious problem for the country.

Due to lack of communication skill especially English language we are not able to get business of customer support service system through voice mail. Large corporate companies of developed nations like USA, Canada, UK etc. are providing customer services through voice mail in order to save their cost with the help of the companies located at third countries like India, Srilanka etc. Through doing such type of business Bangladesh may be gained for which well-groomed English speaking young people are required.

Telecommunication networks are not well developed. Further bandwidth speed is relatively low and also price is very high. As such this is also act as hindrance of developing and exporting software.

Our local software firms cannot gain experience in marketing of software in the domestic market. Virtually domestic software market of the country should be considered as the starting point for marketing of locally produced software. In the domestic market if software can be supplied then experience and further development of the software can be done. But it is unfortunate that in the country demand in domestic market is heavily reduced due to the availability of the pirate software. Therefore in the domestic market vendors have little bargaining power in the market places and sometimes they also involve in unfair and illegal practices. Moreover, some of the vendors are not reliable.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

Software firms should put emphasis on identify the customer. This customer may be in the domestic market or international market. To export software in developed nations, software firms must get exposure in the domestic market otherwise while they tried to pursue abroad they shall face trouble. Management of the software firms should be improved. Software firms' should take initiatives for business process reengineering.

To create the environment of marketing opportunities several actions must be emphasized. New and improved marketing strategies are

required. We should start from the grass root levels and without the diagnosis of the demand analysis we cannot avail to supply the software. Emphasis should be put on the analysis of the demand for which regular research and development is required. Through research and development we have to find out our weakness and tried to improve standard of the software. Continuous research and development of the existing international market regulations are required. Maintenance of high quality of the software is very important and the software must be customized one. Analysis of the customer need and proper communication is required. Software marketing strategy must be based on the economic activities, which should be accompanied with the development of the software from the producer to reach the customer, and may be guided by the international environment considering the price level. Price should be fixed on the basis of analyzing the international market properly. Costing, promotional campaign should get wider recognition. Reliability of the product, easy parameterization is also needed. When international contract is made at that time information regarding legal and socio-cultural background of the exportable country also may be collected. Before exporting of the software, beta version of the software should be properly tested.

Software firms cannot be able to develop properly if they are heavily depends on Govt. sector. As such more investment and initiatives from the private sector for developing ICT sector are required so that they can act as both complementary and substituting activities of the Government initiatives.

Saeed (2002) argues that India entered into the international software market from mid 80's through sporadic efforts of a few Indian nationals working abroad in the computer field. Those individuals, mostly Non-resident Indians (NRIs), through their personal contributions made towards the operations of their overseas employees, managed to create an impact about Indian's ability to offer data processing and software services to the international market place. Growth of Indian Software Industry is given in the Appendix. Bangladeshi expatriates in abroad can help for creating software market in abroad. And they should come forward with promotional activities of the software marketing.

Human resource should be properly developed for accommodating marketing efficiency. Software export market is yet to explore, for which

proper strategies are required. Besides exporting of software if Bangladeshi firms can be guided properly then they can also explore the business of customer services of large multinational corporations of developed nations through voice mail. To work in the international environment we must ensure proper communication skill.

Software firms need a break through in the domestic market. Before exporting the product in abroad they have to be properly nurtured and gathered experiences. Measures should be taken against pirate software.

Recently a delegation team lead by the Vice Chairman of Export Promotion Bureau went European Union, which includes Sweden, Germany, Holland, UK for promoting ICT services with the intention to focus on creation of software export market. As a result of their visit, fair authority of CEBIT 2003 agrees to observe one Bangladesh day when the fair will be arranged in the next year. This sort of initiatives may improve the image of the country in the International environment. Securing markets through contractual arrangements for the developed countries are required.

The following recommendations are made to develop software-marketing strategy:

- a) Bangladesh Embassies in abroad should take initiatives for creating new marketing channel. They can help Bangladeshi exporters through providing information about prospective foreign buyers.
- b) Bangladeshi expatriates who are actively engaged in ICT sector in abroad may take initiatives to promote software product in foreign market.
- c) Present initiatives by the Ministry of Commerce to open two representative offices in USA and Europe for promotional activities of exporting should be executed as soon as possible. Set up of ICT incubator as early as possible for proper nurturing of software development is required.
- d) Bangladesh Association of software and information services (BASIS) and Bangladesh Computer Samitee (BCS) should play

a greater role to build up the image of Bangladesh as an IT friendly country in abroad. As such more positive role is required. Wider participation in the foreign trade fairs are required so that our software products can be exhibited. Heavy dependence on Government support/initiatives must be curtailed. Private sector investment and initiatives are required in this sector.

- e) Software exhibition of Bangladesh should be regularly organized by BASIS, which should be held annually. Foreign prospective buyers may be invited to participate in the fair.
- f) To ensure quality services of the software, all the software firms should be encouraged to obtain ISO 9001 certification and also may try to achieve CMM certification at least up to level - 3.
- g) Though the country possesses young talented people, but they should be properly motivated and guided by the policy makers and also leaders of the IT industries. Young IT professionals and developers should work with greater encouragement in this sector of the country for which realistic approaches are required ..
- h) Overall standard of the IT education should be higher and must be more application oriented. The higher number of qualified software programmers will be available, shortage of good quality programmers will be eradicated. Further, improvement of the communication skill especially in English language should be given emphasis. As such large section of the students of the country may be forced to learn English from the primary level. Bangladesh Computer Council may also start offering English course as compulsory besides offering different courses on programming.
- i) Bangladeshi software firms may get impetuous through selling of their product in the domestic market before exporting their product abroad. As such if local software has the same quality and functionality of foreign software then local software product should be given preferential treatment so that local software firms can be able to make a reference for attracting foreign buyer and also develop their expertise.

- j) Software firms may take initiatives to recruit foreign agents/representatives in different places of the world especially in USA, Europe who can act as middlemen between themselves and buyers.
- k) Vendors must be knowledgeable and honest. They must fulfill their business deal and commitment with the clients as per the sales contract.
- l) Use of pirate software must be strictly prohibited; Cyber crime law may be finalized so that law can be enforced properly. Further, National ICT policy, which was recently approved by the Cabinet, may be passed in the National Assembly as soon as possible.
- m) Software exporters must bring their export earnings through the banking channel of the country and they should not divert their income in abroad.
- n) Telecommunication sector should be properly developed. High speed data transfer arrangement is required. Price of bandwidth should be lowered.
- o) In the area of software development, investment through joint venture companies may be welcomed. Foreign direct private investment in the software development project may be beneficial. Partnership based business may be done with foreign software firms where local software firms may be responsible for developing softwares' and foreign software firms may be responsible for marketing purposes.
- p) Coordination between software marketing professionals and software developers are required. Effective software marketing personnel are required who can able to create demand through their innovative marketing drive.

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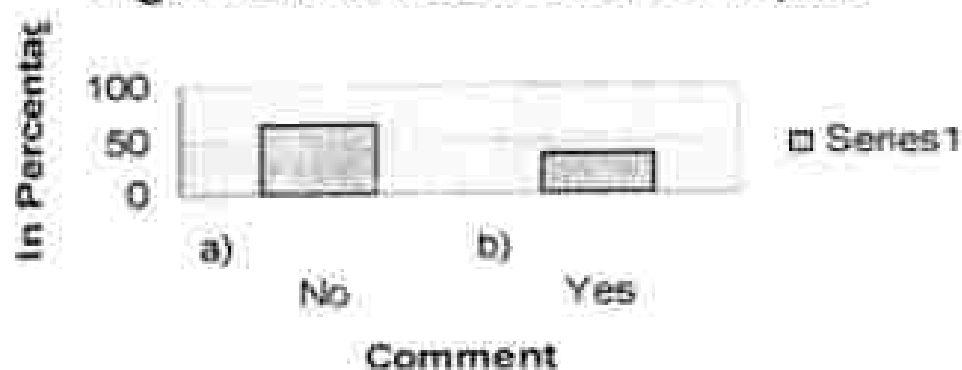
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## Appendix I

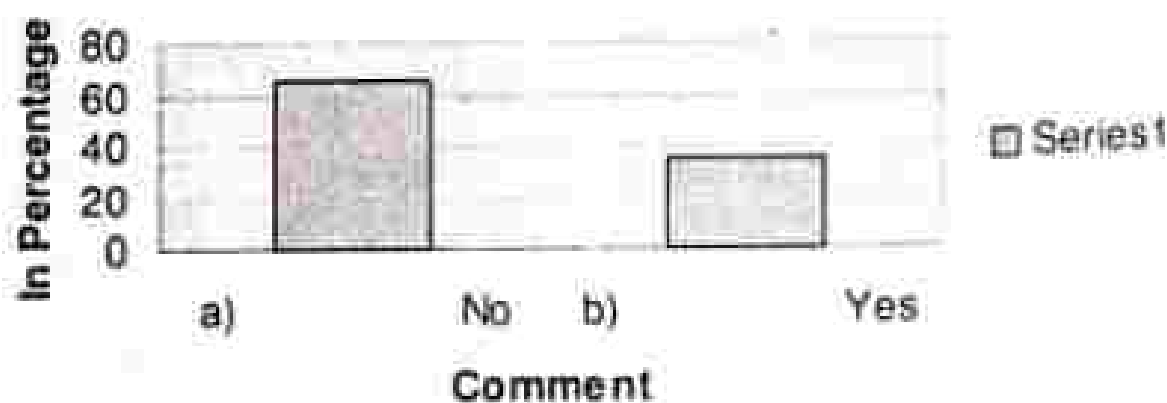
**Fig:1 Software developed for the Market**



**Fig:2 Market Requirement Analysis**

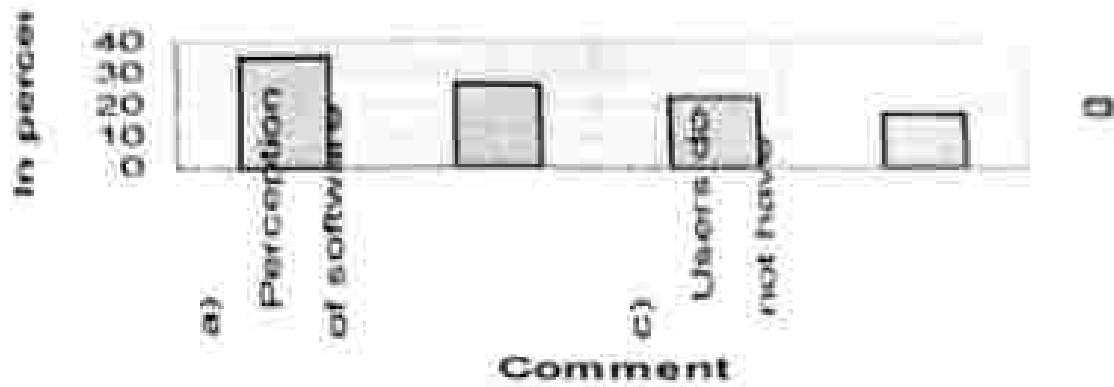


**Fig:3 Market analysis regularly done**

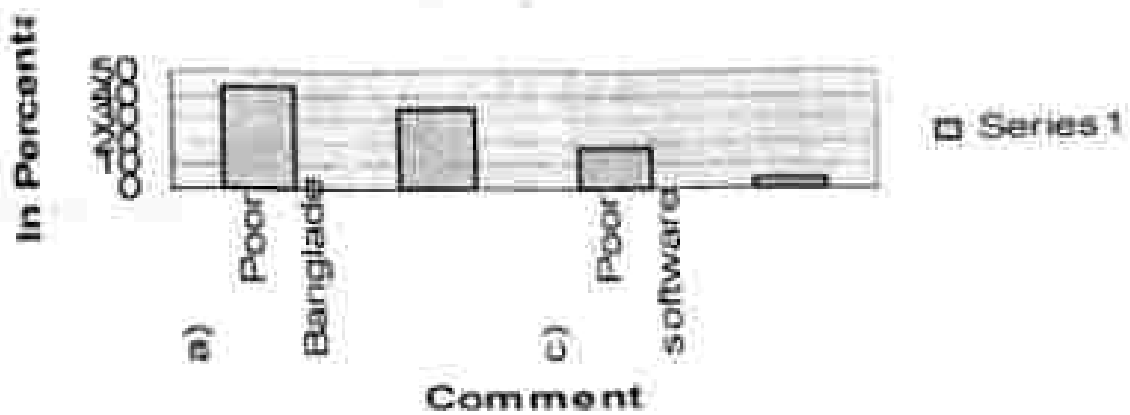




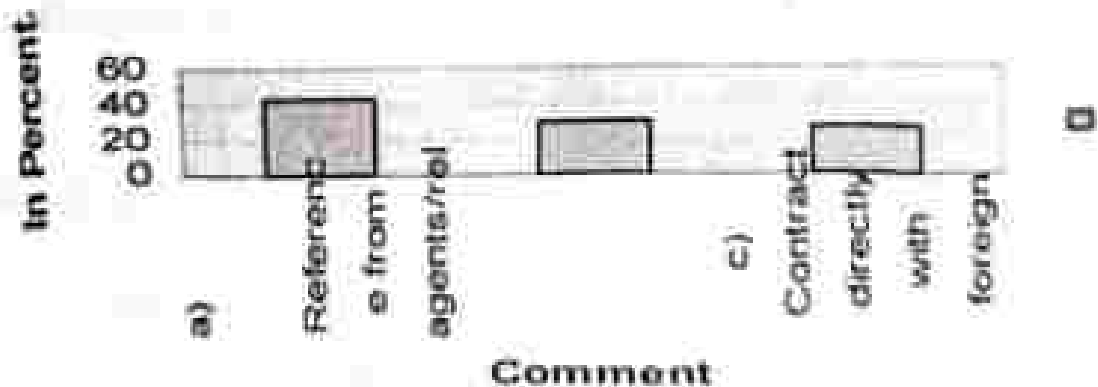
**Fig:4 Low Demand in the Domestic Market**

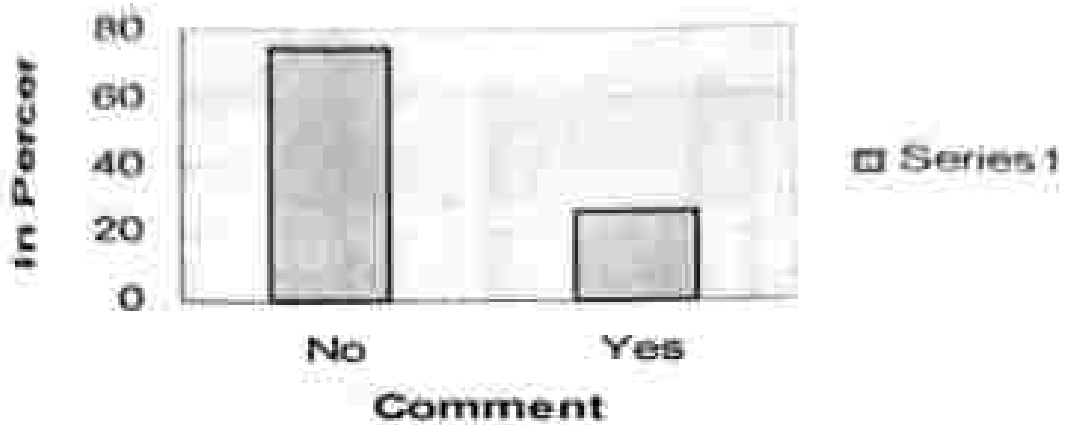
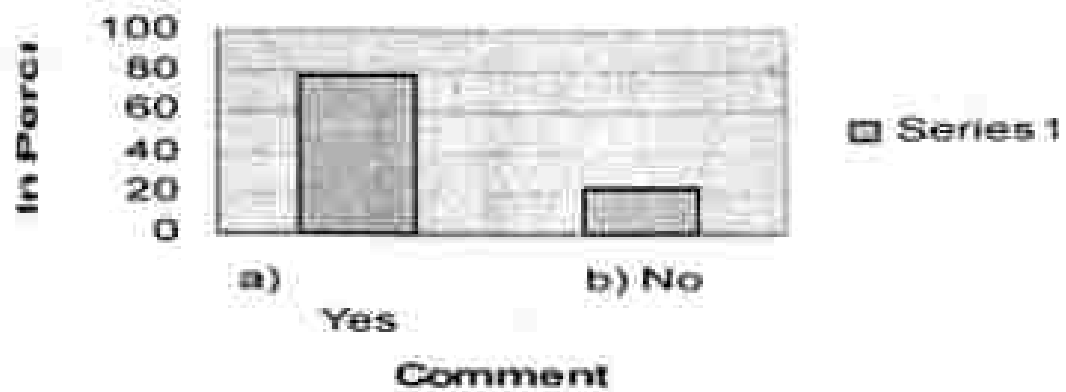
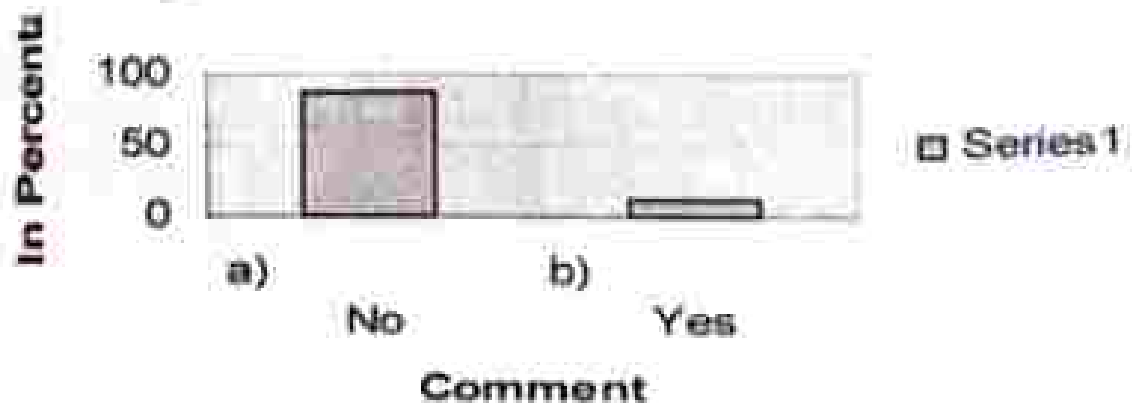


**Fig:5 Problems in Exporting Foreign Countries**

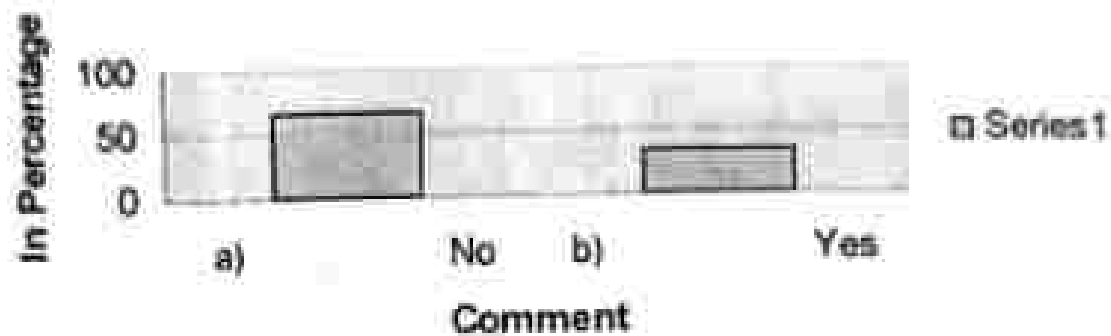


**Fig:6 Order for Software export obtained through**



**Fig:7 Any R&D cell****Fig:8 Marketing Plan to create new markets****Fig:9 ISO Certification Obtained**

**Fig:10 Experience in Selling software in Domestic Market**



## Appendix II

**Table A**  
Growth in Software Industry in India. (in US Dollar Term)

Year	Domestic			Export			Total		
	Amount in US Million	% of growth over prev. year	% of growth over 94-97	Amount in US million	% of growth over prev. year	% of growth over 94-97	Amount in US Million	% of growth over prev. year	% of growth over 94-97
1994	300			85			385		
1995	340	13.33		75	11.76		415	9.09	
1996	470	38.24	56.67	100	33.33	125.33	570	33.25	39.54
1997	600	27.66	100.00	170	70.00	260.00	770	33.33	225.39
1998	1200	100.00	257.14	250	47.06	135.33	1450	88.41	50.00
1999	1500	25.00	300.00	300	20.00	170.00	1800	13.79	50.00

[Source : Phalguni Gupta, ICCIT, 2001]