

¹ Appropriateness of Extension Services of Small-Scale Industry

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⁵ **Abstract**

⁶ Since Bangladesh is an agriculture dependent and over-populated country, so the over
⁷ manpower should be made as resource through industrialization of the country. It is evident
⁸ that the excess manpower lie mainly in agriculture sector and as small-scale industry sector is
⁹ labor-intensive and small capital-requiring industry, so this paper has emphasized on the
¹⁰ development of small-scale industry sector. This paper is explanatory in nature and data have
¹¹ been collected for conducting the study mainly from secondary sources. The main objective of
¹² the study is to find out the need-based appropriate extension service for small-scale industry
¹³ sector. In order to present the appropriateness of extension services for the development of
¹⁴ small-scale industry, the researcher has concentrated to find out the usual/major and even the
¹⁵ trifling problems faced by the small-scale industrial units as well as small industrialists at first
¹⁶ and then scrutinize the suitability of different types of extension services to remove the
¹⁷ problems of this sector. Problems have been identified from two points of view i.e. from the
¹⁸ view point of government and small industrialists' associations as well as from the view point
¹⁹ of industrial unit and owner of the industry. The problems for that are responsible the earlier
²⁰ one are the defects and loopholes in manufacturing process, suitability of machinery and
²¹ technology, cooperation and coordination between government agencies and voluntary
²² associations, financing, marketing, obtaining or providing information to the small
²³ industrialists. The problems for that responsible the industrial unit and owners of the
²⁴ industry are problems regarding organization of the concern/firm, marketing and staffing. The
²⁵ main problem lies in finding out the needs and providing appropriate extension services
²⁶ especially the consultancy, training and financing to small industrialists. Over and above,
²⁷ selection of genuine entrepreneurs, evaluation, implementation and ult
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²⁹ **Index terms**— Itinerant, Staffing, Development, Extension Service, Voluntary, Close-Mutual, Close Coun-
³⁰ seling, Demonstration.

³¹ Bangladesh is an agriculture dependent and overpopulated country. It is also evident that agriculture sector
³² is overmanned one. The excess manpower of this sector should be shifted to other sectors for employing the
³³ excess manpower of one in particular as well as unemployed people of the country in general. As the small-scale
³⁴ industry sector is laborintensive and small capital-requiring one as well as the raw materials to be required for
³⁵ manufacturing goods of this sector may largely be of agriculture sector, so this sector may solve the unemployment
³⁶ problem of the country in easier manner to a great extent than that of other sectors. Over and above, small-scale
³⁷ industry sector can increase foreign exchange earning through exporting its product abroad as well as reduce
³⁸ cash outflow for importing goods through manufacturing indigenous goods. Thus export-import imbalance of the
³⁹ country to some extent might be minimized. In fact, after the independence of Bangladesh, the government has
⁴⁰ been undertaking different initiatives in different planperiod for the development of this sector. But it is a matter
⁴¹ of great regret that no industry-matching and need-base initiative has ever been undertaken and the initiatives
⁴² that are undertaken have been properly implemented and monitored neither by the government nor by any small
⁴³

44 industrialists' associations. So, employment generation and contribution to G.D.P. of this sector till to date is
45 not up to the expectation though these have been being increased for years together. In the consequences, it may
46 be concluded that the development scenario of small-scale industry in Bangladesh is not remarkable. A statistics
47 may be presented in respect of this.

48 Agriculture sector employs 79% and 59% of labor force in mid 70's and mid 80's respectively whereas in 2002-
49 2003 this sector employs 51.69% of labor force following the industry sector 13.56%. So, it is evident here that the
50 employment rate of agriculture sector has been declining over the years. Again, the contribution of agriculture
51 sector to G.D.P was 33.07%, Introduction 29.23%, 25.03% and 21.11% in the year of ??980, 1990, 2001-2002
52 and 2006-2007 respectively. On the other hand, the contribution of industry sector to G.D.P in those years was
53 17.31%, 21.04%, 26.20% and 29.77% respectively ??Economic Review Bangladesh; ??2007:24). It is evident from
54 another review that agriculture sector employs the highest number of labor force which is 43.6% of total labor
55 force where as the industries sector employs 13.56%. At the same time, the contribution of agriculture sector to
56 GDP is 20.29% where as the contribution industries sector to GDP is 29.93% in 2009-2010 (Economic Review of
57 Bangladesh-2011:20).

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

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

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

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

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

105 The main objective of the study is to find out the need-based appropriate extension service for smallscale
106 industry sector and the specific objectives are: i)

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

115 III.

116 **1 Methodology**

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

125 IV.

126 **2 Organization Of The Study**

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

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

131 Section III highlights the methodology of the study.

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

133 Discussion and analyses of the study have been made in section V dividing into twelve subsections. Section
134 V.I discusses the role of different international organizations in developing the small-scale industry sector.

135 Section V.II focuses on the different problems of organization of smallscale industrial units. Section V.III
136 emphasize on the cooperation between government agencies and voluntary associations of smallscale industry.
137 Section V.IV presents the essence of coordination of different government agencies or bodies. Section V.V has
138 made an effort to acknowledge the different types of organization prevailing in smallscale industry and ultimately
139 recommended a suitable organogram for different types of small-scale industries. Section V.VI ways out a
140 financing as well as staffing arrangement that would be beneficial for the small industrialists. It also discusses
141 different problems of financing in small-scale industries.

142 Section V.VII describes some approaches and their techniques and strategies of providing extension services
143 to different small-scale industry. Section V.VIII highlights of several important extension services. Section V.IX
144 has focused on the necessity and applicability of demonstration or model plant for providing training consultancy
145 and information to small industrialists, employees and workers also. Section V.X emphasizes on demonstration
146 and training plant for providing extension services to small industry sector. Section V.XI presents the role of
147 itinerant demonstration and training teams for similar type problematic small industry. Section V.XII produces
148 the necessity and technique of creating market of the small industrial products.

149 Section VI finds out some findings of the conducted study.

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

152 V.

153 **3 Discussion And Analysis**

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

161 **4 V.I Role of International Organizations**

162 Section II the main and some specific objectives of the study. sets Under the Expanded Technical Assistance
163 Programme of the United Nations and its specialized agencies help is available at the request of government
164 of individual countries or on a regional basis. Such help has been provided by the United Nations and the

4 V.I ROLE OF INTERNATIONAL ORGANIZATIONS

165 International Labor Organization in the field of handicraft and small-scale industries for a number of countries.
166 (Services for Small-Scale Industry, I.L.O. 1961:53). Broadly speaking the United Nations is concerned with
167 economic aspects of problems of promoting development and productivity in small-scale industries, while labor
168 and social aspects are primarily matters for the I.L.O. which also has recognized contributions to make in matters
169 of management development and the promotion of cooperative activities. The activities of the two organizations
170 are closely related, they have cooperated in several joint projects. United Nations and I.L.O. experts have
171 collaborated in carrying out surveys of possibilities of development of small-scale industries in different countries
172 of the world.

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

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

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

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

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

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

211 The various departments, Banks and the Corporation of Bangladesh have been furnishing numerous services
212 to small industrialists, designed to assist them in the efficient conduct of their businesses and strengthen their
213 competitive position. Recently, through the establishment of small-scale industry Sales centre with the initiative
214 of Corporation and the Corporation has undertaken to promote the marketing of the product of handicrafts
215 and small industries. In the expert field, the Corporation cooperates with privately Training Institute has
216 been established which renders training services mainly to the officers and employees of BSCIC and at times it
217 arranges some special training and counseling programmes for the entrepreneurs for building awareness among
218 them. Besides, 15 skill development centres have already been established at different locations of the country.
219 There is no so provision of encouraging measures/incentives for the trainees imparted. The training programmes
220 that exist in Bangladesh are not worthy or effective for acquiring job for the unemployed people. After completion
221 of the training programme, there is no pragmatic measure of evaluation and monitoring system by the concerned
222 departments. The existence of a strong and effective association of small industrialists might help in pertaining
223 training to the entrepreneurs and strengthen different government agencies involved in respect of extension
224 services through holding reciprocal discussion and taking initiatives. The Government and the association of small
225 producers are working together in various countries of the world. There are good reasons for trying to establish
226 some sort of working partnership between Government and small producers in providing initiative and direction
227 for extension services. It is noted here that the Government can provide resources, continuity and coordination

228 that are made possible by an over-all view of the requirements of the national economy. Representatives of small
229 producers can provide enthusiasm, ideas and voluntary work to the small industrialists.

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

242 The definition of function and responsibilities of the different departments and agencies has to be determined
243 as per the needs and requirements of smallscale industry after a careful study and an analysis of the factors
244 that hampers its development. Since needs, requirements and conditions are changed over the course of time,
245 a continuous programme of research into economic, social and technological problems of small-scale industry is
246 called for, and decisions taken regarding the kinds of services to be provided and the way in which they are
247 provided need to be reviewed from time to time in the light of research findings. If activities are not undertaken
248 to aid small-scale industry based on careful study and analysis may be misdirected. For example, measures that
249 might be appropriate to help certain small-scale undertakings for absorbing unemployed people in an area with
250 a high population density may not be appropriate for largescale industry. The measures or extension services
251 may differ for a different socio-economic structure also. Usually, small firms is operated using hand-operated
252 manufacturing techniques or in some cases, with vocational training. The trainees remain anxious whether the
253 training and skills that are being imparted would be utilized or sufficient demand of ones would be created or
254 not in future. Whether the efforts that are made for improving a backward technology would be fruitful or not
255 without creating market of the products. In short, efforts may be abortive because they are ignorant what it is
256 required in a given situation, or because they cannot succeed improving only one aspect of the problems that are
257 facing whereas they might be very successful if accompanied by appropriate measures of other kinds. So, a careful
258 study is necessary to take any initiative. Well designed research projects cannot throw only light on the urgency
259 of different needs and the nature of With the initiative of the Corporation, a training centre named SCITI (Small
260 and Cottage Industries In Bangladesh, it is mention worthy and matter of regret that the members of small
261 producers association do not ever try for the betterment of this sector at all or for the other members rather
262 they play a role of a broker through macsul-manism due to unethical takings in obtaining loan from different
263 financial institutions and as such cooperate to divert the loan for their personal purpose. In a matter of fact,
264 for healthy development of small-scale industry, a body may be formed that are exist in some countries of the
265 world for providing appropriate extension services to small industry with the representatives of small producers
266 association and of public and semi-public agencies/departments as well as with other interested quarters of the
267 society who are capable to play positive role in this respect. obstacles to progress; research can and should also
268 be designed to evaluate the result of efforts made and services provided.

269 **5 V.IV Coordination of Government Agencies**

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

285 The guiding principles, mentioned above are not the best one solely. However, certain guiding principles may
286 be suggested in first extreme, the purpose of centralization is to prevent waste and duplication and to ensure
287 that so far as possible, important gaps in services are filled. Waste and duplication may arise if a unit is set up
288 to provide some services that could be provided more effectively and economically by existing agencies. Often
289 economies of scale may be achieved by providing certain services in combination and spreading their overhead

290 cost. For example, some people who are equipped by training and experience to provide consultancy services are
291 likely to be well qualified for "vetting and reporting on the merits of application for loans. They will be probably
292 well qualified to provide at least certain kinds of training. Again, a laboratory equipped to test materials and
293 products of a certain industry in a certain region may be able to provide the same services for the same industry
294 establishing separate laboratories for each region. In fact, the centralization as well as decentralization move among
295 other things, depend upon the size of a country. Such as, services may appropriately be much more centralized in
296 a small country like Bangladesh than in a big country like India. As regards the question of the specialization by
297 industry the purely the technological problems of different industries are apt to be entirely different, but many
298 of their more general management and marketing problems are very similar. While one would not expect the
299 same expert to advice on, say, cutting speeds for machine tools and glazes for ceramics, one would expect that an
300 expert in cost accounting could give useful advice both in small engineering works and in a small pottery. These
301 differences between specialized technological problems and other more general problems of management need to
302 be taken into account in organizing extension services.

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

305 But there remains an interest in solving a question of how these various problems have been tackled in different
306 region of the country as well as in different counties of the world. The following different bodies/team may solve
307 the problem of providing extension services to small-scale industry. i) A group of field officers who pay visits to
308 small undertakings and if necessary stay for days together at the industrial unit which seek their advice on a wide
309 range of questions (for example, the establishment or extension of factories and problems of materials, product
310 improvement, equipment, energy supply and financing). In Bangladesh, the BSCIC is performing such type of
311 activities decentralizing its office in different districts as well as at different upazila also. But these activities
312 would be beneficial for this sector if these are performed in above mentioned manner.

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

322 ii) At least one chemical engineer stationed at each regional office and charged with assisting the field V.V
323 Types of Organization officers on chemical questions, the field officers would be mainly of mechanical engineers.
324 In district office of BSCIC, there are engineers but all of them are not skill enough to evaluate the trade-wise
325 project i.e. not like of above structured. iii)

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

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

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

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

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

352 will help to show which of the latter are in the greatest demand, and will create an incentive to expand these
353 rather than other forms of activity.

354 On the other hand, if a service is intended to be entirely self-supporting financially, it will inevitably be rather
355 costly to the users. Though good administration and concentration on essentials keep down the costs, nevertheless
356 it is likely that many small industrialists who could benefit from the service will be differed from doing so by
357 the relatively high fees that will have to be charged. In most countries the combination of the grants and fees
358 probably constitutes the most appropriate type of financial arrangement. In Bangladesh, the small industrialists
359 are facing very much difficulty for paying high interest on loan that hampers the development of this sector. The
360 following table gives an idea regarding the interest on industrial loan. From the above table it is revealed that
361 all most all the financing institutions have increased the interest rate on loan in 2007 in respect of 2002 whereas,
362 it was supposed to reduce the rate of interest on loan in the immediate past industrial policy, 2005.

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

364 **6 V.VI Financing and Staffing**

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

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

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

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

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

409 The group approach is most effective when information to be given is generally applicable by selected groups
410 of small industrialists of the same social and economic level and technical skills and where variations in methods
411 and conditions of work in the individual units are not large. Thus, it may be used in providing training in simple
412 management technique such as bookkeeping, elementary cost accounting and principle of cooperative actions.
413 The group method may be supplemented by individual training, to meet specific demand of particular small

414 enterprises. It is also a valuable device for providing general technical training in production techniques such as
415 the use of new raw materials or the manufacture of new commodities within the scope of existing skills.

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

420 7 V.VII The Choice of Extension Method

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

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

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

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

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

457 Extension work performed through a selected individual demonstration plant offers only limited opportunities
458 of providing actual training for workers from outside, for which adequate facilities are usually lacking in a plant
459 that is already operating as going concern. This method thus serve mainly to demonstrate needs of their individual
460 activities in conformity with the manufacturing and operational pattern of the common plant. Joint technical
461 training under a group approach can help to install in the participating small industrialists an appreciation of
462 the collective action which is the basis for success in this kind of industrial development. Of course, the mass
463 approach cannot be expected to have the same result, in depth, as the individual or group approach in the
464 teaching of new methods, especially when the training in these requires a certain education level or a degree
465 of concentration or sustained activity. However, it has its value, especially for propaganda purposes. It can
466 help by means of meetings, films, radio, exhibition and other media to create a livelier understanding of the
467 place of small industry in the national economy and a keener awareness of the opportunity offered by modern
468 method and forms of organization to raise the social and economic status of small industrialists and workers.
469 Mass extension method may contribute to a change in outlook which is often important prerequisite of social
470 and economic progress; they can most usefully supplement the individual and group approaches by preparing
471 a ground for a fruitful application of specific methods and forms of organization . the improved of techniques
472 applied consistently within an existing small industrial establishment with a view to encouraging other small
473 industrialists to apply similar techniques. If for this purpose they or their workers need specific training, the
474 extension method has to be supplemented, e.g. by itinerant demonstration and training units.

475 V.VIII Some Specific Extension Services V.IX Individual Demonstration/Model Plants Demonstration projects

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

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

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

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

520 The holding of marketing arrangement may be an effective method of disseminating useful information to
521 small industrialists on the marketability of their products. Such an arrangement may in appropriate cases be
522 conducted by itinerant demonstration and training teams. In suitable centres of small industrial production,
523 exhibitions may be arranged of selected products manufactured in various small industrial units. These products
524 are inspected and appraised by one or more specialists of the team, paying attention to feature of design and
525 packing, quality, weight, size and other factors that affect marketability and price. On the basis ^{1 2 3 4 5 6}

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Figure 1: Source

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Figure 2: Table 1 :

526 Appropriateness of Extension Services of Small-Scale Industry of these appraisals, suggestions are made
527 to each exhibitor as to ways of improving the marketability of his product and information is given to
528 him regarding market requirements. Since, in many instances, small industry is not fully geared to the
529 requirements of an expanding market economy, with its changing consumers' tastes and preferences, such
530 marketing V.X Demonstration and Training Plants V.XI Itinerant Demonstration and Training Team V.XII
531 Marketing Arrangements intelligent appraisal of the place of its products in the market and of the measures to
532 be taken to improve their salability.

533 VI.

534 .1 Findings of The Study

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

549 .2 VII. Suggestions And Recommendations

550 Many problems that are facing by small-scale industrial units and small industrialists regarding extension services
551 have been found out from the endeavor made by the researcher. Suggestions and recommendations have been
552 given for finding out the problems and scrutinizing the appropriateness of extension services to small-scale industry
553 as well as small industrialists for future within the purview of the study. The study recommended as follows: 1.
554 The major/usual and even the trifling problems should be identified. The itinerant Demonstration team can play
555 a vital role in this regard staying in the small undertakings for a reasonable time. 2. The need-based extension
556 services have to be selected for individual industrial undertakings. 3. The itinerant demonstration team should
557 be consists of chemical engineer, mechanical engineer and some field officers in conformity with other developing
558 countries of the world. 4. Frequent consultancies have to be held with the owners, managers as well as employees
559 and workers and imparted them to trade-wise training and acknowledged about new technology. 5. Easy
560 availability of funds has to be ensured to small industrialists. 6. Maintain a good coordination between the
561 government agencies and small industrialists' associations. These associations have to be strengthened through
562 the strong patronization of the government. The associations have to play significant role for the interest of
563 obtaining appropriate extension services and if necessary bargain with competent authority. 7. The owners and
564 the managers should be imparted a special training for marketing the products and well staffing in their units.
565 8. A strong and pragmatic implementation and monitoring cell have been formed to implement and monitor
566 the projects. The authority assigned for performing this task has to be empowered adequately. 9. A panel
567 of experts in Industrial Management in underdeveloped countries should be formed consisting of the interested
568 people in this direction. 10. For strengthening the research work much more fellowships have to be managed from
569 different international organizations as well as the existing documentation and information centre at divisional
570 level should be enriched and a rich documentation and information centre should be set up at each district for
571 easy availability of information regarding small-scale industry.

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