

An Investigation of Subcontracting Linkages in Botswana

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Abstract: This paper presents the results of a study that was undertaken to determine the extent and potential of subcontracting between large enterprises and micro and small enterprises (MSEs) in Botswana. Thirty-one enterprises spanning five industrial sectors submitted acceptable responses. Overall, 35 percent of the respondents indicated having some kind of subcontracting in place. Thirty six percent of these were with MSEs. Amongst the non-contractors, 85 percent expressed a willingness to consider subcontracting to MSEs. Though present level of subcontracting may appear low, it should be seen in the light of the fact that subcontracting had never been given serious thought by almost half of the respondents. The paper suggests that putting subcontracting on the agenda of MSE promotion agencies might change the picture.

Keywords: Business Linkages, Micro and Small Enterprises, Subcontracting

Introduction

The Role of by Micro and Small-scale Enterprises:

Micro and small-scale enterprises (MSEs) play an important and prominent role in a number of developmental areas. Being labour intensive, MSEs have the capacity to create a large volume of employment for the same amount of capital compared to huge capital-intensive projects. They may therefore open up avenues for self-employment and help reduce unemployment, underemployment and/or seasonal employment. MSEs also facilitate the mobilisation of resources like capital and skilled manpower, which may otherwise remain unutilised or under-utilised for productive purposes. Since MSEs tend to be set up wherever a need and ability to pay is identified, they encourage and add to balanced regional development. As a corollary, they may help reduce the problems of rural-urban migration and social instability by creating employment at local community level. This leads to a better distribution of income.

Also, because of their low capital requirements, MSEs are easier to set up. This precipitates a more widespread ownership level and a more equitable distribution of production facilities and national income, motivated and driven by the benefits of private enterprise. The resulting wider participation in the economic activities of a country or region contributes to the economic empowerment of the population.

MSEs provide a breeding ground or nursery from which technical and managerial skills are learned and consolidated for future big business. Through creating employment and income generating avenues, they make it possible for the citizenry to take responsibility for their well-being and therefore move away from a dependency culture (Agrawal, 1996 and Bhat, 1996).

It is for the above reasons that MSE promotion is a much sought after objective of most governments. The Botswana Government has put in place adequate financial support and institutional frameworks (Kaunda and Miti, 1995 a). These include Financial Assistance Policy (FAP) (1982), Local Preference Scheme (LPS) (1978) and the Selebi Phikwe Development Program. The Local Procurement Programme (LPP) replaced the LPS in April 1997 (Coopers & Lybrand, 1997).

However, MSEs face a number of constraints. In the legal and regulatory environment, some laws and regulations are not wholly conducive to their development. For example, they may be required to go through lengthy registration and licensing procedures as large enterprises do. At a micro level, entrepreneurs lack managerial skills to complement the technical skills that they may possess. This is reflected in deficiencies in marketing, production, finance, bookkeeping and accounts, among others. Another major problem facing MSEs is that they tend to be shunned by financial institutions because they are perceived as highly risky and costly to deal with. Also, by virtue of their size, ownership, location and other constraining characteristics, MSEs have limited access to information regarding marketing opportunities and threats, new technologies, improved production techniques, and related issues (Tjihuiiko, 1996). They also have poor access to appropriate technology and infrastructure. (Agrawal, 1996; Bhat, 1996).

The Use of Subcontracting in Economic Development:

In their efforts to industrialize and bring about economic development for their citizenry, many countries are turning to the promotion of MSEs. In this regard, governments have at their disposal a number of tools one of which is subcontracting (Humphrey and Schmitz, 1995). Though widely used in the developed world, subcontracting is not that prevalent in the less developed countries and Africa in particular. It is to this and the fact that the subject of MSE promotion is just emerging that is attributed the paucity of information on subcontracting.

The study: This paper presents the results of a study on subcontracting linkages in Botswana. The general objective of the study was to determine the extent and potential of subcontracting linkages, particularly between large enterprises and micro and small enterprises in Botswana. The specific objectives were:

- to determine the extent of subcontracting between business enterprises and between large enterprises and micro and small enterprises in Botswana
- to determine which sectors of industry offer greater opportunities for such subcontracting linkages
- to identify the driving forces of subcontracting relationships

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- to compare the observed results against other countries. Japan was selected as the comparative country because of its large-scale use of subcontracting and availability of statistics.

The study set out test the following hypothesis:

H₀: The extent of subcontracting linkages between business enterprises and between large enterprises and micro and small enterprises in Botswana is the same as would be expected in other countries.

Defining Subcontracting: UNIDO defines subcontracting as what takes place "...when a company (called the contractor) places an order with another company (called the subcontractor) for the production of parts, components or subassemblies or assemblies to be incorporated into a product to be sold to the contractor. Such orders may include the processing, transformation or finishing of materials or parts by the subcontractor at the request of the contractor" (UNIDO, 1974). Another definition of subcontracting is "...manufacturing or fabrication of products, parts and accessories, or manufacturing or repair of facilities and equipment used for manufacturing products, under commission by an enterprise with a larger capital or a larger number of employees than the contractor" (National Association for Subcontracting Enterprises Promotion, 1996).

Subcontracting is an economic activity that involves a network of complementary inter-industry or inter-firm relationships between industries or firms of various types and sizes. In these subcontracting relationships, enterprises which place orders for manufacturing of processing products, parts, or accessories or goods are called parent (order placing) enterprises while those that receive orders are called subcontracting (order receiving) enterprises.

Subcontracting in MSE Promotion: There are economic explanations for and benefits of subcontracting. The economic explanations include economies of scale, the theory of comparative advantage and the economic concept of derived demand (Sanyikosa, 1989).

The benefits of subcontracting between large institutions and MSEs may be divided into three: benefits to the parent companies, benefits to subcontractors, and benefits to the country as a whole. To parent companies the benefits include the opportunity to reduce costs (mainly due to the lower costs, tax concessions, etc, enjoyed by the former), the flexibility of MSEs, the opportunity to concentrate on more strategic issues, and prevention of overgrowth and operational ineffectiveness.

Subcontractors derive the following benefits from subcontracting arrangements: stable markets, development of managerial and production skills, research and development (R&D) expertise, specialization, financing, and the possibility of producing multiple lines.

For the country as a whole, subcontracting may contribute to development in that it helps broaden the industrial base and leads to a more efficient utilization of scarce resources. Other benefits include minimization of waste, increased capacity utilization, and transfer of know-how from large institutions to MSEs.

In his study of subcontracting in Zambia, Sanyikosa (1989) examined the types of industries in which subcontracting was prevalent in the country. He found that though in principle subcontracting could be

beneficial for Zambia; there were practical limitations, mainly the absence in adequate numbers and sizes of industries that can be categorized as having high potential for subcontracting. An example of industries that have high potential for subcontracting, based on Japanese studies, is given in Tables 1 below.

Table 1: The Ratio of Subcontracting Enterprises in Japan, 1987

Sector	Percentage
Transportation equipment	81.2
Electrical appliances	80.5
Textiles, textile related equipment	79.7
General purpose machinery	75.0
Metal products	71.1
Precision machines and tools	71.1
Synthetic resin products	69.0
Steel, nonferrous metals	58.1

Source: Q & A on Subcontracting Enterprises, National Association for Subcontracting Enterprises Promotion, International Business Partners Information Center, Japan, March 1996.

In addition to the absence of the right industrial categories, the study found other limitations like the absence of basic industries (i.e. iron and steel and plastic) and a small domestic market. The latter point is important since the demand for subcontracts is derived and therefore depends on the demand for the final product. Other limitations noted were the lack of incentives and market imperfections, exports of raw materials, and lack of production management skills amongst MSEs. Despite these limitations, this study did recognize the importance of encouraging subcontracting where possible as it engenders cooperation in that MSEs compliment rather than compete with large institutions. In another study (Government of the Republic of Zambia, 1997), it was found that 69% of the responding large enterprises had some form of subcontracting relationship with MSEs. Regarding the types of jobs subcontracted to MSEs, the study found that parent companies tended to outsource those jobs that were of low value added, labor intensive, specialized or beyond their scope. In this study only 31% of the responding large enterprises thought the introduction of incentives would encourage large enterprises to enter subcontracting relationships with MSEs. In conclusion it was found that there is potential for subcontracting, subject to MSEs adapting to the needs of large enterprises.

Writing on the business linkages initiative in Namibia, Biwa (1996) concluded that business linkages may be beneficial to both MSEs and large enterprises. As in the other studies above, here too there were caveats. First, it was noted that in order for business linkages to work, the relationship must be based on sound commercial principles rather than on social responsibility. The second caveat was that to increase the chances of success, linkages must be accompanied by other support services. Lastly, business linkages should not lead to a dependency syndrome; i.e. the idea should be to promote additional marketing opportunities for MSEs.

In Botswana, Chotani (undated) points out that there is need to promote and implement business linkages as this would help make the "Buy Botswana" campaign a reality. However, his study does not indicate what the extent of

business linkages is. Neither does it identify the sectors where linkages exist. But he does recognize the absence of information and recommend that studies need to be undertaken.

Materials and Method

This study was descriptive. The target population was enterprises in the following manufacturing industry groups: 1) textile and clothing, 2) paper and paper products and printing and publishing, 3) rubber and plastic products, 4) fabricated metal products and machinery and equipment, 5) furniture manufacturing, and 6) leather and leather products. These industry groups were selected because they have been suggested as offering the best prospects for subcontracting in the literature reviewed. Geographical coverage was planned to cover Gaborone, Francistown, Lobatse, Selebi Phikwe, Kweneng, and Mochudi. These are the areas where most manufacturing industries are based with Gaborone, Francistown, Lobatse, Selebi Phikwe and Kweneng accounting for 50%, 9%, 4%, 6%, and 5% respectively of the 878 operating manufacturing industries (Republic of Botswana, June 1998).

The sampling frame was constructed from the Botswana Confederation of Commerce, Industry and Manpower (BOCCIM) 1998/1999 Business Directory. The fieldwork was undertaken between August 1999 and August 2000. A total of 91 companies were randomly selected from each of the six industry sectors to participate in the survey using a respondent completed questionnaire. However, only 31 companies responded representing a response rate of 34 percent. A personal call by the researcher and three telephone follow-ups were made before non-responding firms were replaced or dropped.

Table I: Sample Size and Response Rate by Sector

Sector	Sample size	Number responding	Response rate (%)
Paper	19	8	42
Leather	5	3	60
Textiles	37	11	30
Metals	25	7	28
Furniture	5	2	40
Total	91	31	34

The breakdown of the respondents by district was Gaborone 17, Francistown 7, Selebi Phikwe 5, Kweneng 1, and Mochudi 1.

Using the Government of Botswana guidelines that micro and small enterprises are those that employ less than 25 employees (Government Paper No. 1 of 1999), the respondents comprised of 11 MSEs and 20 medium and large enterprises.

Results and Discussion

Survey Findings

Extent of Subcontracting: Only 35 percent of the responding companies indicated having subcontracting relationships as detailed in Table 2.

Thirty six percent of the respondents had subcontracting relationships with MSEs compared to 9 percent and 55 percent for medium and large enterprises respectively. The responding companies therefore had less

subcontracting relationships with MSEs than with medium and large enterprises.

All respondents in the study indicated that they have no deliberate policy to do business with MSEs, i.e. that they maintain an open door policy where they deal with all enterprises without regard to size.

Types of Work Subcontracted: The types of work subcontracted fell into four broad categories as follows (Table 3):

The types of work falling under these broad category included transportation, bleaching of fabrics, printing, packaging, production of parts and components and assembly of parts and components.

Reasons for subcontracting: The main reasons cited for entering subcontracting relationships were lack of skilled/specialized labour in the parent company, lack of specialized equipment, inadequate capacity to meet orders and cost and convenience offered by the subcontractor.

The responding companies with subcontracting relationships also made it clear that the motive in making decisions regarding subcontracting is largely commercial benefit (82 percent) rather than social responsibility. The remaining 12 percent consider both commercial and social responsibility issues.

Some Characteristics of Non-Contractors: Of the responding companies that had no subcontracting relationships, only 25 percent had considered subcontracting before. These were motivated by inadequate in-house capacity, lack of equipment and skills, and to a lesser extent the competitive production costs and convenience offered by the subcontractors (see Table 4). However, 20 percent could not go ahead to subcontract as they were contractually forbidden to subcontract by the parent organizations.

Overall, this means that almost 50 percent (i.e., 15 out of the 31 respondents) have never considered the issue of subcontracting at all. Eighty five percent of the non-contractors at the time of the study were willing to consider subcontracting to MSEs under certain conditions only (Table 5), while 15 percent would not consider it under any circumstances.

The most likely activities for subcontracting were identified generally as non-core activities (39 percent), activities requiring specialized skills and equipment (39 percent), and excess work (21percent).

Policy changes and facilitating institutions: To encourage subcontracting, the responding companies suggested a number of issues as detailed in Table 6.

The use of a third party institution to facilitate subcontracting did not receive support from 74 percent of the respondents on the ground that the use of middlemen might create remoteness between the subcontractor and the parent organization. Of the 26 percent of the responding companies that recommended the use of a facilitating institution, 38 percent suggested BOCCIM for the role. The other suggestions were: other private sector player (25 percent) and relevant government department (38 percent).

Generally, the respondents felt that in order to promote MSEs through subcontracting, the issues in Table 7 should be addressed:

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Table 2: Extent of Subcontracting

Sector	Number responding	Number subcontracting	Percentage subcontracting
Paper	8	2	25
Leather	3	1	33
Textiles	11	4	36
Metals	7	2	29
Furniture	3	2	100
Total	31	11	35

Table 3: Broad Categories of Subcontracted Work

Broad category	Number subcontracting	Percentage subcontracting
Provision of services	7	44
Provision of goods	1	6
Production of parts and materials	3	19
Processing, transformation or finishing of materials or parts	5	31
Total	16	100

Table 4: Reasons for Subcontracting

Reasons	Number of respondents	Percentage
Lack of skilled/specialized labour	5	38
Lack of specialized equipment	4	31
Inadequate capacity to meet orders	2	15
Cost and convenience	2	15
Total	13	100

Table 5: Conditions Necessary for Subcontracting

Conditions	Number of respondents	Percentage
Bigger orders for contractors	9	45
Provision of improved quality by subcontractors	4	20
Provision of lower production costs by subcontractors	2	10
None	5	25
Total	20	100

Table 6: Issues to Be Addressed to Encourage Subcontracting

Issues	Number of respondents	Percentage
Trained manpower to provide supervision	7	35
Business friendly and transparent tendering system	4	20
General incentives (e.g. discouraging imports, export guarantee, schemes, tax incentives)	5	25
MSE support	4	20
Total	20	100

Table 7: Issues to be addressed to promote MSEs through subcontracting

Issues	Number of respondents	Percentage
Encouragement from and supervision by government	5	31
Skills and facilities development for MSEs	6	38
General incentives	5	31
Total	16	100

Hypotheses Testing: This study proceeded on the tentative assumption that the current situation regarding subcontracting in Botswana is not significantly different from other countries other than for differences due to sampling errors, with the null hypothesis being that: H_0 : The extent of subcontracting linkages between business enterprises and between large enterprises and micro and small enterprises in Botswana is the same as would be expected in other countries. This null hypothesis was tested using the chi-squared goodness of fit test to establish whether the differences between the observed frequencies and the expected frequencies are more than can simply be due to random occurrences. At a 5 percent significance level, there is only a 5 percent chance that random fluctuations accounted for the calculated chi squared value (142) being greater than the chi squared critical value of (9.49). Since the calculated chi squared value is greater than the critical value, the null hypothesis was not accepted, i.e., the extent of subcontracting linkages

between institutions in Botswana is not the same as in other countries:

Discussion and Recommendations

Comparison of the Extent of Subcontracting to Other Countries: At 35 percent, the extent of subcontracting in Botswana is lower than the average in the comparative country of Japan where the prevalence rate is about 65 percent. However this comparison needs to be tempered with a recognition of the gap in the levels of industrial development between the two countries. Subcontracting relationships with MSEs were at 36 percent.

Almost 50 percent of the respondents have never considered subcontracting at all. Amongst the non-contractors this proportion is 75 percent. Clearly, for some reasons, subcontracting has not been on the agenda of most business organizations. It is recommended that institutions charged with the responsibility of MSE development put subcontracting on

their agenda and explain and publicize it to both large enterprises (and other potential contractors) and MSEs. This would be in line with Objective (VI) of the Policy on Small, Medium and Micro Enterprises in Botswana (Government of Botswana, 1999) which states: "...There is need to develop linkages between SMMEs (Small, Medium and Micro Enterprises) and larger firms operating in Botswana through subcontracting for the provision of goods and services".

Despite the low level of subcontracting taking place, there is a willingness to give it a try. Eighty five percent of the non-subcontractors were willing to go into subcontracting with MSEs subject to there being bigger orders for contractors and subcontractors improving on their quality.

It is therefore suggested that while MSE development agencies can not do much about giving business to contractors, they can play a role in helping MSEs as potential subcontractors improve on their product and service quality by directing part of their effort to training in the areas of production management and quality assurance amongst others. This point underscores the fact that subcontracting should be an integral part of a bigger MSE promotion package.

Subcontracting by Sector: Though the overall prevalence of subcontracting is 35 percent, within the five sectors covered this ranged from 25 percent for the paper sector to 100 percent for the furniture sector. However, these figures should be taken as indicative only on account of the smaller sample realized in the study.

By type of work, the provision of services and the processing, transformation or finishing of materials or parts appeared to offer more opportunities. Also, subcontracting tended to apply more to activities considered to be non-core to the contractor and to activities requiring specialized skills and equipment.

It is suggested that rather than target specific sectors and therefore inhibit the entrepreneurs' initiatives, the idea of subcontracting should be promoted in all sectors.

Reasons for subcontracting: Commercial necessity rather than long term strategy appears to be the motive behind subcontracting. Instead of investing in skills development and equipment, the tactic employed is to subcontract when the situation arises where skilled labour and the appropriate equipment are not available. While recognizing the bottom line that commercial benefit is the primary motive behind business decisions, large institutions should be encouraged to subcontract to MSEs whenever it makes business sense. Though the idea behind subcontracting is not to provide "handouts" for MSEs, we suggest that it is good corporate citizenship to help the community in which one does business. One way large institutions can do this is by giving some of their business to MSEs.

Policy Changes and Facilitating Institutions: To encourage subcontracting, the responding companies' main suggestion was the provision of supervision by trained personnel (either from a government department or a private sector player). But the respondents agreed overwhelmingly that this third party institution's role should not include playing "broker" between the contractor and subcontractor. The institutions most favored for this role were BOCCIM and any relevant government department.

It is suggested that a government MSE promotion agency and BOCCIM can work in tandem, each with its own program. The objective is the same: to encourage the use of subcontracting between MSEs and large institutions.

Limitations and direction of future research: The interpretation of these results and recommendations should be informed by an appreciation that a major

limitation of this study was the small sample that was actually realized. Though a sample size of 91 companies was targeted, only 34 percent of these companies actually responded. Further, the adoption of The Policy on Small, Medium and Micro Enterprises in Botswana (Government Paper No. 1 of 1999) does address some of the recommendations made here. This means that future research should be more concerned with issues of policy implementation and how it can be enhanced.

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