**BIBLIOGRAPHY** 

FABROS, MARVEIN S., APRIL 2013. An Assessment of DOST Small Enterprise

Technology Upgrading Program (SETUP) Assisted Furniture Enterprises in Baguio City

and Mountain Province. Benguet State University, La Trinidad, Benguet.

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**ABSTRACT** 

This study was conducted to:determine the profile of furniture enterprises assisted

by DOST SETUP in Baguio City and Mountain Province; determine the status of the

furniture enterprise in terms of production, marketing, financial, and organization and

management before SETUP intervention; determine the type of intervention adapted by the

furniture enterprises from the SETUP program; and, identify the expected results/impact

of the furniture enterprises in terms of production, marketing, financial, and organization

and management as result of the SETUP intervention.

The results showed that the type of the furniture enterprises assisted by DOST

SETUP in Baguio City and Mountain Province is single proprietorship, and most of the

respondents never finished their studies. All furniture enterprises have increased

productivity, product quality; improved financial condition; and the entrepreneurs have

improved management capability. The respondents of Baguio City and Mountain Province

have good impact to their furniture enterprises because they reach their aims.

The furniture enterprises need to further improve their products for them to meet the standards in the export market. Moreover the government should provide support for the furniture enterprises to export or participate in the international marketing. Furthermore, DOST must conduct trainings (marketing assistance and provision of production technology) and seminars to their locality.



#### INTRODUCTION

# **Rationale**

The National Science and Technology Authority (NSTA) was re-organized into the Department of Science and Technology (DOST), paving the way for the creation of DOST Regional Offices through the country on January 30, 1987. The Cordillera Administrative Region was created by virtue of Executive Order 220, 1987, consisting of the provinces of Abra, Benguet, Mt. Province (formerly from Region I), Ifugao, Kalinga-Apayao (formerly from Region II). This was followed by the establishment of the DOST-CAR regional office through Administrative Order No. 36 and 180, series of 1987. On July 31, 1990, the Provincial Science and Technology Centers (PSTCs) were created through RA 6959. DOST-CAR has established its PSTCs in Abra, Benguet, Ifugao, Kalinga-Apayao, and Mountain Province in December 1991. The last PSTC to be added is the Apayao S&T Center when the former province of Kalinga-Apayao was splited into two in February 1995, through RA7887 (DOST, 2011).

The Department of Science and Technology (DOST) launched the Small Enterprise Technology Upgrading Program (SETUP) in response to the call for more focused programs of assistance for small and medium enterprises (SMEs). SETUP is a nationwide strategy to encourage and assist SMEs to adopt technological innovations to improve their operations and thus boost their productivity and competitiveness. The program enable firms to address their technical problems through technology transfer and technological interventions to improve productivity through better product quality, human resources



development, cost minimization and waste management, and other operation related activities(DOST, 2011).

Micro, Small, and Medium Enterprises (MSMEs) play a major role in the country's economic development through their contribution in the following: rural development and decentralization of industries; creation of employment opportunities and more equitable income distribution; use of indigenous resources; earning of foreign exchange (forex) resources; creation of backward and forward linkages with existing industries; and entrepreneurial development (DOST, 2011)...

As of June 2012, there were about 139 small and medium enterprises assisted by the DOST SETUP in whole the CAR. To break it down, there are nine (9) projects in Abra, 11 in Apayao, 21 in Kalinga, 22 in Benguet, 22 in Mt. Province, 26 in Ifugao and 28 in Baguio City. Specifically for furniture enterprises, there are 2 in Abra, 4 in Apayao, 2 in Baguio, 1 in Benguet, 7 in Ifugao, 2 in Kalinga, and 10 in Mt. Province the total number of furniture enterprises availed on SETUP project have twenty eight (28) in the whole CAR (DOST, 2011).

Therefore, it is necessary to assess the SETUP projects of DOST CAR, the present status of the furniture sector prior to the support of the SETUP, the type of interventions adapted through the SETUP program, and the expected results or impact of the interventions for the improvement of the functional areas of their business (DOST, 2011).



#### Statement of the Problem

This study focused on the assessment on the furniture enterprises assisted by DOST SETUP in Baguio City and Mountain Province. Specifically, this study wants sought the answers to the following:

- What is the profile of furniture enterprises assisted by DOST SETUP in Baguio
  City and Mountain Province?;
  - 2. What is the status of the furniture enterprises in terms of production, marketing, financial, and organization and management before SETUP intervention?;
  - 3. What is the type of intervention adopted by the furniture enterprises from the SETUP program?; and
  - 4. What are the expected results/impacts of the furniture enterprises in terms of production, marketing, financial, organization, and management as result of the SETUP intervention?

# Objectives of the Study

Specifically, this study aims to:

- 1. Determine the profile of furniture enterprises assisted by DOST SETUP in Baguio City and Mountain Province;
- 2.Determine the status of the furniture enterprise in terms of production, marketing, financial, and organization and management before SETUP intervention;
- 3. Determine the type of interventions adapted by the furniture enterprises from the SETUP program; and



4.Identify the expected results/impacts of the furniture enterprises in terms of production, marketing, financial, and organization and management as result of the SETUP interventions.

## Importance of the Study

The result of the study provided basic information to the furniture enterprises owners in making decisions regarding their business operations and determining the interventions they needed. Furniture projects include identification of abundant commodity in a given community that has great potential for production or manufacture intended to create livelihood and improve the standard of living of a furniture enterprises. These projects involve commodity-specific S&T interventions or activities and multistakeholders participation in project development and implementation at the furniture sector. Other concern agency like DOST SETUP may also be guided in formulating policies to improve their services in providing the interventions needed by their customers.

#### Scope and Delimitation of the Study

The study was conducted on February 2013. Respondents of this study are the furniture enterprises owners assisted by DOST SETUP in Baguio City and Mountain Province.



#### REVIEW OF LITERATURE

#### Micro, Small, and Medium Enterprises (MSMEs) Defined

As defined under Small and Medium Enterprises Development (SMED) Council Resolution No. 01 Series of 2003 dated 16 January 2003, micro, small and medium enterprises (MSMEs) are any business activity or enterprise engaged in industry, agribusiness/ services, whether single proprietorship, cooperative, partnership, or corporation whose total asset, inclusive of those arising from loans but exclusive of the land on which the particular business entity's office, plant and equipment are situated, must have value falling under the following categories: By Asset Size: Micro- up to P3,000,000; Small – P3,000,000-P15,000,000; Medium-P15,000,000-P100,000,000; Large- above P100,000,000. Alternatively, MSMEs may also be categorized based on the number of employees: Micro 1-9 employees; Small 10-99 employees; Medium 100-199 employees; and Large- 200 and above employees (DTI, 2008).

#### MSMEs Contribution to the Economy

MSMEs contribute to the creation of wealth, employment, and income generation, both in rural and urban areas, thus, ensuring a more equitable income distribution. They also provide the economy with a continuous supply of ideas, skills, and innovations necessary to promote competition and the efficient allocation of scarce resources. In the last five years, the MSMEs sector accounted for about 99.6% of the registered business in the country by which 63% of the labor force earn a living. Around 35.7% of the total sales and value added in the manufacturing come from MSMEs as well. As of 2009 count, there



are 780,437 business enterprises operating in the Philippines. Of these, 99.6% (777,357) are micro, small and medium enterprises (MSMEs) and the remaining 0.4% (3,080) is large enterprises. Of the total number of MSMEs, 91.4% (710,822) are micro enterprises, 8.2% (63,529) are small enterprises, and 0.4% (3,006) is medium enterprises. Majority of the 777,357 MSMEs operating in 2009 are in the wholesale and retail trade industries with 3,385,610 business establishments; followed by manufacturing with 11,987; hotels and restaurants with 97, 289; real estate, renting and business activities with 47,654; and other community, social, and personal services with 44,313. These industries accounted for about 88.4% of the total number of SME establishments. MSMEs generated a total of 3,595,641 jobs in 2009 versus 2,094,298 for the large enterprises.

Thus, further indicates that MSMEs contributed almost 63.2% of the total jobs generated by all types of business establishments that year. Of these, 30.4% or 1,731,082 jobs were generated by micro enterprises; 25.5% of 1,449,033 by small enterprises; and 7.3% or 415,526 by medium enterprises. By industry sector, MSMEs in the wholesale and retail trade generated the most number of jobs(with 1,250,453) in 2009 followed by MSMEs in manufacturing, 637,524; hotels and restaurants, 482,357; real estate, renting, and business activities, 284,406; and education, 225,016.Majority of the jobs are generated by MSMEs in the National Capital Region (NCR) with 1,360,440 jobs; followed by MSMEs in Region 4-A (CALABARZON), 466,648; Region 3 (Central Luzon), 319,340; Region 7 (Central Visayas), 235,091; and Region 6 (Western Visayas), 193,543.MSMEs contribute around 35.7% of the total sales and census value-added in the manufacturing industry, according to the National Statistics Office (NSO).MSMEs account for 25% of the country's total exports revenue. It is also estimated that 60% of all exporters in the country



belong to the MSME category. MSMEs are able to contribute in exports through subcontracting arrangement with large firms, or as suppliers to exporting companies, (DOST, 2008).

## Furniture Industry

The furniture industry faces many challenges which require it to change and be innovative in order to remain competitive. Companies are looking for designers to deliver innovation, to establish and build brands, and to improve production systems and sales. In this day and age, a company's greatest natural resource is the ingenuity of its employees. Designers are being used more strategically across businesses to help companies grow and compete more successfully in global markets. The traditional laws of markets and competition for the industry are now being challenged by global trends-environmental issues, growing economies and social sustainability, to name a few. Greater economic, educational and cultural objectives must be met if a company plans to improve its competitiveness. Examples of these objectives include the quality of designs, the national image of the company and the social value of the products. With today's rapidly evolving market, staying ahead of the game can bring a whole new serving of trends (Bill Martin, 2005).

The Philippine furniture industry for instance has metamorphosed to a highly diversified manufacturing sector, which is composed of roughly 15,000 furniture firms directly or indirectly employing about 800,000 people. This is thrice the employment estimate of 250,000 in the 1980's and does not include the estimated 1,000,000 people in the sub-contracting network. Ninety-eight percent of these companies are micro, small and



medium enterprises with only 2% being large enterprises. The bulk of all these companies are concentrated in three provinces, namely: Metro Manila, Cebu and Pampanga. The furniture manufacturing in the Philippines is still labor-intensive, with products ranging from leg items (chairs, tables, beds, settees); case goods (cabinets, desks, chest of drawers, kitchen storage units and related products); and a combination of these two (building or home fittings, shelves, ornaments and similar products). The industry, as a whole, contributes about U\$600M in the sales to the economy. This does not include the taxes and sundry fees which the furniture companies, as well as the 1.8M workers in these establishments, bring into the coffers of the government through taxes. Growth was admittedly sluggish starting the late 1990's, reaching a high of U\$381.39M in 2000 and dropping to a low of U\$297M in 2001 due to 9/11. Recovery has been slow but steady, despite hiccups such as the Asian health crisis in 2003 (Anonymous, 2006).

## <u>Importance of Furniture Industry Design</u>

Mat Hunter quoted the statement of former Chairman George Cox that design is what links creativity and innovation. It shapes ideas to become practical and attractive propositions for users or customers. Design may be described as creativity deployed to a specific end.

According to Chief Design Officer, Mat Hunter (n.d), every designer has a slightly different approach and different design specialism also have their own ways of working, but there are some general activities common to all designers. At the Design Council we like to illustrate this with a 'Double Diamond' model. Divided into four distinct phases, discover, define, develop and deliver, it maps how the design process passes from



points where thinking and possibilities are as broad as possible to situations where they are deliberately narrowed down and focused precisely on distinct objectives:

- 1. <u>Discover</u>. The first quarter of the double diamond model covers the start of the project. Designers try to look at the world in a fresh way, noticing new things and seeking inspiration. They gather insights, developing an opinion about what they see, deciding what is new and interesting, and what will inspire new ideas. Specific methods include: Market research, User research, Managing and planning and Design research groups.
- 2. <u>Define</u>. The second quarter represents the definition stage, in which designers try to make sense of all the possibilities identified in the 'Discover' phase. Which matters most? Which should we act on first? The goal here is to develop a clear creative brief that frames the fundamental design challenge to the organization. Key methods during the Define stage are: Project development, Project management and Project sign-off.
- 3. <u>Develop</u>. The third quarter marks a period of development where solutions are created, prototyped, tested and iterated. This process of trial and error helps designers to improve and refine their ideas. Key activities and objectives during the Develop stage are: brainstorming, prototyping, multi-disciplinary working, visual management, development methods and testing.
- 4. <u>Deliver</u>. The final quarter of the double diamond model is the delivery stage, where the resulting product or service is finalized and launched. The key activities and objectives during this stage are: Final testing, approval and launch and Targets, evaluation and feedback loops.



Furniture designers sometimes work on their own, some also make the furniture they design, and others work in teams as part of a large-scale manufacturing process. Pieces of furniture often start off as sketches of designer's ideas. 3D models are sometimes made, often by hand from cardboard, foam, wood or whatever the designers can lay their hands on, to show the piece's look and shape. Computer aided design (CAD), which is used increasingly in contemporary furniture design to translate ideas into technical drawings, forms a big part of a furniture designer's training and it is now widely used to quickly create new pieces of furniture. Rapid prototyping machines use CAD information to print complex 3D shapes and furniture designers may use them to model detailed parts of their concept. Full scale prototypes are commissioned to enable the functionality of a piece and its materials to be tested before a concept can be taken and manufactured at scale. Larger furniture design and manufacturing companies will employ staff to focus on marketing and selling new pieces or collections of furniture. Furniture designers who work on their own may need to engage in a degree of self-promotion in order to get themselves and their designs noticed, and therefore generate sales and profit. Whatever the size of the design practice, furniture creators will have to work with retailers, to sell their furniture. Domestic furniture is most often sold through retailers such as up-market specialist shops like Heal's or more democratic outlets like Ikea. Furniture bought for public or commercial use – for a shop, restaurant, office or school, for example – may be sold through a furniture dealer who specialises in supplying furniture in volume, (Hunter, n.d.).



#### **Functional Furniture**

All furniture should be functional to some degree or it is, to all intents and purposes, useless, but there are instances where the need for practicality takes precedence over the aesthetics. School furniture, for example, is designed above all else to be comfortable and durable, due to its sustained use. It must also be cost-efficient, as it's likely to be purchased using public money. The same criteria applies to hospital furniture which must be highfunctioning, comfortable and, most importantly, hygienic. Furniture is essential to our every-day lives. We use it at home, while we're working and when we're out shopping, at the cinema or travelling. Well-designed and researched furniture can improve our quality of life - when we like how it looks it gives us pleasure and when it makes us comfortable it can increase our efficiency and productivity. How furniture looks is important, and some of the most successful furniture designs of all time are often the most aesthetically pleasing, but the most successful furniture designs of all time look good and work well. By combining form and function in the design, and by ensuring products are made using responsible materials and ethical production techniques, furniture designers help create the pieces that collectively sell for £8.3billion each year according to the Furniture Industry Research Association (FIRA), (Hunter, n.d.).

# Furniture Materials in Operations

There are literally thousands of natural and man-made materials used for making furniture ranging from soft woods, hard woods and various grasses all the way to steel, glass, plastic and a host of man-made materials. One of the earliest and the most popular materials used for making furniture is wood. That is because wood has historically been



plentiful and is very easy to work with. Other materials, even stone have been used since early times however due to the impracticality of materials like stone, mostly benches and other outdoor items are made exclusively of stone. Stone is however used frequently as a component of furniture making, for example marble and granite are sometimes used to create a beautiful and nearly indestructible top for tables and similar furniture items. The most popular furniture making woods are Oak, Pine, Cedar, Cherry, Maple, Mahogany, Teak, Bamboo, Wicker and Veneers. Combined with leathers, fabrics and stone it is possible for skilled furniture craftsmen to make the most beautiful furniture using only natural materials. Laminates are another all too popular material for making furniture. Unlike the other materials mentioned, laminates are not natural. A laminate, not to be confused with a veneer, is a cheap way of making furniture that looks good, but it is a method that is never used for making quality furniture (Irvine, CA, 2011).

## <u>Production Management</u>

According to Porter (1980), as cited by Walang et al. (1998), to remain economically viable, a firm must be concerned with both the unit cost of its products and services and their contribution to profit. In addition, the enlightened firm will look at various aspects of productivity and always seek improvement.

#### Marketing Strategies

According to G. Smith (1999), Furniture marketing strategies have eight characteristics.



Strategy 1. Think big and audit your time. No matter what is the size of your business, place a mental image in your mind as if you are the largest and most successful person in your industry. How much time is consumed by routine office work someone else should be doing? Spend more time with more important tasks such as marketing strategies, improving customer relations, and implementing new strategies to expand your services.

Strategy 2. Be different and stand out from the competition. Jordan Furniture sells more furniture per square foot than any other furniture store in the nation. They transformed their family-owned business into a multi-million dollar corporation by following a principle called "shoppertainment." To surprise employees and customers, Barry and Eliot Tatleman dressed up like the Lone Ranger and Tonto and rode horses in their parking lot. They built an IMaxtheater inside one store to entertain children while their parents shopped. When you drive around the back to pick up your furniture they provide you free hotdogs and wash your car windows.

Strategy 3. Build relationships with your customers. For each month that goes by, customers lose 10% of their buying power. Create a customer database and contact them on a regular basis. Mail them a postcard, birthday card, sales flyer, newsletter etc. to keep your name, phone number, and service on their mind.

Strategy 4. Collect E-Mail Addresses. Get permission from your customers to use their E-mail address. Periodically send updates and notices to your client list. As long as you have their permission and avoid overuse, E-mail can be a powerful and inexpensive marketing tool.

Strategy 5. Hire top sales people. Successful businesses realize the quality of their sales staff is critical to sustaining their growth in the marketplace. A top salesperson can



outsell an average one 4 to 1. Sales people must understand their strengths and have a well-defined plan to reach their potential. Many companies can provide you sales assessments to both identify top candidates and develop currently employed sales people.

Strategy 6. Put a shopping cart on your website. Online sales are still growing at a dramatic pace. This is coming from people who want to save time, avoid crowded stores, convenience, and the ability to shop outside of store hours. Just consider E-Bay for example, which generates millions of dollars of sales each year. It does not cost anything to set up an account on E-Bay, and you pay a proportion based on the cost of the item you are trying to sell. If you don't want to use E-bay, consider using your own shopping cart system on your website.

Strategy 7.Pay-per-click advertising. Many business owners are finding classified advertising is not an effective use of their marketing dollars. Others are finding pay-per-click advertising is an easier and cheaper way to reach a larger market. Pay-per-click will insure you receive top visibility on websites driving more customers to your door. Advertisers bid on keywords and the more popular the keyword, the more expensive each click is. Prices vary between ten cents to many dollars depending on the popularity of the word. The most popular pay-per-click advertisers are Google, Business.com, and Yahoo.

Strategy 8. Use customer service commandments to create good habits. Bates Ace Hardware store located in Atlanta created "Twenty Customer Service Commandments" modelled after the Ritz-Carlton hotels outlining specific behaviors employees are to demonstrate when dealing with customers and fellow employees. For example, "Accompany a customer to the correct aisle instead of pointing to another area of the store." They print the commandments on a small card and employees carry it with them at work.



#### Human Resource

Human resources are the most important resources because they are the one who plan and implement business activities.

Moreover, human resource is required to operate not only the machinery but all production activities. In any factor, there are many specialized functions to manage. This leads to the principle of specialized labor to the selling up of an organizational structure designed to accomplish the various jobs (Drucker, 1965) as cited by Walang, 1998.

#### Financial Resources

According to Fajardo (1982), as cited by Walang et al. (1998), states that financial capital are essential resources to the entrepreneur. These are the life blood of the enterprise, the entrepreneur needs money in starting his business as well as for the development and growth, in many cases, small entrepreneurs have inadequate capital. Thus, it is important for them to be able to identify sources of funds.

In addition, financial manager must determine the best way to raise money. However, it is also important that the money should be used effectively in realizing the goals of enterprise and should adopt ways of monitoring and evaluating financial performance (Walang *et al.*, 1998).

#### DOST SETUP

Initially, the program covers the following sectors; (1) food processing, (2) furniture, (3) gifts, toys, house wares, handicrafts, natural fibbers and dyes, (4) marine and aquatic resources, (5) horticulture (cut flowers, fruits and high value crops), (6) metals and



engineering, (7) information and communication technology/ electronics, and (8) health products and services/pharmaceuticals (DOST, 2011).

SETUP aims to assist MSMEs improve their productivity and competitiveness through the : (1) infusion of new/advanced technologies to improve operations of MSMEs, (2) provision of limited funds for technology acquisition, (3) manpower training, technical assistance and consultancy services, (4) design of functional packages and labels, testing, (6) database information system (DOST, 2011).

# **DOST Strategies to assist MSMEs**

<u>Provision of technology</u>. For technology needs assessment and sourcing of technology, participating firms will be assisted in assessing their technology needs and appropriate technologies recommended for adoption. Once identified, the source of the technology will be determined and negotiations for the acquisition and installation of the technology will be done (DOST, 2011).

Although limited, DOST will provide one time seed fund to participating MSMEs to facilitate technology acquisition. This could hopefully enable them to access formal credit sources for future technology needs and expand their production activities (DOST, 2011).

Technical training for manpower on key production issues such as Hazard Analysis and Critical Control Points (HACCP) particularly for food processing, Good Manufacturing Practices (GMP), quality and environment management systems (QMS/EMS) as well as training on specific technical skills (DOST, 2011).



To ensure successful adoption of technologies, DOST through its pool of science and technology experts from its various agencies and members provide continuing technical and productivity consultancy services to participating firms (DOST, 2011).

<u>Products Standards and Testing</u>. Product Standards, to be able to compete globally and locally, Philippine made products must meet certain standards. Unfortunately, there are still no local standards for a large number of Philippine products. DOST is currently working with the Bureau of Product Standards (BPS) of the DTI in cooperation with the private sector, the academe, other government agencies and non-government organizations in establishing standards for some products(DOST, 2011).

Product Testing and Enhancement of Testing Laboratories, to determine if products conform to standards, there must be tested in accredited laboratories. DOST, established a network of regional testing laboratories in cooperation with State Colleges and Universities and private testing centers (DOST, 2011).

Packaging and Labelling. Products must be packaged well to increase its shelf life especially for food products, improve handling and protection and ultimately improve their marketability. In addition, the export market requires appropriate labelling of food products in response to the demand of the highly environment and health conscious consumers. DOST established the Packaging R & D Center in its Bicutan Compound to assist MSMEs in developing functional designs for packages, identifying and developing suitable or alternative packaging materials especially from indigenous sources (DOST, 2011).

<u>Database Management Information System</u>. Several databases vital to MSMEs are now being prepared. These include a listing of available technologies at the national and regional level, listing of S & T experts, and a listing of testing laboratories including testing



services provided as well as costs. These databases will be accessible through the SET-UP web page that is currently being developed (DOST, 2011).

<u>Linkages and Networking</u>. We have five of linkages and networking according by the following; 1) Raw Material sourcing; 2) Marketing; 3) Technical/Entrepreneurial Training; 4) Financing; 5) Equipment design and fabrication.

# Conceptual Framework

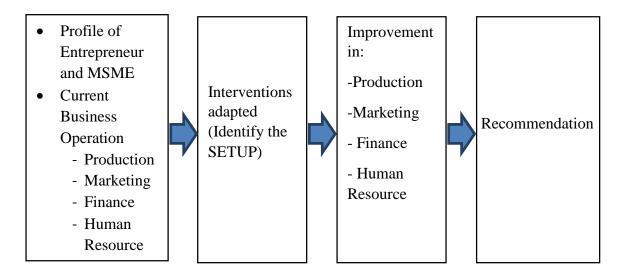
Analyzing the different factors that will affect the business is very significant for the attainment of the enterprise goal. The profile of the entrepreneur and its current business operations will be determined. In addition, the current business operation of the enterprise in terms of production, marketing, human resource and financial operations will be assessed.

After assessing the present status of the business, the intervention adopted will be asked to identify the technology related strengths and weaknesses of an enterprise and gaps incurred in the business operations.

Improvement on the enterprise, production, marketing, human resource and financial operations will be analyzed. Then the study will give its recommendations after the evaluation of the projects (Figure 1).



Figure 1. Paradigm showing the relationships of variables.



#### **METHODOLOGY**

# Locale and Time of the Study

The study area covers Baguio City and Mountain Province. All micro, small and medium enterprises that were registered and assisted by the Department of Science and Technology (DOST) are included in the study. The study was conducted on February 2013.

# Respondents of the Study

This study of furniture enterprises included eight (8) entrepreneur managers and owners of furniture enterprises over Baguio City and Mountain Province. These eight (8) managers graduated and completed, covers all micro, small and medium enterprises that were assisted by the Department of Science and Technology (DOST).

The respondents were found dominant in Bontoc, Mountain Province with a percentage of 37.5, followed by Tadian, Mountain Province and Baguio City (25%), lastly, Sadanga, Mountain Province (12.5%). The data implies that most of the respondents live in Bontoc, Mountain Province.

#### Research Instrument

A survey questionnaire was prepared to gather empirical data. The questionnaire was used as a guide in gathering data and information from the respondents.



# Data to be Gathered

The data gathered was focused on the profile of the respondents, enterprise profile, status of the enterprise before and after SETUP intervention, and the results/ impact of the intervention adapted from the SETUP project.

# Data Analysis

Data was collected with the used of survey questionnaire and given to the selected respondents assisted by DOST SETUP. An interview was done for needed clarifications and validations of data sought.



#### RESULTS AND DISCUSSION

# Profile of the Entrepreneur

In this study, a total of six DOST SETUP assisted furniture in Mountain Province and two from Baguio City were taken as respondents. Table 1 presents the characteristics of the respondents according to their age, gender, civil status, and educational attainment.

Age. The respondents' ages ranged from 40 to 60 years old. 37.5 % were 40-45 years old. 12.5 % respondent was in 46-50 years old, 37.5 % were in 51 to 55 years old, and 12.5 % were in 55 - 60 years old.

Gender. There were more male respondents (62.5 %) than female (37.5 %). This implies that males are more active in engaging into furniture enterprises as compared to the females.

<u>Civil Status</u>. Most of them are married (87.5%), and only one (12.5%) is widow. Most of the respondents also revealed that they were assisted by the family in managing the enterprise.

Educational Attainment. The respondents vary in their educational attainment. There were 12.5% who reached elementary, 62.5% high school, and 25% college. Most of the respondents however at least reached high school level.



Table 1. Distribution of entrepreneurs according to profile

Duefile of the Entury or over	Respo	ondents
Profile of the Entrepreneur	F	%
Age		
40-45	3	37.5
46-50	1	12.5
51-55	3	37.5
56-60	1	12.5
TOTAL	8	100
Gender		
Male	5	62.5
Female	3	37.5
TOTAL	8	100
Civil Status		
Married	7	87.5
Widow	1	12.5
TOTAL	8	100
Educational attainment		
<b>Elementary Level</b>	1	12.5
High School level	5	62.5
College	2	25.0
TOTAL	8	100

# **Enterprise Profile**

This section presents the distribution of respondents according to the profile of furniture enterprises to include (a) type of organization, (b) number of years in operation, (c) production site/ location, (d) year enterprise was established,(e)year started adopting the SETUP intervention, (f)amount of SETUP assistance availed, and (g)enterprise registration. (Table 2)



<u>Type of Organization</u>. Table 2 shows the type of organization the respondents were into. All of them are in single proprietorship.

Number of years in operation. Table 2 shows the number of years the respondents operated their business. Fifty percent (50.0%) of the respondents are in 13 years and above on its business operation, 3 (37.5%) in 5-9 years operation, and 1 (12.5%) in 10-12 years operation.

Year enterprise was established. Table 2 shows that the range of the establishment of the different enterprise was 1991-2010. On the year of 1996- 2000 3 (37.5%) has established their enterprise, 2 (25.0%) respectively in the year of 2001- 2005 and the year of 2006- 2010, and 1 (12.5%) in the year of 1991- 1995.

Year started adopting the SETUP intervention. Table 2 shows that in year of 2005-2008 have 3 (37.5%) adopted the SET UP intervention, also 3 from 2009- 2011 (37.5%) and 2 (25.0%) in year of 2012- 2015.

Amount of SETUP assistance availed. Table 2 shows the amount of SETUP assistance availed by the enterprise. Three (37.5%) availed the SETUP project with a worth of 251,000- 300,000, 25.0% in a worth of 50,000- 100,000, the rest of the respondents availed 12.5% 101,000- 150,000, 151,000- 200,000 and 201,000- 300,000.

Enterprise registration. Table 2 shows the respondents enterprise registration. Fifty percent (50.0%) registered in the year of 2006- 2010, 2 (25.0%) in the year of 1996- 2000, 1 (12.5%) in the year of 1991- 1995, and also 1 (12.5%) enterprise in the year of 2001- 2005. The table shows that majority of the respondents registered in the year of 2006-2010 while the rest registered below the year of 2006.



Table 2. Distribution of respondents according to enterprise profile

Endown in Dunfil	Respo	ondents
Enterprise Profile	${f F}$	%
a. Enterprise Registration		
1991- 1995	1	12.5
1996- 2000	2	25.5
2001- 2005	1	12.5
2006- 2010	4	50.0
b. Type of Organization		
Single Proprietorship	8	100
c. Year enterprise was established		
1991- 1995	1	12.5
1996- 2000	3	37.5
2001- 2005	2	25.0
2006- 2010	2	25.0
d. Year started adopting the SETUP Intervention		
2005- 2008	3	37.5
2009- 2011	3	37.5
2012- 2015	2	25.0
e. Amount of SETUP assistance availed		
50,000- 100,000	2	25.0
101,000- 150,000	1	12.5
151,000- 200,000	1	12.5
201,000- 250,000	1	12.5
251,000- 300,000	3	37.5

# **SETUP** Intervention.

This section presents the distribution of respondents according to SETUP intervention. The table shows the sources of information about SETUP, S&T intervention availed SETUP, objective in availing SETUP, knowing if the respondents met their



objectives in availing SETUP, and knowing if they had encountered problems/ constraints in adopting SETUP intervention.

Sources of information about SETUP. Table 3 shows the sources of information about SETUP project. The agency personnel is the dominant source of information as claimed by 62.5%, 25% they have learned about SETUP from their co-entrepreneur and 12.5% for friend. According to most respondents, there was a program launched by the DOST that they could provide assistance to their enterprise which made them aware of the SETUP.

<u>S&T</u> intervention availed <u>SETUP</u>. Table 3 shows the S&T intervention availed SETUP for the furniture enterprises. All of the respondents answered equipment upgrading and technology upgrading. The result shows that the intervention availed by the respondents vary depending on the needs to their enterprise. The result implies that the upgrading production facilities were highly needed by the respondents.

Objectives in availing SETUP. Table 3 shows the objectives of the respondents in availing SET UP project. All of the respondents said that their objective in availing the program was to improve product quality, to expand the product line, and to increase production volume meeting the market demand.

Attainment of objectives. Table 3 shows the respondents answers if they had attained their objectives in availing SETUP. All of the respondents said that they had met their objectives through availing the SETUP project with DOST and were glad that they have not encountered any problems/constraints in adopting the SETUP interventions. Fifty percent of the respondents said that they had attained their objectives at about 80-90%, 37% of the respondents attained their objectives in a rate 50% and below while 12.5% of



the respondents rated 100% in their objective attainment. This implies that the respondents have higher chance to attain their objectives to continuous availing the SETUP intervention.

<u>Problems/constraints encountered</u>. Table 3 also shows the answers of the respondents if they had encountered problems/ constraints in adopting SETUP intervention. All of the respondents answered that they had not encountered problem/ constraints in adopting SETUP interventions. This show that the all respondents did not encountered any problems/constraints in adopting SETUP intervention. Some respondents said that have problem/constraints effective their furniture enterprises but mostly due to the total log ban in the past three years, but not included as an intervention in the problem of this study.

# <u>Assessment of DOST SETUP Intervention</u> Availed as Perceived by the Beneficiaries

This section presents the distribution of respondents according to assessment of DOST SETUP intervention availed as perceived by the beneficiaries, it follows the technology needs assessment, project proposal preparation, and provision of production technology.



TABLE 3. Distribution of respondents according to SETUP Intervention

SETUP Intervention	Respondents		
	F	%	
a. Sources of information about SETUP			
Co-entrepreneur	2	25.0	
Agency personnel	5	62.5	
Friend	1	12.5	
b. S&T intervention availed SETUP			
Technology Needs Assessment	8	100	
Project proposal operation	8	100	
Provision of production technology:			
Equipment upgrading	8	100	
Process / Technology upgrading	8	100	
c. Objective in availing SETUP			
To improve product quality	8	100	
To expand the product line	8	100	
To increase production volume meeting the market demand	8	100	
d. Have you met your objectives in availing SETUP?			
YES	8	100	
If yes, how many percent?			
1- 50%	3	37.5	
80- 90%	4	50.0	
100%	1	12.5	
e. Did you encounter problems/ constraints in adopting SETUP intervention?			
NO	8	100	

<u>SETUP intervention availed</u>. Table 4 shows the SETUP intervention availed by the respondents. Sixty two point five percent (62.5%) of the respondents said they that they were satisfied with the technology needs assessment provided by SETUP. As to other interventions like project proposal preparation and provision of production technology



process and equipment upgrading, majority of them claimed to be satisfied. As shown on the table, 75% claims that they are so satisfied with the proposal preparation as SETUP intervention they availed. This can be further justified from the computed mean averages.

Table 4. Distribution of respondents according to assessment of DOST SETUP Intervention availed as perceived by the beneficiaries.

SETUP INTERVENTION		1	2	2		3		4		5	AVE	DES
AVAILED	F	%	F	%	F	%	F	%	F	%		
Technology needs assessment	-	-	-	-	-	-	5	62.5	3	37.5	4.38	Satisfied
Project proposal preparation	-	-	-	-	-	-	6	75	2	25	4.25	Satisfied
Provision of production technology (Process)	-	-	-	-	-	-	5	62.5	3	37.5	4.38	Satisfied
Equipment upgrading	-	-	-	-	-	-	5	62.5	3	37.5	4.38	Satisfied
Legend:												
0.1-1.5= very unsatisfied 1.1-2.5 = Unsatisfied	l		-3.5 -4.5				4.	1-50 =	= V(	ery sa	tisfied	

#### **Production Status**

Table 5 presents the volume of production before and after the SETUP interventions. All the respondents showed increase in production given the 6 months information. Respondent 4 had the highest rate of increase by 570%, followed by respondent 5 at 88.41% and the least was respondent 8 with 3.41%.

The result shows that the interventions provided had positive impact in production, thus implying effective and efficient production technology.



TABLE 5. Distribution of respondents according to production status of the enterprise before and after the SETUP intervention.

PRC	PRODUCTION VOLUME / 6 month						
RESPONDENTS	BEFORE	AFTER	INC/DEC.	% CHANGE			
1	50	58	8 Inc.	16			
2	526	559	33Inc.	6.27			
3	84	116	32 Inc.	38.10			
4	40	268	228Inc.	570			
5	69	130	61 Inc.	88.41			
6	364	423	59 Inc.	16.21			
7	157	170	13 Inc.	8.28			
8	586	606	20 Inc.	3.41			

# Processing methods

Table 6 presents the different processing methods of the respondents before and after the intervention and how they are done: whether manual or automatic.

It shows that six (6) of the respondents do the raw materials selection manually while 2 automatically do it before the intervention. For the methods of measuring, all respondents claim that they manually do it. In cutting woods, 6 respondents automatically do it and 2 manually cut the wood. For the air drying process, have 4 manually do it and 4 automatically do it. In sun drying, 5 respondents manually do it and 2 automatically do it. If 5 claims they do slicing methods automatically, 3 do it manually. In the shaping process method, 5 respondents say that they automatically do it and 3 do it manually. For the assembling method, have 5 respondents manually do it and 3 do it automatically. In varnishing,4 automatically do it while 4 respondents said they manually do it. For the



finishing processing methods, 6 respondents claim that they do it manually while 2 respondents do it automatically. The table shows that the enterprises were increase in automatic equipment and it helped increased the production and reduce hard work of the respondents.

Table 6.Furniture processing methods.

	BEFORE		AF		
PROCESSING METHODS	Manual	Automatic	Manual	Automatic	Changes automatic equipments
Raw materials Selection	6	2	3	5	3
Measuring	8	-	8	-	-
Cutting	2	6	-	8	2
Air drying	4	4	2	6	2
Sun drying	5	3	2	6	3
Slicing	3	5	-	8	3
Shaping	3	5	-	8	3
Assembling	5	3	2	6	3
Varnishing	4	4	2	6	2
Finishing	6	2	3	5	3

#### Furniture Processing Equipment

Table 7 shows that equipment's availed in SETUP intervention and their owned equipment of the respondents. It showed the intervention of equipment before and after availing the equipment. Before the intervention some of the respondents did not follow the standard processing because of lacking of equipment in their enterprises but after the intervention they followed the standard procedure of processing because most of the respondents completed the needed equipment of their enterprises.



<u>Functionality of Equipment</u>. Table 8 shows the functionality of equipment adopted before and after the intervention. Before the intervention all equipment of respondents are functional and after the intervention all equipment are functional. This implies a positive impact from the intervention availed and don't need more employees to exert effort and time to finish the product.

Table 7. Furniture Processing Equipment.

-	Ox	wned	SETUP		Functionality			
PROCESSING EQUIPMENT	F	wiieu %	F	10F %		wned		ΓUP
Hammer	8	100			F 8	100	<u>F</u>	<u>%</u>
Measuring tools (ruler, etc.)	8	100	_		8	100	_	_
Knives/ bolo	8	100	-	-	8	100	-	-
Circular saw	8	100	-	-	8	100	-	-
Curving tools	8	100	-	-	8	100	-	-
Hack saw	8	100	-	-	8	100	-	-
Bar clamp	7	87.5	1	12.5	7	87.5	1	12.5
Router	6	75	2	25	6	75	2	25
Wood lathe machine	6	75	2	25	6	75	2	25
Wood Planer	6	75	2	25	6	75	2	25
Air compressor	6	75	2	25	6	75	2	25
Table saw	6	75	2	25	6	75	2	25
Bespa Sprayer/ Spray gun	6	75	2	25	6	75	2	25
Band saw	6	75	2	25	6	75	2	25
Molding machine	6	75	1	12.5	6	75	1	12.5
Drill press/ Electric drill	4	50	2	25	4	50	2	25
Jig saw	3	37.5	2	25	3	37.5	2	25

<u>Effect to Production</u>. Table 8 shows the effect of intervention to production. Before availing the SETUP intervention, all of the respondents claimed that they have minimal



production but after the intervention all respondents had increased production in 100% after availing the equipment. When I interviewed, the respondents answered that equipment availed from SETUP increased of their production because the product processing helped to produce more products for the enterprises. The equipment availed is effective on their production because majority of the respondents, almost thirty percent (30%) increased in production.

Table 8a. Functionality of Equipment Availed

a.FUNCTIONALITY OF EQUIPMENT AVAILED	RESPONDENTS					
	BEF	ORE	AFTER			
	F	%	F	%		
Functional	117	100	140	100		
b. EFFECT TO PRODUCTION						
Increase production	-	-	8	100		

Table 8b.Effect to production

PRODUCTIO	ON VOLUME / 6 mont	h	Changes
RESPONDENTS	BEFORE	AFTER	Volume %Inc.
1	50	58	8/50 Inc.
2	526	559	33/526 Inc.
3	84	116	32/84 Inc.
4	40	268	228/40 Inc.
5	69	130	61/69 Inc.
6	364	423	59/364 Inc.
7	157	170	13/157 Inc.
8	586	606	20/586 Inc.

<u>Promotional media used</u>. Table shows that all (100%) of the respondents that their own way to promote their product through person to person and then 37.5% were doing



the exhibit fairs because some respondents could not afford advertisement through television, radio and newspaper so 25% displayed in their own house to promote their own products. This shows that the respondents used the following strategies to promote their products through word of mouth, exhibit fairs, and other respondents displayed on their own house.

<u>Label of product</u>. Table shows the labelling content of product. According to the respondents before the intervention they will see that the dominant is quality because they have 62.5% compare to the other level is only have 37.5 of texture and 12.5 on size. After the intervention they increase the quality because they have 75% base on texture they decrease so they will have only 25%. This shows that the labels of products vary among respondents as to size, texture, and quality.

Product quality. Table shows that before the intervention, that the product quality that they have 87.5% in standard and 12.5% in low of product quality. After the intervention, we can see the different of the product quality because they have 87.5 in standard of products and there have 12.5 on high of product quality. Table shows that the qualities of products were in improved after availed the intervention.

#### Financial Status

This presents the financial condition and financial operation of the enterprise before and after the intervention.



Table 9. Marketing status of enterprise

PARTICULARS	BEFORE		AFTER	
	F	%	F	%
a. Promotional media strategies				
Word of mouth	8	100	8	100
Exhibit fairs	3	37.5	5	62.5
Others: House	2	25	2	25
b. Label of product				
Size	1	12.5	-	
Texture	3	37.5	2	25
Quality	5	62.5	6	75
c. Product Quality				
Low	1	12.5	-	
Standard	7	87.5	7	87.5
High	-	-	1	12.5

# **Financial Operation**

Table 10a shows the financial operation of the respondents according to the sales revenue, total gross revenue, total expenses and net income.

Sales revenue. Table 10 presents the sales revenue of the respondents before and after the intervention. Before the intervention, 75% of the respondents have a total sales of Php100,000-600,000, 25% of respondents have a total sales of Php700,000-1,200,000. After the intervention, 62.5% of the respondents have a total sales of Php100,000-600,000 and 37.5% of respondents have a total sales of Php700,000-1,200,000. The table shows that the number of respondents sales revenue increase with the increase in sales revenue after the intervention. Majority of the respondents still maintain their sales revenue as production is not continuous and sales largely depend on order of buyers.



Cost of sales. Before interventions almost all of the respondents (75%) were having Php100,000-300,000 costs of sales and the rest (25%) were in Php400,000-600,000. After intervention 62.5% of the respondents have Php100,000-300,000 costs of sales and 37.5% have in Php400,000-600,000. The table shows that some respondent increased the cost of sales after the intervention because if increase the sales revenue also increase the cost of sales of ten percent (10%) in the sales by year.

Total gross revenue. The table present the "Raw" sales income; the amount which customers actually pay the company when they make their purchases. Before the intervention, 75 % of the respondents were in Php100,000-300,000 have total gross revenue and 25% of the respondents were Php300,000-600,000 total gross revenue. After the intervention, 62.5 % of the respondents were in Php100,000-300,000 have total gross revenue and 37.5% of the respondents were Php300,000-600,000 total gross revenue. They will see there is an increase in the total gross revenue after the intervention. Table shows that all respondent would increase the total gross revenue because their productions just increase after the intervention.

Total expenses. The table presents that the expenses of the respondents before and after the intervention. Before the intervention, 37.5 % of the respondents range fromPhp100,000-200,000 have total expenses, 25% of the respondents falls from Php200,001-300,000 total expenses and 25% said to have a total expenses ofPhp300,001-400,000. After the intervention, 37.5 % of the respondents have in Php200,001-300,000 total expenses, 25% of the respondents have Php300,001-400,000 total expenses and 25% have a total expenses fromPhp100,000-200,000. The table shows that after the intervention



there is an increase in the expenses because the equipment uses more electricity and space expansion of their enterprises.

Net income. The table presents that the accumulated net income of the respondents before and after the intervention. Before the intervention, 37.5 % of the respondents have a net income ofPhp10,000-110,000, 25% of the respondents have a net income of Php110,001-210,000 and Php210,001-310,000 while 12.5% of the respondent have a net income ofPhp310,001-410,000. After the intervention, 37.5 % of the respondents have a net income of Php110,001-210,000, 25% of the respondents have a total expenses ofPhp210,001-310,000, 25% have a net income ofPhp310,000-410,000 and 12.5% of respondent have a net income of Php10,000-110,000. Table shows that all of the respondents increased their net income after the intervention because the equipment availed was easy to produce and easy to finish their products so there income will increase because their products easily to distribute in their own buyers.

# Financial Condition

Table 10b shows the financial condition according to the assets and liabilities of the respondents before and after the intervention.

Assets. Table 10a shows the financial status of economic value owned/property by the respondents, before and after the intervention. Before intervention in current asset they have 37.5% of respondents on Php 50,000-150,000 were the Php 150,001-250,001 have 25% of respondent and the other have only 12.5 percent in Php 250,001-350,000, the same the amount of Php 350,001-450,000 and also the Php 450,001 and above have 12.5% of respondents just have assets. After the intervention they would increase the current asset



in amount of Php 250,001-350,000 have 37.5, 25% in 50,000-150,000 and the others will have only 12.5%. Table shows that the respondent before the intervention their owned properties were in the minimal amount but after the intervention it will increase because of the equipment availed on DOST SETUP.

Table 10. Financial operation of the enterprise

PARTICULARS	BEFORE		AFTER	
	$\mathbf{F}$	%	F	%
a. Financial Operation				
Sales Revenue				
100,000-600,000	6	75	5	62.5
700,000-1,200,000	2	25	3	37.5
Less: Cost of Sales				
100,000-300,000	6	75	5	62.5
400,000-600,000	2	25	3	37.5
<b>Total Gross Revenue</b>				
100,000-300,000	6	75	5	62.5
a. Financial Operation				
300,000-600,000	2	25	3	37
<b>Total Expenses</b>				5
100,000-200,000	3	37.5	2	25
200,001-300,000	3	37.5	3	37.5
300,001-400,000	2	25	3	37.5
Net Income				
10,000-110,000	3	37.5	1	12.5
110,001-210,000	2	25	3	37.5
210,001-310,000	2	25	2	25
310,001-410,000	1	12.5	2	25

Non-current asset. The table presents that the respondents which have a long term investments and the case that the full value will not be realized within the accounting year



before and after the intervention. There are 62.5% of the respondent have non-current asset of Php100,000-500,000 before the intervention. Twenty five percent have non-current asset of Php500-001-1,000,000 and 12.5% non-current asset of Php1,000,001-1,500,000 it's before the intervention because their non-current asset is their own sacrifices to build their owned enterprises. After the intervention the non-current asset will increase, three of them or 37.5% have non-current asset with amount of Php500,001-1,000,000 and also the 37. 5% have non-current assets of Php 100,001-500,000 and have 25% of respondents just havePhp1,000,000 non-current assets. Table shows that most of the respondents increased their non-current asset after the intervention because there availing of the equipment in to the SETUP helped.

Total asset. For the asset accumulated by the respondents, the table presents that 62.5% of respondents have assets of Php100,000-500,000 before the intervention. 25% of respondents have assets of Php500,001-1,000,000 and 12.5% have an assets of Php1,000,000-1,500,000of which we can see the respondents who save the lowest amount of total asset. For the asset accumulated after the intervention, the table presents that 50% of respondents have assets of 500,001-1,000,000. There were 37.5% of respondents who have assets of Php100,000-500,000 and 12.5% have an assets of Php1,000,000-1,500,000. Table shows that the respondents increase their total asset because the other equipment availed from DOST SETUP.

<u>Liabilities</u>. For the liabilities incurred by the respondents, this table shows the obligation that legally binds each entrepreneur. Before the intervention, the table shows that majority 62.5% of the respondents have liabilities of Php100,001-500,000 while 25% havePhp500,001-1,000,000 liabilities and only have 12.5% of the respondents have



liabilities of Php1,000,001-1,500,000. For the liabilities incurred after the intervention, it shows that majority or 50% of the respondents have liabilities of 500,001-1,000,000 while 37.5% havePhp100,001-500-000 liabilities and only 12.5% respondent have liabilities incurred Php1,000,001-1,500,000. Table shows that before the intervention, majority of the respondents were in the minimum amount of liabilities but after the intervention some of the respondents increased the liabilities because of the additional equipment their enterprises.

# Organization and Management Status of the Enterprise

Table 12 shows the organization and management status of the enterprise according to the total employment generated by the enterprises.

Total employment generated. The table presents that the employment generated by the respondents before the intervention was a total of 28 employees, then after the intervention the total of employment decreased of nine employees because of the equipment availed. According to the enterprises, they need to remove some workers because the machine can do automatically and better than when manually operated.

<u>Direct employment</u>. These are the number of employees directly hired by the enterprises including those that are hired by the subcontractors of the SME. Table shows that before the intervention, the enterprises have regular employees but after the intervention, the enterprises have to remove some regular employees because the equipment requires less men employees to do the work.



Table 11. Financial condition of the enterprise

PARTICULAR	BEFORE		AFTER	
	F	%	F	%
Financial Condition				
Assets				
Current Assets				
50,000-150,000	3	37.5	2	25
151,000-250,000	2	25	1	12.5
251,000-350,000	1	12.5	3	37.5
351,000-450,000	1	12.5	1	12.5
451,000 and above	1	12.5	1	12.5
Non-current assets				
100,000-500,000	5	62.5	3	37.5
501,000-1,000,000	2	25	3	37.5
1,000,001-1,500,000	1	12.5	2	25
<b>Total Assets</b>				
100,000-500,000	4	50	3	37.5
501,000-1,000,000	3	12.5	4	50
1,000,000-1,500,000	1	37.5	1	12.5
Liabilities				
50,000-150,000	5	62.5	3	37.5
151,001-250,000	2	25	4	50
250,001-350,000	1	12.5	1	12.5
Equity				
50,000- 150,000	5	62.5	3	37.5
151,001- 250,000	2	25	4	50
250,001-350,000	1	12.5	1	12.5

<u>Indirect employees</u>. These are the manufactures components/parts of the whole product. Table shows that under indirect employment there have backward and forward before and after the intervention. We can see that this table are how many employments generated by the suppliers of inputs or using the products of enterprises of the production.



<u>Backward</u>. These are the employment generated by the suppliers of inputs and other raw materials needed to produce the final product of the enterprise. Table shows that before the intervention there have five (5) employments generated by the suppliers of inputs to produce the final product and after the intervention it was increase four (4) so the total employments generated by the suppliers of inputs have nine (9) employments.

Forward. These are the employment generated by the other enterprises using the product of the enterprise or as consequence of the production of the enterprise such as supplier of packaging materials, transport groups, etc. Table shows that before the intervention the eight (8) respondents were generated ten (10) employees by the other enterprises but before the intervention, half of this would continue for using the product enterprise while the others would stop so we can see the effect of intervention on their enterprises.

Comments/ suggestion and other concerns in availing the SETUP intervention according to the respondents:

For the other concerns about the SETUP project, according to the respondents they need more of conducting seminars so that they will know and learn the SETUP intervention and how to manage the business. Availing the SETUP project are very satisfactory to all entrepreneur because the equipments were given with no interest by the DOST and they have improved the quality of their products and also helped increased the production.



Table 12. Organization and management status of the enterprise

PARTICULARS	BEFORE F	AFTER F	
Organization and management status of the enterprise			
a. Total of employment generated	28	19	
b. Direct employment			
Company hire:			
Regular	4	-	
Part-time	6	2	
Sub-contractor hire:			
Regular	15	9	
Part-time	3	8	
Indirect employment:			
Backward	5	9	
Forward	10	5	

# SUMMARY, CONCLUSIONS AND RECOMMENDATION

### Summary

This study perceived to assess the furniture enterprise project assisted by DOST SETUP in Mountain Province and Baguio City. The respondents of the study were eight co-operators who have graduated/completed the planned SETUP intervention. The study sought answers to the following:

1) Profile of furniture enterprise assisted by the SETUP in Mountain Province and Baguio City; 2.) Status of the furniture enterprises in terms of production, marketing, financial, organization and management before the SETUP intervention; 3) Type of intervention adopted by the furniture enterprises from the SETUP program; and 4) Effects or changes of the furniture enterprises in terms of production, marketing, financial, organization, and management as a result of the SETUP intervention.

Almost all of the entrepreneurs involved in furniture enterprise who availed the intervention were assisted by SETUP were from in Baguio City and Mountain Province. All of them were males and about 87.5% are married and 12.5% are widowed. All of them belong to sole proprietorship. Furthermore majority of them finished high school level. Most of the firms existed for many years but they were on and off in their operation. All of the enterprises were registered. Half of the respondents only availed the SETUP intervention from year 2006-2010, two availed from year 1996-2000 while the rest availed way back 1991-1995 and 2001-2005.

All of the respondents availed the technology needs assessment done by the DOST technical staff and all respondents availed project proposal preparation, equipment



upgrading and provision of product technology. Over all, the respondents were satisfied on SETUP intervention availed. Majority of the respondents attained their objectives.

In the production of the enterprises before and after the intervention, the volume of production increased and the product quality improved because of the improvement of the processes through the equipment provided by the SETUP. The automatically operated furniture processing methods and functional equipment of the enterprise after availing the SETUP intervention increased.

For marketing status, almost all respondents are concerned on the quality assurance for the customers safe. Some of the respondents have established market outlet for the sale and promotion of increased production.

On financial status of the furniture enterprises, all of the respondents said that their financial status before the intervention was in a minimum average and after the intervention all of the respondents said that there was an increase in the volume of production and also increased their sales because the equipment availed from SETUP. Thus the increase in their income is based.

As to the organizational and management status, the respondents said that the total employment generated before SETUP is 28, while after the intervention, but was lessened the equipment took place the required manual labor after the intervention.

### Conclusions

Based on the findings, the following conclusions were made:

1. The furniture processing enterprises assisted by DOST SETUP in Baguio City and Mountain Province belongs to sole proprietorship. Most of them did not finish their studies but served as owner/manager of their enterprises.



- 2. The interventions availed by the respondents from the SETUP vary depending on the needs of their enterprise. All of the respondents were satisfied on the SETUP intervention availed.
- 3. Overall, SETUP program has a positive impact to furniture enterprises for the reason that it increases productivity, improves product quality and increase financial operation and financial condition, and also improves management capability of the enterprises.
- 4. The common problems/constraints encountered by the furniture enterprises are the lacking of woods so they did not increase the volume of products.

# Recommendations

- 1. Most of the respondents heard the SETUP program through agency personnel and co- entrepreneurs. Thus DOST must also conduct trainings (technology needs assessment, consultancy services, marketing assistance, and provision of production technology) and seminars in order for those who haven't any resources such as internet, friends and relatives from the government can avail from it.
- 2. The furniture enterprise should need market outlet for the promotion of their product especially in our country. DOST must support the enterprises according to marketing assistance in order to cope up with the competition in the market.
- 3. DOST SETUP must motivate and encourage more furniture enterprise to avail the program.



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